ਜਗਤ ਗੁਰੂ ਨਾਨਕ ਦੇਵ
ਪੰਜਾਬ ਸਟੇਟ ਓਪਨ ਯੂਨੀਵਰਸਿਟੀ
ਪਟਿਆਲਾ

The Motto of Our University

(SEWA)

SKILL ENHANCEMENT

EMPLOYABILITY

WISDOM

ACCESSIBILITY

JAGAT GURU NANAK DEV
PUNJAB STATE OPEN UNIVERSITY, PATIALA

(Established by Act No. 19 of 2019 of the Legislature of State of Punjab)

MASTER OF ARTS (ECONOMICS)

MAEC24303T- MONEY AND BANKING

SEMESTER – III

Head Quarter: C/28, The Lower Mall, Patiala-147001
Website: www.psou.ac.in

The Study Material has been prepared exclusively under the guidance of Jagat Guru Nanak Dev Punjab State Open University, Patiala, as per the syllabi prepared by Committee of Experts and approved by the Academic Council.

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PREFACE

Jagat Guru Nanak Dev Punjab State Open University, Patiala was established in December 2019 by Act 19 of the Legislature of State of Punjab. It is the first and only Open University of the State, entrusted with the responsibility of making higher education accessible to all, especially to those sections of society who do not have the means, time or opportunity to pursue regular education.

In keeping with the nature of an Open University, this University provides a flexible education system to suit every need. The time given to complete a programme is double the duration of a regular mode programme. Well-designed study material has been prepared in consultation with experts in their respective fields.

The University offers programmes which have been designed to provide relevant, skill-based and employability-enhancing education. The study material provided in this booklet is self-instructional, with self-assessment exercises, and recommendations for further readings. The syllabus has been divided in sections, and provided as units for simplification.

The University has a network of 110 Learner Support Centres/Study Centres, to enable students to make use of reading facilities, and for curriculum-based counselling and practicals. We, at the University, welcome you to be a part of this institution of knowledge.

Dean Academic Affairs

MASTER OF ARTS (ECONOMICS)

MAEC24303T- MONEY AND BANKING

SEMESTER – III

MAX. MARKS:100

EXTERNAL:70

INTERNAL:30

PASS:40%

CREDITS:6

OBJECTIVE:

This course introduces the basic principles of public expenditure and revenue. It acquaints the students with the needs and effects of public debt and deficit financing and how a fiscal policy works under the conditions of deflation and inflation.

INSTRUCTIONS FOR THE PAPER SETTER/EXAMINER:

1. The syllabus prescribed should be strictly adhered to.
2. The question paper will consist of three sections: A, B, and C. Sections A and B will have four questions each from the respective sections of the syllabus and will carry 10 marks each. The candidates will attempt two questions from each section.
3. Section C will have fifteen short answer questions covering the entire syllabus. Each question will carry 3 marks. Candidates will attempt any 10 questions from this section.
4. The examiner shall give a clear instruction to the candidates to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.
5. The duration of each paper will be three hours.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt any two questions each from the sections A, and B of the question paper, and any ten short answer questions from Section C. They have to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.

SECTION A

UNIT 1- The definition of money: Function and Types of Money, Post-War Controversy on the Definition of Money and Money Supply – The Theoretical Debate and Empirical Attempts
UNIT 2- Demand for Money: The Classical Quantity Theory of Money, The Keynesian Approach, Friedman's Theory
UNIT 3- Supply of money: Money Creation by the Banking System. High-Powered Money and Money Multiplier. Measures of Money Supply in India. **UNIT 4-** Term Structure of Interest Rates: The Expectations Theory, Liquidity Premium Theory, Market Segmented Theory, and Preferred Habitat Theory

SECTION B

UNIT 5- Monetary Policy: Targets, Goals and the Trade-Offs among Alternate Goals, Lags in Operation, Transmission Mechanism – Classical Model, Keynesian Model and Monetarist Model
UNIT 6- Central Banking: Origin and Evolution, Main Functions, Policy Tools, RBI - Monetary Policy and Autonomy.
UNIT 7 - Commercial Banking: Functions, Major Developments in Commercial Banking in India Since Nationalization. Banking Sector Reforms.
UNIT 8- Development Financial Institutions: Role, Growth and Structure of Development Financial Institutions in India. Types and Control of Non-Banking Financial Companies (NBFCs) by RBI.

Suggested Reading:

- Bofinger Peter (2001): Monetary Policy: Goals, Institutions, Strategy and Instruments. Oxford University Press
- Dennis Geoggrey, E J (1981): Monetary Economics Longman
- Dinlio, A Eugene: Theory and Problems of Money and Banking International Edition (Schaum's Outline Series)
- Howells, Peter and Bain Keith (2002): The Economics of Money, Banking and Finance. Prentice Hall, Pearson Education Ltd.
- Khanna, Perminder (2005): Advanced Study in Money and Banking Theory and Policy Relevance in the Indian Economy. Atlantic Publishers, New Delhi.

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

UNIT 1: MONEY: DEFINITIONS, TYPES, POST -WAR CONTROVERSY, THEORETICAL DISCOURSE AND EMPIRICAL EVIDENCE ON THE DEFINITIONS OF MONEY AND MONEY SUPPLY

STRUTURE

1.0 OBJECTIVES

After reading this lesson, you will be able to understand

- Various types of Money
- Barter System
- Various functions of money
- Post-war Controversy

- Theoretical Discussion on the Definition of Money and Money Supply
- Empirical Evidence on the Definition of Money and Money Supply

1.1 DEFINITION OF MONEY

Many economists have defined money. Money functions as a medium of trade, a unit of account, a store of value, a standard for deferred payments, and a method for settling debts. Money is also characterised by its physical qualities. Waker asserts, "Money is what money does." Seligman defines money as. "One characteristic that enjoys widespread acceptance." GDH Cole states, "The fundamental nature of money is its ability to be transferred from one individual to another in a single act of circulation." Professor Crowther defines money as "any entity that is broadly recognised as a medium of exchange and simultaneously functions as a measure and store of value." It may manifest in various other forms. In Europe, following World War II, cigarettes were extensively utilised as a form of currency. Moreover, gold, silver, gemstones, and leather have been used as currency at different periods across numerous nations. Money is fundamentally functional and must meet the condition of widespread acceptability. A comprehensive definition of money must encompass all its essential activities and its fundamental characteristic of popular acceptability. The definition of money is somewhat complex. It falls into a category that eludes a singular definition. The rationale is that money fulfils four essential roles, each serving as a criterion for moneyness, and these criteria are satisfied to varying degrees by different assets. Money is merely one of numerous types of financial assets that consumers, businesses, governments, and other economic entities maintain in their portfolios. Currency is the fundamental component in facilitating the majority of economic transactions within the economy.

Money has a singular function inside an economic system: to enable the exchange of commodities and services. The primary function of money within the economic framework is to facilitate trade at the lowest possible cost. Money is instrumental, as it constitutes a fundamental component of the contemporary trading system, hence enabling specialisation and production.

1.2 BARTER SYSTEM

The trade of commodities for commodities is referred to as the barter system. Primitive commerce frequently involved the direct exchange of commodities and services. However, pure barter is exceedingly inefficient in terms of time and effort, rendering minimal trade viable if it were the exclusive mode of exchange. The primary deficiency of pure barter is the

absence of a universal unit for measuring the value of goods and services. It signifies its value, the amount of other goods and services it can command in the market. The absence of a double coincidence of wants: It is exceedingly uncommon for the proprietor of a good or service intended for barter to readily locate an individual who desires his commodity and simultaneously possesses the desired item. Barter becomes increasingly challenging when the items to be swapped lack equivalent value and cannot be subdivided without incurring a loss in worth. Some of the limitations of barter are explained below.

1.2.1 Absence of an adequate unit:

What will be the conditions for drafting contracts necessitating future payments? Contracts that entail future payment are a fundamental component of an exchange economy. It would result in three significant challenges.

a) It frequently provokes debate on the quality of the goods or services to be reimbursed;

b) The parties frequently encountered difficulties in reaching a consensus regarding the particular product designated for payment;

c) Both parties would face the risk of significant fluctuations in the value of the commodity to be repaid throughout the contract's life.

1.2.2 Absence of a storage mechanism:

Individuals might save purchasing power for future utilisation just by retaining certain goods or claims to specific commodities. The stored asset may decline (or increase) in value. The storage will be expensive and occasionally challenging to dispose of promptly without incurring a loss if the holder intends to purchase an alternative item. Due to these constraints, pure barter is seen as exceedingly inefficient for trading purposes.

1.3 THE SPECIFIC FUNCTIONS OF MONEY

Money fulfils its fundamental role as "The great wheel of circulation, the primary instrument of initiation by executing four distinct functions, each of which mitigates one of the challenges associated with pure barter as previously described." The following delineates the four principal functions of Money:

- Currency as a measure of worth.
- Currency as a medium of exchange
- Currency as a criterion for postponed payments
- Currency is a repository of value.

The initial two functions are referred to as the primary functions of money, whereas the subsequent two functions are termed derivative functions, as they are derived from the basic functions.

1.3.1 Money as a Measure of Value

The primary functions of money are referred to by various terms, including unit of value, standard of value, unit of account, common measure of value, and common denominator of value. The monetary unit acts as the standard by which the value of all goods and services is quantified and articulated. Once a monetary unit, such as a dollar, peso, franc, pound, sterling, or pengo, is established, the value of each good or service can be represented as a price, indicating the exchange rate. The quantification of goods and services in monetary units facilitates the assessment of their exchange value in the marketplace. For instance, if oil is priced at $8 per hundredweight and wheat at $2 per bushel, then a hundredweight of oil equates to four bushels of wheat. This approach also streamlines accounting practices, allowing assets, liabilities, income, and expenses to be expressed in uniform monetary terms for aggregation or subtraction.

Currency is not the sole universal metric utilised within the economic framework. Measurements such as feet, inches, and meters quantify linear distance; ounces, grammes, pounds, and tonnes assess weight; gallons, litres, and barrels gauge liquid volume; and so forth. These units of physical measurement are inherently stable quantities. Conversely, the paramount unit of measurement in the economic system—money—has frequently experienced significant fluctuations in purchasing power value.

I.3.2 Money as a Medium of Exchange

The secondary function of money is referred to by various terms, including medium of exchange, medium of payments, circulating medium, and means of payment. This function signifies that money is widely accepted by individuals in transactions for goods and services. The medium may consist of gold, silver, paper currency, or credits associated with loans. A fundamental criterion for an object to serve as money is the general willingness of people to accept it in exchange for goods and services. The characterisation of money as a generalised purchasing power or a bearer of options underscores the autonomy it provides. The proprietor of a good or service is not obligated to procure supplies from their trading partners; instead, they can utilise their money to acquire goods from those offering the most advantageous

terms. Money can only operate effectively if it preserves a relatively stable purchasing power. If a dollar exhibits erratic purchasing power, it is prone to engender confusion in commerce.

1.3.3 Money as a Standard of Deferred Payment

The third function derives from the initial two functions of money. Contemporary economic systems necessitate a substantial volume of contracts, predominantly those pertaining to the payment of principal and interest on debt, wherein future payments are denominated in monetary units. Some contracts have durations of only a few days or months, while many extend beyond ten years. Additionally, numerous contracts, aside from debts, are fixed or semi-fixed in monetary terms, such as dividends on preferred stock, long-term leases on real estate and other properties, and pensions. Money serves as an acceptable standard of deferred payments solely when it preserves a stable purchasing power over time. An appreciation in the value of money adversely affects those obligated to pay fixed sums while benefiting recipients of such amounts. Conversely, depreciation in the value negatively impacts those set to receive fixed sums and alleviates the burden on payers.

1.3.4 Money as a Store of Value

Once money is utilised as a unit of value and a universally accepted medium of exchange, it will be extensively employed as a store of value. Money serves as an effective store of value for addressing emergencies and particularly for settling debts denominated in monetary terms. However, this does not imply that money has consistently functioned as a stable and entirely satisfactory store of value. Its efficacy is contingent upon the constancy of its purchasing power. Money is not the sole store of value; this function can be fulfilled by any valuable asset. Value can be preserved for the future through short-term promissory notes, bonds, mortgages, preferred stocks, household furniture, real estate, land, or other valuable goods. The primary advantage of these alternative assets as stores of value is that they typically generate income through interest, profits, rent, or utility, and may also appreciate in monetary value. Conversely, these assets possess specific disadvantages as stores of value, such as;

- They occasionally incur storage expenses;
- They may diminish in monetary value;
- They possess lower liquidity to varying extents, as they are not widely recognised as currency.

Occasionally, rapid conversion to cash results in a depreciation of value. Individuals and enterprises possess the autonomy to select the modalities for storing their value, determining the ratios of monetary versus non-monetary forms they will maintain. They may opt to modify these allocations periodically to attain what they perceive as the most advantageous proportions, guided by considerations of income, security, and liquidity. These choices are shaped by an individual's anticipations regarding future price movements. Classical economists overlooked the role of money as a store of value, and Neoclassical economists paid less attention to it. It was Keynes who highlighted the importance of money's function as a lasting store of value for economic policy and analysis.

The primary functions of money can be encapsulated as follows:

Money pertains to four functions. A medium, a metric, a criterion, a repository; This does not provide a comprehensive understanding. We may increase transferability further.

1.4 TYPES OF MONEY

Money can be categorised based on several criteria, as outlined below;

1.4.1 Based on the Source: Inside Money and Outside Money

The concept of inside and outside money was introduced by Gurley and Shaw. **Inside Money:** This refers to the currency generated by the private sector. When commercial banks acquire assets and generate money, it is termed inside money, created in relation to private debt.

- **Outside Money**: This refers to currency supported by foreign and government securities, devoid of any corresponding debt. Monetary assets originating from government procurement of goods and services or transfer payments are classified as outside money. An example of outside money is gold coins issued by the government. Variations in government budgetary expenditures, taxes, and transfer payments will also affect the quantity of outside money.

I.4.2 Based on the materials utilized:

- **Commodity Money**: When the nominal value of such currency corresponds to the intrinsic metal content, it is referred to as standard money, full-bodied money, or full-weight money.
- **Token Money**: This is representative currency, wherein its nominal worth exceeds the intrinsic value of the metal it comprises.

- **Subsidiary Currency**: This currency is utilised for minor transactions. The coins are composed of lesser metals and serve as limited legal tender.

1.4.3 Based on the Paper

- **Representative Paper Money:** It is entirely supported by gold and silver reserves.
- **Convertible Paper Currency**: This form of currency is entirely convertible into standard coinage and lacks any backing of gold or standard coins.
- **Inconvertible Paper Money:** This form of currency cannot be exchanged for standard coins and lacks backing by metal or conventional coins.
- **Fiat Money**: This is a form of representational currency that is non-convertible. It is issued by government decree and is often introduced during times of crisis.

1.4.4 Based on Its Nature

- **Money Proper:** It denotes the tangible means of exchange that circulates throughout the economy.
- **Money of Account**: This sort of currency involves the maintenance of an account pertaining to assets and liabilities. It represents the monetary form in which debts, price contracts, and general purchasing power are articulated.

1.4.5 Based on Law

• **Legal Tender Money**: Currency recognised by the public and government as an acceptable medium of exchange, possessing governmental endorsement. All banknotes and coins issued by the government and the central bank constitute legal tender money.

• **Limited and unlimited Legal Tender Money**: Limited legal tender money refers to currency that individuals cannot be compelled to accept beyond a legally established threshold. In India, 50 paisa coins are legal tender only up to Rs. 10, while smaller coins are valid up to Rs.1. Unlimited legal tender, conversely, is currency that must be accepted without any legal restrictions. In India, paper notes of Rs.5, 10, 20, 50, 100, and 500 are classified as unlimited legal tender.

• **Non-Legal Tender Money (Optional Money):** This category of money, lacking legal endorsement, is referred to as optional money. It is predominantly utilised in commercial transactions, such as cheques and bills of exchange.

1.5 POST-WAR CONTROVERSY IN THE DEFINITION OF MONEY AND MONEY SUPPLY

In the post-war era, the interest in currency is heightened by inflation and unemployment rates, prompting a resurgence of monetary policy. Contemporary economists prioritise elucidating monetary assets, which encompass time and savings deposits, treasury bills, and short-term commercial papers that can be converted into currency and demand deposits. However, in terms of liquidity, money remains paramount. These assets are interchangeable. The amalgamation of monetary and asset structures can be articulated in terms of both flows and stocks. The functions of money can be categorised into three sequential stages:

a. The transition from a barter economy to a commodity money system characterised by non-interest-bearing currency.
b. The substitution of commodity money with credit money that does not accrue interest.
c. The substitution of non-interest-bearing credit currency with interest-bearing credit currency.

The substitution of barter with commodity money can be considered a social innovation. A segment of society's capital assets is converted into a medium of exchange, bestowing an intangible worth upon money users.

Prof. Harry Johnson asserts that the utility yield of money ought to be incorporated into the definition of income. The replacement of non-interest-bearing credit money with commodity money enhances societal wealth. This transition liberates real resources that were previously constrained by the medium of exchange, allowing for reinvestment in the production of goods and services. There exists no substantial distinction between INSIDE and OUTSIDE money, as both are non-interest-bearing and both incur competitive interest obligations. The shift from money as a medium of exchange to money as a store of value has sparked a discourse among monetary theorists. This discourse stems from the acknowledgement of the interchangeability between money and various alternative financial assets, including government debt, as well as between money and credit offered by financial institutions in developed economies. It raises the pivotal question regarding the significance of the money supply in monetary theory and policy. However, unless the demand for money can be demonstrated as a stable function of several key variables, the money supply must be considered a secondary and insignificant factor in the elucidation and regulation of economic activity.

In "Money in a Theory of Finance," Gurley and Shaw analyse the function of finance, particularly Non-Bank Financial Intermediaries, in economic development. They assert that

genuine economic development is linked to a process of financial advancement, wherein primary securities diversify and financial intermediaries expand. Non-bank financial intermediaries provide liabilities that closely resemble money, and their proliferation typically diminishes the demand for money.

In his General Theory, Keynes stressed that in a monetary economy, consumer behaviour is predicated on future expectations and is connected to the demand for money, money hoarding, and interest rates. Patinkin focuses on the Classical Dichotomy, which distinguishes between a real theory for relative prices and a monetary theory for the overall price level, treating them as distinct entities. To ascertain the relative price level, the introduction of money is unnecessary. Conversely, determining money prices does not require knowledge of relative prices.

1.6 THE RECONCILIATION

How is reconciliation to be achieved? The Classical assertion that an augmentation in the money supply will elevate prices proportionately, thereby rendering relative prices independent of the money supply, is to be upheld? This specific Classical assertion is technically referred to as the neutrality of money. If money is neutral, an increase in the money supply will solely elevate the price level without altering relative prices and interest rates.

The introduction of the Real Balance Effect resolves the classical contradiction by necessitating the inclusion of money in discussions of relative prices while maintaining that the system's real equilibrium remains unaffected by the money supply. This represents Patinkin's resolution, though it has not garnered universal acceptance. In scenarios limited to equilibrium, the Real Balance Effect may be disregarded. It should be viewed not as an essential component of general equilibrium theory but rather as relevant to the analysis of monetary stability. The Real Balance Effect implies the absence of Money Illusion. Professor Cliff Lloyd contends that price level stability can be achieved without invoking the Real Balance Effect, merely by positing a finite money supply and an unspecified desire among individuals to hold money. Nonetheless, this scenario does not yield the classical neutrality of money.

Gurley and Shaw have examined the circumstances in which currency is supported by foreign and governmental assets. In the case of external money, there exists no associated debt. When currency is represented by gold coins, the intrinsic worth of these coins, and consequently the wealth, will fluctuate inversely with the price level.

In the context of Inside Money, when prices increase, the individual possessing a dollar note experiences a decline in wealth, whilst a person indebted to the community's wealth gets wealthier.

Gurley and Shaw assert that when the money supply comprises both inside and Outside money, the neutrality of money is invalidated, as it results in alterations to relative prices and interest rates. Conversely, if the money supply consists solely of Outside money, a modification in the price level can maintain the real value of the Outside money without affecting any other real variables.

In a scenario where only Inside money exists, monetary neutrality prevails as neither relative price nor interest rates fluctuate. However, in reality, the coexistence of two forms of currency results in a lack of monetary neutrality.

The Keynesian Theory of underemployment faced criticism from the introduction of the Pigou Effect. This critique is predicated on the assumption that a decline in the money price level enhances wealth by augmenting the real value of money. The argument presupposes that the money in circulation is outside money. However, if money is generated against debt, referred to as inside money, the conclusion does not hold. As the price level decreases, some individuals may become wealthier while others may become poorer; nonetheless, the overall economy does not experience an increase in wealth, thereby negating the presence of the Pigou Effect and, consequently, failing to discredit the Keynesian perspective on underemployment. From the perspective of realistic monetary theory, the Inside Money model is more accurate than the Outside Money model. In contemporary monetary systems, money is predominantly generated in relation to various forms of debt. Similar to the Patinkin model, individuals perceive government debt as an asset rather than a liability. Nonetheless, the government must service its debt through taxation. An increase in government debt necessitates a rise in taxation. Consequently, there is no justification for believing that government debt enhances individual welfare or constitutes an asset. The increased significance of deposit money in the contemporary monetary system renders Inside Money more critical than Outside Money in the context of monetary theory. In the context of Inside Money, the economy can be divided into the real and monetary sectors. However, the foundation of the theory of monetary equilibrium and stability should be the substitution impact rather than the wealth effect resulting from a change in real balances.

Theoretical Discourse on the Definition of Money and Money Supply In his examination of development in "Monetary Theory and Policy," Prof. H.G. Johnson identifies four principal schools of thought regarding the definition of money supply.

1.7.1 Conventional Approach: This is the earliest recognised method for defining money. According to this perspective, the primary function of money is to serve as a medium of exchange. Money is defined by its unique role in facilitating transactions. Anything can be considered money if it is widely accepted by the community as a means of payment. The crucial element is the general acceptability of items as payment. Consequently, a nation's total money stock consists of all items that are generally recognised as means of payment, which includes only currency and demand deposits in commercial banks as components of the money supply.

1.7.2 M = C + DD where C =Currency and DD=Demand Deposits

This methodology omits time deposits in commercial banks and postal savings bank deposits, as these must be transformed into either currency or demand deposits prior to expenditure. Other assets, such as short-term treasury securities, prime commercial papers, and savings bonds, exhibit high liquidity, as they can be readily converted into cash or demand deposits with minimal loss or risk. All other assets may be classified as money if they are initially converted into currency or demand deposits. The Chicago Approach, associated with Professor Milton Friedman, encompasses a broader definition of money that includes commercial bank time deposits and fixed interest-bearing deposits. Economists adhering to this approach provide two justifications for incorporating deposits held with commercial banks into their definition. Firstly, money is considered to exhibit the highest correlation with income.

Secondly, money encompasses all assets that serve as perfect substitutes, with time deposits being nearly equivalent to currency and demand deposits. In India, time deposits can be liquidated when the deposit holder requires funds, provided they are willing to relinquish a minimal portion of the accrued interest. From this perspective, money can function as a temporary repository of purchasing power when maintained in the form of cash, demand deposits, or any asset closely resembling currency, referred to as near-money assets. This definition of money includes currency, demand deposits, and time deposits.

M = C + DD + TD, where TD = Time Deposits.

1.7.3 Chicago Approach

The Chicago approach is given by Prof Milton Friedman and other economists of Chicago. They defined money in a broader sense by incorporating the concept of purchasing power. Money performs the role of a temporary abode of purchasing power as it is held in the form of currency, commercial bank deposits and so on, which is like liquidity. Their opinion is that all these time deposits are easily convertible into cash; so, they must be included in the definition of money. Due to this, their approach conflicts with the Conventional approach. They have given two reasons for this.

National income is highly correlated with income and changes in the money supply also bring changes in the national income. It will satisfy the empirical criterion of keeping monetary theory in better condition.

Commercial bank time deposits are close substitutes of currency. These are available on demand very easily (timeless and costless ease).

Time deposits are not perfect substitutes; otherwise public would never prefer holding non-interest-bearing currency or demand deposits to holding fixed bearing time deposits.

According to this approach, money will include

M_2 (money Supply) =M_1 (Cash + Demand Deposits) + Time Deposits.

Gurley and Shaw Approach: Prof J.G. Gurley and E.S. Shaw have given their views on money in the Book entitled Money in a theory of Finance. According to this approach, currency and demand deposits are just two among the many claims against the financial intermediaries. They have emphasized the close substitution relationship between currency, demand deposits, commercial bank time deposits, savings bank deposits, credit institutions, shares, and bonds, etc, all of which are regarded as alternative liquid stores of value by the public. This approach is superior to the Chicago approach because like the Chicago approach in which currency demand deposits and time deposers all have been lumped together but this approach refuses to lump the currency bank deposits and close substitutes together. Instead, it circumvents the problem of making arbitrary assumptions regarding the degree of substitutability by assigning weights to different assets on the basis of their closeness to means of payment. The approach adopts the substitutability criterion to define money as a weighted sum of currency, demand deposits and their substitute. Currency and demand deposits have been given Unit Weight; the assets that are completely UN related to currency and demand deposits have been given zero. The assets that are imperfect substitutes of currency and demand deposits have been given a weight between zero and one.

To elucidate this, consider the following example: at a specific moment, the entire assets of the public are as follows:

Suppose Rs. 1,000 crores in cash, Time deposits valued at Rs. 2,000 crores, Liabilities of non-bank financial intermediaries amount to Rs. 2,000 crores, while the total assets of the public are Rs. 5,000 crores. Assume the degree of substitutability between time deposits and currency is 0.75, and between currency and NBFI liabilities is 0.50. Currency will be assigned a weight of one due to its complete substitutability.

We can now compute the weighted sum of the money supply: Rs. 1,000 (cash) + Rs. 2,000 (time deposits) x 0.75 + Rs. 2,000 (liabilities of NBFTs) x 0.5

= Rs. 1,000+Rs.1,500+Rs.1,000=Rs.3,500

According to the Gurley and Shaw approach, the actual money supply will be Rs. 3,500, rather than Rs. 5,000.

M = C + DD + TD + SB + S + B.

SB = Savings Bank Deposits, S = Shares, B = Bonds

1.7.4 The Central Bank Approach/ Credit Approach: This approach, articulated by central banking authorities, provides the most comprehensive perspective on money. It encompasses individuals primarily focused on monetary aspects rather than monetary theory per se. This school is divided into two primary categories.

a) **The First Group of economists** underscored the significant substitutability between money and bank credit. They contend that bank credit and other credit forms serve as close substitutes for money. They advocate for a more expansive definition of the total amount of credit outstanding. The total credit available is paramount. The quantity of money exerts influence primarily because bank credit constitutes a segment of total credit. This is a quantifiable concept, as the extent of credit expansion can be evaluated and its ramifications thoroughly analysed.

b) **The Second Group** is represented by the perspectives articulated by the Redcliffe Committee, led by Professor R.S. Sayers. They posited that both the money supply and its velocity of circulation are quantifiable concepts, as economies can optimise their monetary resources by substituting credit without restriction. For instance, one can purchase a television, a motorcycle, or a mobile phone using either cash or a credit card. This practice suggests a decline in the velocity of circulation.

The Redcliffe Sayers thesis posits that the money supply is of negligible importance; rather,

the liquidity state of the economy is paramount. This liquidity state is contingent upon the collective borrowing capacity of the community. They assert that "Money is a state of mind," indicating that liquidity levels are influenced by individuals' perceptions of their access to funds, whether through income, asset liquidation, or borrowing. The ease with which money can be procured affects the sentiments of consumers and investors, fostering purchases and investments that might otherwise be deferred in a strained liquidity environment. As liquidity is fundamentally a psychological construct, it eludes precise measurement.

Professor W.T. Newlyn has proposed a neutrality criterion for defining money. He asserts that only those assets should be incorporated into the definition of money that satisfy the following two conditions: when an item is utilised for making a payment.

A) Its overall supply within the economy is unaffected;

B) The overall supply and demand for loanable funds, and consequently the interest rate, remain unchanged while the asset is utilised for transactions.

Only currency and demand deposits fulfil the neutrality condition; thus, only these should be incorporated into the definition of money supply. The preceding discussion on the concept of money reveals a lack of consensus among economists over its nature, with no prospect for resolution in the near future. They contend that the resemblance between money and alternative financing methods warrants a more expansive definition of money, whether quantifiable or not. Money is equated with credit provided by diverse sources. This perspective encompasses currency, bank credit, time deposits, credit from non-bank financial institutions, and credit from informal agencies.

M=C+DD+TD+NBFI+CUA

NBFI = non-bank financial institutions.

CUA=Credit from Unregulated Entities

1.8 EMPIRICAL EVIDENCE OF THE DEFINITION OF MONEY AND MONEY SUPPLY

numerous economists contend that the challenge of accurately defining money can only be addressed by empirical research, as it constitutes an empirical issue. The topics for discussion are as follows:

Firstly, are time deposits sufficiently comparable to demand deposits and money to be considered the same asset? If the answer to the above question is affirmative, then secondly, are the liabilities of other financial institutions sufficiently analogous to those of commercial

banks to allow them to be regarded as equivalent assets? What is the definition of a sufficiently close substitute? If the focus is on the definition of money, the primary issue has been the identification and quantification of a stable demand for money function. To assess the degree of substitutability between money and near-money assets, two primary techniques are typically employed.

Economists like (Feige, Hartley, T.H. Lee, etc.) have employed the cross elasticity of demand between money and other liquid assets as an indicator of their substitutability. A negative cross elasticity between money and a specific near-money asset signifies that the asset serves as a substitute for money, with a higher absolute value indicating a closer substitution. Empirical findings are inconsistent; some economists, including Feige, Hartley, and Kichine, have not identified any substitution relationship between money and near- money assets, particularly bank time deposits and liabilities of non-bank financial institutions, when analysing U.S. data. Conversely, T.H. Lee and others, utilising the same methodology on U.S. data, have concluded that "savings and loan shares and other assets are close substitutes for money."

The second empirical technique proposed by Professor Milton Friedman outlines two criteria for selecting assets to be incorporated into the definition of money supply.

i) The total assets should have the strongest association with different aggregates of assets relative to national income.

ii) A greater association of some assets with monetary income than with any individual components.

Friedman, Meiselman, G.S. Lumas, and others have employed this method in the United States and concluded that time deposits in banks are nearly equivalent to money, advocating for their incorporation into the money definition. Conversely, Tunbertake and Torson, utilising the same methodology and data, have reported divergent findings, indicating that time deposits do not serve as substitutes for money and that their inclusion in the money definition yields no benefit.

1.10 SUMMARY

This unit elucidates the concept of money and money supply through the various functions performed by money. It delineates the different approaches and classifications of money. Additionally, it provides a comprehensive analysis of pre- and post-war endeavours to define money, supported by empirical evidence. The classification of money based on source,

materials, nature, and legality enhances our understanding of the concept in a broader context.

In conclusion, it is evident that at the current stage of discourse regarding the right definition of money, it is impossible to provide a precise and universally accepted definition. The student must adhere to the conventional definition of money. However, theoretically, there exists no rigid demarcation between money and near-money assets.

However, this does not suggest that policymakers are functioning in isolation. It merely highlights the hard reality that there is no singular method for defining or measuring the money supply. Various statistical series of money supply are calculated by central banks in both developed and developing nations to accommodate specific circumstances. Central banks permit considerable disaggregation and utilise a range of monetary aggregates based on the intended application of the data.

Studying the methodologies employed to quantify money stock in India is essential. The necessity for multiple measurement approaches arises from the inadequacy and potential misleading nature of relying on a singular money stock metric. In light of this, the Reserve Bank of India (RBI) commenced the computation of various statistical series of money stock tailored to specific circumstances.

1.11 QUESTIONS FOR PRACTICE

A. Short answer type questions

Q1. Give the limitations of the barter system.

Q2. Write a note on various types of money.

Q3. Explain the Store of value function of money.

Q4. What is the conventional approach?

Q5. Explain the credit approach.

B. Long answer type questions

Q1. Differentiate between the basic function of money and the specific function of money.

Q2. How does the Conventional Approach to the definition of money differ from the Chicago Approach?

Q3. Explain in detail the four approaches to the definition of money.

Q4. What is the basis of theoretical debate on the definitions of money? Give empirical evidence on support of it.

1.12 SUGGESTED READINGS

- Ascheim, J and Hsiech, C (1969): Macroeconomics: Income and Monetary Theory. Columbus, Orio, Charley E. Merrill.
- Khanna, P: Advanced Study in Money and Banking: Theory and Policy Relevance in the Indian Economy (2005); Atlantic Publishers, New Delhi.

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

UNIT 2: DEMAND FOR MONEY, THE CLASSICAL QUANTITY THEORY OF MONEY, THE KEYNESIAN APPROACH, FRIEDMAN'S THEORY

Structure

2.0 OBJECTIVES

After going through this lesson, you will be able to learn

- The Classical Approach of Quantity Theory of Money
- The Cash Balance Approach or Cambridge Equations
- Friedman's restatement of the quantity theory of money
- Keynesian Approach, Liquidity Trap
- Maintenance of wealth
- Active and Passive balance

2.1 INTRODUCTION

Individuals and corporations require money because, in an economy, they engage in the exchange of products and services (including factor services) in the monetary market and then utilise money to procure the offerings of others. This essentially involves utilising money as a medium of transaction. Upon completing this unit, you will understand that in Keynesian Theory, money transcends its role as only a medium of exchange and serves as more than just a mechanism for facilitating transactions in the marketplace. Individuals also seek funds for speculative endeavours and as a safeguard against unanticipated events. The categorisation of money demand into transactional, precautionary, and speculative components is crucial to the theory proposed by Keynes to elucidate interest rates. Consequently, there are three primary methodologies regarding the demand for money: the Classical Approach, the Keynesian Approach, and the Post-Keynesian or Modern Approach.

2.2 THE CLASSICAL APPROACH - THE TRADITIONAL QUANTITY THEORY OF MONEY

The initial formulation of the quantity theory, which seeks to connect the worth of money or price level with the circulating quantity of money, can be attributed to the mercantilist authors of the 16th century. Jacob Viner asserts that the rudimentary form of the quantity theory is evident in the works of Malynes, Hun, R.B. Cotton, Henry Robinson, and Bodin. During this period, there was a substantial migration of silver onto the European continent from the New World. It led to an augmentation of the money supply in Western European nations. Writers like as Angell and Monroe, however, dispute the assertion that the doctrine began with the 16th century Mercantilists. The initial formulation of this thesis is attributed to the British philosopher John Locke (1691). David Hume articulated it in a more sophisticated and detailed manner in 1752. He considers the price level to be a function of the money supply. He stated, "If four-fifths of all the currency in Great Britain were to be annihilated overnight, would not the value of all labour and goods decline correspondingly.

The early proponents of quantity theory posited a proportional link between the money supply

and the price level. They also acknowledged that technical advancements inside a nation might enhance production levels and that the velocity of money circulation fluctuates in accordance with alterations in the country's monetary institutions.

To quote A.N. Hansen.

"....it could not be true that P (price level) would vary in direct proportion to M (the money supply). The price level P was however thought to very secularly in relation to the money supply M in a fairly dependable and predictable manner."

Professor Irving Fisher articulated the argument in a refined manner in his 1991 publication, 'The Purchasing Power of Money.' Fisher articulated the correlation between M and P as follows: "The quantity theory posits that an increase in the number of dollars, whether through renaming coins or augmenting coinage, will result in a proportional increase in prices." Fisher's analysis differentiated between bank deposits and standard currency; secondly, he articulated the relationship between M and P through an algebraic expression, represented as **MV = PT.**

M = total quantity of money, i.e. coins and banknotes;

V = velocity of money circulation.

P = general price level,

T=total volume of transactions

Since PT denotes the aggregate value of transactions and MV signifies the disbursed monetary amount, the equation MV = PT briefly asserts that the disbursed amount is equivalent to the received amount. Therefore, the exchange equation is simply a tautology.

The overall price index

(P) =*MT* /*T* and the value of money

***I / P= T/* MV**

suppose M = Rs. 10 crores, V = 3 and T = 5 crores

then MV = 10 × 3 = Rs. 30 crores

and (P) = MV/ T = 30 crores/ 5 crores = 6 crores

I/ P = 5/ 30 1/6 crore

The equation MV = PT is termed as the transactional cash equation, as M denotes the primary money (coins and banknotes). Credit money or demand deposits with banks influence transactions similarly to currency. Fisher consequently expanded the cash transactions equation

to encompass bank deposits as well. The extended equation of exchange can be articulated as

MV + M'V' = PT.

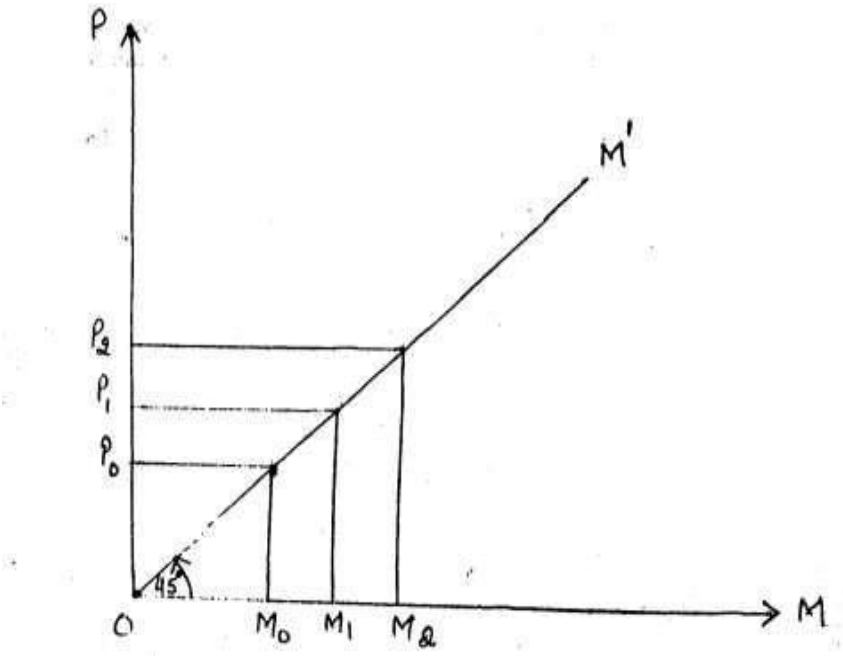
M' = quantity of bank money

V' = velocity of circulation of bank money

The pricing level is defined as

P = (MV + M'V)/ T or the value of money is **I/P=T/MV+MV'** If V, V', and T are constant, and the ratio of M to M' is unchanged, the price level will vary directly with the quantity of money and inversely with the value of money.

A doubling of M leads to a corresponding doubling of the price level, hence halving the value of money compared to its previous state. The correlation between M and P can also be explained by fig1. Figure 1 illustrates equi-proportional alterations between M and P. As the money supply expands from M0 to M1, the price level escalates from P0 to P1. As the money supply function OM intersects a 45-degree line, M0 to OP0 indicates that OM1 equals OP1. Consequently, the change in money, ΔM, is equivalent to the change in price level, ΔP, thus the proportional change in money (M1 - M0)/M0 is equal to the proportional change in the price level (P1 - P0)/P0. When the money supply rises from M1to M2 and the price level rises from P1 to P2, the proportional change in money is equivalent to the proportional change in the price level**.** figure 1



2.2.1 Assumptions of Fisher's Model

The overall price level (P) is a passive variable. It is influenced by other elements or variables and does not influence them.

The bank money (M') maintains a constant relationship with M. Fisher states, "under any conditions of industry and civilisation, deposits tend to maintain a constant ratio to the money in circulation." Consequently, the incorporation of M' typically does not disrupt the quantitative relationship between money and price.

V, the velocity of money circulation, remains constant and is influenced by subjective factors such as the condition of banking and financial institutions, payment methods, demographic growth and composition, central bank credit policy, and government policies regarding taxation and public expenditure. Likewise, V' remains constant and is independent of M'.

The transaction volume T is presumed to be constant and independent of M in the short term. The magnitude of T is contingent not on M, but rather on the state of technology, the amount and quality of productive inputs, the degree of worker specialisation, the extent of integration or disintegration of business units, and the level of employment.

Fisher implicitly presupposes the complete use of all resources within the economy i.e., full employment.

Fisher's theory presupposes a highly monetised economic system in which all transactions occur exclusively through money, with no presence of barter exchanges.

Currency functions solely as a medium of exchange, with no portion being retained by individuals.

Based on these assumptions, Fisher constructed a direct and proportional relationship between the money supply and the price level.

2.3 EVALUATION

Numerous scholars have criticised the quantity theory of money on the following grounds.

1. **No assertions are supported by the exchange equation:** The basic principle of MV = PT states that total spending on goods and services equals sales value. The identity between MV and PT makes this equation useless for practical or analytical purposes.
2. **Oversimplified Assumptions**: The hypothesis assumes constant T, V, V', and M-M', which is unlikely. These elements fluctuate over short and long periods. Since business conditions, payment habits, consumer and producer expectations, and banking restrictions change, T, V, and V' cannot be assumed to be consistent.

3. **Variable Independence**: The transactions model assumes that the equation of exchange variables is independent, therefore P changes proportionally to M. P is affected by V, V', and land T, therefore the price level may change more or less than proportionally to money changes. In the Great Depression (1920–33), the price index fell largely due to a fall in money circulation rather than a money supply contraction. Transaction volume affects addition P. In affluent times, T may raise prices, and vice versa. Therefore, it is incorrect to assume that money quantity determines price level or value.
4. **Technical Inconsistency**: The technical mismatch in Fisher's exchange equation limits its significance. M is the amount of money at a given time, and V is its circulation rate. Unless M represents an average money supply, George N. Halm considers multiplying these two no comparable quantities illogical.
5. **P is not passive**: This research mistook P for a passive variable. Pricing increases financially benefit entrepreneurs. Thus, transaction volume may rise, increasing money circulation. P can affect all Fisher's exchange equation variables.
6. **Consistent proportion between M primes**: According to Fisher's hypothesis, a 50% increase in currency requires a 50% increase in demand deposits. This assumption seems unlikely. In times of strong commercial activity, currency and demand deposits rise, but not proportionally. A depression causes widespread financial sector confidence erosion. Thus, bank deposits and currencies may fluctuate oppositely.
7. **The disregard for V- variation: The** idea ignores V size fluctuations and their causes. V fluctuates across a country's business cycle. The hypothesis fails to explain the expenditure ratio and how spending motivations affect money circulation.
8. **Insufficient Currency Valuation Explanation**: J.L. Hansen objects that Fisher's theory explains money value or price level variations. It doesn't explain how money's value is set.
9. **Counter-quantity theory causality:** Lord Keynes proposed the quantity theory of causality, which contradicted Fisher's M-P relationship. M does not necessarily determine P, he says. M and P can also be viewed differently. The monetary authorities sometimes boost the money supply to reduce monetary tightness after a price hike. Actual price level determination is neglected. The premise is that the equation of exchange variables fully controls the price level.

Keynes' main issue is that the theory ignores income, expenditure, investment, and saving, which drive prices. Benham believes population growth drives prices. With a steady total output, population growth reduces per capita output, raising prices. Fisher's transactions model contradicts this assumption. No M-P Proportionality Money supply and price level have a high

proportionality relationship. Criticised by Keynes and Samuelson, this relationship relies on two unreasonable assumptions. Firstly, total spending initially depends on money. Secondly, prices follow spending.

When money is only used for trading and no part of it is saved, the initial assumption holds. The idea that the money supply is used just for transactions is unreasonable. Individuals' liquidity tendency may grow so great that they absorb all money supply increases. Second, the proportionate link between total expenditure and pricing assumes constant total production, which is unlikely. If connected with output growth, an increase in money supply will limit price increases due to increased product availability.

Only when output remains constant despite a higher purchasing medium do prices rise**.**

2.4 CRITICISM OF QUANTITY THEORY OF MONEY

1. **Static Theory**: MV, P T represents the final equilibrium position, allowing no change in P size if M remains constant. It does not explain the causal mechanism that sets the equilibrium price level or the system changes that led to it.
2. **Oversight of Short-Run Equilibrium:** Fisher's transactions method doesn't explain short-term prices. Fisher agreed that V and T may not be constant over short periods. As the economy reaches long-term equilibrium, these variables stabilise. Long-term equilibrium is untrue.
3. **Inability to Explain Price and Production Cycles** – Patterns show that prices have not risen despite money supply expansion during economic depressions. This money-price relationship is caused by a considerable fall in money velocity (V), which more than offsets the rise in money supply. Due of this, prices have fallen during downturns. Due to increased liquidity preference, the price level has fallen without a money supply reduction in some cases.

   Even with strict monetary and credit restrictions, prices rise rapidly during economic expansion. Fisher's quantity theory doesn't help design anti-cyclical monetary policy.
4. **Failure to Explain Relative Prices** - Comparative pricing changes is not fully explained by the hypothesis. P may not vary, but food and clothes prices may burden society.
5. **The Unilateral Theory** - The valuation of money focusses on money supply rather than demand, which is assumed to be constant.
6. **Independent Theory Not Required** - The value of money is determined by demand and supply dynamics; hence, a theory with many unrealistic assumptions is unnecessary. There is no direct correlation between M and P. The quantity theory states

that money supply and price level are proportionate. Money alone cannot raise prices unless it affects communal spending; K. Wicksell explained that money supply increases bank liquid assets, which affects expenditure and pricing. They increase their business loan operations using this cash. Bank loans circulate capital, raising expenditure and prices.

7. **Poor Integration Distinction between Price and Monetary Theories:** Keynes says aggregate demand and output theory unify these two essential economic concepts. Money supply increases aggregate demand, which may raise the price level, depending on output elasticity. This relationship is ignored by the quantity theory.
8. **Too Little Theory:** Mrs Joan Robinson believes that money supply changes are crucial because they affect interest rates, hence any monetary theory that ignores interest rates iswrong. According to J.L. Hansen, the Quantity Equation represents a static state of equilibrium at a single time, either before or after a change, and defines the relationship between M, V, P, and T.

2.5 THE QUANTITY THEORY OF MONEY - THE CASH BALANCE APPROACH OR CAMBRIDGE EQUATIONS

The Cambridge Approach sought to integrate the theories of money and prices. The monetary value theory is merely a specific instance of the broader value theory. Consequently, the value of money must be ascertained based on the demand and supply of currency. The Cambridge Approach directly addresses the various factors behind the want for money among individuals. Money is undoubtedly required to facilitate transactions as it serves as an effective medium of exchange; however, its primary demand arises not from individuals seeking to exchange it for goods and services, but from those desiring to retain it as a store of value, thereby ensuring the smooth execution of business transactions and gaining a competitive edge in negotiations. Furthermore, maintaining liquid assets may assist an individual in addressing unexpected emergencies. The fundamental reasons for maintaining money pertain to transactional activities and a sense of prudence. Consequently, at any given moment, the community's aggregate demand for cash balances does not equate to the whole money supply in circulation but rather corresponds to a certain portion of the yearly real national income. Marshall posits that the demand function for money can be articulated as.

M = KY+K'A

M = total supply of money, which consist of currency and demand deposits with the bank;

Y = money income

K = proportion of money income (Y) which people intend to hold in the form of cash

A = Money value of assets or wealth an

K' = proportion of the total which people tend to hold in the form of cash

The Marshallian equation was modified and re-stated the money demand function as

M = KY.....**(i)**

The money income of the community is equal to the value of the total output, i.e.

Y = PO..... **(ii)**

Substituting for Y in eq (i), the Marshallian equation can be stated as
M = KPO

or,

P=M / KO..... **(iii)**

Thus, it is K and not M that is of profound significance in this equation because it is the value of K that influence the price level.

The Marshallian cash balance approach was further developed by A.C. Pigou and it was

expressed as:

P= KR/ M..... **(iv)**

P = the value of money, rather than the price level.

P= The inverse of P in Fisher's equation.

R=total real income.

K = fraction of actual income retained by individuals as cash,

M = entire quantity of legal tender or money.

The whole money supply, however, is not exclusively in the form of legal tender. A portion of funds is retained as cash, while the remainder is maintained as bank deposits. Pigou reformulated the Cambridge equation as follows:

P=KR / M [c + h(1-c)] (v)

Where C is the proportion of cash maintained in the form of legal tender, so (1-c) denotes the proportion of cash retained to explain fluctuations in the value of money. Pigou has prioritised K over M. In his equation, the value of money is dictated not by its supply but by the desire for holding cash balances. According to the aforementioned equation proposed by Pigou, the

aggregate demand for currency might be articulated as follows:

P=KR / M [c + h(1-c)] P (vi)

h represents the ratio of legal tender to bank deposits. In equation (vi), K, R, C, and h are considered constants. Pigou's equation represents a rectangular hyperbola or a uniform unitary elastic demand function for money, indicating that a reduction in the purchasing power of money by half results in a doubling of the demand for money, and conversely. The product of P and M remains constant.

The uniform unitary elastic demand function for money is illustrated in Figure 2.
Figure 2

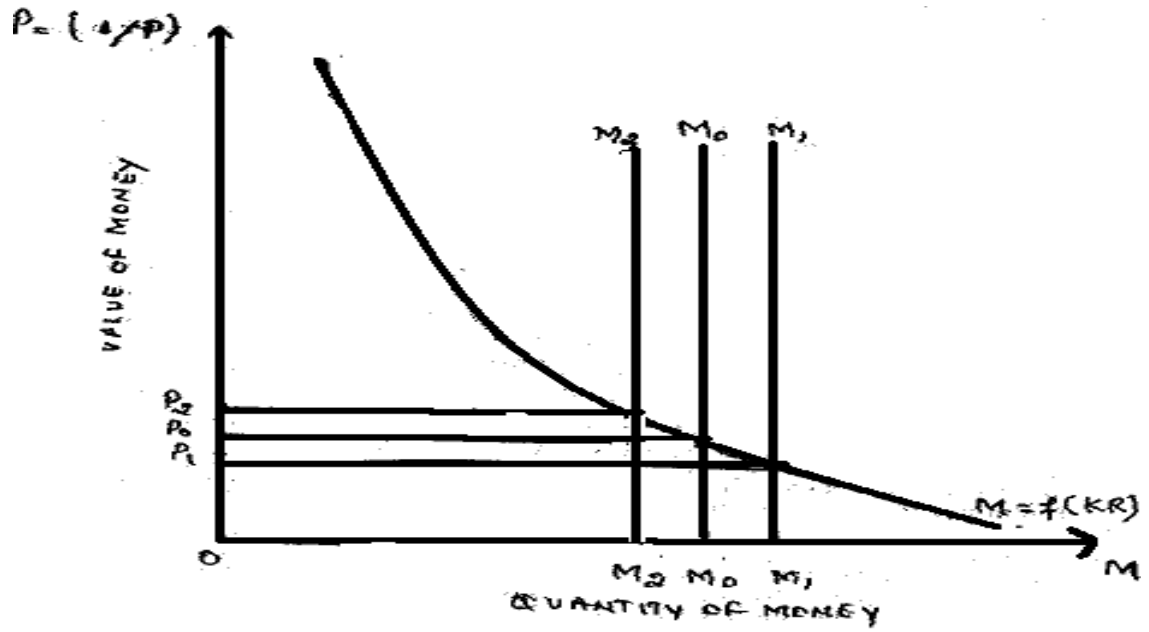


Fig. 2

M in the diagram represents the demand function for money, which is dependent on KR. The negative slope arises because an increase in money holdings necessitates a decrease in its value concerning commodities and services. The curve, like a rectangular hyperbola, asymptotically approaches the two axes without ever intersecting them. According to this configuration of the money demand function, any alteration in the money supply results in an inversely proportional change in the value of money. Assuming the money supply is autonomously decided by the monetary authority in a country, M0, M1, and M2 represent the vertical money supply curves. When the money supply increases from M0 to M1, the value of money declines from P0 to P1; conversely, when the money supply decreases from M0 to M2, the value of money ascends from P0 to P2. Pigou's equation elucidates the rationale behind the value of money and the factors influencing individuals' decisions to retain varying shares of their income in monetary

form. In a period of inflation, when the value of currency diminishes, individuals prefer to retain a reduced fraction of their income in cash, resulting in a decrease in the magnitude of K. Conversely, the community opts to retain a greater share of their income in cash during the depression, as the value of money appreciates under these conditions, resulting in an increase in the magnitude of K. However, Keynes was dissatisfied with Pigou's equation. In the publication "A Tract on Monetary Reform". Keynes developed the equation known as the Real Balance Equation.

$$n = p\,(k + rk') \ldots\ldots\ldots \text{(vii)}$$

Where n = quantity of cash in circulation;

p = price of a consumption unit;

K= quantity of consumption units that individuals opt to retain as cash,

k'= quantity of consumption units that individuals choose to maintain as bank deposits, r = cash reserve ratio of the banks.

The magnitude of r is contingent upon the reserve procedures employed by the banking system, whereas the ratio between k and k' is determined by the banking arrangements and the habits of the populace. If the magnitudes of r' k and k' remain constant, n and p increase and decrease in the same proportion. Keynes asserts that cyclical fluctuations cannot be ascribed to alterations in n or r, but rather to modifications in k and k'.

2.6 THE PRINCIPAL DEFICIENCIES IN KEYNES' REAL BALANCE EQUATION ARE AS FOLLOWS:

2.6.1 The variable (p) does not quantify the overall buying power of money but pertains just to the price level of consumption units.

The equation pertains solely to consumer items and neglects industrial and financial transactions.

As the variable (p) solely quantifies the price level of consumption units, it implies that individuals retain money to acquire consumption products.

Keynes acknowledged that the proportional link between n and p is flawed, especially in the near term, when k, k1, and r may fluctuate due to changes in n. P may vary disproportionately in relation to changes in n, contingent upon the behaviour of k, k1, and r.

Due to these shortcomings in the real balance equation, Keynes relinquished this methodology for money and price in his general theory.

D.N. Robertson is another prominent proponent of the Cambridge approach. He presents the subsequent cash balance equation.

M=K.T. P Or P= M/ KT

P = price level; M= money supply;
T =the quantity of goods and services intended for purchase during a year, reflecting the number of annual transactions.

K is the function of T that individuals seek to control in the form of cash balances. The Robertsonian cash balance equation is often seen as superior to the equations proposed by other Cambridge economists due to its straightforward comparability with the Fisher Approach. Fisher's transactions equation MV = PT and Robertson's equation MP = KT include identical variables when V is regarded as the reciprocal of K, specifically 1/V = K. Fisher posits a direct and proportional link between M and P, assuming V and T remain constant; likewise, Robertson's equation delineates a direct and proportional relationship between M and P, contingent upon the constancy of T and K. The primary distinction between the two methodologies is that Fisher's approach emphasises the expenditure of money, whereas Robertson's approach prioritises the retention of money.

2.7 SUPERIORITY OF THE CASH BALANCE APPROACH

1. **Emphasis on Human Values and Motivations**: The focus on K in the cash balances approach highlights the issue of value and the various human factors that affect the price level.
2. **Informal Procedure**: The monetary price relationship elucidated by Fisher's technique is devoid of a causal mechanism. The Case Balance Approach elucidates how the price level might fluctuate despite a stable money supply. A shift in the community's inclination to maintain greater or lesser cash balances may elevate or diminish the price level, despite the quantity of money remaining constant.
3. **Consideration of Both Money Demand and Supply**: The Fisher method perceives the supply of money as the sole effective predictor of its value, whereas the Cambridge method highlights both the demand for and the supply of money as determinants of its worth concerning the price level.
4. **Appropriate Emphasis on R**: The examination of fluctuations in K provides an opportunity to investigate several significant issues, including as uncertainty and interest rate expectations, which were neglected in the conventional transaction velocity model.
5. **Adequate Elucidation of Cyclical Phenomena**: Marshall has asserted that the variable K

is more pertinent for studying the phenomenon of business swings than the Fisherine. During a depression, as the need for liquidity rises, the value of money appreciates as the price level declines. Conversely, as public distrust in currency arises, the propensity to retain it diminishes, K declines, resulting in a depreciation of money's value and an increase in the price level.

6. **Focus on Revenue**: A.C.L. Day asserts that the Cambridge Approach underscores a significant new aspect. It focuses not on the aggregate value or transactions but on the income level. Considering the money supply and a defined income level, the behavioural alterations in K lead to variations in incomes and prices. Assuming K=0.6, the money demand function (KY) in relation to income is presented in **Table 1 below.**

Table 1 (in Crores of Rs.)	
Y	**KY**
300	180
250	150
200	120
150	90
100	60
50	30

If the money supply is fixed by the monetary authority and is independent of the level of income, the latter is determined by the intersection of inelastic money supply function (*M0*) and the money demand function (KY) as shown in fig. 3

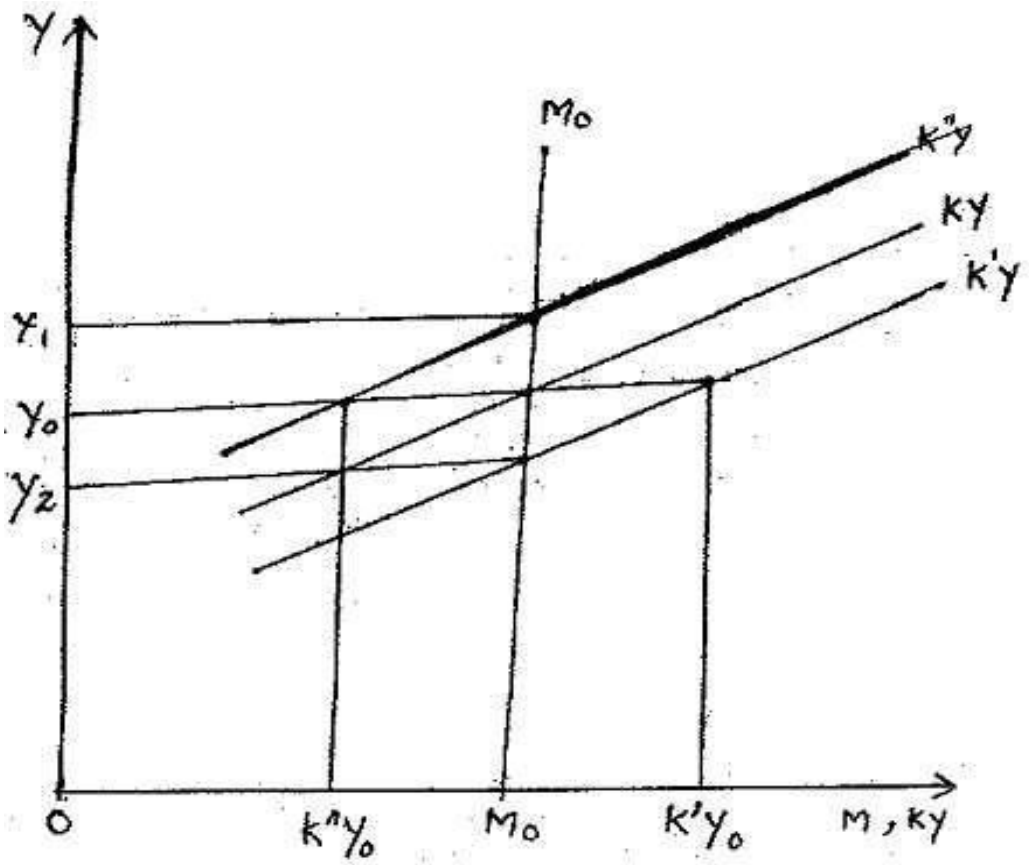


Fig. 3

If the money supply exceeds the demand for money at the Y2 income level, the surplus cash may be employed by society for the increased acquisition of products. This will elevate both income levels and prices until the equilibrium income Y0 is established. If the demand for money exceeds the money supply, individuals may liquidate their holdings of goods to maintain bigger cash balances. Consequently, prices and income decline, and income tends to converge towards the equilibrium level Y0. If K grows, the KY function transitions to K1Y, and at the equilibrium income level Y0, the demand for cash balances exceeds the fixed money supply M0. The money demand function K1Y equilibrates with M0 at a reduced income level of Y2. A reduction in K, resulting in a shift of the money demand function K1Y with the supply at M0, elevates the income level to Y.

2.8 EVALUATION

The cash-balance equation, as a monetary theory, is unable to elucidate the dynamic price behaviour within the economy. It cannot elucidate the cyclical fluctuations in prices. Secondly, the cash-balance equation is flawed as it fails to assess the whole demand for cash balances. It overlooks the asset or speculative desire for cash balances, which often results in

Abrupt and drastic alterations in the community's liquidity preference schedule. By disregarding the significant influence of the speculative motivation on the overall demand for money, the cash balances equation does not elucidate the factors affecting the overall demand for money and, by extension, the value of money. This theory posits that money functions solely as a means of exchange inside the economy. The cash balances equation overlooked the influence of interest rates on the demand for cash balances by disregarding the asset or speculative demand for money. Thus, the equation stays distinct from the entirety of the monetary theory about the interest rate. Thirdly, the equilibrium equation presupposed k and T or Y as predetermined. In the equation, K is influenced by institutional factors considered constant in the near term, but the aggregate output Y is regarded as fixed. Finally, the monetary balances of all demographic groups have been aggregated in the equation. Indeed, individuals' cash balances exhibit varying behavioural patterns, reflecting the impact of significantly diverse underlying causes. Notwithstanding its shortcomings, the Cash Balance Approach has positively influenced monetary theory by addressing the issue of valuing money from a strategic perspective—specifically, the demand for money.

2.9 FRIEDMAN'S RESTATEMENT OF QUANTITY THEORY OF MONEY

The Quantity Theory of Money, which delineated a proportional link between money supply and price level, faced contention following the Great Depression of the 1930s. The theory experienced a resurgence in the late 1950s, regaining professional credibility mostly due to the contributions of new quantity theorists, notably Milton Friedman at Chicago. In 1956, Milton Friedman edited a book titled Studies in the Quantity Theory of Money, to which he contributed an article. "The Quantity Theory of Money - A Restatement," which signalled the resurgence of the quantity theory. At Chicago, Henry Simons and Lloyd Mints, along with Frank Knight and Jacob Viner, indirectly taught and refined a more nuanced and pertinent version of the quantity theory, which was transformed and integrated with general price theory, evolving into a flexible and responsive instrument for interpreting fluctuations in aggregate economic activity and formulating relevant policy recommendations. Friedman asserts that the methodology employed by Chicago economists is theoretical in nature. The crux of the matter is its assertion that money is significant, and any analysis of short-term fluctuations in economic activity is fundamentally flawed and frequently deceptive if it neglects monetary alterations and their consequences, and if it does not elucidate why individuals choose to retain a specific nominal amount of money in circulation. Friedman contends that the quantity theory primarily serves as a theory of demand for currency. It is

neither a theory of output, nor of monetary income, nor of price levels. The demand for money may originate from the ultimate wealth-holding entities within the economy. For them, money constitutes a form of asset, a means of retaining wealth, and is synonymous with the need for a consumption service. The demand for money, akin to the theory of consumer choice, is contingent upon the following factors: (a) the total wealth to be maintained in diverse forms; (b) the price and yield of one form of wealth relative to its alternatives; (c) the tastes and preferences of the wealth-holding entities. Total wealth encompasses all sources of income and consumable services from a comprehensive perspective. One such source is the productive ability of individuals, and hence, this is a way in which wealth might be possessed. From this perspective, the interest rate signifies the relationship between stock, representing wealth, and flow, denoting revenue. Therefore, if Y represents the whole flow of income and r denotes the interest rate, total wealth is **W = Y/r**

Income, in its most comprehensive definition, should not be equated with income as conventionally quantified. The latter is typically a "gross" stream in relation to humans. Due to the absence of deductions for the costs associated with preserving human productive capacity, it is also influenced by transient factors that cause it to deviate significantly from the theoretical notion of a steady level of service consumption that could be sustained eternally.

Wealth can exist in various forms, and the ideal wealth holder distributes their assets among them to optimise "utility". Contingent upon any restrictions that influence the conversion of one form of wealth into another. Typically, this indicates that he will pursue a distribution of his wealth whereby the rate of substitution between different forms of wealth aligns with his willingness to make such substitutions. To comprehensively delineate the alternative combinations of wealth forms accessible to an individual, it is essential to consider not only their market prices—expressible in units of $1.00, except human capital—but also the structure and magnitude of the income streams they generate.

2.10 MAINTENANCE OF WEALTH

It is sufficient to highlight the principal challenges that these factors provide by examining five distinct forms of wealth ownership. Money (M), defined as clearing or commodity units universally recognised for debt settlement at a predetermined nominal value;

Bonds (B), defined as entitlements to a fixed nominal stream of payments;

Equities (E), defined as entitlements to specified pro-rata portions of enterprise returns;

Physical non-human goods (G)

Human Capital (H) - Now, consider the yield of each.

1. **Money** Capital can generate a return in the form of monetary gains, such as interest on demand deposits. It will streamline the discussion and involve no significant loss of generality to assume that money generates its returns exclusively in kind, typically manifested as convenience, security, etc. The extent of this return in "real" terms per nominal monetary unit is evidently contingent upon the quantity of products associated with that unit, or the overall price level, which we may denote as P. Given that we have established $1.00 as the unit for each type of wealth, this principle applies uniformly to all forms of wealth. Consequently, P is a variable that influences and signifies a capital loss in real terms, which must be subtracted from the nominal yield. A decline in the general price level leads to an appreciation of money, resulting in capital gains that should be incorporated into the nominal yield of money.
2. **Bonds:** If we define the "standard" bond as a claim to a permanent income stream of fixed nominal value, then the return to the bondholder can manifest in two forms: The annual payment received, known as the "coupon," and any fluctuations in the bond's price over time, result in a return that may be positive or negative. If the price is anticipated to remain stable, then a bond valued at $100 generates rb annually, where rb is the "coupon" amount divided by the bond's market price; therefore, 1/rb is the price of a bond that guarantees a payment of $100 every year. We will designate rb as the market bond interest rate. If the price is anticipated to fluctuate, the yield cannot be computed straightforwardly, as it must consider the return from the expected appreciation or depreciation of the bond, and it cannot, as with rb, be derived directly from market prices (at least while the "standard" bond remains the sole one traded). The market rate of lit or bonds, defined as the nominal rate of return, can be computed as follows:

$$r - \frac{1}{r_b}\left[\frac{\partial r_b}{\partial t}\right] \ldots\ldots\ldots\ldots\ldots\ldots \textbf{(1)}$$

3. The sum, along with the previously mentioned P, delineates the actual return from possessing $1.00 of wealth in bonds.
   Equities (E) Like our analysis of bonds, we can define the "standard" unit of equity as a claim to an everlasting income stream of fixed "real" value; specifically, it resembles a standard bond with a purchasing power adjustment clause, ensuring a perpetual income

stream that, in nominal terms, corresponds to a constant multiple of a price index, which we may conveniently denote as the same price index P referenced in (1). The nominal return to the equity holder can be classified into three forms: the fixed nominal amount received annually in the absence of any change in P, and any fluctuations in the nominal price of the equity over time, which may arise from variations in interest rates or price levels. Let re denote the market interest rate on equities, defined similarly to r, namely as the ratio of the "coupon" sum at any given time to the equity price. Consequently, 1/re represents the price of an equity that guarantees a payment of \$1.00 per year, assuming the price level remains constant. The nominal rate of return on equities can be estimated by

$$r_e + \frac{1}{P} \cdot \frac{dP}{dt} - \frac{1}{r} \frac{dr_e}{dt} \quad \textbf{(2)}$$

where re is the market interest rate on shares. This figure, in conjunction with P, delineates the actual return from possessing \$100 of wealth in equities.

4. **Physical Non-Human Commodities (G)** Physical assets possessed by ultimate wealth-holding entities resemble stocks, except that the annual returns they generate are in kind rather than monetary form. This return, similar to that from equities, is contingent upon price behaviour in nominal units. Moreover, similar to equities, tangible assets should be considered as providing a nominal return through an increase or depreciation in monetary value. Assuming the previously mentioned price level P applies uniformly to the value of those physical goods at time zero.

$$\frac{1}{P} \cdot \frac{dP}{dt} \quad \textbf{(3)}$$

The magnitude of this nominal return per \$1.00 of tangible items. In conjunction with P, it delineates the "real" return from possessing \$1.00 in the form of tangible items.

5. **Human Capital (H)** Given the restricted market for human capital, particularly in contemporary non-slave societies, it is challenging to ascertain market prices that delineate the substitution of human capital for alternative forms of capital, thereby making it impossible to define a physical unit of capital equivalent to \$1.00 of human capital at any given time. There exist opportunities to replace non-human capital with human capital in an individual's wealth portfolio, such as when one engages in a contract to provide personal services for a designated duration in exchange for a predetermined number of periodic payments, which are not contingent upon their physical ability to

perform the services. However, the primary transitions between human capital and other forms must occur via direct investment and disinvestment in the human agent, and we might as well consider this the exclusive method. Consequently, regarding this type of capital, the limitations or barriers impacting the different wealth compositions accessible to the individual cannot be articulated in terms of market pricing or rates of return. At each given moment, there exists a delineation between human and non-human wealth inside his asset portfolio; while he may alter this over time, we shall consider it fixed at a specific point in time. Let (w) represent the ratio of non-human wealth to human wealth, or the equivalent income derived from non-human wealth relative to income from human wealth, indicating its close association with what is typically defined as the tastes and preferences of affluent entities regarding service streams derived from various sources of wealth, should generally be assumed to dictate the structure of the demand function. To provide empirical substance to the theory, it must generally be assumed that preferences remain stable over considerable spans of place and time. Nonetheless, explicit provision may be given for certain alterations in preferences insofar as these alterations are associated with objective conditions.

Let represent any variables anticipated to influence tastes and preferences (for "utility" determining variables). Below mentioned is the demand function for money: the ratio of wealth to income. This is the variable that must be considered about human wealth.

$$M^{d} = f\left[P: rb - \frac{1}{rb}\frac{drb}{dt}: re + \frac{1}{(P)}\frac{dP}{dt} - \frac{1}{re}\frac{dre}{dt}; \frac{1}{P}\frac{dP}{dt}w; \frac{Y}{r}; \mu\right] \ldots\ldots\ldots\ldots \textbf{(4)}$$

Observations regarding the function

Assuming prices and interest rates remain constant, the function encompasses three interest rates: two specific asset kinds, (rb) and (re), and one applicable to all asset types, (r). The general rate(r) should be seen as a weighted average of the two specific rates, in addition to the rates relevant to human capital and physical assets. As the last two are unobservable, it is advisable to consider them as systematically varying with rb and re. Based on this assumption, we can eliminate (r) as an explicit variable, considering its impact as completely accounted for consideration of rb and re. Assuming that rb and re remain constant throughout time and that the rate of price change is needed independently in any event. Friedman designates the nominal return on bonds and equities as re and rb, respectively. Assuming that rb and re remain constant throughout time and that the rate of price change is

needed independently in any event. Friedman designates the nominal return on bonds and equities as re and rb, respectively. The money demand function will be as follows:

$$M^{d} = f\left[P; r_b; r_e : \frac{1}{(P)}\frac{dP}{dt}; w; Y; \mu\right] \text{.....} \textbf{(5)}$$

Or

$$Y = V\left(\frac{P}{Y}; r_b; r_e; \frac{1}{P}; w; u\right) M^{d} \text{.....} \textbf{(6)}$$

The equation is presented in the conventional quantity form, with (v) representing income velocity.

These equations pertain exclusively to funds possessed directly by ultimate wealth-holding entities. As observed, capital is also retained by commercial entities as a productive asset. The equivalent of this commercial asset on the balance sheet of a final wealth-holding entity is a non-monetary claim. For instance, an individual may purchase bonds from a corporation, which subsequently utilises the profits to fund its operational capital requirements.

The equation is expressed in the standard quantity form, with v denoting income velocity. These equations relate solely to assets held directly by ultimate wealth-holding entities. Capital is retained by commercial firms as a productive asset. The counterpart of this commercial asset on the balance sheet of a terminal wealth-holding body is a non-monetary claim. An individual may acquire bonds from a corporation, which then employs the proceeds to finance its operational capital needs.

2.11 FEATURES OF FRIEDMAN'S METHODOLOGY

Having elucidated the major concepts inside Friedman's model of money demand determination, we can now emphasise the distinctive characteristics of this method. Firstly, contemporary quantity theorists draw a reasonable distinction between the demand for money and the 'demand function' for money, as well as between 'velocity of money' and 'velocity of function'.

Secondly, the conviction that the demand function for money or the velocity of money function is exceptionally stable, far more so than the pivotal function of the alternative Keynesian method, specifically the consumption function.

Thirdly, the stability of the money demand function does not indicate that the real quantity of money demanded per unit of output, specifically the value of the Marshallian constant k or Fisher's constant, remains constant. While the velocity function may be stable, the velocity of

money can fluctuate significantly, potentially increasing during periods of hyperinflation. Fourthly, contemporary quantity theorists such as Friedman assert that it is adequate to incorporate only a select number of empirically significant variables in the money demand function. Friedman's assertion is that "increasing the number of variables considered significant diminishes the empirical substance of the hypothesis."

Fifthly, contemporary quantity theorists consider the money demand function to be not only stable but also crucial in defining variables essential for comprehensive economic analysis, such as the level of money income and the price level.

Sixthly, he also posits that the money demand function and the money supply function are independent of one another. He posits that significant variables govern the supply of money; however do not affect the demand for money. Otherwise, Friedman's money demand function, designed to forecast the effects of alterations in the money supply, will not fulfil its intended purpose.

2.12 CRITIQUE OF FRIEDMAN'S RESTATEMENT

Friedman's Restatement of the Quantity Theory, akin to his other propositions such as the Permanent Income Hypothesis, offers a rigorously structured approach for ascertaining the demand for money. It exhibits several deficiencies and shortcomings, some of which will be examined below.

1. Considers just a fixed need for money: Friedman's derivation of the money demand function explicitly considers just a fixed need for money; the transactions demand for money has not been sufficiently examined. This equates to disregarding the role of money as a medium of exchange. It offers no examination of transaction costs and their potential significance in assessing the demand for money and other asset forms. There is an absence of analysis about the significance of varying holding periods of wealth on the composition of asset portfolios of wealth holders, which undoubtedly affects the issue of money demand determination. Miles Fleming stated that "the nature of the services provided by money balances is not required to be examined closely," which renders Friedman's analysis excessively abstract.

2. Various asset forms are near equivalents for one another: Friedman's thesis presupposes that the various assets are near equal to each other. However, the foundation of this assumption is not articulated. The impact of transaction costs, varying holding durations for wealth, and the inclination towards risk aversion on the extent of substitutability among

diverse asset forms. The impact of impacted substitutability on the demand for money and other assets has been excluded from the analysis.

This also led to Friedman's choice of a limited number of variables in his money demand function. This justification is tenuous, as it claims that these are the sole empirically meaningful variables and that incorporating additional variables would render the money demand function empirically worthless.

This argument necessitates an analysis of Friedman's assertion that the demand for money can be elucidated through a limited set of variables. What is the criterion for retaining certain variables while excluding others from the function's argument? The degree of responsiveness of the dependent variable to a little alteration in the specific independent variable, with all other factors held constant, should be the determining factor. Within the framework of the money demand function, this criterion indicates that the significance of an independent variable, such as (b), (e), or another variable, is contingent upon the elasticity coefficient of money demand in relation to that variable. If this coefficient is insignificant, it may be justifiably excluded from the argument. However, if this coefficient is substantially large, the variable should be preserved. However, Friedman's Restatement of the Quantity Theory of Money did not offer a rationale for maintaining certain variables while eliminating others.

3. Anticipated rate of price change, represented as 1 dP/P dt.: Friedman has provided no elucidation on the formation of these expectations. Indeed, expectations are typically the most problematic aspect of economic study.

4. Friedman's model has been articulated in a static format: It disregards the time delays and their implications for the need for money. Assuming that expectations for the challenging variables in Friedman's model are based on their historical values, the trajectory of these values will establish the expectations from one time to the next, which will consequently dictate the demand for money. In that scenario, all variables will interrelate, influencing their values over time. The characteristics of the time lags will dictate the values of the fluctuations over different periods. Time lags and the development of expectations are not the sole significant delays. Delays in the adjustment of asset values and structures within wealth holders' portfolios to the preferred levels and configurations significantly influence the demand for money. Miles Fleming astutely notes that time lags, the magnitude of elasticities concerning independent variables, and the extent of variability in those variables must all be considered when evaluating the claim that the demand for money can be elucidated by a

limited number of variables. However, Friedman's approach fails to acknowledge these issues.

5. Empirical Examination: Friedman's claim that his money demand function and the associated monetary multiplier exhibit greater stability than the Keynesian consumption function and its corresponding multiplier has not been substantiated by empirical examinations into this issue. In the seminal empirical research conducted by Friedman and Meiselman, titled "The Relative Stability of Monetary Velocity and the Investment Multiplier in the United States, 1899-1958," it was concluded that U.S. data corroborated Friedman's thesis. However, Ando and Modigliani ("The Relative Stability of Monetary Velocity and the Investment Multiplier") arrived at a divergent conclusion, as they provided a superior explanation of consumer expenditure grounded in the Keynesian multiplier compared to that of Friedman and Meiselman regarding the monetary multiplier. The empirical investigation conducted by Barry and Water ("The Stability of Keynesian and Monetary Multipliers in the United Kingdom") yielded inconclusive results.

6. Assertion is contestable: A significant implication of Friedman's model is the consistent and robust correlation between the money supply and both money income and prices. An additional implication is that the levels of monetary income and prices can be regulated by managing the money supply. While the research conducted by Friedman and his associates, including Cagan and Selden, ostensibly supports the aforementioned proportion, there exist alternative studies that contest this assertion. Seventhly, Friedman's notion of money is excessively expansive. It encompasses time deposits as well. Excluding time deposits from money income will result in the demand elasticity for money being close to one, rather than exceeding one.

2.13 THE KEYNESIAN APPROACH

Keynes' perspective on the demand for money is encapsulated in his liquidity preference theory, which represents a notable divergence from previous theories regarding money demand. In his 'Treatise on Money,' Keynes defines the term liquid as "more certainly realisable at short notice without loss." Upon analysing this term, Hicks suggests that "without loss" may pertain to the losses incurred in transactions, although the duration required for selling is a more pertinent attribute. He contends that the capacity for conversion on short notice at a price significantly higher than that achievable over a longer duration represents market 'ability' rather than 'liquidity'. In his view, liquidity is an attribute exclusive to marketable assets whose worth is relatively assured, devoid of the potential for

significantly adverse outcomes. Patinkin and Marschak define liquid assets as those incurring non-zero transaction costs. The transaction cost pertains to the expense associated with implementing modifications. In summary, any fully marketable asset, possesses a high degree of value certainty and is reversible in nature can be accurately classified as liquid. Among all asset categories, currency is the most universally accepted. The liquidity of money in relation to other assets can be illustrated as follows:

Perfect Liquidity	Increasing Liquidity				
Money					Real Goods
Cash and Current Deposits	Time Deposits	Bills	Bonds	Equities	Building, Land, Cars etc.

As indicated in the aforementioned table, money is the quintessential liquid asset. The inquiry now emerges as to why individuals favour retaining liquid assets or currency. The primary motivations that drive an individual or business to demand currency or maintain liquid assets are the transactional motive, precautionary motive, and speculative motive.

2.14 THE DEMAND FOR MONEY CAN BE CATEGORISED AS:

a) The Transactions Demand

b) The Precautionary Demand

c) The Asset Demand, and

d) The Speculative Demand

The overall demand for money or cash balances can be categorised into two types: active and Idle cash balances.

2.14.1 ACTIVE CASH BALANCES

The demand for active cash balances is categorised into transaction demand and cautious need for money. The transaction requires money because money serves as a means of exchange. Subsequent receipts and payments do not occur concurrently. There is invariably a temporal interval between consecutive receipts, while payments are a continuous aspect of everyday operations. Consequently, individuals must maintain cash reserves to facilitate their routine transactions. Keynes posits that the transaction motive for holding money arises from the necessity of cash for ongoing personal and commercial

expenditures. Consequently, consumers and corporations retain money due to the transaction motive. Their distinct transactional motives might be classified as income and business motives. The income motive pertains to the transactional behaviour of households. Families maintain cash reserves to facilitate regular transactions. The need for money within households is contingent upon the following factors:

- **The Income Level**: The transaction demand for money by households is directly correlated with income levels; as income increases, so does the transaction demand for money, and conversely.
- **The Price Level**: As the price level increases, the transaction needs for money also increase, and conversely. As prices increase, a greater amount of money will be necessary to acquire the same quantity of goods and services, hence elevating the transaction demand for money in response to rising prices.
- **The Expenditure Patterns:** If individuals in a community are frugal, they would necessitate less capital for transactional objectives. However, if a significant percentage of individuals in a society are prodigal, they will necessitate greater financial resources for transactional activities.
- **The Temporal Interval**: When the time period between two consecutive revenue receipts is substantial, individuals will maintain higher cash amounts for transactional purposes, and conversely.

Likewise, companies require financial reserves to cover expenses for raw supplies, transportation, wages, salaries, and other obligations. The cash balance maintained by enterprises to meet these obligations is the capital retained for business purposes. The amount of money retained for business purposes is directly proportional to the firm's turnover; that is, a higher turnover correlates with a greater sum of money held for commercial purposes. The demand for money in transactions is the aggregate of money retained for income and commercial motives. It is income-dependent and remains constant in the short term, while changes in income occur solely in the long term. Financial exchanges' demand for money is an increasing function of income. Symbolically, the transactions demand for money function can be stated as follows:

Lt = f (Y)

Lt = Liquidity preference under transactions motive.

Y = Level of national income.

Individuals maintain cash reserves to address unexpected needs. The quantity of financial reserves maintained by individuals to address unexpected needs is termed precautionary demand for money or money saved for precautionary purposes. Illness, unemployment, mortality, accidents, and similar unplanned occurrences may occur in individuals' lives. The precautionary need for money is contingent upon the uncertainty of future income. It is directly correlated with wealth and exhibits relative stability. The precautionary demand for money is interest-inelastic and fluctuates in response to variations in uncertainty.

The precautionary demand for money might be articulated symbolically as follows:

Lp = f (Y)

Lp = Liquidity preference for precautionary motive: The transaction and precautionary demand for money are not easily distinguishable in practice, and as both demand functions are governed by income and are also inelastic to interest rates, they are jointly referred to as active balances. The desire for active balances can be expressed symbolically as follows:

L1 = Lt + Lp

The demand for money, both for transactions and precautionary purposes, is dictated by income; so, we can reformulate the money demand function for active balances as follows:

L1 = f (Y)

The figure below illustrates the necessity for active balances. At income level OY1, OM1 represents the demand for active cash balances. As income levels increase to OY2, the demand for active cash balances correspondingly rises to OM2. The need for active cash balances is directly proportional to fluctuations in income.

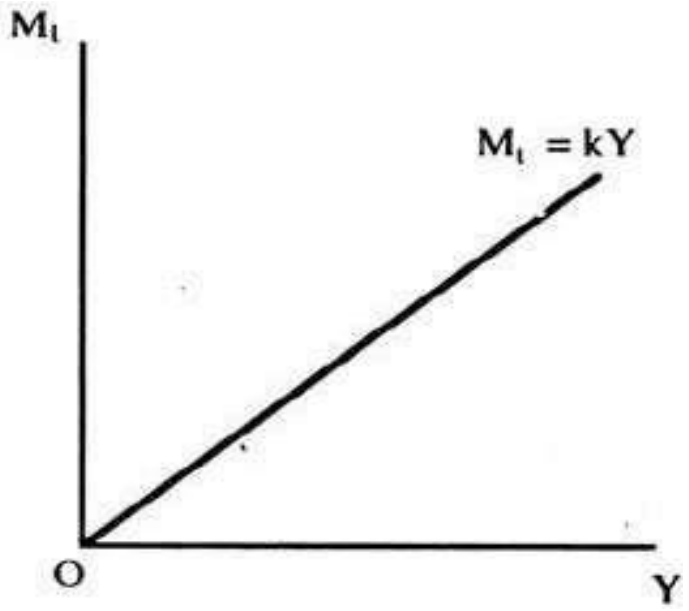


Figure 2

2.14.2 Idle Cash Balances (Speculative Demand for Money)

The cash reserves maintained by individuals for speculative reasons are referred to as the demand for idle cash balances. The speculative rationale for maintaining cash reserves arises from uncertainty over future interest rates. Speculative desire for money emerges due to pertaining to the store of value function of currency. The speculator maintains financial reserves to achieve speculative profits through investments in securities. Keynes posits that investors realise capital gains through speculation on securities or bonds. The speculative desire for money is contingent upon the interest rate. The demand for speculative cash balances is negatively correlated with the interest rate. When individuals anticipate a decline in the prices of income-generating assets like bonds, the speculative demand for money increases, and conversely. The speculative motive for money can be articulated symbolically as follows

L2 = f (i)

L2 = Speculative demand for money, i = Rate of interest.

Figure below illustrates the inverse relationship between the rate of interest and the speculative demand for money.

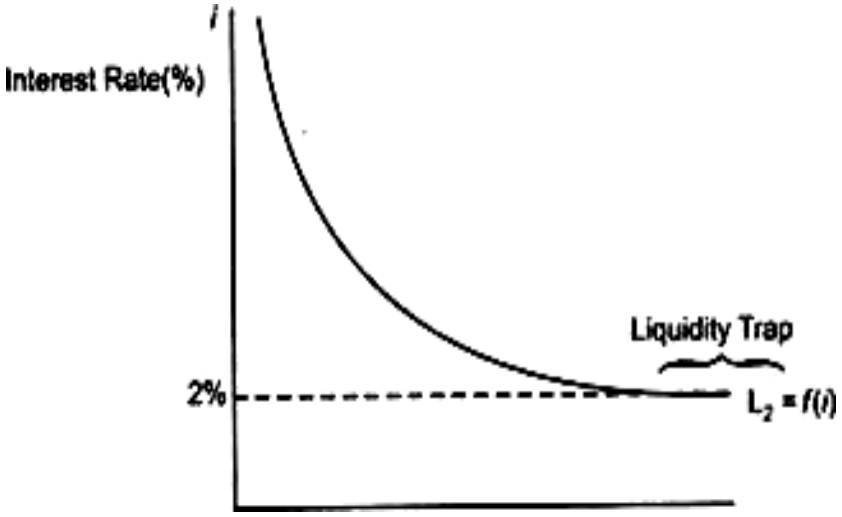


Figure 3

The speculative demand for money is inversely correlated with the interest rate. As interest rates decrease, the speculative demand for money increases, and conversely. Consequently, speculative demand for money is significantly elastic with respect to interest rates. At a minimal interest rate, the speculative demand for money becomes fully elastic, meaning that all income is retained as idle cash balances. This occurs because bond prices and interest rates fluctuate inversely. When interest rates increase, bond or securities prices decline, and conversely. The speculative demand for money is a determinant of income rather than being determined by income, unlike transaction and precautionary demand for money. When interest rates are anticipated to increase, individuals want to maintain their reserves at the prevailing interest rate to capitalise on future rate hikes. Increased speculative demand for money signifies a heightened preference for liquidity.

2.15 THE NOTION OF LIQUIDITY TRAP

At a minimal interest rate, the speculative demand for money are fully elastic, meaning individuals retain their whole income as cash balances for speculative purposes. In a liquidity trap, the percentage change in the demand for money in response to a percentage change in the interest rate is infinite. The liquidity trap scenario can be articulated as follows: The L2 curve in Fig.3 illustrates the liquidity preference associated with the speculative motive at varying interest rates. At an elevated interest rate of 20%, the speculative demand for money is significantly diminished, and conversely. Nevertheless, when the interest rate is merely 2%, the Speculative demand for money attains complete elasticity. Currently, any augmentation of the money supply or income will be retained by individuals as idle currency

reserves. The figure illustrates the liquidity trap by emphasising the horizontal portion of the liquidity preference curve. A liquidity trap occurs when, at extremely low interest rates, the opportunity cost of maintaining cash reserves is little, and there is an anticipation that this opportunity cost will increase in the future.

Aggregate Demand for Money The entire demand for money comprises transaction, precautionary, and speculative demands. The total desire for money can be expressed symbolically as follows:

L = L1+L2

L = Aggregate demand for money.

The functional relationship between the aggregate demand for money and the deciding variables of nominal aggregate income and the interest rate can be articulated as follows:

L = f (Y, i)

The liquidity preference schedule of a community can be derived by overlaying the L1 curves at each income level onto the L2 curves. The liquidity preference schedule of a community is illustrated in Figure 4 below

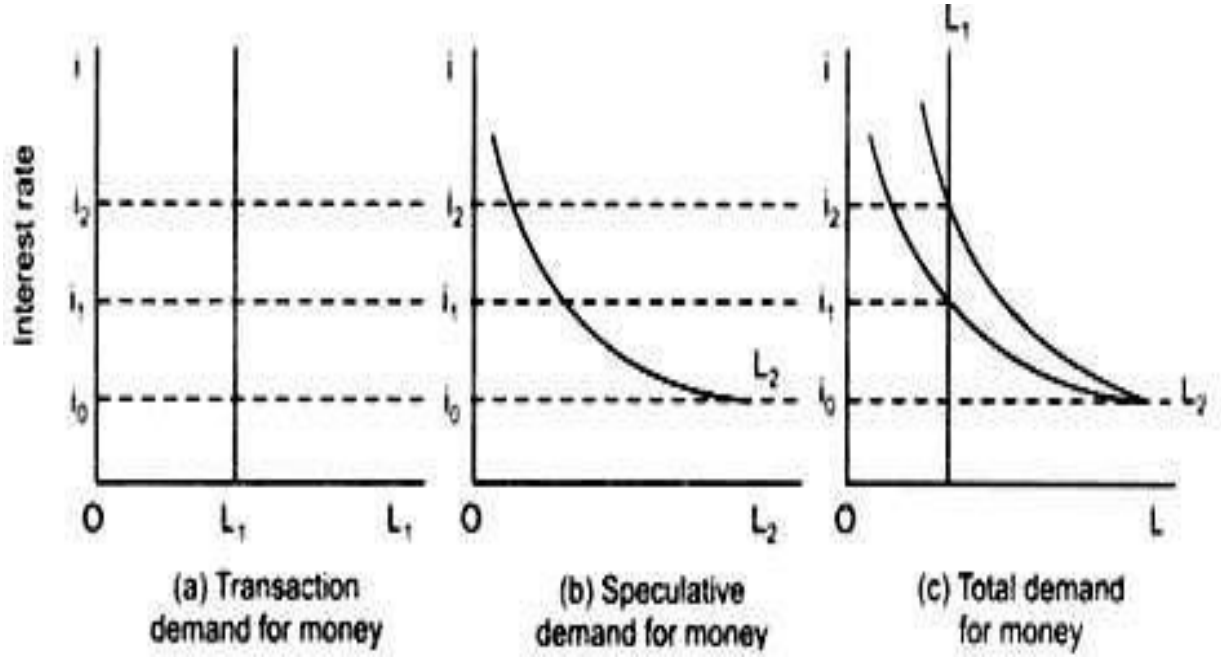


Figure 4

Figure 4, Panel (A) illustrates the schedule of active balances (the aggregate of transaction and precautionary demand for money) possessed by individuals at varying income levels. The demand for active balances is perfectly inelastic to fluctuations in interest rates in the short

term and varies proportionately with variations in income levels. L1 (Y1) represents the demand for active cash balances at the Y1 income level, and so forth. The L1 curves exhibit a vertical slope due to their high inelasticity. In Panel (B), the L2 curves represent the demand for idle cash balances or speculative demand for money. Speculative demand for money is interest-elastic and inversely correlated with the interest rate. Consequently, the L2 curve exhibits a decreasing slope. At a minimal interest rate, it becomes horizontal, signifying that all income is retained as idle cash holdings. Panel (C) displays the liquidity preference curve representing the aggregate demand for money. The outcome is the superimposition of the L1 curves onto the L2 curves. Consequently, the curves L(Y1), L(Y2), and L(Y3) are derived, representing the liquidity preference schedules of the community at different interest rates and national income levels.

2.16 QUESTIONS FOR PRACTICE

A. Short answer type questions

Q1. Is money only a medium of exchange?

Q2. The transactions demand for money is determined by the income level. Discuss.

Q3. Write a note on the Liquidity trap.

Q4. Differentiate between Active and Idle cash balance.

B. Long answer type questions

Q1. Explain the quantity theory of money.

Q2. Discuss critically Friedman's restatement of the quantity theory of money

Q3. What is the Keynesian Approach? How is it different from previous theories?

Q4. Discuss the various forms of wealth ownership.

2.17 Suggested Readings

- "The Transactions Demand for Cash; An Inventory-Theoretic Approach"; *W.J. Baumol Quarterly Journal of Economics*, Nov. 1952.
- "The Interest Elasticity of Transactions Demand for Cash"; *J. Tobin, Review of Economics and Statistics, Aug. 1956.*
- Advance Study in Money and Banking: Theory and Policy Relevance in the Indian Economy (2005), *Atlantic Publishers, New Delhi; Khanna, P.*

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

UNIT 3: SUPPLY OF MONEY: MONEY CREATION BY THE BANKING SYSTEM. HIGH POWERED MONEY AND MONEY MULTIPLIER, MEASURES OF MONEY SUPPLY IN INDIA

Structure

3.0 OBJECTIVES

After going through the lesson, you will be able to:

- Describe the components of money supply
- Explain the factors responsible for changes in money supply
- Knowledge of sources of money supply
- Measures of Money supply in India
- Analyse the concept of high-powered money
- Money multiplier
- Viewpoints of Riefler Burgess on high-powered money

3.1 INTRODUCTION

The money supply is a stock idea. Currency is any entity widely recognised as a medium of exchange. The money supply is contingent upon various things. This chapter will address the definition of money supply, its determinants, and the theory of money supply function. The money supply encompasses all currency within the economy. The money supply may encompass demand deposits, time deposits, currency, and many forms of liquid assets. Bank deposits comprise around 80 percent of the entire money supply in developed nations. The monetary supply should be in a liquid form. Friedman and Schwartz classified all tradable government securities as money. The obligations of savings institutions should be considered as money. Certain economists contend that monetary gold stock should be excluded from the definition of money, as gold functions as international currency and is prohibited from domestic circulation as money. In a strict sense, the money supply encompasses currency and demand deposits. Currency (notes) and coins are issued by central banks via the credit multiplier, based on main and derivative deposits. The total money supply is represented by the equation MV, where M denotes the money supply and V signifies the velocity of money circulation.

From the perspective of central banking regulation, the money supply might be considered an exogenous quantity. It is established exogenously by the central bank. According to Tobin's econometric perspective, the money supply is dictated by internal forces within the system. In this context, the money supply is endogenous

The money supply affects economic activity in several ways. There may be a direct correlation between income and expenditure. The money supply may influence interest rates and lending and borrowing activities. The money supply may influence the cost and availability of loans, thereby impacting investment and expenditure. The Radcliffe Committee asserts that the money supply is the focal point of the monetary system.

Friedman identified a robust link between the money quantity and national income. The fast increase in the money supply is the cause of inflation.

The money supply should align with the output supply. A growth rate of approximately 4% in the money supply may correlate with a steady level.

Milton Friedman asserts that money is significant, notwithstanding potential debate on its degree of importance. The money supply affects output, employment, and income levels within an economy. The money supply significantly impacts business, industry, and trade.

3.2 MONEY SUPPLY AND INDIAN CURRENCY SYSTEM

A. Indian currency system

The currency system in India is based on the Indian rupee (INR), which is the official currency of the country.

- **Currency Denominations:** The Indian rupee is available in the form of banknotes and coins. The banknotes are issued in denominations of Rs10, Rs 20, Rs 50, Rs100, Rs 200 and Rs500. Coins are available in denominations of Rs1, Rs 2, Rs 5, 10 and 20.
- **Issued and regulated by the RBI-** Reserve Bank of India (RBI) is the central bank responsible for issuing and regulating the Indian currency.
- **Coinage:** The Indian government, in consultation with the RBI, has the authority to issue coins of various denominations. Coins are minted by the government's mints and bear symbols representing India's cultural and historical heritage.

2. Security Features: Indian banknotes have several security features to prevent counterfeiting. These include watermarks, security threads, color-shifting inks, intaglio printing, latent images, and micro-lettering.

3. Legal Tender: The Indian rupee is the sole legal tender in India. It means that all transactions within the country must be conducted using the official currency, and Indian rupee banknotes and coins are accepted as valid payment.

4. Decimal System: The Indian currency system follows a decimal system, where the rupee is divided into 100 paise. However, the 25 paise coin and smaller denominations have been phased out, and transactions are now rounded off to the nearest rupee.

5. Demonetization: India has undergone significant demonetization efforts in the past. For instance, in 2016, the Indian government demonetized the Rs500 and Rs1,000 banknotes to

curb corruption, promote digital transactions, and combat the black market. In 2024, Rs 2000 note was withdrawn from the market.

3.3 MONEY SUPPLY- DEFINITIONS

Money supply is defined on the basis of its functions in two ways: narrow money supply and broad money supply.

Narrow supply of money (M1) – In a narrow sense, the supply of money refers to the total amount of money in circulation, which is used as a medium of exchange.

M1 = Currency (notes + coins) with the public + demand deposits of the public in the bank (which can be easily converted into currency)

Broader Supply of Money (M3) - It refers to the total amount of money in circulation used as a medium of exchange as well as a store of value.

M3 = Currency + Demand Deposit + Time or Fixed Deposit

3.4 HIGH POWERED MONEY- DEFINITION AND COMPONENTS

High Powered money is the Monetary Base, that is, the monetary liabilities of the government (treasury and central bank). Monetary base consists of: Gold stock, Amount of other types of money issued by the government (coins, paper money), Amount of Central Government credit outstanding (securities, loans). High-powered money (M0) is the total amount of money issued by a central bank in an economy. It is the foundation of the money supply and serves as a basis for the creation of other forms of money in the economy.

The components of high-powered money include:

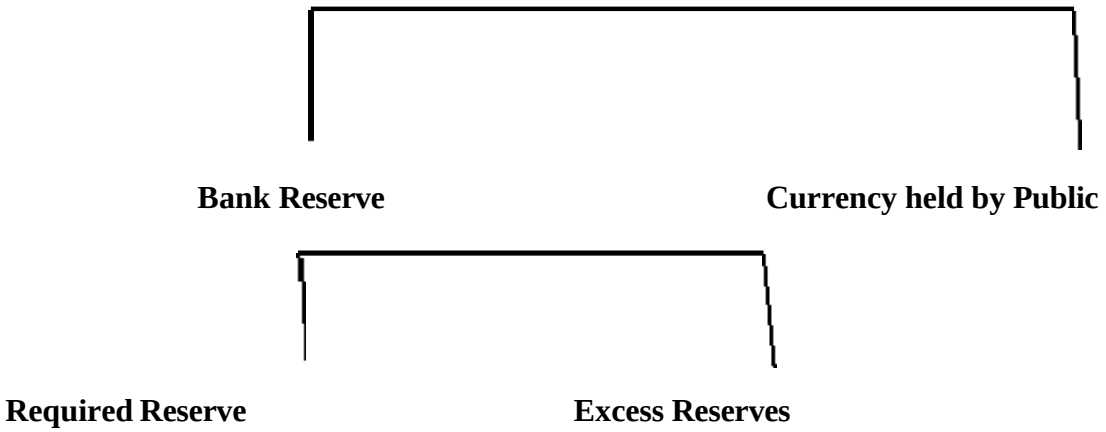
Currency in circulation (C): This refers to the physical notes and coins held by the public and commercial banks. It represents the portion of the monetary base that is in the hands of individuals and businesses for day-to-day transactions.

A. Reserves of commercial banks (RR): Commercial banks are required to hold a certain percentage of their deposits as reserves, either in the form of cash in their vaults or as deposits with the central bank. **Required Reserve** depends on the amount of public deposit money and the percentage of the minimum legal reserve requirement. If the cash deposited with the commercial bank is Rs. 10000 and the percentage of minimum legal reserve requirement is 10, then the Required Reserve to be kept with the Central Bank is Rs. 10000 x 10% = Rs. 1000

B. Other deposits of the Central Bank (OD) – This includes the time deposits of the semi-government organizations with the central bank

M0 = C + R + OD

3.4 High-Powered Money



A. **Bank Reserve** It includes Commercial Banks' necessary reserves with the Central Bank or required reserves (RR) on deposits reserved by the commercial banks as per rules and existing reserves with Commercial banks.

B. **The Excess Reserve** with the commercial banks is the difference between the total reserves of commercial banks and the required reserves (RR) kept with the central bank. ER can be increased by reducing RR or increasing total reserves. ER can be decreased by reducing total reserve and increasing RR. Whereas open market purchase of securities by the Central Bank increases the bank reserves, open market sales reduce the reserves of the banking system.

Similarly, the bank rate or discount rate affects the level of bank reserves. When the bank rate is high, commercial banks get less money from the Central Bank by discounting securities. The reserves of the commercial banks will rise whenever the bank rate goes down.

Bank reserve is an important determinant of the money supply in a country. Other things remaining the same, the higher the level of bank reserves, the larger is the money supply. The bank reserve itself is influenced by the Central Bank's policy regarding open market operations.

C. Currency Held by the Public

It comprises Currency, Demand Deposits, and Other Deposits with the RBI

It implies that money supply in an economy is determined by High Powered Money (currency + excess reserve + required reserve) and the currency deposit ratio. Suppose a change of Rs 100 crore in the monetary base results in a change of Rs 300 crore in the money supply, and then the money multiplier will be 30. In short, the money supply is an increasing function of the monetary base or high-powered money. It implies that whenever H changes, M also changes in the same direction, and most of the changes in M are due to H.

3.5 COMPONENTS AND DETERMINANTS OF MONEY SUPPLY

The money supply is affected by numerous causes. The central bank, government, and commercial banks are responsible for the creation of money. The money supply is the total gross output of money, excluding the monetary inventories maintained by the entities that generate money.

Components of Money Supply:

a) Currency issued by the central bank;

b) Demand deposits generated by commercial banks.

The components of the money supply differ across nations and may fluctuate over time within the same nation. In underdeveloped countries, the currency component is comparatively substantial, whereas in wealthier nations, demand deposits are disproportionately predominant. The monetary base is influenced by monetary policy, fiscal policy, and the balance of payments position. If the government engages in deficit budgeting, the money supply will increase; conversely, surplus budgeting will result in a contraction of the money supply. The money supply will decrease if the government implements a contractionary monetary policy. Commercial banks can significantly affect the money supply through credit creation. The money supply is affected by central and commercial banks, the non-banking population, and the government treasury.

Determinants of Money Supply The factors influencing the money supply include the monetary base, public currency holdings, time deposits, government deposits, and the cash reserve ratio, among others. The money supply is influenced by various factors, including primary deposits and cash reserves. Milton Friedman and Anna Schwartz assert that the

nominal money supply is influenced by three principal factors: The formula for determining the money supply by banks is as follows

$$\mathbf{MS = 1/r\ \partial D}$$

Where MS = money supply, r = the minimum legal reserve ratio, and ∂D = primary deposits. Let us simply examine these determinants:

- **Reserve Requirements:** The central bank sets reserve requirements, which are the minimum percentage of deposits that banks must hold as reserves. By increasing or decreasing reserve requirements, the central bank can influence the amount of money that banks can create through lending.
- **Open Market Operations:** The central bank conducts open market operations by buying or selling government securities in the open market. When the central bank buys government securities, it injects money into the banking system, increasing the money supply. Conversely, when the central bank sells government securities, it absorbs money from the banking system, decreasing the money supply.
- **Discount Rate:** The discount rate is the interest rate at which commercial banks can borrow funds directly from the central bank. By raising or lowering the discount rate, the central bank can encourage or discourage banks from borrowing, which affects the availability of credit and, consequently, the money supply.
- **Treasury Operations:** The government's fiscal policy decisions, such as its spending and taxation policies, can also influence the money supply. When the government spends more than it collects in taxes, it typically finances the deficit by issuing bonds or borrowing from the central bank, thereby increasing the money supply.
- **Desired Reserves:** Commercial banks' desired reserves depend on their expectations about future economic conditions, interest rates, and regulatory factors. If banks anticipate increased demand for loans or stricter regulations, they may choose to hold higher levels of reserves, reducing their ability to create new money.
- **Public Demand for Money:** The public's demand for money, specifically currency and demand deposits, also affects the money supply. Changes in public preferences for holding cash versus other assets can impact the amount of money in circulation.

3.6 MEASURES OF MONEY SUPPLY IN INDIA

The RBI has computed money supply and monetary aggregates in four categories during the past several years: M1, M2, M3, and M4. The RBI Working Group on Money Supply has

updated its parameters for assessing money supply, along with the contemporary trend of restructuring economic indices. The Reserve Bank of India calculates four series of statistics on the money supply. The primary distinction among these measurement series is the differing levels of liquidity.

1. M1 comprises:

a) Currency notes and coins in public circulation (excluding banks' cash reserves);

b) Demand deposits (excluding interbank deposits) from all commercial and cooperative banks

c) Other deposits maintained with the Reserve Bank of India (excluding balances in Account no. 1 of the International Monetary Fund, the Reserve Bank of India "Employees" Pension Provident and Guarantee funds, and ad hoc liability items).

2. M2 comprises

a) M1 and

b) Savings deposits with post office savings banks;

3. M3 comprises

a) M1 and

b) Time deposits of all commercial and cooperative banks (excluding inter-bank time deposits);

4. M4 comprises

a) M1 and

b) Total deposits with post office savings organisations (excluding National Savings Certificates).

M3 might theoretically be regarded as the money supply (MS) held by the public, while M4 relates to the total aggregate monetary resources (AMR) available. The money supply is a variable governed by both economic factors and policy decisions. M1 provides a traditional, limited definition of money stock measures. M3 provides a more expansive concept akin to the Chicago School methodology. The new series was established following the recommendations of the Second Working Group of the RBI and replaced the previous series.

A. Vasudeva asserts that the primary distinction between the old and new series of money stock pertains to its scope of coverage. In the previous series, the limited definition of money supply is designated as money supply with the public (MS), whereas the expansive definition is termed aggregate monetary resources (AMR). In the previous series, only deposits from commercial banks (both scheduled and non-scheduled) and State cooperative banks were considered. The new series considers the deposits of these institutions, as well as those of central cooperative banks, urban cooperative banks, and salary-earning organisations. The new series has employed the principles of both narrow and broad money supply, similar to the old series. The categorisation of money is predicated on the criterion of liquidity. M1 possesses greater liquidity than M2. None of the four equities possesses equal liquidity. The American data corroborated the Chicago School concept, whereas the Indian data emphasised the conventional or restricted meaning of money supply above the broad definition. This is evidentfrom the following table.

Table no 1

	Correlation/Regression	**Corr./ Coefficient**
	R	**R^2**
GNP and MS (M1)	0.9888	0.9778
GNP and AMR	0.9779	0.9564
Real income and MS (M1)	0.9307	0.8662
Real income and AMR	0.9070	0.82

The correlation coefficient between MS (M1) and GNP at current prices is 0.988, which exceeds the correlation coefficient between AMR and GNP at current prices, which is 0.977. The correlation coefficient between MS (M1) and real income (0.930) exceeds that between AMR and real income (0.907). The traditional definition of money supply is more closely associated with national income than the Chicago definition of money supply.

In the aforementioned table, MS denotes money supply, whereas AMR represents aggregate monetary resources. R1 denotes simple correlation, R2 represents the coefficient of determination, and R2 signifies the adjustment for degrees of freedom related to the sum of squares involved.

The regression will be Y = a + bx.

In this regression, x=MS/AMR, and Y=revenue.

The table clearly indicates that the correlation coefficient and regression results favour the standard concept of money supply in India. R2 is maximal for narrow money supply (currency and demand deposits), indicating its superior explanatory capacity regarding changes in India's national GDP.

Various causes are responsible for the highest correlation/regression value of the conventional money supply with income in India.

People are cash-minded and have underdeveloped banking habits.

Cash transactions are more overwhelming than credit (commercial-paper-based transactions).

The parallel economy existing in the country hardly uses credit papers and is mostly run on cash.

M_1 can be used as a medium of exchange, but not M_3.

M_1 is more liquid and generally acceptable and preferred by people. M_3 is less liquid and is not generally acceptable as a medium of exchange.

It is quite apparent from the above findings that the broad concept of money supply does not fit well in the Indian case where the more relevant concept of money stock seems to be conventionally a narrow one.

3.7 NEW MONETARY EQUATIONS $M_1 - M_3$

1. M_1, i.e. money supply with the public

M_1 = Currency + Demand Deposits + Deposits with RBI

2. M_2

M_2= M_1+ Time Liabilities Portion of Savings Deposits with Banks

+ Certificates of Deposits (CDs) issued by banks

+ Term Deposits maturing within a year (excluding FCNR (B) Deposits

3. M_3

M_3 = M_2

+ Term Deposits with banks with a maturity of over one year

+ Call Term Borrowings of the banking system.

Radcliffe Committee on Monetary Reforms recommended the concepts of Narrow Money and Broad Money. RBI had introduced both concepts. The monetary aggregates M2, M3 and M4 were used to measure the aggregate liquid resources of the general public. After the new revision of monetary aggregates, RBI Working Group Money Supply has introduced a new concept called Liquid Resources.

3.8 LIQUID RESOURCES IN INDIA

L_1 = New M_3

+ All Deposits of Post Office Savings Banks, excluding National Savings Certificates

$L_2 = L_1$

+ Term Deposits with Term Lending Institutions and Refinancing Institutions.

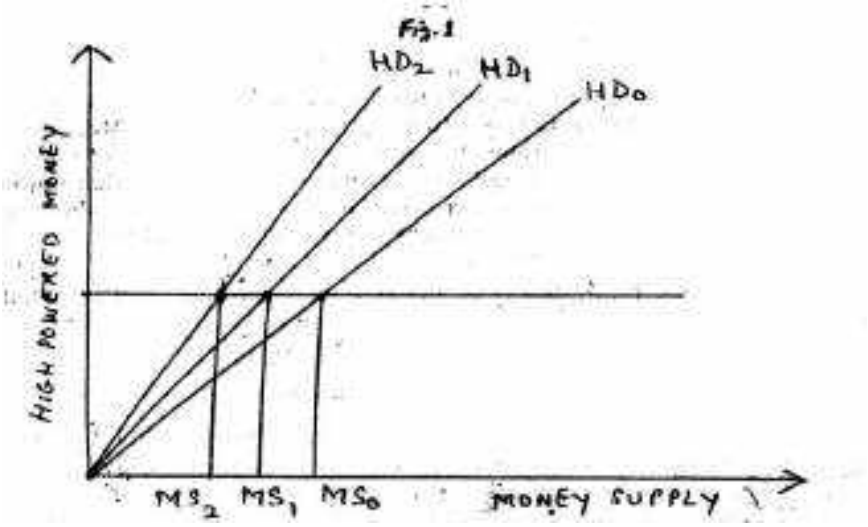
+ Term Borrowing by Financial Institution (FIS)

+ Certificates of Deposits issued by FIS.

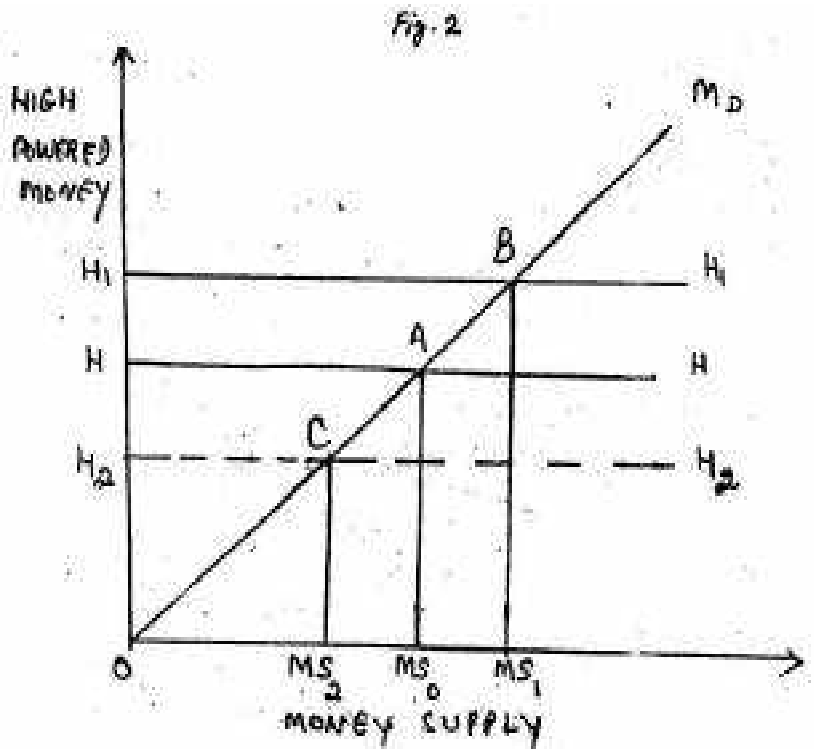
$L_3 = L_2$

+ Public Deposits of Non-Banking Finance Companies (NBFCs).

It may be highlighted that while the revised monetary aggregates, (M_1, M_2 and M_3) consider only bank deposits and bank borrowing. Liquidity Aggregates (L_1, L_2, L_3) consider term deposits and borrowings by Fis also



On X- Axis, we have taken money supply and on Y-Axis, it is high-powered money. It is clear from the figure that when the demand for high-powered money is very low (HD0),



money supply is very high (MS0). It implies that Demand for high-powered money has an inverse relation with money supply. Whereas, the supply of high-powered money is directly related to the money supply. The higher the supply of high-powered money more will be the total money supply.

In the illustration, with the supply of high-powered money (OH), the equilibrium point is A, where the demand for money equals OH and the money supply is OMS0. When the supply of high-powered money is increased by H1, equilibrium transitions to B, where the money supply is OMS1. An increase in the supply of high-powered money results in a corresponding growth in the total money supply. Conversely, as the supply of high-powered money decreases, the overall money supply likewise increases. A decline in the supply of high- powered money results in a decrease in the total money supply. The dotted lines in the figure clearly indicate this.

3.9 Money Multiplier

We can derive the money multiplier from the monetary base or high-power money.

Monetary Base (B) = R + C ..... (i)

R = Bank reserves and C = Currency held by public)

Now, R = r (D+T+G)..... (ii)

(D = Demand deposits, T = Time deposits, G = Government deposits, and r =Weighted average reserve ratio against all deposits)

Currency held by public (K) = C/D

C= currency, D= Demand Deposit.

Therefore C= K.D ---------- (iii)

Changes in K over time will be dependent on the level of income, uncertainty, necessity and so on.

Time Deposits-Typically, time deposits are excluded from the money supply. The time to demand deposit ratio (t) affects the money supply. This ratio will be influenced by several factors, such as interest rates and public preference patterns.

T=T /D or T=tD ---------(iv)

Government Deposits-Government deposits are excluded from the money stock; yet, fluctuations in government deposits influence the private deposits that the banking system can sustain based on the existing monetary foundation. Government deposits (G) constitute a fraction (g) of private demand deposits (D).

$g = \frac{G}{D}$ **or G= g D (v)**

We can now rearrange equations (i) and (ii);

Values of R, C, T and G will:

B = r (D + tD + gD) + K.D …… (vi)

or B = D [r (1 + t + g) + K]..... **(vii)**

$D = \frac{1}{r(1+t+g)+k} \cdot B$ **……(viii)**

We know that C= K.D

So $C = \frac{k}{r(1+t+g)+k} \cdot B$ ..... **(ix)**

Total money supply (M) =C +D …. (x)

Substituting the values of C and D in equation (x), we get;

$$M = [\frac{k}{r(1+t+g)+k} \cdot B] + [\frac{1}{r(1+t+g)+k} \cdot B] = B\,[\frac{1+k}{r(1+t+g)+k}]$$

The money credit multiplier (m) will be:

$$m = \frac{1+k}{r(1+t+g)+k}$$

Therefore, we find that money supply is determined by the parameter v, t, k and g. These can be influenced by the central bank, commercial banks, public and treasury. It is expected from the theory of money supply to explain these behaviour parameters.

3.10 Theoretical Developments in Money Supply

This is essentially a recently explored domain of monetary study. In Keynesian analysis, non-bank financial institutions (NBFIs) were deemed insignificant in the theory of the money supply function. The profit maximisation behaviour of the commercial bank was also overlooked. The money supply was considered to be exogenously determined. The analysis of money stock determination was conducted automatically. The money supply was associated with the legal reserve and the ratio of currency to deposits held by the public. These ratios are seen as behavioural relationships that reflect asset-holding choices made by various institutions, rather than just mechanical constants. The money supply considers asset selection. The allocation of public assets between currency and deposits is a significant issue in capital theory. Likewise, the requisite reserves for banks constitute an issue under capital theory. These reserves constitute an inventory that banks maintain to mitigate the risk of cash withdrawals. This novel study aims to reconcile monetary theories and value theories concerning money supply. By rejecting the notion of a mechanical connection between reserves, deposits, and money, the money supply is regarded as an autonomous and endogenous economic quantity.

3.11 RIEFLER BURGESS'S IDEA REGARDING THE MONEY SUPPLY

W. R. Burgess developed his notion of money supply in 1927. W.W. Rieffer collaborated with him, sharing his complementary thoughts, in 1930. Burgess presented the concept of high-powered money (monetary base, comprising currency and reserves), while Riefler focused on the consequences of the Federal Reserve System's open market operations. Riefler and Burgess noted that during the initial phases of FRS development, member banks attempted to keep their total reserve holdings near the statutory mandates. The member banks previously sought to evade indebtedness to the Federal Reserve System (Central Bank). The

Excess-Reserve-Deposit Ratio (ER/D) was almost zero. Member banks refrained from incurring debt to the central bank (FRS) for the following reasons:

a) Indebtedness indicates that member banks are financially unstable.

b) Indebtedness was not in accordance with the FRS Act.

c) Indebtedness was inconsistent with the established historical traditions of FRS.

Consequently, the conventional conduct of member commercial banks indicates that the money supply is contingent upon the monetary base (high-powered money), which can be affected by gold inflows or open market activities. The Riefler-Burgess theory on money supply lacked a foundation in advanced theoretical or empirical study. Riefler and Burgess asserted that member banks' reserves can be augmented through open market purchases of assets, akin to the events in the USA from 1922 to 1924. Nonetheless, an augmentation in the reserves of member commercial banks may not invariably result in a proportional growth of lending. The development of credit is contingent upon numerous intricate circumstances. Their experience indicated that even a substantial surplus reserve exerted only a restricted influence on credit development in the USA. Credit expansion is not a unilateral process. The outcome relies not solely on the banks but also on the borrowers and their repayment ability. All else being equal, an increased reserve (R) results in a more substantial credit expansion. Riefler and Burgess consider the money supply to be an endogenous variable. Riefler and Burgess have emphasised the significance of bank credit flow. They assert that a misalignment between the volume of generated bank credit and the volume of business will result in either an inflationary or deflationary cycle. Therefore, the effective utilisation of bank loans is essential.

3.12 THEORY OF MONEY SUPPLY: SOME DEVELOPMENTS

This is practically a newly discovered field of monetary research. In the Keynesian analysis, NBFIs were not given any importance in the theory of the money supply function. The profit maximisation behaviour of the commercial bank was also ignored. Money supply was regarded to be exogenously given. The analysis of the determination of the stock of money was treated automatically. Supply of money was related to the legal reserve and the ratio of currency and deposits held by the public.

Now, these ratios are considered as behaviour relationships reflecting choice regarding asset holding by different institutions and not simply mechanical constants. Monetary supply takes into account asset choice. The division of the assets of the public between currency and

deposits are really a problem in capital theory. Similarly, the number of reserves needed by banks is also a problem of capital theory. These reserves are an inventory (stock) that the banks want to hold against the possibility of cash withdrawals. Through this new analysis of money supply, monetary and value theories are sought to be integrated. If we discard the idea of the mechanical link existing among reserves, deposit and money, money supply assumes an independent and endogenous economic variable. This kind of analysis leads to a money supply function, which is very useful.

3.13 SUMMARY

It should now be evident that the money supply encompasses all monetary assets inside the economy, including demand and time deposits, currency held by the public, and borrowings from commercial banks. The diverse sources of money supply, such as government borrowings from the RBI and mandated reserves, induce fluctuations in the level of economic activity. It may involve inflation, deflation, and the many stages of the business cycle.

Milton Friedman points out that Money supply influences the supply of output, employment and income in an economy. Money supply greatly influences commerce, industries and trade. Money keeps the wheels of industry and trade moving. Money supply can also influence the demand and supply positions of different commodities through the price.

After reading the whole chapter, it must be very clear to all of you that money supply includes all money in the economy viz., demand and time deposits, currency with the public and commercial bank borrowings. The relationship between money and economic activity is clearly significant as it impacts income, output and employment levels. The various sources of money supply, i.e., government borrowings from the RBI and required reserves, bring about changes in the level of economic activity. It could be inflation, deflation and the various phases of the business cycle. After this is the role of high-powered money, comprising currency and reserves. Total credit creation depends upon the extent of high- powered money available in the economy. And the factors impacting the money supply are changes in demand for precautionary, transactions and speculative purposes.

3.14 QUESTIONS FOR PRACTICE

A. Short answer type questions

Q.1 Describe briefly the components of money supply.

Q.2 Name the determinants of money supply.

Q.3 Explain the concept of High-Powered Money.

B. Long answer type questions

Q.1 Discuss the definitions of Money Supply in India.

Q.2 Explain the various measures of Money Supply in India

Q.3 Write a note on High Powered Money and Money Multiplier

3.15 SUGGESTED READINGS

Khanna, P., *Advanced Study in Money & Banking: Theory and Policy Relevance in the Indian Economy,* Atlantic Publishers, New Delhi, 2005.

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

UNIT 4: TERM STRUCTURE OF INTEREST RATES

STRUCTURE

4.0 OBJECTIVES

After reading the unit, the learner will be able to know about:

- Term Structure of Interest Rates
- Expectations Theory
- Liquidity Premium Theory
- Market Segmentation Theory
- Preferred Habitat Theory

4.1 INTRODUCTION

Interest rates differ from each other on the basis of the nature of the loan, the creditworthiness of the debtor, tax conditions, terms of maturity, etc. Other things being constant, the difference in the rates of interest on account of the term to maturity of debt is called the term structure of interest rates.

The curve showing the relation between yield and the terms to maturity is called the yield curve (fig. 1). The yield curve is a graphic form of the term structure of interest rates. The term is synonymous with interest rate. The term yield is used interchangeably for interest rate. In case of non-marketable security (financial instruments with limited liquidity, e.g., Private company shares, limited partnership shares, etc.), the yield is only the nominal payment of interest from debtor (one who borrows) to the creditor (one who lends). On the other hand, the marketable security (liquid financial instruments like stocks and bonds), the yield to the creditor includes not only the payment of interest rate, but also capital gain or loss resulting from the sale of the security by the creditor in the market. Moreover, when we move from shorter to longer maturity

securities, the chance of capital gain or loss increases because of greater fluctuations in the securities market. In other words:

Effective yield = nominal coupon interest payment + capital gain/ loss

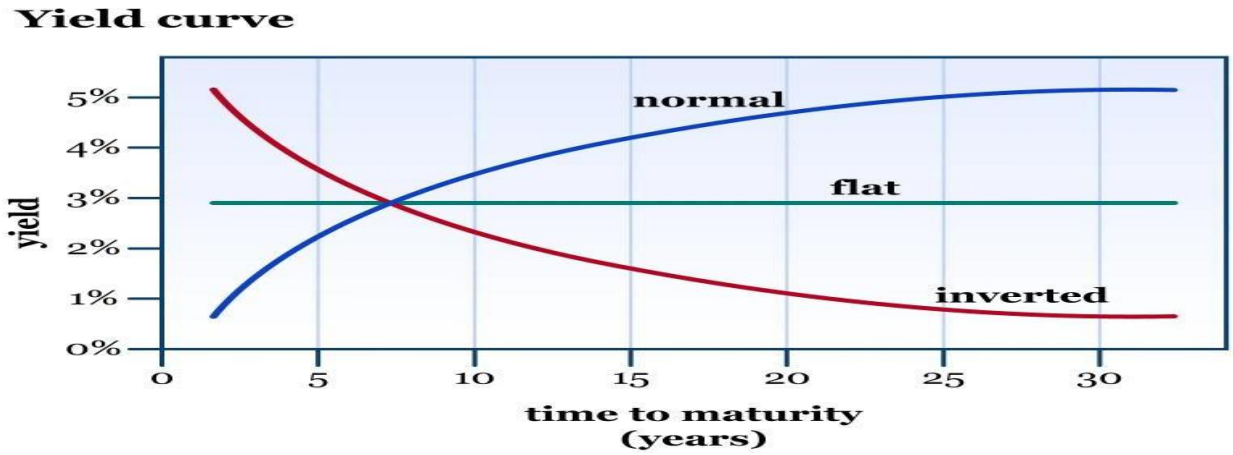


Fig. 1: Yield curve

4.2 EXPECTATIONS THEORY

The term structure of interest rates (TSIR) is a widely analysed field of research that, nowadays, continues to receive much attention from researchers in finance and macroeconomics. The most prevalent one is the Expectations Theory (ET), which posits that the slope of the yield curve, that is, the spread between long rates and short rates, reflects the market's forecast of changes in interest rates. The expectations theory of the term structure of interest rates was originally postulated by Irving Fisher in 1896. While Fisher is credited with the initial idea, John Hicks expanded on Fisher's work in 1939. The expectations theory has been described extensively in numerous papers, Modigliani and Sutch (1966, 1967), Nelson (1972), Modigliani and Shiller (1973), Shiller (1972), Campbell and Schoenholtz (1983). In their study, Shiller (1979) and Singleton (1980) concluded that short-term interest rates increased in terms of their volatility and that long-term interest rates remained extremely high in spite of inflation being curbed. In brief, the expectations theory emphasises market expectations on future interest rates.

4.2.1 CONCEPT OF EXPECTATIONS THEORY

Rational expectations theory posits that investor expectations will be the best guess of the future using all available information. Expectations do not have to be correct to be rational; they just have to make logical sense given what is known at any particular moment. An expectation would

be irrational if it did not logically follow from what is known or if it ignored available information.

Expectations theory on the term structure of interest rates explains the movements of long-term interest rates by market expectations for future short-term interest rates. It means that, to maximize the expected discount value of a certain asset, investors try to choose an optimum portfolio among the alternatives:

(a) purchasing and consecutive holding of bonds whose maturity equals their planned investment period;

(b) rolling over of short-term instruments; and

(c) purchasing of longer-term bonds and selling of such bonds before their maturity.

In the expectations theory, the expectations regarding future interest rates play a significant role in the determination of their portfolio and eventually the term structure of interest rates. Depending upon the explanatory power of the expectations factors assumed, the theory can be classified into:

(i) unbiased expectations theory, and
(ii) risk premium hypothesis.

Unbiased expectations theory maintains that long-term interest rates are perfectly determined by market expectations for future short-term interest rates, whose first advocate can be traced back to Fisher (1930).

On the other hand, the risk premium hypothesis assumes that, in addition to expected future short-term interest rates, the risk premium also plays an important role in the determination of long-term interest rates. Risk premium hypothesis can be further divided into: (a) the constant risk premium hypothesis, such as the liquidity premium hypothesis of Hicks (1939); and (b) the time-varying risk premium hypothesis with the risk premium that changes over time as well as terms to maturity. There exists a variety of risk premia, for instance, a liquidity premium which compensates for the risk incurred by purchases of long-term bonds and a term premium created by the mismatching of the planned investment period and the actual maturity of bonds purchased.

In the time varying risk premium hypothesis, the expected period holding rate of return of an n-period bond at time t (i.e., coupon income {interest payments received by the holder of a bond, calculated as a percentage of the bond's face value} plus expected capital gains or losses) equals the sum of short-term interest rate corresponding to their holding period and the time-varying risk premium. Mathematically, it can be notated as:

$$E_t (H_{n,t}) = R_{1,t} + \Phi_{n,t}\ ,\ n = 2,3,\ldots..,N$$

Where, $H_{n,t} = \frac{P_{n-1,t+1} - P_{n,t} + C.M_v}{P_{n,t}}$

E_t : Market expectations formed rationally based on available information at time t

$_{n,t}$: Period holding rate of return of an n-period bond

$R_{1,t}$: Short-term interest rate

Φ_{nt} : Risk premium

$P_{n,t}$: Price of an n-period bond

C : Coupon rate

M_v : Price at which investment is repurchased

The aforementioned equation is the generalized equation for the time-varying premium hypothesis. Based on it, the unbiased expectations theory and the constant risk premium hypothesis can be studied. Since the risk premium is assumed to be zero in the unbiased expectations theory, the equation for the unbiased expectations theory can be written as:

$$E_t (H_{n,t}) = R_{1,t}, \qquad n = 2,3,\ldots..,N$$

On the other hand, in the constant risk premium hypothesis, it is assumed that risk premium does not change over time ($\Phi_{n,t} = \Phi_n$).

$$E_t (H_{n,t}) = R_{1,t} + \Phi_n, \quad n = 2,3,\ldots..,N$$

Note: the constant risk premium hypothesis assumes that investors are risk-averse.

Expectation theory leaps into pure expectations hypothesis and expectations hypothesis. Pure expectations theory postulates: (a) expected excess returns on long-term over short-term bonds are zero, or (b) yield term premia are zero, or (c) forward rates are zero. On the other hand, the expectations hypothesis postulates: (i) expected returns are constant over time, or (ii) yield term premia are constant, or (iii) forward term premia are constant over time.

4.2.2 VARIATIONS

- **Pure Expectations Theory:** This version assumes that investors are risk-neutral and only care about expected returns.
- **Liquidity Preference Theory:** This theory adds a premium for holding longer-term bonds, as they are generally perceived as less liquid (more difficult to sell quickly).
- **Segmented Markets Theory:** This theory suggests that different maturities of bonds are not perfect substitutes for each other, and that supply and demand within specific maturity segments determine their yields.

4.2.3 RELEVANCE IN CURRENT ERA

The expectations theory has recently been subject to extensive empirical scrutiny in the United States. On the basis of this empirical work, the expectations theory of the term structure has been rejected in various studies. Despite this consistent rejection, Shiller, Campbell and Schoenholtz (1983) note that the theory continually reappears in policy debates.

In an important paper, Cox, Ingersoll and Ross (1981) re-examine several propositions about the relation between long and short rates typically associated with the expectations theory. In particular, Cox et al.'s discussion is directed to the "pure" expectations theory, which states that risk premia are zero, whereas most empirical applications consider the less restrictive expectations hypothesis (EH), which allows for constant risk premia.

4.2.4 LIMITATIONS

1. Theory assumes that the expectations held by the market actually turn into reality. Whereas critics point out that the expectations need not always turn out to be true.

2. The theory inherently assumes that the authorities are not capable of influencing the term structure via public debt management or money supply. Whereas, in reality, even a slightest change in interest rates can change market sentiment manifolds (in case of elastic demand).
3. The theory makes an audacious assumption that the investors always make precise and accurate expectations regarding the future behaviour of interest rates.
4. In this theory, short-term interest rates are considered as causes while long-term interest rates as effects.

4.3 LIQUIDITY PREMIUM THEORY OF THE TERM STRUCTURE OF INTEREST RATES

The term structure of interest rates, represented by the yield curve, illustrates the relationship between bond yields and their maturities. Several theories explain its shape, including:

- Pure Expectations Theory (based solely on future rate expectations),
- Market Segmentation Theory (investors have rigid maturity preferences), and
- Liquidity Premium Theory (LPT) (combines expectations with risk premiums).

The Liquidity Premium Theory of the term structure of interest rates was postulated by John Hicks in 1939. He proposed that the theory is based on the idea that investors prefer shorter-term securities due to their greater liquidity, and therefore, lenders need to offer a premium on longer-term securities to compensate for the reduced liquidity. It is worth noting that the liquidity premium theory focuses specifically on how investors demand higher returns (liquidity premiums) for holding longer-term bonds due to the increased risk and decreased liquidity of those bonds. This chapter examines LPT's assumptions, mathematical formulation, empirical validity, and practical applications.

4.3.1 THEORETICAL FOUNDATIONS:

a. Core Assumptions

LPT modifies the Pure Expectations Theory by introducing risk aversion:

1. Short-Term Preference: Investors favor short-term bonds for liquidity and lower interest rate risk.
2. Liquidity Premium: Long-term bonds must offer a risk premium to attract investors.

3. Forward Rates Include Premiums: Observed long-term rates reflect both expected future short-term rates and an added liquidity premium.

b. Mathematical Representation

Under LPT, the yield on an n-period bond is:

$$(1+R_n)^n = (1+R_1)\,(1+f_2+L_2)\,(1+f_3+L_3)\,\ldots..\,(1+f_n+L_n)$$

Where:

R_n = Yield on an n-$_{year}$ bond,

R_1 = Current one-year rate,

f_t = Forward rate (expected future short-term rate),

L_t = Liquidity premium (increasing with maturity).

Alternatively, in simplified form:

$$R_n = \frac{r_1 + r_2 + \ldots.. + r_n}{n} + L_n$$

According to the liquidity premium theory, the interest rate on long term maturities is higher than that on short term maturities (or yield curve slopes upwards towards right) primarily because a liquidity premium must be added to the yields of long-term maturities.

The theory is based on the fact that interest rate risk is more on longer maturity securities. A small change in rate of interest results in either making a capital loss (as a result of fall in rate of interest) or a capital gain (as a result of a rise in interest rate). But there is a catch! With the increase in length of maturity, risk of capital loss (or gain) also increases. Generally, investors are risk averters, thus they prefer securities with shorter maturity. Therefore, a premium is added to return of longer-term maturities to attract risk averse buyers. In this sense, the liquidity premium factor always causes longer maturity rates to be higher than the shorter maturity.

The liquidity preference theory incorporates elements of both the rational expectations theory and the market segmentation theory. The liquidity preference theory explains all three observations of the term structure of interest rates: 1. Interest rates across different maturities tend to move together. That is, they are positively correlated. 2. The yield curve tends to exhibit

a steep positive slope when short-term rates are low and a negative slope when short-term rates are high. 3. For the most part, the yield curve exhibits an upward-sloping bias.

4.4 IMPLICATIONS FOR THE YIELD CURVE:

LPT explains why the yield curve is typically upward-sloping:

- Normal Curve: Rising/stable short-rate expectations + liquidity premiums push long-term yields higher.
- Inverted Curve: Possible if expected short-term rates fall sharply, outweighing liquidity premiums.
- Humped Curve: Occurs when medium-term premiums dominate expectations.

4.5 COMPARISON WITH OTHER THEORIES:

Theory	Key Idea	Limitations
Pure Expectations	Long-term rates = average expected short-term rates	Ignores risk premiums
Market Segmentation	Investors are confined to specific maturities	Overlooks substitutability between maturities
Liquidity Premium	Long-term rates = expected rates + liquidity premium	Difficult to measure premiums empirically

4.5.1 EMPIRICAL EVIDENCE:

- Support: The yield curve is usually upward-sloping, aligning with LPT.
- Challenges:
  - Liquidity premiums are unobservable and time-varying.
  - During crises (e.g., 2008), short-term securities also face liquidity risk.
  - Preferred Habitat Extension: Some investors may accept non-preferred maturities if sufficiently compensated, reinforcing LPT.

4.5.2 PRACTICAL APPLICATIONS:

1. Bond Pricing: Investors adjust required yields based on estimated liquidity premiums.

2. Monetary Policy: Central banks analyze yield curves to distinguish between expectations and risk premia.
3. Portfolio Management: Investors balance risk-return tradeoffs by assessing term premiums.

4.6 CRITICISMS AND LIMITATIONS:

- Measurement Issues: Isolating liquidity premiums from expectations is challenging.
- Institutional Preferences: Pension funds and insurers may prefer long-term bonds, reducing premium demands.
- Behavioral Factors: Ignores irrational investor behavior (e.g., panic selling).
- One size doesn't fit all: Different investors don't have the same degree of risk aversion. This makes it difficult to determine liquidity premium.

4.7 MARKET SEGMENTATION THEORY

The market segmentation theory has been developed as an alternative to expectations theory. Market segmentation theory is a theory that long-term and short-term interest rates are not related to each other. It also states that the prevailing interest rates for short, intermediate, and long-term bonds should be viewed separately, like items in different markets for debt securities.

4.7.1 CONCEPT

The market segmentation theory asserts that the markets for different maturity bonds are segmented. In other words, market segmentation theory states that long- and short-term interest rates are not related to each other because they have different investors. Under this assumption, the interest rate for each bond is determined by the supply and demand for bonds, without consideration given to the expected returns on bonds of other maturities.

Stated differently, under this theory, bonds are not substitutable, and the expected return from a bond of given maturity does not influence the demand for a bond of another maturity. Further, investors are thought to prefer short-term maturity bonds over long-term maturity bonds. Thus, there is greater relative demand for short-term bonds than there is for long-term bonds. As a result, the price of short-term bonds is higher, resulting in a lower yield than that offered on long-term bonds.

4.7.2 IMPLICATIONS FOR MARKET ANALYSIS

The yield curve is a direct result of the market segmentation theory. Traditionally, the yield curve for bonds is drawn across all maturity length categories, reflecting a yield relationship between short-term and long-term interest rates. However, advocates of the market segmentation theory suggest that examining a traditional yield curve covering all maturity lengths is a fruitless endeavour because short-term rates are not predictive of long-term rates.

4.7.3 LIMITATIONS

Neither the rational expectations nor the market segmentation theory fully explains the term structure of interest rates. But, taken together, these theories form the basis of the liquidity preference theory, providing a clearer understanding of the term structure of interest rates and the calculation of the discount rates used to value fixed-income securities and their related derivative securities.

4.8 PREFERRED HABITAT THEORY

Preferred Habitat Theory is a theory on the investing behavior of bond buyers. It states that individual investors have a preferred range of bond maturity lengths, and will only go outside of this range if a higher yield is promised. This theory also states that investors prefer shorter-term bonds to longer-term bonds. The preferred Habitat Theory is the modern interest theory explaining the yield curve. It was developed in the post-Nixon era to meet the difficulties arising in the fiat currency systems.

Modigliani and Sutch, while empirically analysing the U.S. government's "Operation Twist" policy to twist the yield curve and address balance of payments issues, reviewed existing term structure theories, i.e. expectations theory and liquidity theory and formulated their own explanation, now known as the Preferred Habitat Theory.

4.8.1 CONCEPT

In the mid-1960s, Modigliani and Sutch introduced the Preferred Habitat Theory as an extension of the Expectations Theory and Market Segmentation Theory of the term structure of interest rates. According to this view, investors prefer certain maturity ranges—so-called "habitats"— based on their specific investment horizons and risk tolerances. If an issuer or borrower wishes to

issue securities outside these preferred maturities, they must offer a yield premium to entice investors to accept the additional risk.

Unlike the Liquidity Premium Theory, which assumes a uniform increase in the risk premium with longer maturities due to investors' general preference for liquidity, the Preferred Habitat Theory argues that this premium is not strictly tied to maturity length alone. Instead, it depends on the balance of supply and demand within specific maturity segments. When a mismatch occurs, investors or borrowers may shift from their preferred sectors, but only if adequately compensated for the increased risk—either reinvestment risk for short-term instruments or price risk for longer-term instruments.

For instance, an investor with liabilities maturing in five years will find a five-year bond less risky than bonds with shorter or longer maturities. If forced to invest outside this timeframe, they will demand a risk premium. Similarly, borrowers prefer to match the duration of their borrowing to their funding needs to avoid the risks of refinancing or premature repayment.

Empirical evidence supports this theory. A prominent example is the U.S. Treasury's 2000–2002 buyback of long-term bonds, which caused yields on thirty-year bonds to drop significantly while shorter-term yields remained largely unaffected. Such a supply shock localized to a specific maturity range aligns with the Preferred Habitat Theory but cannot be easily explained by the representative-agent models assumed by the Expectations Theory.

The theory also helps explain why the yield curve can take many shapes—upward-sloping, downward-sloping, flat, or even humped. It reflects both expectations of future short-term rates and the risk premiums required to persuade investors to shift from their preferred maturities. For example, a sharply upward-sloping curve might signal expectations of rising short-term rates, while a flat curve could imply falling rates or a balance in supply and demand across maturities.

Fundamentally, Modigliani and Sutch challenged the idea that all investors always wish to liquidate quickly and that all borrowers prefer long-term funds. They noted that financial institutions and investors often have liability structures that determine their preferred investment horizons. This makes them risk-averse to maturity mismatches, driving their need for compensation if they must invest outside their "habitat."

4.8.2 ASSUMPTIONS OF PREFERRED HABITAT THEORY

1) Investors and borrowers have segments of the market in which they prefer to operate.
2) When significant differences in yield exist between market segments, investors are willing to leave their desired maturity segment.
3) Yield differences are determined by the supply and demand conditions within the segment.

4.9 SUMMARY

Expectations theory posits that long-term interest rates are determined by the market's expectations of future short-term interest rates. Essentially, it suggests that investors make decisions about buying and selling long-term bonds based on their predictions of how short-term rates will change in the future. Time-varying risk premium is important for the determination of the term structure of interest rates from both the theoretical and empirical perspectives. This also indicates the importance of the time-carrying risk premium when discussing expectations theory. In spite of limitations, the expectations theory is a widely accepted theory of the term structure of interest rates since it's found to be empirically valid. The results of various studies have tended to give strong support to the expectations theory, particularly to its modified

version which accepts the existence of a liquidity premium on long-term bonds.

The Liquidity Premium Theory enhances the Pure Expectations Theory by incorporating investor risk aversion. While it explains typical yield curve shapes, its reliance on unobservable premiums and exclusion of behavioural factors limits its predictive power. Nevertheless, it remains a cornerstone of fixed-income analysis, influencing investment strategies and policy decisions.

The market segmentation theory explains the tendency of the yield curve to exhibit a positive or upward-sloping bias. However, the market segmentation theory cannot explain the tendency of interest rates to move together, or the presence of downward-sloping yield curves.

This theory's major conclusions are that yield curves are determined by supply and demand forces within each market/category of debt security maturities and that the yields for one category of maturities cannot be used to predict the yields for a different category of maturities.

The Preferred Habitat Theory suggests that the term structure of interest rates reflects not just market expectations about future rates but also maturity-specific supply and demand imbalances and the varying risk appetites of investors and borrowers. Thus, it expands on the pure Expectations Theory by introducing the idea that market participants are not indifferent to maturity but require incentives to deviate from their preferred investment horizons.

The major conclusions of the preferred theory are as follows:

1) If the yield curve slopes upwards, investors do not expect any major changes in interest rates. Rates may go higher, but they may also remain the same, with the upward slope reflecting the risk premium. In other words, the prevailing conditions are expected to continue (provided the economy is growing).
2) If the yield curve is sloping downward, short interest rates are expected to fall. Since at higher maturities we would expect interest rates to be higher, but get them lower in a downward slope, the only possible conclusion is that rates will fall so much that they will be lower than today's interest rates, even with the risk premium added.
3) If the yield curve is flat, the market is expecting future rates to come down slightly. Interest rates must fall in the future so that the yield curve may remain flat even with the risk premium added on top of future prices.

4.10 QUESTIONS FOR PRACTICE

A. SHORT ANSWER TYPE QUESTIONS

Q.1 What is meant by the term structure of interest rates?

Q.2 Define the term structure of interest rates.

Q.3 Write a short note on the yield curve.

Q.4 Write a short note on the expectations theory of term structure of interest rates.

Q.5 How do inflation expectations influence the term structure of interest rates?

Q.6 Provide examples of research studies that have examined the term structure of interest rates.

Q.7 How can the term structure be used to assess the risk associated with different bond maturities?

Q.8 Briefly explain the “Preferred Habitat Theory” of the term structure of interest rate.

Q.9 State assumptions of the “Preferred Habitat Theory” of the term structure of interest rate.

Q.10 What is meant by the term structure of interest rate? Compare the theories of the term structure of interest rate.

Q.11 “Expectations theory of term structure of interest rate is the mother of all theories of term structure of interest rate.” Explain.

Q.12 Carve out differences between preferred habitat theory and market segmentation theory of the term structure of interest rate.

Q.13 Explain the concept of the "humped" yield curve. What factors might lead to this unusual shape?

B. LONG QUESTIONS

Q.1 Explain the expectations theory of term structure of interest rates.

Q.2 Discuss the role of the term structure of interest rates as a leading economic indicator. What insights can be gained from analysing the yield curve?

Q.3 Discuss the implications of a yield curve inversion for the economy.

Q.4 Enumerate liquidity premium theory.

Q.5 Compare expectations theory and liquidity premium theory of term structures of interest rate.

Q.6 What are the limitations of liquidity premium theory?

Q.7 Critically analyse liquidity premium theory.

Q.8 Critically evaluate expectations theory of term structure of interest rates.

Q.9 Write a short note on liquidity premium theory.

Q.10 Which is the best theory of term structure of interest rate? Explain in detail.

Q.11 What is meant by term structure of interest rate? Critically examine liquidity premium theory.

Q.12 “Liquidity premium theory is derived from expectations theory of term structure of interest rates.” Write down appropriate explanation to support this argument.

Q.13 “Liquidity premium theory encompasses all in one.” Do you agree? If yes, write in detail to support this argument.

Q.14 Pen down the differences between market segmentation theory and liquidity premium theory.

Q.15 Write a short note on market segmentation theory of term structure of interest rate.

Q.16 Explain market segmentation theory and liquidity premium theory of term structure of interest rate.

4.11 SUGGESTED READINGS

- Cox, Ingersoll, & Ross (1985): A Theory of the Term Structure of Interest Rates.
- Adrian, Crump, & Moench (2013): Pricing the Term Structure with Linear Regressions.
- Fabozzi (2016): Fixed Income Analysis, 3rd Edition.

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

UNIT 5: MONETARY POLICY

STRUCTURE

5.0 OBJECTIVES

After studying this unit, learners should be able to know about:

- Monetary Policy Targets
- Trade Offs Among Alternative Goals of Monetary Policy
- Instruments of Monetary Policy
- Monetary Policy Committee
- Portfolio Adjustment
- Classical Approach
- Tobin's Q Theory
- Keynesian Approach to Portfolio Adjustment

5.1 INTRODUCTION

Monetary policy is the macroeconomic policy laid down by the central bank. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity. In India, monetary policy of Reserve Bank of India is aimed at managing the quantity of money in order to meet the requirements of different sectors of the economy and to increase the pace of economic growth.

RBI uses various instruments, like the repo rate, to implement the monetary policy. Monetary policy can be expansionary or contractionary in nature. Increasing money supply and reducing rate of interest rates indicate an expansionary monetary policy. Whereas, decreasing money supply and increasing interest rates point to a contractionary monetary policy.

Monetary Policy Framework: Instruments, Targets, Policy Expectations

5.2 MONETARY POLICY TARGETS

Targeting Monetary Aggregates	Targeting Interest Rate

1. The ultimate targets that the monetary authority would like to control are macroeconomic goal variables such as the unemployment rate, the inflation rate, and growth in real GDP. In the short-run, the central bank has at times tried to influence these ultimate targets by influencing intermediate target variables.	An alternative to targeting monetary aggregates is to target an interest rate.
2. The intermediate target is a variable that the central bank controls to influence the ultimate policy target predictably.	RBI meets this target using monetary policy instruments like OMOs, Repo Rate, Reverse Repo Rate, etc.
3. The monetary policy committee makes choices based on past data and staff forecasts of the behaviour of the economy for the given money growth rates.	The interest rate managed by the central bank is a short-term operating target. Long-term interest rates can also be observed contemporaneously but cannot be closely controlled by central banks.

Price stability is a necessary precondition to sustainable growth.

The amended RBI Act, 1934, also provides for the inflation target (4% +-2%) to be set by the Government of India, in consultation with the Reserve Bank, once in every five years.

Recently, the Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) noted that the central bank's accommodative policy stance may fail to comply with the Inflation target (upper limit of 6%).

Various objectives of monetary policy are stated below:

1. Price stability
2. Controlled Expansion of Bank Credit
3. Promotion of Fixed Instrument

4. Restriction of Inventories and Stocks
5. Promote efficiency
6. Reduce rigidity

5.3 TRADE-OFFS AMONG ALTERNATIVE GOALS OF MONETARY POLICY

Monetary policy faces trade-offs among its primary goals of price stability, output stabilization, and financial stability. Central banks often need to balance these competing objectives, as actions taken to achieve one goal may negatively impact another. For example, tightening monetary policy to curb inflation could slow economic growth and potentially destabilize the financial system.

1. Price Stability vs. Output Stabilization:

- The Dilemma: A central bank might face a situation where it needs to cool down an overheating economy to prevent inflation, but doing so could lead to a recession or slower growth. Conversely, if the economy is weak, stimulating growth with lower interest rates might lead to higher inflation.
- The Trade-off: This trade-off is often represented by the short-run Phillips curve, which suggests a negative relationship between inflation and unemployment (or output). However, the strength of this relationship can vary, and it may not always be a clear-cut trade-off.

2. Price Stability vs. Financial Stability:

- The Dilemma: Actions taken to maintain price stability, such as raising interest rates, can negatively impact financial stability by increasing the risk of bank failures or asset price bubbles. Conversely, policies that prioritize financial stability, like keeping interest rates low, could fuel inflation.
- The Trade-off: This trade-off has become more prominent in recent years, as central banks are increasingly recognizing the importance of financial stability alongside price stability.
- Example: During the 2008 financial crisis, central banks had to balance the need to lower interest rates to stimulate the economy with the risk of exacerbating the financial crisis.

3. Output Stabilization vs. Financial Stability:

- The Dilemma: Policies aimed at stabilizing output, such as lowering interest rates to boost borrowing and investment, can increase the risk of excessive risk-taking by financial institutions and potentially lead to financial instability. Conversely, policies that prioritize financial stability could hinder economic growth.
- The Trade-off: This trade-off is particularly relevant when considering the role of macro prudential policies (policies aimed at reducing systemic risk in the financial system) in conjunction with monetary policy.

4. Other Potential Trade-offs:

- Climate Change: Some central banks are exploring the role of monetary policy in mitigating climate change, but this could create trade-offs with other objectives like price and financial stability. For example, greening the economy might require specific policies that could impact inflation or financial stability.
- Central Bank Independence and Credibility: The level of central bank independence and transparency can also influence the effectiveness of monetary policy and its ability to navigate trade-offs. A central bank with strong credibility may be better able to manage trade-offs by influencing inflation expectations.

5.4 INSTRUMENTS OF MONETARY POLICY:

1. Repo and Reverse Repo Rate
   - Repo rate is the rate at which RBI lends to its clients generally against government securities. Reduction in Repo rate helps the commercial banks to get money at a cheaper rate and increase in Repo rate discourages the commercial banks to get money as the interest rate increases and lending becomes expensive. This in turn discourages public to borrow money and will encourage them to deposit.
   - Reverse Repo Rate is the rate at which RBI borrows money from the commercial banks.

2. OMO (open market operations)

   - OMOs involves buying and selling of government securities from or to the public and banks.

3. Cash Reserve Ratio (CRR)

- CRR is a certain percentage of bank deposits which banks are required to keep with RBI in the form of reserves or balances. Higher the CRR lower the liquidity. RBI is empowered to vary CRR between 15 percent and 3 percent, but as a suggestion by the Narsimham Committee Report, CRR was reduced from 15% in 1990 to 5% in 2002.

4. Statutory Liquidity Ratio (SLR)
   a. Every financial institution is required to maintain a certain quantity of liquidity assets with themselves at any point of time of their total time and demand liabilities. These assets have to be kept in non-cash form such as government securities, precious metals, bonds etc. The ratio of liquid assets to time and demand assets and liabilities is termed as the statutory liquidity ratio.
      i. Bank Rate Policy
   b. The bank rate is also known as discount rate. It is the rate of interest charged by RBI for providing funds or loans to the banking system. This banking system involves: commercial banks, co-operative banks, industrial development bank of India (IDBI), EXIM bank and other approved financial institutions. Increase in bank rate decreases the credit volume to banks and hence decline in money supply. Thus increase in bank rate is a symbol of tightening of RBI monetary policy.
         i. Credit Ceiling
   c. RBI issues information or direction that loans to commercial banks will be given up to a certain limit. E.g.: priority sector lending.
      i. Credit Authorization Scheme
   d. This was introduced in November 1965 when P C Bhattacharya was the chairman of RBI. Under this instrument of credit regulation, RBI as per the guidelines, authorizes the banks to advance loans to desired sectors.
      i. Moral Suasion
   e. RBI may request commercial banks not to give loans for unproductive purposes which don't add to economic growth but increases inflation.
      i. Market Stabilisation Scheme (MSS)

- This instrument for monetary management was introduced in 2004.
- Surplus liquidity arising from large capital inflows is absorbed through the sale of short-dated government securities and treasury bills.

- The cash so collected is held in a separate government account with the Reserve Bank.

5.5 MONETARY POLICY COMMITTEE:

- The monetary policy committee is a statutory and institutionalized framework under the Reserve Bank of India Act, 1934, for maintaining price stability, while keeping in mind the objective of growth.
- MPC consists of 6 members. Out of 6, 3 members are from RBI and 3 are appointed by the government.
- The Governor of RBI is ex officio Chairman of the committee.
- The MPC determines the policy interest rate (repo rate) required to achieve the inflation target.
- An RBI-appointed committee led by the then deputy governor Urjit Patel in 2014 **recommended** the establishment of the monetary policy committee.

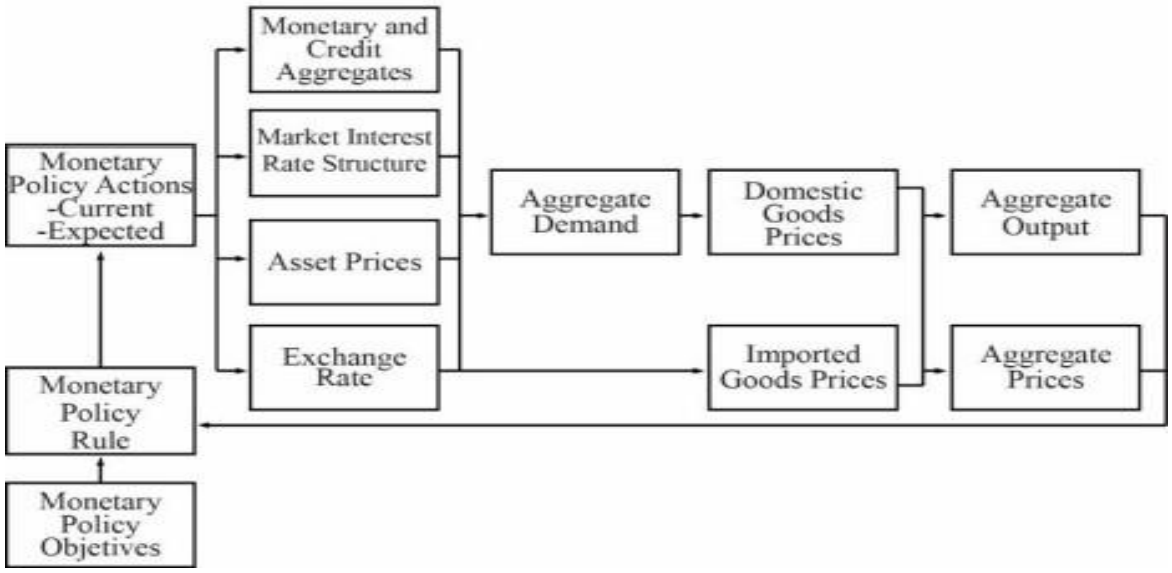
5.6 EFFECTIVENESS AND LIMITATIONS OF MONETARY POLICY

The limitations of monetary policy put constraints on its effectiveness. The effectiveness of monetary policy depends upon certain factors, viz., time lag, problems in forecasts, reaction of non-banking financial intermediaries, and the underdevelopment of capital markets. Some of the lags in monetary policy are discussed as under:

1. Time lag; The time lag is the time taken in calking out policy action, its implementation and response time. Time lag is further divided into two parts: (i) inside lag or preparatory lag; and (ii) outside lag or response lag. The time lag of monetary policy, particularly its response lag has found to be generally longer than the time lag of fiscal policy.
2. Problems in forecasting the magnitude of the problem: Despite advancement in forecasting techniques, reliable forecasting of macroeconomic variables remains a mystery! Because of low degree of reliability of forecasting, prediction of the outcome of the monetary policy remains extremely a difficult task.
3. Growth of non-banking financial intermediaries: The proliferation of non-banking financial intermediaries including industrial financial corporations, industrial development banks, mutual saving funds, insurance companies, chits funds etc have reduced the share of commercial banks in total credit.

4. Underdeveloped money and capital markets: Though money and capital market are fragmented, the money market and capital market are interactive and work interdependently. Effective working of monetary policy requires a fairly developed money market.

5.7 TRANSMISSION MECHANISM OF MONETARY POLICY: THE PORTFOLIO ADJUSTMENT



5.8 OBJECTIVE OF PORTFOLIO ADJUSTMENT

In this section, we discuss how changes made in the monetary policy instruments affect the monetary and real sectors and the economy as a whole. The monetary transmission mechanism describes how policy-induced changes in the nominal money stock or the short-term nominal interest rate impact real variables such as aggregate output and employment.

A rise in the money supply causes a fall in the rate of interest and vice versa. A fall in the rate of interest increases investment (because borrowing becomes cheap). A rise in investment causes a rise in the level of national income. The central theme of the transmission mechanism is portfolio adjustment by households and firms. The portfolio adjustment theory was initially developed by James Tobin, and was later developed by monetarists.

5.9 PORTFOLIO ADJUSTMENT

The portfolio adjustment refers to reallocation of total investment between the different forms of assets – cash balance, bank deposits, government bonds, treasury bills, land, building, plant and equipment, shares, debentures, etc. The increase in proportion of idle cash balance (a non-earning form of wealth) in the portfolio makes the portfolio balance suboptimal. This is called disequilibrium in portfolio balances. The process of regaining equilibrium position (equilibrium levels of price and income change) is called the portfolio adjustment process.

5.10 CLASSICAL APPROACH

According to the classical approach of transmission mechanism, the changes in money supply affect interest rates and thus ultimately affect the overall price level in the economy. Lower interest rates encourage borrowing and spending thereby stimulating aggregate demand. Whereas, higher interest rates discourage borrowing and spending, thus curbing aggregate demand.

Aggregate demand is inversely proportional to interest rates.

The wealth effect can be observed from changes in asset prices. Eg, rising asset prices can make consumers feel wealthier, leading to increased spending. Conversely, falling asset prices can reduce spending.

Further, interest rates also affect exchange rates. Lower interest rates tend to depreciate of domestic currency, making exports cheaper and imports more expensive. This boosts net exports and stimulates aggregate demand.

Quantity theory of money (Fisher's equation: MV = PT) and Cambridge's cash balance theory are typical examples of the classical approach of the transmission mechanism.

5.11 TOBIN'S Q THEORY

Tobin's q theory of investment measures the ratio of the stock market value of a firm to the replacement cost of the physical capital that is owned by that firm. Everything else being equal, a policy induced increase in short-term nominal interest rate makes debt instruments more attractive than equities in the eyes of investors; hence, following a monetary tightening, equilibrium across securities markets must be reestablished in part through a fall in equity prices. Facing a lower value of q, each firm must issue more new shares of stocks in order to finance any new investment project, in this sense; investment becomes costlier for the firm. In the aggregate across all

firms, therefore, investment projects that were only marginally profitable before the monetary tightening go unfunded after the fall in q, leading output and employment to decline as well.

$$\text{Tobin's Q} = \frac{\text{Market Value of Asset}}{\text{Replacement Cost of Asset}}$$

5.12 KEYNESIAN APPROACH TO PORTFOLIO ADJUSTMENT/ KEYNESIAN TRANSMISSION MECHANISM

The Keynesian approach is basically Tobin's portfolio adjustment approach. When money supply increases, cash balance with the public increases. The increase in proportion of non-earning assets in the portfolio causes a temporary imbalance in the optimum portfolio. So the households try to adjust their portfolio. The process of portfolio adjustment includes increasing investment in financial assets like bonds and securities, shares and debentures but not in real assets.

According to the Keynesian approach, an increase in demand for financial assets pushes the prices of financial assets up. As a result, the interest rate goes down. A fall in the interest rate increases investment in productive assets, which increases the level of income. Increases in income cause a rise in aggregate demand (AD = C+I). The upward shift in the aggregate demand results in a further increase in the equilibrium level of income. The process continues until a new equilibrium point is attained.

increase in cash balance	→	increase in demand for financial assets	→	fall in the interest rate	→	increase in investment	→	increase in aggregate demand.

5.13 MONETARIST APPROACH TO PORTFIOLIO ADJUSTMENT

Monetarists treat cash balance and real assets as close substitutes. Unlike Keynesian approach, according to monetarists, change in cash balance changes the demand for real assets, not the financial assets. The ultimate result is the same, i.e. change in aggregate demand.

Increase in money supply	→	Increase in cash balance	→	Increase in demand for real assets	→	Increase in aggregate demand

5.14 QUESTIONS FOR PRACTICE

Q.1 Define monetary policy

Q.2 State the lags in the operation of monetary policy.

Q.3 What are the goals of monetary policy?

Q.4 Discuss the trade-offs among alternative goals of monetary policy.

Q.5 Explain the transmission mechanism of monetary policy.

Q.6 Explain the targets of monetary policy. How are monetary policy targets achieved?

Q.7 Compare Keynesian and monetarist models of the transmission mechanism of monetary policy.

Q.8 Define monetary policy. Discuss Keynesian and Monetarist views on transmission mechanism of monetary policy.

Q.9 What are the targets of monetary policy? Which of these serves as the best target?

Q.10 What are the primary objectives of monetary policy? How do these objectives sometimes conflict, and how should policymakers prioritise them?

Q.11 To what extent does monetary policy influence aggregate demand and output?

Q.12 How should monetary policy be adapted to address specific economic challenges, such as financial crises or recessions?

5.15 SUGGESTED READINGS

- Official RBI website
- R. R. Paul, Money, Banking and International Trade.

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

UNIT 6: CENTRAL BANKING: ORIGIN AND EVOLUTION, MAIN FUNCTIONS, POLICY TOOLS, RBI- MONETARY POLICY AND AUTONOMY

Structure

6.0 OBJECTIVE

After reading this Unit, learner will be able to know about:

- Evolution of central Banking in India
- Functions of the Central bank
- Instruments of Central bank: Quantitative and qualitative
- Types of Monetary policy and implementing tools
- Autonomy of RBI
- Recent Developments

6.1 INTRODUCTION, ORIGIN AND EVOLUTION OF CENTRAL BANKING IN INDIA

The concept of a central bank first emerged in Sweden with the Sveriges Riksbank (1656), followed by the Bank of England (1694). Initially, these banks were established to finance governments and manage national debts. Central banks evolved as lenders of last resort during banking crises and became monetary authorities. We can see how chronologically, the Central banks evolved over time.

- **In 18th–19th centuries:** Limited functions, mainly public debt and note issuance.
- **Early 20th century:** Central banks began regulating commercial banks and stabilizing the currency.
- **Post-WWII period:** Central banks took active roles in macroeconomic stabilization.
- **Modern role:** Monetary policy formulation, inflation targeting, financial system stability.

The concept of central banking in India evolved out of a need for a regulatory authority to manage currency, credit, and banking. Before the formation of the RBI, India lacked a structured central authority. The origins of the Reserve Bank of India (RBI) can be traced to 1926, when the Royal Commission on Indian Currency and Finance – also known as the Hilton- Young Commission – recommended the creation of a central bank for India to separate the control of currency and credit from the Government and to augment banking facilities throughout the country. The Reserve Bank of India Act of 1934 established the Reserve Bank and set in motion a series of actions culminating in the start of operations in 1935. Over time, the Reserve Bank's role and functions have evolved,

as the nature of the Indian economy and financial sector changed. Though started as a private shareholders' bank, the Reserve Bank was nationalised in 1949. The Preamble to the Reserve Bank of India Act, 1934, under which it was constituted, specifies its objective as "to regulate the issue of Bank notes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage". The primary role of the RBI, as the Act suggests, is monetary stability, that is, to sustain confidence in the value of the country's money or preserve the purchasing power of the currency. Ultimately, this means low and stable expectations of inflation, whether that inflation stems from domestic sources or from changes in the value of the currency, from supply constraints or demand pressures. In addition, the RBI has two other important mandates; inclusive growth and development, as well as financial stability. India's financial system is dominated by banks. Their regulation and supervision is therefore important both from the viewpoint of protecting the depositors' interest and preserving financial stability. The RBI, deriving powers from the Banking Regulation Act, 1949, designs and implements the regulatory policy framework for banks operating in India. Over the years, the purview of regulation and supervision has been expanded to include non-banking entities also. Central banks are at the heart of a country's payment and settlement system. "One of the principal functions of central banks is to be the guardian of public confidence in money, and this confidence depends crucially on the ability of economic agents to transmit money and financial instruments smoothly and securely through payment and settlement systems"1. The RBI has, over the years, taken several initiatives in building a robust and state-of-the-art payment

6.2 A BRIEF CHRONOLOGY

1) **Pre-RBI Era:** Banking in India began with the Bank of Hindustan (1770) and later the Presidency Banks in Bombay, Madras, and Calcutta. These banks merged into the Imperial Bank of India in 1921, which carried out some central banking functions. The Hilton Young Commission (1926) recommended the creation of a central bank for India.

2) **Establishment of the RBI:**
The Reserve Bank of India (RBI) was established on April 1, 1935, under the RBI Act, 1934. Initially set up as a private shareholders' bank, it managed currency issuance, acted as banker to the government, and regulated credit. RBI was nationalized on January 1, 1949, following the passage of the Reserve Bank (Transfer to Public Ownership) Act, 1948. It became fully owned by the Government of India and took on a more significant role in economic planning.

3) **Post-Independence to Pre-Liberalization**: RBI promoted credit to agriculture and industry and introduced Selective Credit Controls (SCC). It also established and supported financial institutions like NABARD and IDBI.

4) **Post-Liberalization Reforms (1991 onwards):** The economic reforms of 1991 led to a shift from direct to indirect tools of monetary policy. Interest rates became market-determined, and liquidity management tools were refined.
Modern Phase (Post-2016): Inflation targeting and the formation of the Monetary Policy Committee (MPC) became key reforms. RBI now operates within a Flexible Inflation Targeting (FIT) framework, focusing on price and financial stability.

6.3 FUNCTIONS OF THE RESERVE BANK OF INDIA

The functions of the Reserve Bank today can be categorized as follows:

1) Framing of Monetary policy
2) Regulation and supervision of the banking and non-banking financial institutions, including credit information companies
3) Regulation of money, forex and government securities markets as also certain financial derivatives
4) Debt and cash management for Central and State Governments
5) Management of foreign exchange reserves
6) Foreign exchange management-current and capital account management
7) Banker to banks
8) Banker to the Central and State Governments
9) Oversight of the payment and settlement systems
10) Currency management
11) Developmental role
12) Research and statistics

Aims and Objectives of RBI/ Monetary Policy

- It aims to achieve macroeconomic objectives such as price stability, economic growth, and financial stability.
- To regulate the issue of banknotes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage.
- It is essential to have a modern monetary policy framework to meet the challenge of an increasingly complex economy. The primary objective of the monetary policy is to maintain price stability while keeping in mind the objective of growth. It must control inflation and maintain the purchasing power of the rupee.
    - Growth: Support development by ensuring credit availability to the entrepreneurs.
    - Financial Stability: Ensure stability in the financial markets. It must take a lead role.
    - Employment Generation: Create a favourable environment for job creation in the country.
    - Exchange Rate Stability: Manage the external value of the rupee

6.4 MAIN FUNCTIONS OF CENTRAL BANK

The central bank is an apex financial institution in the banking system of a country. It functions as an independent authority and is responsible for controlling, stabilizing and regulating the monetary and banking structure of the nation. In India, the Reserve Bank of India is regarded as the central bank.

The functions of a central bank can be discussed as follows:

1) **Currency regulator or bank of issue*:*** Central banks possess the exclusive right to manufacture notes in an economy. All the central banks across the world are involved in issuing notes to the economy. This is one of the most important functions of the central bank in an economy and due to this, the central bank is also known as the bank of issue. Earlier all the banks were allowed to publish their own notes which resulted in a disorganized economy. To avoid this situation, the government around the world authorised the central banks to function as the issuer of currency, which resulted in uniformity in circulation and balanced supply of money in the economy.

2) **Custodian of Cash reserves*:*** It is a practice of the commercial banks of a country to keep a part of their cash balances in the form of deposits with the central bank. The commercial banks can draw that balance when the requirement for cash is high and pay back the same when there is less requirement of cash. It is for this reason that the central bank is regarded as the banker's bank. The central bank also plays an important role in the credit creation policy of commercial banks.

3) **Custodian of International currency*:*** An important function of the central bank is to maintain a minimum balance of foreign currency. The purpose of maintaining such a balance is to manage sudden or emergency requirements of foreign reserves and also to overcome any adverse deficits of the balance of payments.

4) **Bank to the government*:*** One of the important functions of the central bank is to act as the bank to the government. The central bank accepts deposits and issues funds to the government. It is also involved in making and receiving payments for the government. Central banks also offer short term loans to the government in order to recover from bad phases in the economy. In addition to being the bank to the government, it acts as an advisor and agent of the government by providing advice to the government in areas of economic policy, capital market, money market and loans from the government. In addition to that, the central bank is instrumental in the formulation of monetary and fiscal policies that help in the regulation of money in the market and controlling inflation.

5) **Controller of credit*:*** Central banks also function as the controller of credit in the economy. It happens that commercial banks create a lot of credit in the economy, that increases inflation.

6) **Lender of last resort*:*** The central bank acts as a lender of last resort by providing money to its member banks in times of cash crunch. It performs this function by providing loans against securities, treasury bills and also by rediscounting bills. This is regarded as one of the most crucial functions of the central bank wherein it helps in protecting the financial structure of the economy from collapsing.

7) **Clearing house for transfer and settlement***:* Central bank acts as a clearing house of the commercial banks and helps in settling of mutual indebtedness of the commercial banks. In a clearing house, the representatives of different banks meet and settle the interbank

payments. The central bank controls the way credit creation by commercial banks is done by engaging in open market operations or bringing about a change in the CRR to control the process of credit creation by commercial banks.

8) **Protecting depositors' interests***:* Central bank also needs to keep an eye on the functioning of the commercial banks to protect the interests of depositors.

6.5 INSTRUMENTS OF MONETARY POLICY: QUANTITATIVE INSTRUMENTS

Quantitative instruments are non-discriminatory in nature. Like if a central bank set up an interest rate, then that rate applies to the whole banking system of the country. But qualitative measures vary from sector to sector. Some of the important quantitative measures of credit control are as follows:

- **Repo Rate (Repurchase rate***):* Rate at which central bank lends short-term funds to commercial banks on submission of collateral (such as securities) by commercial banks. It is periodically decided by the central bank. Other rates, such as bank rate, reverse repo rate, and marginal standing facility (MSF) rate, are automatically adjusted as a fixed percentage of repo rate. In conditions of inflation, central bank increases the repo rate, which leads to increase in interest rates and leading to decrease the demand for credit and further decrease aggregate demand. On the other hand, in case of deflation, central bank can decrease the repo rate to leading to a decrease the interest rates. Decreased interest rates may lead to higher demand for credit and more aggregate demand. This is how changes in repo rate can improve the condition and lead to stable economic growth.

- **Reverse Repo Rate***:* It is the rate at which central bank borrows from commercial banks to absorb excess liquidity. It helps regulate the amount of money available in the market and control inflation. The RBI uses these rates to manage liquidity, control inflation and promote economic growth. Changes in these rates can impact borrowing costs, loan interest rates and overall economic activity.

- **Bank Rate***:* The rate of interest at which a central bank provides long-term loan to commercial banks and other financial institutions. In case of inflation, a central bank can increase the bank rate, which may lead to an increase in interest rates in the economy and a decline in aggregate demand. This decreases the price level, leading to the solution of the

inflation problem. Similarly, in case of deflation, a central bank reduced the bank rate to decrease the interest rates and ultimately increase the aggregate demand and increase the price level and solve the issue of deflation.

- **Cash Reserve Ratio (CRR***):* Minimum cash balance banks must maintain with the central bank. The minimum cash reserve is kept to meet day to day cash payments and partially to comply with statutory reserve requirements. In case of Inflation, central bank may increase the cash reserve ratio (CRR) which, may increase the interest rates, and reduce the aggregate demand. Decreased demand will push price level down and hence correct the situation. On the other hand, in recessionary conditions, CRR may be decreased by the central bank in order to decrease the interest rates and increase the demand for credit. The increased credit demand will further lead to increase in aggregate demand and the price level and improve the overall condition of the economy.
- **Liquidity Ratio (SLR):** Apart from Cash Reserve Ratio, as per the RBI Act, banks are required to hold a certain part of their demand and time liabilities in the form of liquidity assets in their own vault. That minimum percentage of deposits that banks must maintain in liquid assets is known as statutory liquidity ratio. Liquid assets include gold, cash, and approved securities like government securities.
- **Open Market Operations:** Buying or selling government securities by central bank to adjust liquidity to/ from the public and banks. In inflationary conditions, a central bank adopts contractionary policies and hence sells government securities in open market and absorbs the money from the economy. The decreased money supply may lead to lesser aggregate demand and decrease the price level. On the other hand, in case of recessionary conditions, the government adopts expansionary policies and purchases the government securities from the open market. The purchase of the securities may lead to increase the money supply in the economy which will further increase the aggregate demand and hence improve the overall condition.

6.6 INSTRUMENTS OF MONETARY POLICY: QUALITATIVE INSTRUMENTS

Qualitative measures or policy instruments may not increase or decrease the volume of money in the economy. These measures are used to discriminate between different uses of credit and regulate credit for specific purposes. Following are some of the qualitative measures:

1) Moral Suasion: Informal advice and guidelines through discussions, letters, and speeches by central bank to other banks to follow policy directions, is known as moral suasion. Central bank can urge other banks to keep big fraction of their assets as government securities. In inflationary conditions, RBI can also discourage banks from excessive borrowing.

2) Credit Rationing*:* Limits on credit for certain sectors to curb over-lending in certain industries. For example, during an inflationary period, the central bank may curtail the commercial banks from lending to enable consumers to buy T.V. fridge, etc. Then the demand for these luxury items will come down, bringing down their price and indirectly helping to control general price level.

3) Margin Requirements*:* The margin is the part of the loan amount which the bank does not finance. Adjusting margins on secured loans to reduce speculative lending. A higher margin on loans discourages borrowing. To encourage priority lending to particular sectors, the margins may be reduced.

4) Direct Action*:* The Central bank can impose penalties or restrictions on non-compliant banks. For example, central bank charges a penal rate over and above the bank rate, or may refuse to rediscount facilities. Central bank can use a mix of quantitative and qualitative monetary policy tools to correct the situation prevailing in the economy.

6.7 MONETARY POLICY IN INDIA

Monetary policy is a tool used by the central bank of a country, the Reserve Bank of India (RBI) in India, to control and manage money supply and interest rates to ensure price stability, control inflation, and promote economic growth. The RBI formulates this policy under the provisions of the RBI Act, 1934. Since 2016, India has followed a Flexible Inflation Targeting (FIT) framework. Under Section 45ZB of the amended RBI Act 1934, the central government is empowered to constitute a six-member Monetary Policy Committee (MPC). Of which three are from within RBI and three members are nominated by the Government of India. The MPC is required to meet at least four times in a year. Each member of the MPC has one vote, and in the event of an equality of votes, the Governor (ex officio Chairperson) has a second or casting vote. So, decisions are made by majority vote, with the RBI Governor holding a casting vote in case of a tie. The MPC aims to set benchmark interest rates with a focus on transparency and accountability. RBI, once in every six months, releases a Monetary Policy report to explain the sources of inflation and the forecast of inflation for 6-18 months ahead. MPC determines the policy repo rate and the current

inflation target is 4% (with a tolerance band of +/- 2%) that reflects that committee's primary mandate is to maintain annual inflation at 4%, with a tolerance band of 2% to 6%

6.8 TYPES OF MONETARY POLICY

A. Expansionary Monetary Policy: When Reserve Bank of India (RBI) lowers interest rates or increases money supply to boost economic activity. During depression, expansionary (Cheap) monetary policy is used. By lowering interest, it will give a boost to entrepreneurs to make new investments. New investment will generate employment opportunities which will lead to rise in income, savings and capital formation. New technologies will develop and economy will come out of depression.

B. Contractionary Monetary Policy: When RBI raises interest rates or reduces the money supply to control inflation. This type of monetary policy also called dear monetary policy is used during inflation. With rise in the rate of interest, there will be less investment. It will lead to fall in production and consequently fall in purchasing power. Inflation will be under control

6.9 IMPLEMENTATION OF MONETARY POLICY TOOLS

After the amendment to RBI Act, 1934, in May 2016, the primary objective of monetary policy is to maintaining price stability while keeping in mind the objective of growth. There are various direct and indirect instruments used for implementing monetary policy including Repo Rate, Reverse Repo Rate, Liquidity Adjustment Facility (LAF), Marginal Standing Facility (MSF), Corridor, Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Open Market Operations (OMOs) and Market Stabilization Scheme (MSS). They are briefly explained below

- **Repo Rate:** The (fixed) interest rate at which the Reserve Bank provides overnight liquidity to banks against the collateral of government and other approved securities under the Liquidity Adjustment Facility (LAF).
- **Reverse Repo Rate*:*** The (fixed) interest rate at which the Reserve Bank absorbs liquidity, on an overnight basis, from banks against the collateral of eligible government securities under the LAF.
- **Liquidity Adjustment Facility (LAF):** The LAF consists of overnight as well as term repo auctions. Progressively, the Reserve Bank has increased the proportion of liquidity injected under variable rate repo auctions across the range of tenors. Term-repo aims to

help develop the inter-bank term money market, which in turn can set market-based benchmarks for pricing of loans and deposits, and hence improve transmission of monetary policy. The RBI also conducts variable interest-rate reverse repo auctions, as necessitated under market conditions.

- **Marginal Standing Facility (MSF):** A facility under which scheduled commercial banks can borrow an additional amount of overnight money from the Reserve Bank by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit at a penal rate of interest. This provides a safety valve against unanticipated liquidity shocks to the banking system. Corridor: The MSF rate and reverse repo rate determine the corridor for the daily movement in the weighted average call money rate.

- **Bank Rate*:*** It is the rate at which the Reserve Bank is ready to buy or rediscount bills of exchange or other commercial papers. The Bank Rate is published under Section 49 of the Reserve Bank of India Act, 1934. This rate has been aligned to the MSF rate and, therefore, changes automatically as and when the MSF rate changes alongside policy repo rate changes.

- **Cash Reserve Ratio (CRR*):*** The average daily balance that a bank is required to maintain with the Reserve Bank as a share of such per cent of its Net demand and time liabilities (NDTL) that the Reserve Bank may notify from time to time in the Gazette of India.

- **Statutory Liquidity Ratio (SLR):** The share of NDTL that a bank is required to maintain in safe and liquid assets, such as unencumbered government securities, cash and gold. Changes in SLR often influence the availability of resources in the banking system for lending to the private sector.

- **Open Market Operations (OMOs*):*** These include both outright purchase and sale of government securities, for the injection and absorption of durable liquidity, respectively.

- **Market Stabilization Scheme (MSS*): This*** instrument for monetary management was introduced in 2004. Surplus liquidity of a more enduring nature arising from large capital inflows is absorbed through sale of short-dated government securities and treasury bills. The cash so mobilized is held in a separate government account with the Reserve Bank.

Till date, 54 meetings of monetary policies have been held and the recent was the 54th (April 2025) which reflects a balanced approach to support growth and maintain price stability by RBI. The decision to cut the policy repo rate by 25 basis points to 6 per cent is underpinned by easing inflation, particularly in food prices, and a gradual recovery in economic activity. With GDP growth for 2025–26 projected at 6.5 per cent and inflation expected to stay within the 4 per cent target band. The report reflected cautious optimism despite global uncertainties.

On the external front, robust services exports and strong remittance inflows have helped cushion the merchandise trade deficit, keeping the current account deficit at sustainable levels. Meanwhile, improved system liquidity, lower short-term borrowing costs, and stable foreign exchange reserves underscore the resilience of India's financial system. The RBI has acknowledged its commitment to closely monitor evolving conditions and take timely, standardized measures to preserve macroeconomic and financial stability.

6.10 AUTONOMY OF RESERVE BANK OF INDIA

The autonomy of the RBI refers to its ability to formulate and implement policies independently without undue interference from the government. RBI operates under the RBI Act, 1934. While it has functional independence, the Government of India can issue directions in public interest (Section 7). The RBI has historically navigated a complex relationship with the Government of India, balancing autonomy with collaboration. Recent developments indicate a convergence in their monetary policy objectives, signaling a more harmonious approach to economic management. The Monetary Policy Committee (MPC), established under the amended RBI Act, 1934, comprises six members, with three from RBI and three appointed by the government. This framework allows for a more structured approach to monetary policy decision-making.

Traditionally, the RBI has maintained a degree of independence to ensure neutral monetary policy decisions. However, instances like the 2016 demonetization highlighted tensions between the RBI and the Government. Critics argue that such decisions, perceived as politically driven, compromise the RBI's autonomy and effectiveness.

Key Aspects of RBI Autonomy:

- **Independence in Decision-Making**: RBI's MPC makes policy decisions based on economic conditions, with the Governor holding a casting vote in case of a tie.

- **Operational Autonomy:** RBI has the authority to formulate and implement monetary policy, using various tools to achieve its objectives.
- **Accountability:** RBI is accountable to the government and publishes regular reports on its monetary policy decisions.

6.11 CHALLENGES AND OPPORTUNITIES

A) Balancing Autonomy and Collaboration: RBI must balance its autonomy with collaboration with the government to ensure effective economic management.

B) Managing Inflation and Growth: RBI faces the challenge of controlling inflation while promoting economic growth.

C) Adapting to Emerging Challenges: RBI must adapt to emerging challenges, such as digital innovations, climate change, and fintech developments

D) Government pressure during fiscal stress: During a financial crisis, there can be pressure from the government. Disputes over surplus transfer and liquidity regulations.

6.12 RECENT DEVELOPMENTS: SIGNS OF CONVERGENCE

Recent policy decisions suggest a growing alignment between the RBI and the government as both entities have shown a commitment to controlling inflation while supporting economic growth. Formation of the MPC in 2016 with shared decision-making. Transparent policy communication and publication of MPC minutes. The statutory inflation targeting framework ensures policy discipline.

The government's fiscal policy and the RBI's monetary stance appeared to be more synchronised, reducing policy contradictions and enhancing economic stability.

Despite these positive developments, challenges remain. Ensuring that the RBI retains its autonomy is crucial to prevent monetary policy from becoming overly politicised. Continuous dialogue and respect for institutional boundaries will be essential to maintain this balance.

6.13 SUMMARY

The evolving relationship between the RBI and the government of India reflects a maturing economic governance framework. While alignment in monetary policy objectives is a positive

development, preserving the RBI's autonomy will be key to ensuring long-term economic stability and credibility. Political interference must be avoided for the smooth functioning of Central bank.

6.14 QUESTIONS FOR PRACTICE

A. Short-answer type questions

Q1. What do you mean by moral suasion?

Q2. Explain a central bank as a Banker to banks and an advisor to the government.

Q3. Differentiate between repo rate and reverse repo rate.

Q4. Write a note on Autonomy.

B. Long answer type question

Q1. What are the functions of a central bank? Briefly explain the qualitative measures of monetary policy.

Q2. What are the quantitative and qualitative instruments of credit control?

Q3. Explain the origin and evolution of Central Bank of India and also explain the functions of the RBI.

6.15 SUGGESTED READINGS

- Chandler: G., The Economics of Money and Banking (1960), Oxford Press, U.K.
- Khanna, P., Advanced Study in Money and Banking; Theory, and Policy Relevance in the Indian Economy 2005, Atlantic Publishers, New Delhi.

MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

Unit 7: Commercial Banking: Functions, Major Developments in Commercial Banking in India Since Nationalization. Banking Sector Reforms.

Structure

7.0 Objective

After reading this unit, learner will be able to know about:

- The term bank
- Functions of bank
- Commercial banking in India
- Banking sector reform in India.

7.1 Introduction

As per weisbrod and Rojas-suarez (1995) "The financial systems in developing countries are typically dominated by banks: bank deposits constitute the most important form of household

savings and bank loans are the most important source of external finance for firms. In developing countries, the state of the legal and accounting systems makes it difficult for institutions that are not connected to the payment systems to issue short term liabilities such as commercial paper. Hence banks are the only non-governmental issuers of these liabilities. Because investors require borrowers' liquidity as proof of their solvency, borrowers are restricted to the short-term market, which is dominated by banks."

7.2 Definition of Bank

To learn about commercial banking, the understanding of the term "bank" is an important aspect to explore. The different definitions of a Bank are as follows:

According to John Paget, "Nobody can be a banker who does not (i) take deposit accounts, (ii) take current accounts, (iii) issue and pay cheques, and (iv) collect cheques-crossed and uncrossed, for its customers."

Thus, a bank is a commercial institution that accepts deposits, advances loans and can create credit, manages the payment system of a country through the creation of demand deposits which serve as a medium of exchange.

As per Oxford Dictionary, "Commercial Bank is a bank that offers services to the general public and to businesses."

7.3 Functions of Commercial Banks

The primary function of commercial banks is to take in funds from those who have money, pool them and lend funds to those who need loans. A commercial bank plays the role of intermediary between depositors and borrowers. The modern banks perform variety of functions which are as follows:

PRIMARY FUNCTIONS

1. Accepting Deposits- The people who save but not able to utilise savings profitably, they deposit savings in bank to earn profits. This not only helps in earning profits but also give a safety from theft. The commercial banks operate different types of accounts to give services to all type of individuals.

a) Current Deposit Account-These accounts are maintained for the purpose of withdrawing unlimited number of times without the limit on amount. These accounts are useful for businessmen and traders. There is no rate of interest on these accounts and

depositors must pay charges to maintain current deposit account. These are also known as demand deposits or demand liabilities.

b) Saving Deposit Account- These accounts are for the public to encourage and mobilise their savings having restrictions on number of withdrawal and the amount in a given period. The rate of interest paid on these accounts is lower than the fixed deposit accounts and cheque facility is also provided.

c) Fixed Deposit Account- Money is deposited for fixed period and cannot be withdrawn before expiry of period. Fixed deposits are also known as time deposits or time liabilities. These deposits have rate of interest as per the time period of deposits i.e., longer the time higher will be the rate of interest.

d) Recurring Deposit Account- Normally, money is deposited in monthly instalments for fixed period of time and repaid along with interest after maturity. These accounts encourage savings by people of fixed income groups.

2) Advancing of Loans- Advancing loans to the public is another important function of the commercial banks. Banks give loans to the borrowers as per their requirement after keeping cash reserves to be used by the bank for other purposes. The commercial banks check credit worthiness of borrowers based on different parameters to give loans. Following are the types of loans:

a) Cash Credit- such loans are not given against personal security but against current assets of borrowers. The account is opened in the name of borrower and he withdraw money time to time up to the certain limit determined by the value of current assets and interest is also charged on the withdrawn amount only.

b) Overdraft- Under this facility, customers are allowed to withdraw more than the deposits amount and interest is also charged on this overdrawn amount.

c) Money at Call- These are very short period loans and taken back by bank at very short notice of one to fourteen days.

d) Term Loans- These are medium and long-term loans having more than one year maturity period. The loans can be paid in instalments or on maturity and interest is charged on entire amount.

e) Discounting of Bills of Exchange- When the debtor accepts the bill drawn upon him by holder or creditor of the bill, it is termed as bills of exchange. Here debtor agrees to pay the

amount mentioned on the bill and bank pays this amount of the bill to the holder after deducting its commission. When the bill of exchange matures bank get its payment from the party which had accepted the bill.

3) Credit Creation- when a commercial bank grants a loan to individuals or businesses, it creates an equal amount of bank deposits by opening an account in the name of the borrower and crediting loan amount in this account. The creation of such deposits is credit creation and it increases the stock of money and expands the money supply in an economy. Bank has ability to create credit multiple times of their deposits and it depends on cash reserve ratio of banks.

SECONDARY FUNCTIONS

4) Cheque Promotion- The cheque is the most convenient way to make payments in the modern world in case when online payment is not possible due to unavailability of internet. The cheque is the most developed credit instrument in the money market.

5) Agency Functions- Commercial banks also perform some agency functions for their customers, which are as follows:

a) Fund Transfer- Banks help its customers to transfer money from one account to other and from one bank to other.

b) Purchase and Sale of Securities- Commercial banks also deals with purchasing and selling of securities on the behalf of customers. Here bank plays the role of broker but give no advice to their customers.

c) Dealing in credit instruments- Commercial banks collect and pay various credit instruments like bills of exchange, promissory note etc.

d) help in filing income tax- banks help their customers to prepare income tax returns and get refund of income tax.

e) Collection Work- Bank collects dividends and interest on shares and debentures of their customers.

f) Preserving Wills- Bank acts as a trustee and executor for their customers by preserving wills of their customers and execute them after their death.

g) Working as Representative and Correspondent- Banks also book traveller's ticket, vehicles, plots and get passport for their customers and receives letters on their behalf.

6) General Utility Functions- The general utility services provided by banks are as follows:

a) Letter of Credit- Banks issue letter of credit to their customers to certify their creditworthiness. Letter of credit is very useful for their customers in case of foreign trade.

b) Locker Facility- Banks provide locker facility to customers to keep their valuables and important documents.

c) Traveller's Cheque facility- Banks help customers to travel without the fear of loss of money during their journey by issuing traveller's cheque to them.

d) Underwriting Securities- Banks underwrite the securities issued by government, public or private bodies and public easily buy these securities due to involvement of banks.

e) collection of Data- Bank collects data related to industry, business, trade, money and banking and publish important information. Bank also publishes reports and research articles related to financial and economic matters of the country.

f) Foreign Exchange Business- Banks also deal in business of foreign currencies and finance foreign trade by discounting foreign bills of exchange.

g) Acting as Referee- Banks are referred to seek information regarding the financial position of their customers.

7.4 Commercial Banking in India

At the time of independence, India inherited weak banking system facing stresses and strains during immediate post war years. The report of Central Banking Enquiry Committee in 1931 mentioned about inadequacy of banking laws in India and recommended to implement a banking act. The Reserve Bank of India Act, 1934 defines a commercial bank as "a bank that conducts banking business in India and is included in the second schedule of the RBI act and these banks are also known as scheduled commercial banks." The Banking Companies Act, 1949 defines Indian banking system and governs banking industry of India.

7.5 Bank Nationalisation in India

Bank nationalisation means government control over banks. The first bank nationalised in 1949 and it was Reserve Bank of India. In 1955 Imperial Bank of India was nationalised and converted into State Bank of India. In 1959, 8 major states associated banks converted into subsidiary banks. Further, 14 banks in 1969 and 06 banks 1980 were nationalised and the main reasons of bank nationalisation were as follows:

a) taking away control from few private hands,

b) for expansion of banking facilities to rural India,
c) for making credit accessible to agriculture and small businesses,
d) for encouraging entrepreneurship in India,
e) to impart training to bank staff and professionalise bank management and
f) to stop use of bank funds to support anti-social and illegal activities against the interest of general public.

As per RBI, in 1969, "14 major Indian scheduled commercial banks with deposits of over 50 crores nationalised to serve better the needs of the development of the economy in conformity with the national policy objectives."

As per RBI, in 1980, "six private sector banks were nationalised to control the heights of the economy, to meet progressively and serve better, the needs of the development of the economy and to promote the welfare of the people in conformity with the policy of the state."

Till 1980 there were 20 nationalised banks in addition to State Bank of India and its associate banks (i.e., State Bank of India Group) taken over in 1955. Later on, due to amalgamation of New Bank of India with Punjab National Bank, number of nationalised banks were reduced to 19.

Nationalised banks were directed to do the following tasks:

a) Nationalised banks were to lend specific portion of their lending to priority sectors like agriculture, small businesses, and weaker section of society.
b) Nationalised banks were to expand their branches in rural and semi urban areas.

7.6 Major Developments in Commercial Banking Since Nationalisation

a) Branch Expansion- After bank nationalisation and introduction of lead bank scheme, the number of bank branches expanded not only in urban but rural area also. The population per bank office also declined overtime. As per Handbook of Statistics on Indian Economy, 2023-24, the total number of branches were 35707 (17656 rural branches) in 1981, which increased to 60220 (35206 rural branches) in 1991 and to 159633 (55236 rural branches) in 2024. Rapid expansion of branches of commercial banks has led to integration of urban and rural areas as well as integration of organised and unorganised money markets in India.

b) Deposit Mobilisation- After bank nationalisation, expansion of bank branches and incentives given to savers contributed significantly in deposit mobilisation. As per Handbook of Statistics on Indian Economy, 2023-24, "the aggregate deposits (i.e., time

and demand deposits) were Rs. 37988 crores in 1980-81, which increased to Rs. 192541 crores in 1990-91 and to Rs. 20475226 crores in 2023-24." There has been regular and continuous rise in bank deposits indicating that banking habit is growing in India and more people are using banks to keep their cash.

c) **Expansion of Bank Credit-** Over the time continued expansion in bank credit reflecting the rapid expansion of industrial and agricultural sector of Indian economy. As per Handbook of Statistics on Indian Economy, 2023-24, "bank credit was Rs. 25371 Crores in 1980-81, which increased to Rs. 116301 crores in 1990-91 and to Rs. 16432164 crores in 2023-24." The major factors which contributed to increase in bank credit in India are: a) rise in lendable resources due to decline in CRR and SLR overtime, b) increase in food credit mainly due to food procurement operations, c) increased demand for credit from public sector, d) increase in export credit and e) Cheap money policy of RBI, due to which rates of interest fall overtime to promote bank credit for industry, housing, buying cars etc.

d) **Development Oriented Banking-** Since Nationalisation, the Lead Bank Scheme is the most significantly involved in development effort of the Indian economy. Under this scheme, all districts of the country are allotted to some bank or the other. The lead bank of a district is actively engaged in: a) opening bank offices, b) giving maximum credit for development of district, and c) mobilisation of savings of people in the districts.

e) **Priority Sector Lending (PSL)-** As per RBI's publication Handbook of Statistics on Indian Economy, 2023-24, "the classification of PSL includes agriculture and allied activities, micro, small and medium enterprises, housing, education, renewable energy, social infrastructure, export credit, weaker sections and others." In 1980, RBI issued certain directives regarding PSL: a) PSL should constitute 40 % of total bank credit, b) at least 40% of PSL should be provided to agriculture, c) at least 50% of direct lending to agriculture should go to weaker sections in agriculture and allied activities in rural area, d) at least 12.5% of total advances to small scale industries should be to rural artisans, village craftsmen and cottage industries, and e) about 12% bank credit should go to exporters. The total credit extended to priority sector went up from Rs. 440 crores in June 1969 to Rs. 1283700 crores in March 2013 and in 2023-24, the total amount for PSL was Rs. 5772555.

a) The major problems faced by commercial banks for PSL: Indiscriminate lending, high cost of distribution, follow up and recovery of tiny loans, unable to satisfy the credit

requirements of non-priority sectors and low PSL in backward states like Bihar, Rajasthan etc.

f) **Social Banking-**India Governments used banks to finance poverty reduction and poverty alleviation programmes. Differential interest rates scheme was introduced in 1972 covering 162 districts, later extended to whole country. Under this scheme, loans were given to weaker sections at concessional rates. Integrated Rural Development Programme was assisted by banks and during 1990-91 disbursed a total amount of Rs. 1190 crores as loan and Rs. 800 crores as subsidy to nearly 3 million beneficiaries including over 1.5 million SC/STs and 0.9 million women. The other schemes under social banking are Prime Minister's Rozgar Yojna for Educated Unemployed Youth (PMRY), Scheme for Urban Micro Enterprises (SUME) and Bank Credit to Minority Communities.

g) **Diversification of Banking-** The Govt. of India issued guidelines to banks under section 6 of Banking Regulation Act, 1949 to permit and encourage them to diversify their functions to Merchant Banking and Underwriting, Mutual Funds, Retail Banking, Automated Teller Machines, Anywhere Banking and Internet Banking and Factoring.

7.7 Banking Sector Reforms in India

a) **Statutory Liquidity Ratio (SLR)-** SLR was gradually reduced to 25% in October, 1997 from 38.5%, which was minimum stipulated under section 24 of the Banking Regulation Act, 1949.

b) **Cash Reserve Ratio (CRR)-** RBI gradually reduced CRR from 15% to 5.55% in December 2001, to release funds for lending to industrial and other sectors which were in immediate need of bank credit.

c) **Interest Rates-** were gradually reduced from 20% to 2% by 1994-95. The interest rates on domestic term deposits and on bank loans above Rs. 2 lakhs have been decontrolled. The prime lending rate of SBI and most of the other banks on general advances of over Rs. 2 Lakhs has been reduced. The interest rates on deposits and advances of all cooperative banks have been deregulated. With minimum floor rates and maximum ceiling rates, scheduled commercial banks are now free to set interest rates on their deposits.

d) **Prudential Norms-** To reflect financial position of commercial banks more accurately and as per internationally accepted accounting practices, the prudential norms related to income, classification of assets and provisioning of bad debts are important to introduce. Initially, prudential norms required banks to make 100% provision for all NPAs.

e) **Capital Adequacy Norms-**The capital to risk weighted asset ratio of 8% was fixed in 1992 and by end March, 1996, all public sector and foreign banks had attained this. A new capital framework based on the Basle committee recommendations include two tiers of capital for banks: a) Tier I (core capital) considered the most permanent and readily available support against unexpected losses includes paid up capital, statutory reserves, share premium and capital reserve and b) Tier II capital includes undisclosed reserves, fully paid up cumulative perpetual preference shares, revaluation reserves, general provisions etc.

f) **Access to Capital Market-** The amendment in Banking Companies Act enabled banks to access capital market for funds through public issues (where holding of central govt. would be 51% of paid-up capital).

g) **Opening of New Branches-** Scheduled commercial banks have now freedom to close non-viable branches in urban areas, open new bank branches and upgrade extension counters after following capital adequacy norms and prudential accounting standards.

h) **Private and local area Banks-** Ten private banks started and allowed raise capital from foreign institutional investors upto 20% and from NRIs upto 40%. The RBI issued guidelines and gave its approval to set up seven local area banks in private sector in 1996.

i) **Supervision of commercial banks-** RBI had set up a Board of Financial Supervision with an Advisory Council under chairmanship of Governor to strengthen the supervisory system of banks and financial institutions. To assist the board, Department of Supervision as an independent unit was also established.

j) **Debt Recovery-** The Govt. of India had passed Recovery of Debts due to Banks and Financial Institutions Act, 1993 to speed up the recovery of debts. Six special recovery tribunals were set up at Kolkata, N.Delhi, Jaipur, Ahmedabad, Bangalore and Chennai.

k) **Financial Inclusion-** It means ensuring range of appropriate financial services is available to every individual and enabling them to understand and access those services. Various initiatives by Government of India, RBI and NABARD have been taken like SHG- Bank Linkage Programme, Opening of no-Frills Accounts, Mobile Banking, Kisan Credit Cards, Pradhan Mantri Jan Dhan Yojna etc.

l) **Small Finance Banks-** were created and RBI issued guidelines on 27th November, 2014 for licensing and regulations of SFBs. Most of the customers of SFBs accounted for small and medium enterprises and small businesses.

m) **SARFAESI Act-** Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 was framed to tackle the problem of non-

performing assets (NPAs) through different processes and mechanisms. The main objectives of this act include providing legal framework for securitization activities, setting procedures to transfer of NPAs to asset reconstruction companies, enforcing security interest without court's intervention and giving power to banks and financial institutions to take over immovable property for recovery of debt.

n) **IBBI-** Insolvency and Bankruptcy Board of India (IBBI) was set up on 1st October, 2016 under Insolvency and Bankruptcy Code, 2016. It regulates a profession as well as transactions. It regulates Insolvency Professionals, Insolvency Professional Agencies, Insolvency Professional Entities, and Information Utilities. It writes and enforces rules for processes, namely, corporate insolvency resolution, corporate liquidation, individual insolvency resolution and individual bankruptcy under the Code.

o) **Merger of Public Sector Banks-** To create more efficient and competitive banking system, the weaker and smaller banks are combined with the larger and stronger banks. It builds the capacity to meet the credit demand and create larger capital base to manage NPAs.

p) **Governance Reforms-** The RBI Committee on governance of bank boards highlights governance issues in PSBs. P.J.Nayak Committee on governance of bank boards was constituted which submitted its report in May,2014. This committee suggested repealing of some laws and establishment of Bank Investment Committee (BIC) and Bank Board Bureau (BBB).

7.8 Summary

Commercial bank plays the role of intermediary between depositors and borrowers. Accepting deposits, advancing loans and credit creation are the primary functions of commercial banks. In India before 1969, banks were mainly private and the credit for agriculture sector and small businesses was very limited. After the nationalisation of banks in 1969 and 1980, the commercial banks in India not only experienced branch expansion, deposit mobilisation, and credit expansion but also get involved in priority sector lending, social banking and development-oriented banking. The recommendations of Narsimham Committees,1991 and 1998, for CRR, SLR, interest rates, banking structure, prudential norms, capital adequacy norms etc., help Indian commercial banks to improve its operations as per the requirements of the economy. The mechanism to tackle the NPAs problem and governance reforms for banks also introduced to strengthen the banking operations.

7.9 Glossary

- **Bank-** bank is a commercial institution accepts deposits, advances loan and can create the credit, manages the payments system of a country through creation of demand deposits which serves as medium of exchange.
- **Bank nationalisation**-It means Government control over banks.
- **Cash Reserves Ratio (CRR)-** It is minimum amount of total deposits that commercial banks must keep as reserves with central bank (RBI).
- **Statutory Liquidity Ratio (SLR)-** It is minimum amount of total deposits that commercial banks must maintain in liquid assets like cash, gold or government securities.
- **Narrow Banking-** where banks primarily hold assets with less risks, liquid assets like Govt. Securities rather than engaging in more traditional activities of lending.
- **Financial Inclusion-** It means ensuring range of appropriate financial services is available to every individual and enabling them to understand and access those services.
- **Non-Performing Assets-** in the banking sector, a loan is typically classified as an NPA if the interest or principal instalment remains overdue for more than 90 days.
- **Capital Adequacy Ratio (CAR)-** It is a ratio of bank's capital to its risk. CAR highlights capacity of bank to face or absorb amount of loss and fulfilling the statutory capital requirements.

7.10 Questions for Practice

A. Short Answer Questions

Q1. What is commercial bank?

Q2. What do you mean by bank nationalisation?

Q3. Differentiate between CRR and SLR?

Q4. What are prudential norms?

Q5. What are numbers of banks nationalised in 1969 and 1980?

Q6. What are capital adequacy norms?

Q7. What is SARFAESI Act?

Q8. What are non-performing assets?

Q9. What is Financial Inclusion?

Q10. What is Insolvency and Bankruptcy Board of India?

B. Long Answer Questions

Q1**.** What is Commercial Bank? Discuss the functions of commercial banks?

Q2. What is Bank Nationalisation? Explain the reasons and impact of nationalisation of banks in India?

Q3. Discuss the recommendations of Narsimham Committee 1991 and Narsimham Committee,1998?

Q4. Explain the banking reforms in India since nationalisation of banks?

Q5. Write the recommendations of Narsimham Committee on Financial System of India?

Q6. Write the recommendations of Narsimham Committee on Banking Sector Reforms of India?

Q7. Explain the primary and secondary functions of commercial banks?

Q8. Explain the objectives of bank nationalisation in India? Also write the major developments in Indian commercial banks since bank nationalisation in 1969?

Q9. How recommendations of Narsimham Committee, 1998 are different from recommendations of Narsimham Committee, 1991?

Q10. Explain in detail the major developments in Indian commercial banking since bank nationalisation and write about the banking sector reforms in India?

7. 11 Suggested Readings

- Datt G and Mahajan A 2015. *Indian Economy (recent edition).*S.Chand Publications. India.
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MASTER OF ARTS (ECONOMICS)

SEMESTER – III

MONEY AND BANKING

Unit 8: Development Financial Institutions

Structure

8.0 OBJECTIVES

After reading this unit, learner can be able to know about:

- Role of development finance
- Growth of DFIs in India

- Need for DFIs
- Types of development financial
- Types of DFIs based on functions
- Non-Banking financial intermediaries
- Problems of the development of financial institutions

8.1 INTRODUCTION

Development Financial Institutions (DFIs) were established with the Government's support for underwriting their losses, as well as the commitment to make available low-cost resources for lending at a lower rate of interest than that demanded by the market for risky projects. In the initial years of development, it worked well. The process of infrastructure building and industrialisation has accelerated. The financial system was improved considerably to per the needs of projects. The appraisal system of long-term projects had also been strengthened due to improvements in the availability of information and skills. Thus, the DFIs improved their appetite for risk associated with such projects. “The intermediaries, like banks and bond markets, became sophisticated in risk management techniques and wanted a piece of the pie in the long-term project financing. These intermediaries also had certain distinct advantages over the traditional DFIs, such as low cost of funds and the benefit of diversification of loan portfolios”. The government support to DFI was also declining due to fiscal reasons, or building a more competitive and efficient. Fiscal imperatives and market dynamics have forced the government to undertake a reappraisal of its policies and strategy with regard to the role of DFIs in the Indian system. However, it is important to note that our country has not achieved its development goals; even then, due to unavoidable circumstances like economic reforms, we have started the restructuring process of DFIs after 1991.

The World Development Report (1989) defines, “financial intermediaries are those which emphasize the provision of capital (loans and equity) for development. They may specialize in particular sectors, for example, industry, agriculture or housing”. Elaborating self-financing projects, Kane J.A. says that “a project is self- financing, if it can generate enough income within a specified period of time to (i) cover the cost of operations, (once the plants begin the operations), (ii) repay the principal and interest charges thereon and (iii) lease a residual profit enough to remain in the operations.”

It is a specialized mode of extending development finance, and it is generally called a development financial institution (DFI) or development bank. A DFI is defined as "an institution promoted or assisted by the government to provide development finance to sectors of the economy. The institution distinguishes itself by a judicious balance between commercial norms of operation, as adopted by any private financial institution, and developmental obligations; it emphasizes the "project approach". A development bank is expected to upgrade the managerial and other operational prerequisites of the assisted projects. Its insurance against default is the integrity, competence and resourcefulness of the management, the commercial and technical viability of the project and above all, the speed of implementation and efficiency of operations of the assisted projects. Its relationship with its clients is of a continuing nature and of being a "partner" in the project than that of a mere "financier". These definitions outlined the pervasive nature of the development banks. There are different types of promoters for DFIs. Some DFIs are found to be government-sponsored, others are privately owned, and still others are in both hands. These DFIs are engaged in providing different types of services. Promotional and entrepreneurial services are the main theme of these DFIs. These services carry a commitment towards faster growth and fulfilment of the aspirations of the economy. Thus, the DFIs are necessary for long-term finance and other assistance for activities or sectors of the economy. In emerging sectors, risks may be higher than those of the ordinary financial system, and they are unable to bear the risks involved. They have also been playing an effective role in stimulating equity and debt markets by

(i) selling their own stocks and bonds;
(ii) helping the assisted enterprises float or place their securities and
(iii) selling from their own portfolio of investments.

In this way, "a development bank is intended to provide the necessary capital, enterprise, managerial and technical know-how, as these are inadequate in developing an economy like India. They also assist in building up the financial and socio-economic infrastructure, favorable to quick economic development. The emphasis on its various activities has shifted from one country to another according to its peculiar needs and circumstances. In some countries, the stress has been on finance; in some others, on promotion; yet in others, on technical skill and advice; and again elsewhere on economic planning itself."

8.2 ROLE OF DEVELOPMENT FINANCE

Development financial institutions provide long-term credit for capital-intensive investments spread over a long period and low-yielding rates of return, such as urban infrastructure, mining and heavy industry, and irrigation systems. Development banks are different from commercial banks, which mobilise short- to medium-term deposits and lend for similar maturities to avoid a maturity mismatch (a potential cause for a bank's liquidity and solvency).

They act as critical intermediaries for channelling long-term finance required for infrastructure and realizing higher economic growth.

(i) It is supposed to identify the gaps in the efficacy of institutions and markets and act as a 'gap-filler'.

(ii) It makes up for the failure of financial markets and institutions to provide certain kinds of finance to economic agents who are really interested in improving the working of the economy.

(iii) It targets economic activities or agents, which are rationed out of the market. It motivates the agent to take risky business with venture finance.

(iv) It helps the fund seekers by providing concessional funds at a lower rate of return. Social return of DFIs is quite high. Keeping these facts in mind, the central banking system also supports development financial institutions.

(v) It is specialised in nature and involves long-term finance. It is exclusively meant for infrastructure and industry, finance for agriculture and small and medium enterprises (SME) development and financial products for certain sections of the people who need funds for development perspectives.

8.3 GROWTH OF DFIs IN INDIA

In India, the first DFI was operationalized in 1948 with the setting up of the Industrial Finance Corporation (IFCI). Subsequently, India's Industrial Credit and Investment Corporation (ICICI) was set up with the World Bank's backing in 1955. The Industrial Development Bank of India (IDBI) came into existence in 1964 to promote long-term financing for infrastructure projects and industry. However, during the 1970s-80s, DFI got discredited for mounting non-performing assets, allegedly caused by politically motivated lending and inadequate professionalism in assessing

investment projects for economic, technical, and financial viability.

In India, after the 1991 reforms, major DFIs were converted into commercial banks. However, after these, few institutions in the country could take care of industrial or infrastructure development.

8.3.1 NEED FOR DFIs:

1. The surge in NPAs in the banking sector, and the need to augment financing of infrastructure for kick-starting the growth cycle have led to renewed policy attention on setting up DFIs.
2. The Covid-19 pandemic has exacerbated inequality, the poverty gap, unemployment, and the economy's slowing down.
3. The government has envisaged attaining the target of becoming a USD 5 trillion economy by 2025. However, this goal will depend on world-class infrastructure across the country.
4. Irrespective of the level of development, countries across the world have set up development banks to finance key infrastructure and manufacturing projects. DFIs in China, Brazil, and Singapore have been successful in both domestic and international markets.

Therefore, in order to plug the infrastructure deficit, the government has taken a positive step by making a proposal to re-establish the DFIs in India.

8.3.2 RATIONALE OF DFIS IN INDIA

The DFIs were set up in India on the following rationale:

a) Improving Rates of Savings and Investment: In the initial years, the rate of capital formation was low. At the time of independence, the savings rate was around 5 per cent of national income. India had a fairly diversified industrial base for a developing country, with a number of well-established industrial houses at the time of independence. So necessary guarantee was expected from the DFIs; otherwise, entrepreneurs and promoters would not have been able to generate resources from the market.

b) Infancy Stage of Capital Market: The capital market was at an infancy stage, and industries had to depend on their own profits and banks for financing for further development programmes. That is why these fund institutions, investment institutions, other trusts, etc., have

been declared as DFIs in terms of public financial institutions (PFI) under Section IV-A of the Companies Act, 1956.

c) Risk Averse Commercial Bank: Commercial banks were not interested in venture financing as they are quite risky. DFIs are specialised financial institutions and well-equipped for risky ventures.

d) Arrangement of Loan in Foreign Currency: Earlier, DFIs had access to lines of credit in foreign currencies from various multilateral and bilateral agencies at low rates of interest, mainly for project financing. The Central Government had assumed all foreign currency risks due to fluctuations in the exchange rates.

e) Specialized Credit Support System: DFIs could sanction and disburse credit at fixed/assured rates spread over their borrowing rates till the early 1990s. Moreover, under the existing industrial licensing policy system, obtaining a license was taken as a license to obtain credit from DFIs, without the investor having to go through the elaborate procedures normally associated with a projected appraisal for credit sanction based on commercial judgment and viability.

f) Arrangement of Priority Sector Financing: DFIs did not have competition in deploying their funds to public companies. However, some commercial banks had started providing term capital as priorities for investments in various sectors in the economy were given, along with targets set in successive plans.

g) Project Evaluation and Funding: Some DFIs had also conducted economic potential surveys of regions or states and provided considerable support to several development projects. When project costs were high and could not be financed by one DFI, they formed loan consortia with commercial banks, whereby DFIs could provide large loans, thereby reducing the incidence of risks.

h) Coordinating Financing Agencies: The DFIs were expected to work as conduits between the government/other financing agencies and the ultimate borrowers for an assured margin. They also acquired skills and expertise to study the viability and technical efficiency of projects, which were called directly productive activities.

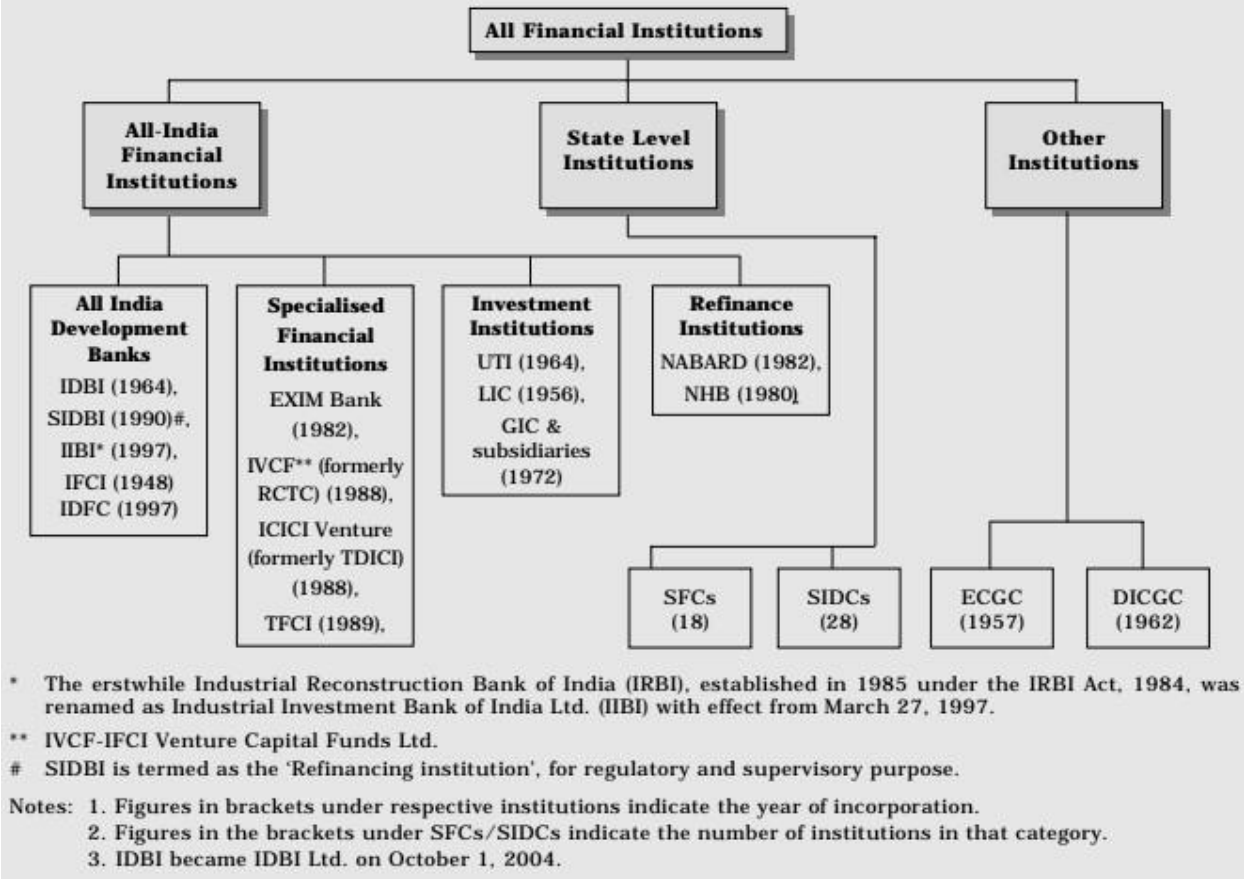

Fig.1: Organisational structure of financial institutions

8.3.3 TYPES OF DEVELOPMENT FINANCIAL INSTITUTIONS IN INDIA

1. National-Level Development Banks:

- Industrial Finance Corporation of India (IFCI): Established to provide financial assistance to industries.
- Industrial Development Bank of India (IDBI): A major player in providing long-term finance for industrial development.
- Small Industries Development Bank of India (SIDBI): Focused on the development and financing of micro, small, and medium enterprises (MSMEs).
- Industrial Investment Bank of India (IIBI): Provided financial support and assistance to industrial units.
- Industrial Credit and Investment Corporation of India (ICICI): A leading financial institution that has since transformed into a commercial bank.

- Infrastructure Development Finance Company (IDFC): Focused on infrastructure financing.
- National Bank for Financing Infrastructure and Development (NaBFID): A recently established DFI to address India's infrastructure financing needs.

2. Sector-Specific Financial Institutions:

- Export-Import Bank of India (EXIM Bank): Finances and facilitates India's international trade and investment.
- National Housing Bank (NHB): Focuses on the housing sector, providing refinance and other support.
- National Bank for Agriculture and Rural Development (NABARD): Supports agriculture, rural development, and related activities.
- Tourism Finance Corporation of India (TFCI): Provides financial assistance to the tourism sector.

3. Investment Institutions

- Life Insurance Corporation of India (LIC): A major player in the insurance and investment sector, providing long-term finance.
- General Insurance Corporation of India (GIC): A reinsurer, also involved in investments.
- Unit Trust of India (UTI): A mutual fund company that also provides investment support.

4. State-Level Institutions

- State Financial Corporations (SFCs): Provide financial assistance to industries within their respective states.
- State Industrial Development Corporations (SIDCs): Promote industrial development within their states.

8.3.4 Types of DFIs based on Functions

(i) Term-lending institutions (IFCI Ltd., IDBI, IDFC Ltd., IIBI Ltd.) extending long-term finance to different industrial sectors,

(ii) Refinancing institutions (NABARD, SIDBI, NHB) extending refinance to banking as well as

non-banking intermediaries for finance to agriculture, SSIs and housing sectors,

(iii) Sector-specific/specialised institutions (EXIM Bank, TFCI Ltd., REC Ltd., HUDCO Ltd., IREDA Ltd., PFC Ltd., IRFC Ltd.), and

(iv) Investment institutions (LIC, UTI, GIC, IFCI Venture Capital Funds Ltd., ICICI Venture Funds Management Co. Ltd.). State/regional level institutions are a distinct group and comprise various SFCs, SIDCs and NEDFi Ltd.

8.3.5 SUGGESTIONS

1. **Mobilizing Capital for DFI:** To lend for the long term, DFI requires correspondingly long-term sources of finance. DFIs of the earlier era were over-reliant on cheap government funds, and today's commercial banks run into asset-liability mismatches due to their reliance on retail deposits to fund long-term projects. Therefore, it may be best for new-age DFIs to focus on diversified sources of funding.
2. **Specialized DFIs:** Specialised project lenders focused on specific verticals tend to do better at building project appraisal skills and managing risks than 'supermarket' lenders who fund any project that comes their way.
3. **Administration of DFI:** The ownership and organisation structure are critical and require greater clarity as this would have bearing on the functioning, flexibility, governance of the institution and its long-term sustainability.
4. **Ensuring Good Governance:** While freeing a DFI from political interference or crony lending is necessary, merely having private shareholders or professional managers on board isn't sufficient to ensure good governance. This has to be backed by a robust system of external checks and balances, such as supervision by the RBI and proper due diligence by auditors and rating agencies.

For a developing country like India, the new DFI should remain viable and sustainable to be able to cater to the long-term development financing requirements.

8.4 NON-BANKING FINANCIAL INTERMEDIARIES/NON-BANKING FINANCIAL COMPANY

A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act, 1956 or Companies Act, 2013, and engaged in the business of loans and advances, acquisition of

shares/stocks/bonds/debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, etc., as their principal business, but does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property. A non-banking institution that is a company and has the principal business of receiving deposits under any scheme or arrangement in one lump sum or in instalments by way of contributions or in any other manner, is also a non-banking financial company (Residuary non-banking company).

Banks and NBFCs are different entities subject to different statutory and regulatory requirements. However, NBFCs lend and make investments, and hence these activities are akin to those of banks. The major differences between banks and NBFCs are given below:

- NBFCs cannot accept demand deposits;
- NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on themselves;
- Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation (DICGC) is not available to depositors of deposit-taking NBFCs.

8.4.1 REQUIREMENTS FOR REGISTRATION WITH THE RESERVE BANK

A 'company' desirous of commencing the business of a non-banking financial institution as defined under Section 45 I(a) of the RBI Act, 1934, should comply with the following:

a. It should be a company incorporated under Section 3 of the Companies Act, 1956 or corresponding Section under the Companies Act, 2013;

b. It should have a minimum net owned fund of ₹10 crores. (The minimum net owned fund requirements for specialized NBFCs are NBFC-Infrastructure Finance Company (NBFC-IFC) – ₹300 crores; Infrastructure Debt Fund – NBFC (IDF-NBFC) – ₹300 crores; Mortgage Guarantee Company (MGC) – ₹100 crores; Housing Finance Company (HFC) – ₹20 crores, Standalone Primary Dealers (SPDs) which undertake only the core activities – ₹150 crores and SPDs which also undertake non-core activities – ₹250 crores; NBFC-AA – ₹2 crores; and NBFC-P2P – ₹2 crores).

8.2.2 DIFFERENT TYPES/CATEGORIES OF NBFCS REGISTERED WITH THE RESERVE BANK

NBFCs are categorised (a) in terms of the type of liabilities into Deposit and Non-Deposit accepting NBFCs; (b) regulatory structure of NBFCs under Scale-Based Regulation into NBFC-Base Layer, NBFC-Middle Layer, NBFC-Upper Layer, and NBFC-Top Layer (as detailed in FAQ no.8 above); and (c) by the kind of activity they conduct.

Based on the type of activities they conduct, the different types of NBFCs are as follows:

- Investment and Credit Company (ICC)
- Housing Finance Company (HFC)
- Infrastructure Finance Company (IFC)
- Infrastructure Debt Fund (IDF-NBFC)
- Core Investment Company (CIC)
- Micro Finance Institution (NBFC-MFI)
- Mortgage Guarantee Companies (MGC)
- Standalone Primary Dealers (SPDs)
- Non-Operative Financial Holding Company (NOFHC)

8.5 PROBLEMS OF DEVELOPMENT FINANCIAL INSTITUTIONS IN INDIA: Due to the changed environment since 1991, the Development Financial Institutions (DFIs) were forced to reorient their lending strategies and activities towards realization of commercial viability and competitive efficiency.

Some of the major problems faced by DFIs in post post-reform era are given below:

1) **Deregulated Market Environment:** Before 1991, DFIs were operating in a protected market with the administered rate of interest on their loans, but after 1991, they were forced to enter into the deregulated market environment. Now market-related rate of interest is the operational base for the DFIs.
2) **Crisis of Credibility:** The DFIs are facing the crisis of credibility in the wake of economic liberalisation, globalization and a changing business environment. The NPA of these DFIs is increasing and is adversely affecting their profitability.
3) **Growing Competition in Financial Market:** The free market economy during the 1990's also witnessed the keen competition for DFIs from the commercial banks, NBFCs and others. At present, the commercial banks are financing both short-term and long-term finance to the corporate sector so it has created a problem for the DFIs to increase and diversify their client

base.

4) **Easy Access to Capital Market:** The liberalisation and globalization process started in the Indian economy has revived the capital market and opened the door for the corporate sector to raise their resources directly from the market. The corporate sector is not interested in the financial assistance of DFIs.
5) **Competitive Interest Rates:** The DFIs have already entered the capital market to raise their resources. These resources are generally raised at the market rate of interest, which is higher than the previously administered rate of interest, so it results in an increase in their cost of borrowing. The DFIs are also being forced to reduce their lending rates due to competition.
6) **Accountability to Stakeholders:** The increasing access of the DFIs to the Indian capital market has created a new type of problem for them with which they were not acquainted earlier. Thus, the management of most of the DFIs in this competitive economy is always on its toes because of this increasing accountability from the public and more specifically from their private shareholders. Now, DFIs are required to be accountable to their stakeholders for transparency and reporting.
7) **Universal Banking System:** The concept of universal banking, which has been recommended by the Khan Committee, has put the DFIs in a fix. Now the concept of development banking is slowly going out of fashion. They have now converted into an NBFC or a universal bank. Development Financial Institutions have been assigned a crucial role in the development of the country. They have played their role in the promotion of industrial units and entrepreneurial environments. However, due to changes in the economic environment since 1991, continuous dilution has occurred in their work. The new economic policy of the government since 1991 has made some of the development financial institutions irrelevant in the present context of development. Structural changes have been made in the role and objectives of some of the development financial institutions. Even today some of the financial institutions are still playing their role in a proper perspective.

8.6 QUESTIONS FOR PRACTICE

Q1 Write a short note on development financial institutions.

Q2 Write a note on the growth of development financial institutions in India.

Q3 What is the role of development financial institutions?

Q4 Explain the structure of development financial institutions in India.

Q5 Define NBFIs.

Q6 How does RBI control NBFIs?

Q7 Evaluate the role, significance and types of NBFIs in India.

Q8 Differentiate between development financial institutions and NBFCs.

Q9 Development financial institutions withered after the economic reforms of 1991. What is its significance in the present era?

Q10 Explain similarities and differences between commercial banks and NBFIs.