CHAPTER I

INTRODUCTION

ROLE OF MONEY IN MODERN ECONOMY:

Money is, indeed, quite indispensable lever for the functioning of a market economy. Money is the pivot round which the whole economy revolves and it is the basis of the pricing process which articulates the whole economy unless consciously planned in detail. A modern social economy will remain a monetary economy and a considerable part of the problems discussed in this dissertation will have bearing upon whatever modern economy one wants to choose.

DEVELOPMENT OF A CREDIT MARKET:

Money being an indispensable catalyst for the development of a credit market, the development of a money market or credit market is the precondition for the formation of a uniform price leading to uniform service which is the object of credit transactions. In fact, in a market economy it is the disposal of money, for a certain period of time, which forms the nucleus of credit transactions. Loans find their ideal expression in money and it is the monetary economy alone in which it is possible to express the price of loanable funds in the form of an interest rate.
CONTEXT OF PLANNED ECONOMY:

Modern planned economies too have made use of the price mechanism. As for example, the 'Gosplan' of the USSR demonstrated the economic expediency through commercial calculation. In the money-using economy of the USSR, the allocation of resources according to the aims of production is the result of the working of a pricing process.

CONCEPTS OF M₁, M₂, M₃:

Laws and Customs establish what is actually established as money. Defined as currency plus demand deposits adjusted, the M₁ definition of money includes coins and paper currency issued by the government and commercial banks' demand deposits. Since savings and time deposits at commercial banks are very close substitutes for demand deposits (i.e. near monies), broader definitions of the money supply also exist. The M₂ definition adds time and savings deposits at commercial banks to M₁; the M₃ definition adds deposits of non-bank institutions to M₂.

CIRCULAR FLOW OF MONEY:

A well-developed financial system is necessary for a market economy to be efficient. Such system facilitates the

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¹Demand deposits are cheque writing accounts at commercial banks. In most cases cheques are as acceptable as paper currency in purchasing goods and services. Since demand deposits are accepted as medium of exchange, they are included along with coins and paper currency in the M₁ definition of money.
transfer of funds from savers to investors. Since a large volume of saving is done by those who do not have ready access to investment opportunities, financial instruments provide a means of channeling device to productive investment outlets. As for example, in the two-sector circular flow depicted below, households earn Rs.750, of which they consume Rs.670 and save Rs.80. The Rs.80 saving re-enters the circular flow through Rs.80 in real investment. Financial institutions are needed to transfer funds from savers to investors. Such money transfers are accomplished through various debt instruments like bills of exchange, promissory notes, cheques etc.

\[ \text{Household Sector} \to \text{Consumer (Rs.670)} \to \text{Saving Rs.80} \to \text{Financial Instruments} \to \text{Real Investment Rs.80} \]

\[ \text{Money Income Rs.750 \leftrightarrow \text{Commercial Sector}} \]

**TWO-TIER CIRCULAR FLOW OF MONEY**

DEMAND FOR \( M \) VIS-A-VIS \( i \) AND \( Y \)

The demand for money depends partly on the level of the community's income and partly on the rate of interest. The
rate of interest at least in the short run, is mainly determined by 'monetary forces'. It means that on the one hand it depends on the actions of the monetary authorities - the Central Bank and the Government. On the other hand, it depends on the attitude of individuals and businesses towards holding money as an alternative to holding bonds and securities. The Central Bank controls the supply of money; and the terms on which individuals are prepared to hold this stock of money can be regarded as the demand for it. The rate of interest is the reward offered to people to induce them to hold bonds or securities instead of cash. For cash is 'Safe' in the sense that there is no danger of physical deterioration. It is because of this risk that a capital loss may be incurred when one purchases securities, that interest payments have to be made to induce people to hold securities instead of holding money.

Supply of F vis-a-vis C and D:

Money plays an important role in determining the level and direction of economic activities, the size and distribution of the national income, the level of productive employment etc. in the economic system. The aggregate money supply would consist of the national supply of high powered money comprising of national currency with the public and national cash reserves of the commercial banks plus the nominal demand deposits of the commercial banks. In short, the aggregate money supply (M₁)
comprises the currency (C) and the commercial bank demands (D) such that
\[ M_0 = C + D \]

SUPPLY OF M AND THE CENTRAL BANK

The money supply in the modern community is under the ultimate control of the Central Bank and hence, usually of the Government. For the Central Bank is the Government's bank and will hold accounts of, and also issue instructions to, the ordinary commercial banks. The total money supply in a country comprises: (i) currency and (ii) demand deposits held by the public with the commercial banks. This measure of money supply is referred to as \( M_1 \). Thus,
\[ M_1 = \text{Currency} + \text{Demand deposits} \]

Both, currency and demand deposits are most liquid assets that are the constituents of money supply.

MODERN VIEWS ON MONEY SUPPLY:

According to the modern or expanded approach, money supply includes: (i) Coins, (ii) Currency notes, (iii) Banks' demand deposits, (iv) Time deposits with banks, (v) Financial assets, such as deposits with non-banking financial intermediaries like the Unit Trust, Post-Office Savings Banks etc.; (vi) Bills - Treasury and exchange bills; (vii) Bonds and equities.

In short, modern view extends the phenomenon of money to the whole spectrum of liquidity in the asset portfolio of the
individuals in a modern economy.

This controversy about the components of money supply has arisen on account of the difference of opinions regarding the significance and relationship between money supply and price level and the efficacy of monetary policy in a modern economy.

According to another group of economists, the measure of money supply is usually referred to as $M_2$. Thus

$$M_2 = M_1 + \text{Time Deposits}$$

Milton Friedman, the world's foremost monetarist, believes that $M_2$ is the best measure of the money supply. He argues that time deposits are quite liquid; it makes sense to include them in the money supply.

RBI'S VIEWS ON THE CONCEPT OF $M_1$:

According to Reserve Bank of India's Second Working Group's study on Money Supply in India, the basic reason for the said dispute is "Can be found in the basic difference implicit in the approaches of the Quantity Theorists and the "Keynesians" to the most distinguishing characteristics of money, that is, the concept of money as a medium of exchange as a store of value. This general recognition of the store of value function of money has given rise to the fairly widely accepted phenomenon

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of substitutability between money traditionally defined as a medium of exchange and the whole of spectrum of financial assets obtaining in the economy. 3

There are four different approaches regarding measure of money supply, namely,

1. Traditional Approach;
2. Chicago School's or Monetarist Approach led by Milton Friedman;
3. Gurley-Shaw Approach; and
4. Radcliffe or Liquidity Approach

GENERAL LIQUIDITY EFFECT:

Radcliffe or Liquidity Approach, however, offers a completely new line of thinking and a much wider concept of money supply. The Radcliffe Committee holds that money supply is just a part of the wider structure of liquidity that is relevant to the spending decisions of the community. Prices are affected by the spending decisions of the people which in turn is determined by the general liquidity of the economy. Hence, the concept of money supply should be viewed in terms of general liquidity which includes cash, all kinds of bank deposits, deposits with other institutions, near-money assets, and the borrowing facilities available.

3Ibid, p. 6.
The Radcliffe Committee, however, observes that money supply, in modern economy, cannot be successfully measured empirically, as the degrees of liquidity of different constituents of money supply (money, near-money and real assets) are varying in nature and are relative in time variation.

AGGREGATE APPROACH:

Following the concept of the liquidity approach to money, the Reserve Bank of India sums up the following assets as "aggregate monetary services":

1. Currency (C);
2. Demand Deposits of Banks (DD);
3. Other Deposits of the RBI;
4. Post Office Savings Deposits (OD);
5. Time Deposits of Banks; and
6. Time Deposits of Post Offices

In fact, from the standpoint of money as a medium of exchange, in a modern economy, the monetary aggregates are fundamentally composed of those assets possessing the attributes of "Superior liquidity".

The Reserve Bank of India has adopted four measures of money stock in a descending order of liquidity criteria as
follows: 4

(i) \( M_1 \),
(ii) \( M_2 \),
(iii) \( M_3 \) and
(iv) \( M_4 \),

Where,

\( M_1 = (i) \) Currency notes and coins with the public (Cash on hand of all banks is excluded),

+ (ii) Demand deposits with all commercial and Co-operative banks (inter-bank deposits are excluded),

+ (iii) Other deposits held with the Reserve Bank of India (Balance 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 are excluded).

The category \( M_1 \) is identical to the traditional sense of money supply with the public.

\( M_2 = (i) M_1 + (ii) \) Savings deposits with Post Office Saving Banks.

\( M_3 = (i) M_1 + (ii) \) Time deposits of all commercial and Co-operative banks (inter-bank time deposits are excluded)

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4For details see Appendix 1.
$M_4$ = An extension of $M_3$ as aggregate monetary resources
(As devised by the Second Working Group)

FOUR MEASURES OF $M$ BY RBI:

According to the Second Working Group, these new
categories of measuring money stock in the Indian economy
have a much wider spectrum of monetary aggregates, in view
of their varying degree of liquidity. Table 1 represents
these four measures of money stock by the Reserve Bank of
India during 1970-71 to 1981-82.

DETERMINANTS OF $M$:

There are basically two determinants of the money supply:

(a) the money multiplier, and

(b) the monetary base (high-powered money).

The monetary base or the high-powered money ($H$) is money
produced by the Central Bank and the government and held by
the public and banks. It constitutes currency held by the
public ($C$), Cash reserves of banks ($R$), and 'other deposits'
of the RBI ($OO$).

Thus,

\[ H = C + R + OO \]

The only difference between $M$ and $H$ is that whereas the
former includes demand deposits, the latter includes reserves
of banks in place of demand deposits.
<table>
<thead>
<tr>
<th>Year</th>
<th>$R_1$</th>
<th>$R_2$</th>
<th>$R_3$</th>
<th>$R_4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-71</td>
<td>7,321</td>
<td>8,311</td>
<td>10,958</td>
<td>12,142</td>
</tr>
<tr>
<td>1978-79</td>
<td>21,858</td>
<td>23,634</td>
<td>39,867</td>
<td>44,535</td>
</tr>
<tr>
<td>1981-82</td>
<td>24,896</td>
<td>27,237</td>
<td>62,551</td>
<td>69,961</td>
</tr>
</tbody>
</table>

Source: R.B.I. Bulletins (Various Issues)  
1970-71 to 1983-84.
DETERMINATION OF MONEY MULTIPLIER 'm':

Following the multiplier theory of money supply, the supply of money \( R_s \) is a highly stable increasing function of \( M \). As \( M \) changes, \( R \) also changes in the same direction, and most of the changes in \( R \) are due to the change in \( M \). Thus,

\[
R_s = m \cdot M, \text{ where,}
\]

\( m = \) the money multiplier.

The money multiplier 'm', is determined when the reserve requirement on demand deposits \( (R_D) \), reserve requirement on time deposits \( (R_T) \), currency ratio \( (C/D) \) and time deposit \( (T/D) \) are determined. The quantity of money will vary as each of these ratios varies. It follows that money multiplier varies with these ratios and the supply of money is positively related to the money multiplier.

STAGES OF MONEY MULTIPLIER PROCESS:

The money multiplier process has two distinct stages -

1. The supply of money is positively related to \( m \)
2. The money multiplier 'm' is inversely related to (i) \( R_D \), (ii) \( R_T \), (iii) \( C/D \) and (iv) \( T/D \)

Note: Monetary base, in general, composed of the following:

(i) Monetary gold stock;
(ii) Reserve assets, such as government securities, bonds and bullions etc. with the Central Bank, and
(iii) Amount of Central Bank Credit Outstandings.
MONEY MARKET: THE SUPPLY FUNCTION:

Supply behaviour in the money market can be specified by the money supply function.

A money supply function expresses the functional relationship between the quantity of money supplied and its determinants.

A commonly adopted money supply function is that money supply is a function of the rate of interest, that is \( M_s = f(i) \), where \( \frac{\Delta M_s}{\Delta i} > 0 \), which implies that there is a positive relationship between the rate of interest and money supply. \( \Delta M_s \) denotes a marginal change in money supply; \( \Delta i \) implies a marginal change in interest rate \( i \); while \( > 0 \) implies a positive change or an increase.

VARIABLES OF THE SUPPLY FUNCTION:

In reality, however, money supply is a function of many variables. The actual factors influencing money supply are:

(i) The quantity of total legal tenders \( l \) possessed by the banks.

(ii) The cash reserve ratios for demand deposits and time deposits \( d_r \) and \( f_r \) respectively.

(iii) The rate of interest \( i \), and

(iv) The national income \( Y \), because it determines the currency required by the public.
Thus, $M_d = f (l, dr, t_r, i, Y)$, where,

$$\frac{\Delta M_d}{\Delta l} > 0; \quad \frac{\Delta M_d}{\Delta dr} < 0; \quad \frac{\Delta M_d}{\Delta t_r} < 0;$$

$$\frac{\Delta M_d}{\Delta i} > 0; \quad \text{and} \quad \frac{\Delta M_d}{\Delta Y} > 0.$$

Here, the factors $l$, $dr$, and $t_r$ are under the control of the Central Bank, while factors such as $i$ and $Y$ are determined by the market forces. It therefore follows that money supply is determined jointly by the action of the Central Bank, the commercial banking system, and the general public.

**MONEY MARKET: THE DEMAND FUNCTION(a) CLASSICAL VIEWS:**

Irving Fisher, a classical monetarist, held that the demand for money ($M_d$) is the product of the volume of transactions $(T)$, over a period of time, multiplied by the price level $(P)$. Thus,

$$M_d = PT.$$  

In this approach, the demand for money is defined in a mechanical sense only.

**MODERN VIEWS:**

Modern economists stress the "Store of value" function of money and view that demand for money means demand for money to hold – the demand for cash balances. Money, being the most liquid asset, can serve as an efficient store of value; so it is demanded for its own sake. In this sense the demand for
money is the inverse of the velocity of circulation. In short, the modern approach to the demand for money stresses the public's need for cash, or money balances, as a store of value at a particular point of time. It involves evidently, the reasons for the people's preference to hold liquid cash or money, rather than other assets, as a store of value. This desire for money is described by Keynes as liquidity preference.

KEYNESIAN VIEWS:

The demand for money, in the Keynesian sense, is a demand for liquidity or "liquidity preference". To Keynes, the total demand for money implies total cash balances which has two components -

(a) Active Cash Balances
\[ L_1 = f (Y) \]

(b) Idle Cash Balances (The Speculative Demand For Money).
\[ L_2 = f (i) \]

Inverse Relationship between the speculative Demand for money and the rate of interest is shown in Diagram 1.

The Liquidity Trap is the set up of points on the liquidity preference curve where the percentage change in the demand for money \( \frac{\Delta M}{M} \), in response to a percentage in the rate of interest, \( \frac{\Delta i}{i} \), approaches infinitely.\(^5\) To put it

DIAGRAM 1. SPECULATIVE DEMAND FOR MONEY.

\[
\left( \frac{\Delta M/M}{\Delta L/L} \right) \rightarrow \alpha
\]

RATE OF INTEREST IN 

DIAGRAM 2.

ACTIVE BALANCES

IDLE BALANCES

TOTAL DEMAND FOR MONEY
in other way, the demand for money becomes perfectly elastic at a particular low rate of interest.

The reason for inverse relationship according to w.

Hamberg,

\[ V = \frac{Y}{i} \]

where,

\[ V \] = the present value of the future income generated from the security
\[ Y \] = the future income per annum
\[ i \] = the market rate of interest

**AGGREGATE DEMAND FUNCTION:**

The community's total demand for money depends on:

(i) the transactions and precautionary motives and
(ii) the speculative motive. Thus,

\[ L = L_1 + L_2 \]

where

\[ L_0 \] = overall demand for money which is the sum of the demand for active and idle balances.

As \[ L_1 = f(Y) \] and \[ L_2 = f(i) \], it follows that

\[ L = f(Y, i) \]. This denotes that community's overall demand for money depends upon the level of national income and the rate of interest. The liquidity preference schedule of a community can be derived by the super-imposition of the \( L_1 \) curves, at each level of income, on the \( L_2 \) curve, denoting

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Frazer, W.Z. The Demand For Money p. 84.
the relationship between the rate of interest and the idle balances held as shown in diagram - 2.

CONTEXT OF INDIAN MONEY MARKET:

Aggregate monetary resources \( (M_3) \) rose at a lower rate in 1981-82 over 1980-81, but subsequently revealed a rising trend again.

Reserve Bank of India's net credit to government rose nearly to 29% in 1980-81 over the previous year, but the rate declined considerably in 1981-82 although it again showed a rising trend in the next year. Bank credit to the private sector revealed more or less static rate of increase in 1980-81 onwards. The foreign exchange assets position of the banking sector revealed a sharply rising negative trend in 1981-82 onwards.

In the backdrop of the preceding analysis the monetary policy in India can be viewed from the RBI's Annual Report of 1976-77.7

7 The continuing imbalance between aggregate demand and aggregate supply and the consequential pressure on prices accompanied by comfortable liquidity conditions in the money market, emphasised the need for further regulating the loanable resources of banks. .............. Reserve Bank of India has been

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### TABLE 2
Sources of change in Money Stock (M₃)

(In Rs. Crores)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I. M₃ (Money Supply with the public)</td>
<td>3370 (16.8)</td>
<td>1468 (6.3)</td>
<td>738</td>
<td>2849</td>
</tr>
<tr>
<td>II. M₃ (Aggregate monetary resources)</td>
<td>6321 (17.6)</td>
<td>6839 (12.3)</td>
<td>3928 (10.7)</td>
<td>8838 (14.2)</td>
</tr>
<tr>
<td>1) Currency with the public</td>
<td>1782 (14.6)</td>
<td>1031 (7.7)</td>
<td>670 (8.0)</td>
<td>1642 (11.4)</td>
</tr>
<tr>
<td>2) Demand deposit with banks</td>
<td>1559 (19.7)</td>
<td>680 (7.1)</td>
<td>381 (4.0)</td>
<td>1221 (12.0)</td>
</tr>
<tr>
<td>3) Time deposit with banks</td>
<td>4951 (18.2)</td>
<td>5371 (16.7)</td>
<td>5170 (16.1)</td>
<td>5989 (16.0)</td>
</tr>
<tr>
<td>4) Other deposits with RBI</td>
<td>20</td>
<td>-243</td>
<td>-293</td>
<td>-14</td>
</tr>
<tr>
<td>III. Sources of change in M₃ (1+2+3+4+5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Net bank credit to govt. (a+b)</td>
<td>5704 (28.5)</td>
<td>4914 (19.2)</td>
<td>3151 (12.3)</td>
<td>4987 (15.6)</td>
</tr>
<tr>
<td>(a) RBI’s net credit to govt. (i+ii)</td>
<td>4030</td>
<td>3997</td>
<td>2142</td>
<td>2157</td>
</tr>
<tr>
<td>i) To Central Govt.</td>
<td>3551</td>
<td>3207</td>
<td>1741</td>
<td>3371</td>
</tr>
<tr>
<td>ii) To State Govts.</td>
<td>487</td>
<td>789</td>
<td>401</td>
<td>1214</td>
</tr>
<tr>
<td>(b) Other banks credit to the govt.</td>
<td>1666</td>
<td>917</td>
<td>1009</td>
<td>2630</td>
</tr>
<tr>
<td>2. Bank Credit to Commercial Sector (a+b)</td>
<td>5308 (17.4)</td>
<td>6676 (18.3)</td>
<td>6037 (16.6)</td>
<td>5786 (13.4)</td>
</tr>
<tr>
<td>(a) RBI’s Credit</td>
<td>154</td>
<td>344</td>
<td>202</td>
<td>429</td>
</tr>
<tr>
<td>(b) Other banks’ credit</td>
<td>5231</td>
<td>6332</td>
<td>5835</td>
<td>5335</td>
</tr>
<tr>
<td>3. Net foreign exchange, assets of banking sector</td>
<td>-513 (-11.5)</td>
<td>-2069 (-43.7)</td>
<td>-1733 (-36.0)</td>
<td>-1101 (-41.4)</td>
</tr>
<tr>
<td>4. Govt’s Currency liabilities to the public</td>
<td>27 (4.6)</td>
<td>19 (3.1)</td>
<td>30 (4.8)</td>
<td>22 (3.4)</td>
</tr>
<tr>
<td>5. Banking Sector’s non-monetary liabilities, other than time deposits (a+b)</td>
<td>2181 (22.4)</td>
<td>2701 (22.7)</td>
<td>1557 (15.1)</td>
<td>659 (4.5)</td>
</tr>
<tr>
<td>(a) Net non-monetary liabilities of RBI</td>
<td>802</td>
<td>1162</td>
<td>464</td>
<td>429</td>
</tr>
<tr>
<td>(b) Net non-monetary liabilities of other banks</td>
<td>1379</td>
<td>1539</td>
<td>1093</td>
<td>229</td>
</tr>
</tbody>
</table>

P = Provisional

following an objective of "Controlled expansion" by restraining the expansion of the total bank credit within a limit, and favouring the borrowing of the priority sectors and weaker sections of the Indian community. The Reserve Bank of India, being a monetary authority, has been concerned with anti-inflationary monetary measures in the present situation of price rise.

SYNTHESIS: MONEY THAT MATTERS

The modern money economy is predominantly a credit economy. The strategic part of the financial structure of the present money economy that plays a vital role in the market economy is founded upon the base of the credit system. The core of monetary policy lies in monetary management. The debate on the importance of money has led to two extreme schools of thought - the monetarist and the non-monetarist. The monetarist's thesis of Friedman and others postulated that "Only Money Matters". Most Keynesians (it is doubtful whether Keynes himself believed that money does not matter) thesis postulates that "Money Does Not Matter". Between the two anti-theses, synthesis can be found out in the proposition "Money Matters". To the degree it matters depends on the empirical situation and environment of the economy.