ROLE OF CENTRAL BANK IN MONETARY MANAGEMENT OF A COUNTRY WITH SPECIAL REFERENCE TO RESERVE BANK OF INDIA

ABSTRACT
THESIS SUBMITTED FOR THE AWARD OF THE DEGREE OF

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IN
ECONOMICS

BY
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Abstract
ABSTRACT

Introduction:

The thesis entitled "Role of Central Bank in Monetary Management of a country with special reference to Reserve Bank of India" is an attempt to analyse the role of Central banks of different countries especially the Reserve Bank of India in their monetary management in the changed environment. The methods of monetary management vary in degree and kind between one Central bank and another depending upon the particular stage of economic development of a country, volume and variety of its material resources, the make up of its banking and credit structure, the nature of its International financial relationship, the state of development of its capital market, the degree of organization and activity of its money market and in the trend of political thought and action. But despite all these variations the Central bankers all over the world are found with more or less the same outlook on monetary and banking matters. The interdependence of one country to another country has made the monetary management more complex. In this study, efforts have been made to critically examine the methodology adopted and
objectives pursued by different central banks for the effective monetary management especially the Reserve Bank of India.

There is no doubt that the conduct of monetary policy in India has transformed over the past 54 years, but the transition from a planned economy to a market economy in the 1990, sharpened the Reserve Bank's monetary management dilemma of providing credit to both the Government and the commercial sector at a reasonable cost, while at the same time containing inflationary pressures. The sudden external shocks requires a hardening of monetary conditions in order to ensure orderly conditions in the financial markets, while the growth objective presage a softer interest rate regime. These increasing complexities of monetary management forced the Reserve Bank of India to adopt a multiple indicator approach in which a cost of macroeconomic variables are monitored for the process of monetary policy formulation. In fact, the relative efficacy of the different instruments and the environment in which they have been applied have undergone a sea-change. Therefore, in this study efforts have been made to analyse —

(i) How the emphasis on various monetary management instruments have evolved from essentially one of direct and administered
instruments to that of relatively indirect and market based instruments.

(ii) How far the Reserve Bank of India is successful in monetary management and able to achieve the objectives of price stability, growth and financial stability.

The data has been collected from the publication department of the Reserve Bank of India and the Economic Surveys of the Government of India. The data consists of the Bank rate changes, changes in the Cash Reserve Ratio (CRR), changes in the selective methods, interest rate changes, change in the money supply, inflation and the GDP growth. Efforts have been made to find the interdependence of different variables like inflation, GDP growth and money supply with the help of correlation coefficient and moving averages. This work is divided into five chapters covering almost every aspect of monetary management.

The chapter first is introductory in nature. It deals about the genesis of monetary management and the evolution of central banking as a technique of monetary management. The basic objectives of monetary management like control of cyclical phenomenon, continuity of values, economic stability and full employment of resources have been dealt in this chapter. An effort have been made to have a
comparative analysis of the operating procedures and the objectives pursued by different central banks in the changed environment where the choice of monetary arrangement depends more on the choices that other countries make.

Evolution of Central Banking technique of monetary management in India and the birth of the Reserve bank have been dealt substantially in this chapter. The reform measures which are essential for effective monetary management and to keep the financial structure of the country 'on an even keel' have been also dealt in this chapter.

Chapter second deals with the general instruments of monetary management. In the chapter efforts have been made to analyse the relative efficacy of different instrument especially in the changed environment. In order to analyse the relative efficacy of various instruments, the whole period is divided into pre-liberalisation period and post-liberalisation period.

The analysis shows that there is remarkable change in the use of different instruments. In the pre-liberalisation period the Bank rate was actively used upto the 70s and acted as a signaling rate. But gradually the bank rate was downgraded and the Cash reserve ratio became an active instrument of monetary management. Though the
open market operations were in use but not actively. But in the post-liberalisation period, which sharpened the Reserve Bank’s monetary management dilemma, the bank rate and the open market operations reactivated and the role of bank rate as a ‘reference rate’, revived whereas, the liquidity adjustment facility (LAF) provides an interest rate corridor.

Thus the analysis concludes that in the changed environment, the reforms in the monetary policy-operating framework in terms of instruments, procedures and institutional architecture are essential for efficient monetary management. Further, it concludes that though all the three instrument have their own merits but no single instrument is adequate to task, so, all the three must be employed in proper combination to achieve the policy objectives.

*Chapter third* deals with the selective methods of monetary management. As we know that in the context of planning and development, selective credit control is necessary because it channelise bank credit to socially desirable and economically useful purposes. In India the selective credit controls are in operation since 1956 and have expanded in coverage, scope and content over the period. In order to have an effective analysis the whole period is divided into three phases, namely, pre-nationalisation period (1956-
68), post nationalisation period (1969-90) and the post liberalization period (From, 1991).

In the pre-nationalisation period (1956-68), the selective methods were not very much effective, the share of bank credit to agriculture and allied activities were very low because the banks were reluctant in providing credit.

In the post-nationalisation period (1969-90) the economy was broadly divided into two categories, namely priority sector and non-priority sector. Various sectors like, agriculture, small industries, exports, roads and water transport operators, retail trade and small business and education and various others were included into the priority sector and the targets of priority sector credit for public sector banks were set and revised from time to time as a matter of government policy and to achieve the desired objectives. Thus during this period there was a persistent decline in the share of bank credit from scheduled commercial banks to industry as a whole and to large and medium industry in particular.

The post liberalisation period (1991 onwards) started with a severe balance of payment crisis and a high rate of inflation, reflecting the growing internal imbalances of 1980s. With the liberalization of the external sector, the management of capital flows
posed a fresh challenge to monetary management. During 1994-95, the evolution of prices and output led to a tightening of selective credit controls on a number of goods but with the expectations of bumper *Kharif* crop and the improvements in the price–output trend selective credit controls were reduced and eliminated in some cases. In 1996-97, with the liberalization of selective credit controls on bank advances against price-sensitive essential commodities, various commodities were exempted from selective credit controls from October 21, 1996. And therefore, we can say that the selective credit controls were virtually eliminated in October 1996. In fact, the degree of success of selective credit controls are very much dependent upon the factors like – the extent of effective credit restrictions, because, the selective credit controls are generally security oriented and purpose oriented.

*Chapter four* deals with the impact of monetary policy on macroeconomic variables. There is widespread acceptance that the design and conduct of monetary policy has an important bearing on aggregate economic activity and it is being actively considered as an instrument of stabilization, working through aggregate demand to smoothen oscillations of economic activity around the desired path. Therefore, in this chapter analysis have been made to know, how the
monetary policy affects output and inflation and for this correlation coefficient between money supply and the inflation and between inflation and output have been determined. Three years moving average graphs have been also depicted to show the interdependence to these variables. In this chapter an effort have been also made to get the transmission channel especially in the changed environment in order to achieve the desired objectives. Here an attempt has been also made to find the trade-off between inflation and growth, and it has been found that there is a non-linear relationship between inflation and growth.

Fifth and the final chapter devoted to the conclusion and suggestions. After going through the extensive study, we can say that in the contemporary macroeconomic thinking, there is no clear winner once enjoyed by Classicals, Keynesians or Monetarist. There is no doubt that the conduct of monetary policy shaped the process of financial sector reforms, but financial liberalization itself posed fresh challenges to the conduct of monetary management. The evolution of interlinked money, government securities and foreign exchange markets, posed challenges to monetary management in terms of heightened risks of contagion.
Though, price stability is generally recognised as the primary goal of monetary policy, but there is little evidence that inflation targeting on an average improves performances of output. Thus, it is important that Central Banks must, at any time, simultaneously pursue three objectives of price stability, growth and financial stability.

Lastly, this chapter concludes that the record of the Reserve Bank in monetary management has been, on balance, satisfactory. In fact, it will be good to say that the degree of credibility that the Reserve Bank of India has earned overtime, is in itself an effective instrument of monetary management in meeting the future challenges.
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Dedicated
To
My Parents
This is to certify that the Ph.D. thesis entitled “Role of Central Bank in Monetary Management of a Country with Special Reference to Reserve Bank of India” submitted by Mr. S. Hasan Qayed, is his original research work and has been written under my direct supervision.

DR. M. IZHAR AHMAD
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(SUPERVISOR)
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S. HASAN QAYYED
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Introduction
INTRODUCTION

The present study entitled "Role of Central Bank in Monetary Management of a Country with Special Reference to Reserve Bank of India" is an attempt to analyse the role of different Central banks, particularly, the Reserve Bank of India in managing the monetary system of the country especially after the liberalization and globalisation.

Prior to the commencement of the twentieth century there had been no clearly defined concept of Central banking. Gradually, the control of currency and credit vested in one bank with the support of the State and Subject to some form of State supervision and participation irrespective of the stage of economic development in the country. But the methods of monetary management vary in degree and sometimes in kind as between one Central bank and another, depending upon the particular stage of economic development of a country, the volume and variety of its material resources, the makeup of its banking and credit structure, the nature of its international financial relationship, the state of development of its capital market, the degree of organization and activity of its money market. The
methods of Central Banks also vary in kind and in degree as between one period and another in accordance with the need for adjustment to fundamental changes in economic conditions and in the trend of political thought and action. Despite all these variations there lies a large measure of agreement in practice and Central bankers are to be found all over the world with more or less the same outlook on monetary and banking matters.

**Review of Literature:**

*Deepak Mohanty, Amitava Sardar and Abha Prasad* (1997); in the paper entitled "Perspectives of Monetary Developments and Policy in India", makes an attempt to capture the monetary developments, and the theoretical and empirical underpinnings of monetary policy, in particular the changing efficacy of various instruments of monetary policy in India. It delineates the evolution of the role of monetary policy from one of developmental in nature during 1950s and 1960s to that of neutralizing huge liquidity generated in the economy consequent upon weakening of fiscal balance of the Government during 1970s and 1980s. This was also followed by institutional reforms during 1990s culminating in the supplemental agreement between the practices of automatic monetisation of fiscal deficit. While analyzing these developments, the article also focuses on how
the emphasis on various monetary policy instruments have evolved from essentially one of direct and administered instruments to that of relatively indirect and market based instruments. The analysis of money, output and prices in a historical perspective shows that unbridled growth of money supply translates largely into rise in prices underscoring the need for prudence in monetary management.

Manohar Rao, M.J. (2003); the paper entitled, "Science of Monetary Policy – some perspectives on the Indian economy", exposit the monetary policies design problem within the limits of an empirical framework for the Indian economy. It first looks at a few of the theories that have been advanced to explain the stylized facts of economic fluctuations and then examines the main features of business cycles in the Indian economy over the past 50 years. Secondly, it empirically measures the threshold rate of inflation within the framework of growth-inflation trade offs and derives the optimal rate of monetary expansion needed to smooth out fluctuations and stabilize the inflation rate at its threshold level. He estimated the optimal rate of monetary expansion around 15 percent to stabilize the inflation rate at the threshold level and the corresponding optimal fiscal deficit, which maximizes the growth rate around 4 percent of GDP.
Sayers, R.S. (1967); in his book entitled, "Modern Banking" have discussed about the economic importance of Banks. According to him a full discussion of the 'monetary' influences on the country's economic activity would have to include an examination of the behaviour of a very wide range of financial intermediaries and the business of the banks. But at the same time while trying to trace the influence of the banks on the level of total demand some regard must be paid to the great web of other financial claims that serve nearly but not all the purposes of money.

Meltzer, Alan H. (1997); in his book entitled, "On Making Policy More Effective Domestically and Internationally" published from McMillan Press Limited, London have found that the conduct of monetary policy has become extremely complex in the environment of interdependent risks. In fact the choice of monetary arrangements depends more on the choices that other countries make.

Dr. Rakesh Mohan, (Deputy Governor, RBI); in his paper entitled, "Challenges to Monetary Policy in a Globalising Context" published in the Reserve Bank of India bulletin, January 2004, have discussed the recent global development and the monetary policy operations. In this paper he emphasizes that the globalisation has expanded economic interdependence and interaction of countries greatly, which
has created the need for greater coordination in terms of the design of appropriate institutional architecture as well as standardization reflected in the adoption of similar monetary policy approaches.

De Kock, M.H. (1987); in his book entitled, "Central Banking" have discussed about the evolution of Central banking as a technique of monetary management. He analysed the methods adopted by different Central banks and concluded that the methods vary in degree and sometimes in kind as between one Central bank and another, depending upon the particular stage of economic development of a country, the volume and variety of its material resources, the make-up of its banking and credit structure generally, the nature of its international financial relationship, the state of development of its capital market and the degree of organization and activity of its money market. But despite all these variations there lies a large measure of agreement in practice. and Central bankers are to be found all over the world with more or less the same outlook on monetary and banking matters.

Narendra Jadhav (2003); in his paper entitled, "Central Bank Strategies, Credibility and Independence - Global Evolution and the Indian Experience" have offered a comprehensive perspective on Central banking in India. The genesis, evolution and development of
the Reserve Bank of India, the domestic compulsions and evolution of international best practices have been analysed thoroughly. Formulation and the conduct of monetary policy, financial stability and management of the changes in the payment and settlement system in the changed environment have been discussed clearly and also highlighted the challenges and the policy dilemmas faced by the Central bankers around the world. Finally, he concluded that Central banks must, at any given time, simultaneously pursue three objectives of price stability, growth and financial stability.

Thus a lot of work has been done on the monetary management of the Central banks and many more would be in the process. In fact review of these literatures helped me a lot in building the arguments and in setting up the objectives of the research work.

Objectives:

In the light of research topic, "Role of Central Bank in Monetary Management of a Country with Special Reference to Reserve Bank of India", the following objectives have been set.

(1) To examine the relationship between money, output and prices.

(2) To know the trade-off between inflation and growth.
(3) To examine the efficacy of different instruments of monetary management after the financial sector reforms.

(4) To analyse whether a single target, single instrument rule is preferable over the multiple target approach.

(5) To know whether the monetary targeting is still feasible in the changed environment or not.

**Plan of Study:**

Though, the conduct of monetary policy in India has transformed over the past 54 years, but the transition from a planned economy to a market economy in the 1990s, sharpened the Reserve bank's monetary management dilemma of providing credit to both the Government and the commercial sector at a reasonable cost, while at the same time containing inflationary pressures. The sudden external shocks require a hardening of monetary conditions in order to ensure orderly conditions in the financial markets, while the growth objective presaged a softer interest rate regime. The increasing complexities of monetary management forced the Reserve Bank of India to adopt a multiple indicator approach in which a host of macroeconomic variables are monitored for the process of monetary policy formulation. The relative efficacies of the different instruments and the environment in which they have been applied
have undergone a sea-change. The complete study has been divided into five chapters.

In the First Chapter we have primarily dealt about the evolution of Central banking as a technique of monetary management. The objectives and the operating procedures of different Central banks in the changed environment have been also dealt. The births of the Reserve Bank of India and its role in the monetary management have also been discussed.

The Second Chapter deals with general instruments of monetary management viz., Bank rate, Open market operations and Cash reserve ratio in detail. Their relative efficacies especially after the liberalization have been discussed.

The Third Chapter deals with the selective methods of monetary management. In this chapter the use of different selective methods like, margin requirements, interest rate differential and moral suasion etc have been discussed in three phases — pre-nationalisation period, post-nationalisation period and post-liberalisation period.

The Fourth Chapter deals with the impact of monetary policy on various macro-economic variables. The relationship between
inflation, growth and money supply has been established. The transmission channels have been discussed and effort have been made to find the effective transmission channel especially when the economy is affected not only due to internal factors but also due to external shocks.

Fifth and the Last Chapter is the summary and conclusion which concludes about the role of Central banks especially Reserve Bank of India in the monetary management after analyzing and testing the different parameters under different circumstances especially after the 1990.

**Hypothesis:**

We have formulated the null hypothesis, which has to be accepted or rejected as per the findings:

(i) $H_0$: Financial liberalization and globalisation has made the relationship between money, output and prices unstable and unpredictable.

(ii) $H_0$: There is a trade-off between growth and inflation at least in the short-run.

(iii) $H_0$: Every Central bank should pursue a single target, single instrument rule.
(iv) $H_0$: Interest rates and exchange rate has replaced the monetary targeting as an anchor of monetary management.

**Research Methodology:**

Since the Research work is evaluating in nature. We have to evaluate the performance of the Reserve Bank in monetary management especially after the liberalization. Therefore all the data are secondary in nature, collected mainly from the Publication Department of the Reserve Bank of India and the Economic surveys of the Government of India. In order to test the different hypothesis, correlation coefficient has been used which shows the interdependence of different variables like inflation, GDP growth and money supply. Moving averages and graphs have been also used to depict the relationships among inflation, output and money supply in the economy.
Chapter 1
MONETARY MANAGEMENT: GLOBAL EVOLUTIONS

1.1 Genesis of monetary management:

Monetary management is as old as money and the monetary system itself. The prince who minted the first coin was a monetary reformer in his day, and the Princes who debased their coinage to finance their deficits were also monetary reformers. According to Paul Einzig, "managed currency was not entirely unknown to the ancient Egyptians, Greeks and Chinese who shifted bullion to and from the shrines of their temples in order to counteract movements in the price level". But such monetary management, or that which prevailed throughout the 19th century and until 1914, was based upon the monetary system, which was considerably based on Gold and was, therefore automatic in character. This automaticity was significantly curtailed during the war (1914-18) and monetary management also assumed a new character. In the modern sense, monetary management implies a deliberate policy, which aims at the systematic regulation of the volume of currency and credit with a definite objective in view. The object may be either the maintenance of a stable exchange rate, or the maintenance of a stable or moderately changing price level, or the maintenance of a stable or
steadily increasing volume of employment and trade. It sometimes necessitates suspending expansion of currency and credit or even reversing it. Circumstances may arise in which management implies an increase of interest rates, contraction of credit, reduction of consumers' purchasing power, and suspension of public works expenditure. Thus, monetary management implies a positive attempt to regulate the volume and value of currency and credit in a way that is considered to be in accordance with the interests of the increase of the welfare of the community, independently of the technical international considerations which had been in the past regarded as being of prime importance.

The problem of monetary management originated into general prominence after the First World War, when statesmen in all countries were faced with the task of reconstructing a broken international monetary system. Two international conferences (Brussels in 1920 and Geneva in 1922) vigorously affirmed the importance of this task, while inflation in Germany and elsewhere seemed to point the moral. Before that the conviction was general that the international Gold standard was a system automatic in character and governed by natural laws to which it was essential that every national monetary system should conform. Within the
framework of this International Gold Mechanism Central Banking was but with a shapeless idea. Though some classical theorists assigned to it an important role in the mechanism of adjustment between the national and international systems, namely that of changing the volume of domestic money in accordance with the balance of payments and it was accepted as an index of monetary management. But beyond this, the Central Banks were considered to be merely the results of certain historical circumstances, which raised a few institutions in their respective territories to positions of superiority and power over their contemporary institutions either by virtue of the sole right to issue paper currently or by their special relations with the state. In due course the return of Great Britain to the Gold standard was acclaimed as giving a lead in the great work of monetary reconstruction, and in their turn other countries followed suit. But this represented only the beginning of the attempt at monetary management. Large-scale unemployment provided a reminder that the monetary problem – that of providing and working a thoroughly satisfactory currency and credit machine – cannot be solved easily and finally before a distant future. The tendency towards monetary management received a strong stimulous through crisis of 1931 and the following years of depression.
1.2 Evolution of Central Banking as a technique of monetary management:

In the 18\textsuperscript{th} and early 19\textsuperscript{th} centuries, the thinkers, (Adam Smith, David Hume and David Ricardo) who had the most influence on the development of monetary theory, placed emphasis on money as a reflector rather than regulator, of levels of economic activity which in turn, were deemed to be determined by non-monetary factors. Among the classical economists, Adam Smith emphasized the role of a ‘properly regulated’ banking system, which in his view would provide the appropriate amount of money endogenously through the expansion and contraction of credit. According to Smith, the introduction of banks and credit money would have a once and for all effect on economic activity by releasing for production, social capital previously tied up in stocks of money commodity. However, once the banking system was in place and functioning according to rules, the quantity of money, now endogenous to the system, would have no independent effect on the level of economic activity.

As a matter of fact, global thinking on monetary management and by implication, that on Central Banking, has evolved over time in accordance with the changing perceptions regarding the role of money in economic activity. In England the principles of monetary
management by the Central Bank were not discovered and proclaimed until the appearance of Walter Bagehot’s ‘Lombard Street’ in 1873. Even then the criteria by which the Bank of England acted were almost entirely rules of thumb, and there was very little attempt at conscious control in pursuit of a consistent policy before the outbreak of the war. France and Germany, though they possessed Central Banks for all or a large part of the 19th century, never came into control of so delicate and astute a mechanism of monetary management, partly due to the lack of large and elastic money markets and partly because the Bank of France and Reich Bank never confined themselves to serving the Member Banks and the government, but competed freely with other banks up and down the country. After the cessation of hostilities, while considering the restoration of pre-war international standard, the successful maintenance of it was pronounced to be conditional on the existence of Central Banks. War time exigencies had disrupted the many links that previously connected the different currencies of Europe. Inflation of prices and fluctuating exchanges had reduced banking almost to chaos. In addition, there were several new and intensely nationalistic states, each with a brand new currency, and each desiring to have a brand new currency policy to match. Appeals were,
therefore, sent out from one international conference after another prescribing the formula of a Central Bank for each country. At the international financial conference held in Brussels in 1920, one of the resolutions passed was that, "in countries where there is no Central Bank of issue one should be established". The advice of the Brussel's conference was widely accepted and as many as thirty new Central Banks were brought into existence between 1921-39. Under the leadership of the Bank of England and of the financial experts of the league of nations, this formula was gradually put into effect, and even such small entities as Estonia, Danzig and Albania were equipped with Central Banks. Under American inspiration the innovation spread to the South American States, and by the outbreak of world war in 1939 there was hardly a country in the world where a Central Bank was not either in existence or proposed. Kisch and Elkin assured even the undeveloped countries that, "the arguments on the economic side for handling over the management of the currency to a Central Bank are convincing. The risk for prematurity in the creation of a Central Banking system should not necessarily be regarded as a decisive factor, because there is no influence so potent in the way of developing a credit system on sound and progressive lines as a well-founded Central Bank."2" Theodone Gregory while
giving evidence before, Royal Commission on Banking and Currency in Canada in 1933, gave a classic statement on the importance of Central Banking. "A Central Bank", he said. "is a center not only for rediscounting, but a center of moral authority in moments of crisis and an authority which is also capable of exerting and expressing a certain volume of moral critique in moments of exaggerated optimism or of exaggerated pessimism." the establishment of a Central Bank was thus looked upon not only as an agency for economic stability, but also as a symbol of the economic independence of a country.

Though the foundations of Central Banking were laid much before the First World War, it did not develop as a concept until the thirties of the twentieth century when it came to be a well-defined and systematic study. Many of the countries called in the help of experts from the older countries, mainly from Great Britain, to advise them on the question of the establishment of a Central Bank. Drawing inspiration from the prominent Central Banks already in existence, certain functions came to be accepted as essentially falling within their province and certain characteristics as fundamental to their integrity. In the twenties, the idea of Central Banking developed into a systematized study and it was found necessary to stock to its armoury with new method of control. By the thirties, the Central
Banks came closer to their respective governments, and the mode and nature of their operations also underwent changes in conception and emphasis. Parker Willis in 1936 wrote that "Central Banking technique tends more and more to rely upon direct control and intervention, and less and less upon the finer balancing of economic and financial forces, which was represented in the older theory of discount rate supervision or direction." Further, he said in the same context that not only the practice of Central Banking but its theory as well, has drifted away from the old moorings. In fact Central banking crystallized itself into a new recognized idea. In this regard De Kock had observed, "Central Banking has become an entirely separate branch of banking as compared with commercial banking, investment banking, industrial banking and agricultural banking. It has developed its own code of rules and practices, and the existence of a science of Central Banking has been acknowledged by many. A clearly defined concept has been evolved." Further, he writes, "While their (Central Banks) constitution and range of powers differ to no small extent, all the Central Banks show a tendency in practice to conform to or work up to, an almost uniform pattern in respect of their functions and methods."
The acid test of an effective monetary management is an adequate adjustment of the amount of currency and credit to the requirements of production, business and trade. For this, a centralized control over both currency and credit is an absolute necessity. That is why the Central Banks, which ultimately supply credit and control it, are given the monopoly of currency. "The perfect Central Bank has the duty of nearly always swimming against the current of public feeling, for it is the current of public feeling, alternately over-optimistic and over despairing, which is more responsible than any other single factor for the swings of boom and slump. In its task of monetary management, the Central Bank is not for looking out and scotching incipient causes of disturbance emerging from the shifting sands of public psychology, but of trying to bring to rest a see-saw in violent oscillation." In order to fulfill effectively these functions, it is necessary to arm the Central Banks with wide powers to control currency and credit operations of agencies engaged in that business and also to control institutional movements of capital and money.
1.3 Objectives of monetary management:

A. Control of ‘Cyclical’ phenomenon:

Ever since wide fluctuations in prices associated with booms and depressions became a chronic feature, the question of Monetary management has been a subject of paramount significance. Monetary management, therefore, aims primarily at preventing maladjustments occurring, that is, at eliminating the causes of recession. To achieve this ‘investment finance’ needs to be regulated through appropriate variations in the rate of interest in the capital market. The rate of interest is a vital link that connects the volume of money and investment in a given economy. The success or otherwise of a monetary policy largely depends on the influence which the rate of interest can be expected to wield on the investment and consumption decisions of the community. According to Golden Weiser the broad objective of monetary management "is to assure the distribution of the monetary flow or income in such a way as to place in the hands of consumers sufficient means to purchase the output of consumer industries and in the hands of investors funds adequate to maintain the existing productive plant and exposed it sufficiently to meet the consumption requirements of a growing population with a rising standard of living." 

20
B. Continuity of values:

Monetary management to be effective must provide the basis of ‘continuity of value’. It carries the implication that general price movements, if any, should not exceed movements in the general level of costs resulting from technical changes. In a country doing a large export and import trade, prices and costs are strongly affected by exchange movements, and not merely by what happens within the national boundaries. For such a country, monetary doctors should also obtain as far as possible, stability in exchange rate. Continuity of values and exchange stability depend largely on the preservation of balanced conditions in economic activity at home, and on an international machinery which would enable the main financial centers to work together not only in controlling credit but also in keeping the flow of lending more consistent, and in providing temporary financial help under conditions of emergency.

C. Economic stability:

Proper monetary management through the condition of supply of money can explore the possibilities of increasing production without affecting the level of consumption of the community. The monetary authorities can bring about the development of productive
resources – actual or potential by financing them with new money, without any risk of inflation, for the increasing stock of money will be simultaneously matched by growing output, even though the interval of time may temporarily disturb the existing price structure of the economic system. In fact, the whole problem of economic development is very intimately and closely linked with successful and effective monetary management. Monetary management is supposed to regulate the availability, cost and use of money, both in aggregates and segments so as to make the maximum contribution to a high level of economic stability.

D. Full employment of resources:

The ultimate objective of monetary management is to achieve and to maintain permanently a condition of full employment of resources. For this purpose monetary policy takes as its basis the Keynesian idea that effective demand determines employment. Effective demand is made up of consumption demand and investment demand. The Keynesian proposition – that as income increases consumption demand becomes increasingly inelastic – is also useful in this connection. Monetary policy and government policy concentrate on stimulating demand on both the investment front and the consumption front. The central monetary authority by stimulating
effective demand can bring out full employment of resources. The obvious objective of monetary policy, therefore is to attain an equilibrium between saving and investment at the point of full employment.8

1.4 Monetary management in globalising context:

The global developments have transformed the environment in which monetary policy operate, throwing up opportunities as well as challenges. Globalisation has expanded economic interdependence and interaction of countries greatly. This has created the need for greater coordination in terms of the design of appropriate institutional architecture as well as standardization reflected in the adoption of similar monetary policy approaches. Structural changes associated with globalisation have increased the uncertainty in interpreting macroeconomic indicators regarding the state of the economy. Financial markets, driven by massive cross-border capital flows and the information technology revolution, immediately transfer the valuation of risks associated with uncertainty across the globe and become contagions.

Thus the conduct of monetary management becomes extremely complex in such an environment of interdependent risks. Though the
monetary management is conducted towards achieving domestic objectives, Central Banks have to follow developments across the world carefully. According to Meltzer, "more than ever before, the choice of monetary arrangements depends on the choices that other countries make."9

A. Objectives:

Though there are so many objectives of monetary policy, but the attainment of price stability is the dominant or prime objective of monetary policy. It rests on the assumption that volatility in prices creates uncertainty in economic decision-making. Rising prices affects savings adversely while they make speculative investments more attractive. The most important contribution of the financial system to an economy is its ability to augment savings and allocate resources more efficiently. A regime of rising prices, thus, clearly vitiates the atmosphere for promotion of savings and allocation of investment. Further, the domestic inflation rate also has a bearing on the exchange rate of the currency. Besides, there is a social dimension, particularly in developing economies where it affects adversely the poorer sections of the society who have no hedges against inflation. But despite a generalized recognition of price stability as the primary goal of monetary policy, the objective of
output stabilization has been prominently pursued by Central Banks all over the world, both in terms of preventing economic overheating and providing stimulus to faster recovery from recessions. Several developing countries have also used monetary measures to defend the exchange rate. Thus, constrained discretion seems to be the preferred rule for most Central Banks today.

A number of Central Banks, beginning with New Zealand (1989), adopted price stability as the sole goal of monetary policy during the 1990s. Presently, there are 18 inflation targeters and many others, including the US Federal Reserve are outside the fold. The 1999 Bank of England survey of monetary policy frameworks reveals the continuing diversity of Central Bank objectives. While price stability emerged as the main/other important policy objective in 50 out of the 77 Central Banks as many as 54 Central Banks reported exchange rate management to be the main/other important policy objective.

B. Intermediate target:

Besides the objectives for monetary policy there are other issues connected with the transmission mechanism of monetary policy actions. The Central Banks of advanced economies have
experimented with various intermediate targets in order to influence the economy in general and prices in particular. In choosing appropriate targets, Central Banks usually keep three major aspects in view: First, the ability to influence the target variable in a reasonably predictable manner. Secondly, the target must show a stable relationship with the end objective of monetary policy. Thirdly, the target must lead to the final objectives.

The monetary policy mechanism holds the key in determining the target. If variables at the beginning of the transmission process are selected, the target may be become controllable but may not show a strong influence on the goal variable. At the other extreme, the final objectives that lie at the end of the transmission process could also be targeted. In such cases, however, the monetary authority may have little control over the target. The middle option could be to adopt intermediate targets (such as money growth or exchange rate) which could lie somewhere at the middle of the transmission process. The importance assigned to targets vis-à-vis objectives in the design of the monetary policy strategy is particularly critical because a mere achievement of target while missing the objective could erode the credibility of monetary management. With the observed instability of the money demand function several Central Banks have been
disenchanted with monetary targeting and have accordingly either switched over to a 'menu' or 'check list approach' or given up monetary targeting altogether. As per 1999 Bank of England survey of monetary frameworks, 43 out of 50 Central Banks viewed monetary aggregates as relevant intermediate targets while only seven Central Banks preferred the interest rate as intermediate targets. In developed economies, an alternative to monetary targeting has been the interest rate primarily due to the fact that interest rates in those countries play a more important role in equilibrating markets. Various segments of the financial markets are closely integrated with interest rates in the different markets mutually influencing one another. The "impossible trinity", i.e., incompatibility between fixed exchange rate regime, open capital account and independent monetary policy is well recognized by the Central Banks all over the world.

The growing complexities of macroeconomic management is now leading a number of Central Banks to monitor a number of macroeconomic indicators rather than centre monetary policy decisions around nominal anchors such as money, interest rates and the exchange rates. The management information system of a number of Central Banks, including the European Central Bank, the Bank of
Mexico and the South African Reserve Bank, has now been broadened to a large set of macroeconomic variables, often including leading indicators, in response to the growing complexities of monetary management.

C. Operating procedures:

The operating procedures of monetary policy have been changing the world over in response to financial liberalization. The key challenge before the current monetary management is to modulate liquidity conditions in the financial markets consistent not only with the macroeconomic objectives but also with the market outcomes. A number of Central Banks set formal/ informal bands for the overnight interest rate. Such monetary policy impulses travel to real activity if inter bank markets are deep enough and if the interest rate structure, as a whole, is sufficiently sensitive to movements at the short end. The strategy of liquidity management followed by a number of Central Banks now broadly follows a two-step procedure of estimating market liquidity, autonomous of policy action to initiate action in terms of open market operations and interest rate signals to steer monetary conditions. But the actual framework adopted by a country to manage liquidity vary in terms of the specific aspects of their operations. In fact, the operating procedures
of monetary policy of most Central Banks are now beginning to converge to variants of three closely related paradigms:

(i) A number of Central Banks, including the US Federal Reserve (since 1992), estimate the demand for bank reserves and then carry out open market operations to target short-term interest rates (the Federal Funds Rate in case of the USA).

(ii) A second set of Central Banks, including the Bank of Japan (since March 2000), estimate market liquidity and carry out open market operations to target bank reserves, while allowing interest rates to adjust.

(iii) A third and growing number of Central Banks, including the European Central Bank, modulates monetary conditions in terms of both the quantum and price of liquidity, through a mix of open market operations, standing facilities and minimum reserve requirement and changes in the policy rate, but do not announce pre-set money or interest targets.

Central Banks in most emerging market economies follow one of the three leading paradigms. The Bank of Mexico estimates the demand for bank reserves and conducts open market operations to achieve a target level of the banks' settlement balances with itself,
allowing interest rates to adjust. The Bank of Korea switched to an interest rate target in 1998, through open market operations conducted on the basis of estimated demand for bank reserves. The Bank of Thailand (BOT) manages market liquidity through daily repurchase market operations, and foreign exchange swaps supplemented by interest rate signals through the fortnightly repurchase rate. The operating procedures of certain Central banks are discussed in detail below.

1. European Central Bank (ECB):

The monetary management policy of the European Central Bank (ECB) is governed by a monetary policy strategy and an operational framework. The operational framework is a set of instruments and procedures with which European Central Bank strives to maintain short-term interest rates in conformity with the monetary policy strategy. In order to achieve the final objective of price stability, the European Central Bank conducts its monetary policy through three types of instruments, namely, open market operations (OMOs), standing facilities and minimum reserve requirement.
(i) **Open market operations (OMOs):**

Open market operations (OMOs) are conducted to maintain short-term interest rates within a well-defined corridor, to manage liquidity on daily basis and to provide signal of the stance of monetary policy to the market. It is classified into four categories namely, main refinancing operations, longer term refinancing operations, fine tuning operations and structural operations.

The main refinancing operations (MROs), which are liquidity injecting (i.e., reverse repo) in nature are held every week in multiple price auctions format with a maturity of two weeks. It constitute the core of the open market operations by which ECB not only provides bulk of the refinancing to the financial sector but also reflect the stance of the monetary policy and serves as the benchmark for deciding the rates on standing facilities which in turn provide corridor to overnight interest rates.

Although the main refinancing operations (MROs) are conducted on weekly basis, the 12 national Central Banks (NCBs) are required to provide their daily forecast of liquidity for individual autonomous factors. namely, currency in circulation, government deposits and other autonomous factors (net) to the European Central
Bank (ECB) by 9.30 A.M. which are amalgamated by the latter for the whole of the Eurosystem. In order to alleviate the impact of uncertainty arising from fluctuations in autonomous factors in the overall liquidity situation in the Eurosystem, except for the forecast of excess reserves, all other relevant information is provided to the market by the European Central Bank (ECB) – the most important being the estimate for reserve requirements published a few days after the start of the monthly maintenance period. The assessment of liquidity condition for the entire banking system constitutes the key element for estimating the benchmark allotment rate of each MRO, i.e., minimum bid rate. Since this rate reflects the monetary policy stance, it is set by the Governing Council.

The longer term refinancing operations are administered on a monthly frequency with a maturity of three months. These operations represent only a limited part of the aggregate refinancing volume of the ECB. The fine-tuning operations which are mainly in the nature of liquidity injecting operations are intended smoothing out interest rate fluctuations that may arise out of unexpected liquidity needs in the economy e.g., millennium changeover, 9/11 events etc. Their frequency of operations and maturity period are not standardized. In addition, structural operations are carried out through issuance of
debt certificates, reverse transactions and outright transactions. These are aimed at adjusting the structural position of the Eurosystem vis-à-vis the financial sector. Their frequency can be regular or irregular.

(ii) Standing facilities:

The standing facilities promote injection and absorption of overnight liquidity at the initiative of market participants. The rates on standing facilities confer a corridor within which overnight rates are allowed to fluctuate. Standing facilities are of two type – marginal lending facility and deposit facility. In normal circumstances, ECB provides unlimited under marginal lending facility, the interest rate of which provides a ceiling to the overnight market interest rates. Such interest rate is set at 100 basis points (bps) over the minimum bid rate accepted under main refinancing operations (MROs). Such a rate forces participants to fund their positions from overnight market and/or from MROs of ECB in the first place and turn to the marginal lending facility only as a matter of last resort. These are granted either in the form of overnight repurchase agreements or as overnight collateralized loan. The deposit facility on the other hand enables participants to deposit unlimited amount to their accounts in respective national Central
Banks. The interest rate is set at 100 bps lower than the minimum bid rate accepted under MROs and no collateral is given to counterparty in exchange for these deposits.

2. **Bank of England:**

The main aim of the Bank of England’s operations in sterling money market is to implement the monetary policy committee’s interest rate decisions while meeting the liquidity requirements and thereby contributing to the stability of the banking system as a whole. In its money market operations, the Bank of England provides the liquidity needed by the banking system for same day settlement and enables the settlement banks to achieve positive end-of-day balances on these accounts. In this way, it acts as the marginal supplier of money to the banking system enabling effective system-wide liquidity management under normal market conditions.

The refinancing provided by the Bank of England ensures that the banking system almost always has a net shortage of funds each day, which is conducted via repo transactions usually having a maturity of two weeks. It seeks to provide the system’s daily liquidity requirement at its principal round of operations at 9:45 A.M. and 2:30 P.M. at the official repo rate set by the monetary
policy committee. If liquidity is required later in the day, then further rounds of operations conducted at 3:30 P.M. and 4:20 P.M. and liquidity is provided usually at a penal rate of interest. The Bank of England closely monitors various flows across its balance sheet in order to know how much liquidity to supply to market participants each day. To facilitate this, it publishes a forecast of the daily system liquidity shortage (the expected amount of refinancing likely to be required) on its wire service pages each day.

If there is a forecast of the shortage of liquidity in the market and the shortage exceeds minimum threshold, then the Bank of England invites its counterparties to submit offers for repos and/or outright sales of bills. Counterparties willing to participate in the round have five minutes to bid for the funds that they wish to obtain through repo and/or outright sales of bills. At the 9:45 A.M. round, the Bank of England does not relieve all of the forecast shortage since it may need to revise slightly its forecast during the course of the day in the light of updated information and a similar process is repeated at the next round of operations at 2:30 P.M. On the other hand if the forecast surplus exceeds the minimum threshold, tenders are held at both 9:45 A.M. and 2:30 PM or a single tender is held at 2:30 P.M.
The Bank of England makes an overnight lending facility available at 3:30 P.M., if there is still a residual market shortage and the rate is set normally at 100 basis points above the official repo rate. This is intended to encourage the market to participate fully in the principal rounds of two-weeks operations at 9:45 A.M. and 2:30 P.M. The Bank of England also makes available a daily overnight deposit facility at 3:30 P.M., which provides counterparties the opportunities to place collateralized overnight deposits with the Bank of England. It helps to moderate undue softness in the overnight market interest rates at the end of the day.

3. Federal Reserve System (USA/ Federal Reserve Banks):

The Federal Reserve replaced two of its discount window programmes – adjustment credit and extended credit – with new primary credit and secondary credit programmes in January.

(i) Primary credit programme:

Under this programme, Reserve Banks extend short-term credit to eligible depository institutions at a rate of 100 basis points above the Federal Open Market Committee's target for the Federal Funds rate. The important goal of the primary credit programme is to reduce institutions' reluctance to use the window as a source of back-up.
short-term liquidity. It acts as the Federal Reserve’s principal safety valve for ensuring adequate liquidity in the banking system. By and large, primary credit is extended on a very short-term basis, usually overnight. But sometimes, it may be extended for up to a few weeks to small institutions that meet eligibility requirements. The primary credit programme does not require institutions to seek alternative sources of funds before requesting occasional short-term advances. Generally, Reserve Banks do not question depository institutions about their reasons for borrowing primary credit except in unusual circumstances. But the institution must have the necessary collateral arrangements in order to utilize the primary credit programme. The confidential nature of Capital adequacy, assets quality management, earnings liquidity systems and control model (CAMELS) and Strength of Support Assessment (SOSA) ratings, regulators do not permit depository institutions to disclose publicly their primary credit eligibility.

(ii) Secondary credit programme:

Federal Reserve Banks extend secondary credit to depository institutions that fails in getting primary credit in order to assist in an institutions’ timely return to a reliance on traditional funding sources or in the resolution of its financial difficulties. It entails a higher
level of Reserve Bank administration and oversight than primary credit and the rate is set at 50 bps above the primary credit rate. This becomes necessary as less sound borrowers are riskier and might have an incentive to use discount window borrowings to expand their balance sheets in a manner that might distort resource allocation, and the higher rate on secondary credit will reduce this incentive.

4. Bank of Mexico:

The Banco de Mexico is constitutionally mandated to guarantee the stability of the national currency's purchasing power. Monetary policy decisions are announced on predetermined dates, accompanied by press releases explaining the reasons that motivate any changes to the monetary policy stance. Though the bank approves that inflation is essentially determined by monetary expansion in the medium term, the day-to-day monetary management essentially focuses on adjusting market liquidity to impact monetary conditions, consistent with the market outcome. It follows a different of the multiple indicator approach whereby a wide range of economic indicators are monitored as a fundamental part of the inflation targeting framework.

The Bank of Mexico uses, as its primary operational target, the average level of the banks settlement balances with itself – the so-called zero-average reserve requirement system - and leaves the
market free to determine the equilibrium interest rates. In order to signal its monetary policy intentions, it announces, on a daily basis, the level of the accumulated balance of total daily balances held by commercial banks with it for the end of the computation period. It participates in the money market at noon on every business day with previous information on all operations affecting the balances of commercial banks current accounts, except for cash deposits or withdrawals made by credit institutions. This is so because the Central Bank credits (or debits) banks' current accounts on the same day when, without prior notice, banks deposit the bills taken from the public in (or withdraw cash from) the bank. Therefore, every day the bank has to forecast changes in the demand for bills and coins in order to offset such changes by means of its intervention in the money market. In order to manage liquidity, the Central Bank intervenes in the money markets, offering credit, deposits or repurchase agreements, or carrying out direct purchases and sales of government securities through auctions. The Bank's monetary policy signals are interpreted in terms of the accumulated balance projections rather than the actual. A zero accumulated balances objective indicates the Bank's intentions to fully satisfy the demand for currency at market interest rates, and thus to supply the necessary
resources, whereas, a negative accumulated balances objective, i.e. a “short”, reflects the policy intention not to supply the banking sector with all the funds requested at market interest rates.

5. Bank of Thailand:

Thailand diverted its monetary policy framework from monetary targeting approach to inflation targeting (IT) approach with a target set for the come inflation, on a quarterly basis. By setting the 14-day repurchase rate as a key policy rate, the Bank of Thailand implements its monetary policy. It signals a shift in the monetary policy stance by the declaration of a change in the fortnightly repurchase rate. Through two instruments, namely (a) daily repurchase rate, and (b) foreign exchange swaps, the Bank of Thailand undertakes its financial market transactions for the purpose of the conduct of monetary policy. The fortnightly repurchase rate acts as an interest rate signal, whereas the daily repurchase rates are market determined. A system of primary dealers and selected financial institutions play a key role in the auction and distribution of government securities, which provides the Bank of Thailand another channel of liquidity control.

Thailand migrated from a pegged exchange rate regime to a managed floating exchange rate regime in 1997, which has provided
it a greater leeway for pursuing an independent domestic monetary policy. As the Bank of Thailand followed a floating exchange rate regime, the capital inflows into the Thai stock market, apart from other external factors, led to an appreciation of the Thai baht by 3.3 percent in 2002. Prevalence of easy liquidity conditions in the financial system forces to reduce the fortnightly repurchase rate by 25 basis points in January 2002. The average one-day repurchase rate, which was below the overnight inter-bank rate also decreases from 1.74 percent to 1.62 per cent during the same period.

Thus the Bank of Thailand's conduct of liquidity management operation is sets through the 14-day repurchase rate and not through the one-day repurchase rate. In fact, the one-day repurchase rate along with the other money market rates automatically adjust synchronously with the policy rate.

6. The People's Bank of China (PBC)'s:

Though the Chinese economy has performed well, the main problem facing it has been an excessive expansion of its broad money at a year on year growth of 18.8 percent in August 2003, outgrowing the sum of Gross Domestic Product (GDP) and Consumer Price Index (CPI) increase by 12.8 percentage points in the first half of 2003. The basic strategy of the People’s Bank of China (PBC)’s in tackling
the problem of excess liquidity has been by conducting "sterilization operations" through the issuance of Central Bank bills, which are the short-term bounds issued by the PBC. Though the issuance of Central Bank bills was the main instrument in managing short-term liquidity propagated through foreign exchange inflows, the People's Bank of China (PBC) recognizes the 'sterilisation limit' of this instrument and thus necessarily coordinates the issuance operation of Central Bank bills through an upward adjustment in the reserve requirements ratio. Recognizing the sterilization limit of the Central Bank bills in the context of ever increasing foreign exchange inflows, the PBC raised the reserve ratio by one percentage point to 7 percent on September 21, 2003. Apart from these two instruments, the third instrument used by the PBC is the discount window. In the context of raising the reserve ratio, with a view to ensure that the national credit requirements do not suffer, the PBC would expand its refinancing and rediscount to maintain a steady credit growth. The assurance of the PBC to implement a sound and steady monetary policy together with flexible conduct of open market operations, according to the conditions of liquidity, to balance the frequency of issuance of Central Bank bills would facilitate formation of stable expectations thereby fostering stable money market rates.
7. **Bank of Korea:**

A paradigm shift in the monetary policy occurred when inflation targeting was introduced under the revised Bank of Korea Act, from April 1998. The operating target shifted to an overnight call money interest rate from the hitherto framework based on bank reserves with broad money targeting and the open market operations got the most important place in the monetary policy toolkit. The shift of operating target from bank reserves to the overnight call rate was not taken at a particular point of time; rather, it evolved as a part of policy response in the aftermath of the 1997 financial crisis, when interest rates were hiked in the defence of the exchange rate. Despite having a purely market based liquidity management framework, the Bank of Korea (BOK) continues to provide sector-specific refinance. To assist the signaling of its policy intentions as well as to stabilize the short-term interest rates, the Bank of Korea introduced Liquidity Adjustment Loan System in June 2000 with interest rate somewhat below the target overnight call rate. It has been lowering Cash Reserve Requirements (CRR) in accordance with shift to indirect instruments, however, the monetary policy committee is empowered to raise CRR up to 50 percent as well as impose marginal CRR of between 50% and 100 percent. Moreover, it does not remunerate CRR.
balances after 1987, mainly on the ground that the cost to banks of maintaining CRR can be viewed, as payment for this service by the Bank of Korea.

The Bank of Korea forecasts the supply of reserves vis-à-vis demand for reserves and undertakes open market operations (OMOs) accordingly. The open market operations are chiefly in the nature of repos rather than outright sales/purchases. Since the volume of the government and public bounds had been inadequate to permit OMOs, the BOK has been issuing its own bonds – Monetary Stabilisation Bonds (MSBs) for more than four decades (since 1961) of different maturities starting from 14 days and going upto two years, in which the two years MSBs dominate the total issuance, with a share of almost three fourth in total. Most of the OMOs are carried out through a process of competitive bidding while MSBs are also sold over the counter at a set price. The Bank of Korea sets its reserve price when it invites competitive tenders. At the time of issuance of MSBs the reserve price becomes the floor (ceiling in case of interest rates) and vice versa for repo purchases. Table-1.1 shows the objectives pursued and operating procedures of various Central banks around the world.
**TABLE-1.1**

**Objectives Pursued by Central Banks and their Operating Procedures of Monetary Management**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Country/ Central Banks</th>
<th>Objectives</th>
<th>Operating Target</th>
<th>Frequency of Market Operations</th>
<th>Key Instruments of Discretionary Liquidity</th>
<th>Key policy indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Brazil</td>
<td>Price stability</td>
<td>Overnight inter bank rate</td>
<td>Daily</td>
<td>CRR: Y</td>
<td>Financial assistance for liquidity</td>
</tr>
<tr>
<td>4.</td>
<td>Japan</td>
<td>Price stability and financial stability for sound economic development</td>
<td>Bank reserves</td>
<td>More than one per day</td>
<td>CRR: Y, OMO: Y, Repo: Y, Standing: Y</td>
<td>Overall economic and financial indicators, such as, wholesale prices corporate service prices and money stock</td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>Target</td>
<td>Monetary Instrument</td>
<td>Frequency</td>
<td>Active Use</td>
<td>Purpose</td>
</tr>
<tr>
<td>---</td>
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<td>---------</td>
</tr>
<tr>
<td>6</td>
<td>Mexico</td>
<td>Maintaining stability of the purchasing power of currency, sound development of financial system and proper functioning of payment systems</td>
<td>Daily</td>
<td>✓ ✓</td>
<td>Money, credit, interest rates, exchange rate, inflation expectations, employment contracts, producer prices and balance of payments</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>South Africa</td>
<td>Value of currency, achievement and maintenance of financial stability</td>
<td>Repurchase rate</td>
<td>Daily</td>
<td>✓ ✓ ✓ ✓</td>
<td>Reporate Foreign currency swaps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Money, credit, international interest rates, yield curve, nominal and real salaries and wages, employment, nominal unit labor costs, output gap, money market conditions, asset prices, balance of payments, terms of trade, exchange rate and public sector borrowing requirement.</td>
</tr>
<tr>
<td>8</td>
<td>UK</td>
<td>Inflation target as a precondition for achieving sustainable growth and employment</td>
<td>Daily</td>
<td>✓ ✓</td>
<td>Repo rate</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>USA</td>
<td>Maximum employment, stable prices and moderate long-term interest rates</td>
<td>Federal Funds rate</td>
<td>Typically one per day</td>
<td>✓ ✓ ✓</td>
<td>Discount rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A number of indicators of current and prospective economic developments.</td>
</tr>
</tbody>
</table>

✓ Indicate active use.

Source: Websites of Different Central Banks
1.5 Evolution Of Central Banking Technique Of Monetary Management In India – A Historical Retrospect

1.5.1 Early Currency Controversies:

Monetary management as a technique of Central Banking control on volume, cost and direction of credit and currency in order to determine their impact on trade and industry in the country did not become really apparent till the thirties of the twentieth century when the Reserve Bank appeared on the monetary map of India. Prior to that; all the emphasis was on currency problems and management of money and monetary affairs were strictly restricted to the regulation of means and methods of coinage and currency. When East India Company was on the scene there were as many as 994 different coins of Gold, Silver and Copper of varying weights, denominations and fineness were in circulation. In 1835, a uniform currency was established whereby the Silver-rupee, weighting 180 grains, out of which 165 grains were pure Silver was adopted as the standard coin for the whole of British India\textsuperscript{10}. In fact this was the beginning of management in the monetary field of the country.

As a result of this important currency management, the institution of indigenous money lending suffered a considerable
setback and a number of modern banks were established, among those the most important were the Presidency Banks of Bengal, Bombay and Madras, which acted as bankers to the East India Company and had the right of note-issue in their respective presidency towns. In 1862, the right of note-issue by private banks was finally abolished and the management was taken over by the Government. This may be said to be the second stage in the currency management in India.

In 1873, when the free mintage of Silver were abandoned by countries forming the Latin Union, marked the commencement of a continuous fall in the Gold value of Silver. India, being on the Silver standard, attracted the depreciating white metal to the point of surfeit. The continued fall in the Gold price of Silver caused repeated embarrassment to the Government of India. The consequent fall in exchange not only upset trade and tended to discourage the influx of much-needed capital from England in India, but also caused a serious direct loss to the Government in making their remittances to meet their sterling obligations in England. Therefore, mints were closed down for the unrestricted coinage of rupee in 1893 with a view to introducing the Gold Standard.

The Fowler Committee was in favour of the establishment of a Gold currency in India as well as a Gold standard. They reported, “We
are in favour of making the British Sovereign a legal tender and a current coin in India. We also consider that at the same time, the Indian mints should be thrown open to the unrestricted coinage of Gold. The result would be that, under identical conditions, the sovereign would be coined and would circulate both at home and in India. To the effective establishment in India of a Gold standard and currency based on the principles of the free inflow and out flow of Gold, we recommend these measures for adoption. But the backwardness of our banking arrangements, the habits and the suspicions of the people, the infancy of cooperation – all retarded the possibilities of introducing Gold standard with Gold currency in the country. In their attempts to implement the Gold policy, as recommended by the Gold experts, the government steadily and unconsciously passed on to the Gold Exchange Standard. The emphasis of monetary management naturally and appropriately shifted from ‘Gold’ to ‘exchange stability’, which brought into force the necessity of central control over currency and exchange in the country."

1.5.2 The ‘Dogma’ of Central Monetary Control:

The idea of establishing a Central Monetary Authority on all India basis was conceived as early as 1836, but it actually got
revived with the decision to adopt Gold standard in the country. In 1898, when the Fowler Committee considered the adoption of Gold standard in the country as an *automatic mechanism* to balance international indebtedness arising through trade, a Central Bank was conceived as a *cog* in the automatic machinery of the Gold standard to eradicate unfavourable balance of trade. Hambro in his memorandum to the *Fowler Committee*, said that, “the success of the recommendations of the committee will very much depend on the banking wants of the country being assisted in times of pressure, and curtailed in times of slackness, and this could only be done by the establishment of some institutions having ample facilities at its disposal*. By 1913, looking to the necessity of imparting both internal and external stability in the value of monetary unit, the arguments in favour of a Central Banking and Monetary Authority gained its momentum. But before it could materialize, the First World War ensued and all proposals on currency and banking smothered in its smoke. The war brought to prominence many economic truths, while it disproved some of the pet theories of economists. It left quite a legacy of difficulties and solved many important problems. In the case of India, the war demonstrated the weak joints in our banking armour and the happy results of a
coordinated policy on the part of the various banks. It was well realized that alone and unaided, no individual Presidency Bank would have withstood the strong and effective competition of the immigrant banks. With this background the Imperial Bank of India came into existence with the amalgamation of three Presidency Banks in 1921. The amalgamation was largely the outcome of reapproachment on the part of the Banks themselves, to whom the events and experiences of the war brought a broader outlook on the banking problems of the country.

The Bank was recognized from the very beginning as a semi-public institution with provisions for a certain measure of control by the Government. The management of the public debt and all general banking business of the government were vested in the bank. The bank was to hold hereafter all the treasury balances. In the Central Banking tradition, the bank was expected to play the role of a bankers bank, holding their cash balances, rediscounting their bills and assisting them in times of crisis. At the same time the Imperial Bank was permitted to transact the same kind of commercial banking business which it had inherited from the Presidency Banks. The imperial bank was thus designed to represent in itself a peculiar blend of central and commercial banking. With increased resources
and government banking behind, it was expected that it would become a sanctuary for the struggling banks. Enormous capital and massive size would enable it to secure controlling influence and act as the recognized and responsible leader. Conducting sound banking in times of stress as well as ease, it was expected that it would create a sense of security and confidence in the public. The Imperial Bank was expected to be the friend, philosopher and guide of the banks, rediscounting their bills and satisfying their wants for more credit currency. Besides, welding the banking system into a coordinated whole, it was expected to secure greater stability of business owing to greater activity and mobility of reserve administered by it. But the Bank failed in its mission of credit management. It never enabled the government to develop a currency policy in encouraging the use of _hundis_ and internal bills of exchange.

1.5.3 The ‘Birth’ of the Reserve Bank of India:

Prompted by the failings and shortcomings of the Imperial Bank, a common sentiment grew in favour of its dethronement, and establishment of an independent Central Bank without commercial banking functions, which would not compete with the commercial banks of the country. The belief was general that the currency and the credit should rest in the hands of one single authority for the
effective development of trade and industry. In 1926, the Hilton Young Commission had vigorously recommended the establishment of a Reserve Bank while giving proposals for the future monetary setup. The commission discovered the "inherent weakness of a system in which the control of currency and credit is in the laws of the separate authorities whose policies may be widely divergent and in which the currency and the banking reserves are controlled and managed separately one from the other."\textsuperscript{16}

In faithful compliance to the commission's recommendations a Bill to form a Central Bank was finally placed before the legislative assembly by Sir Basil Blackett, the Finance Member, on 25 January 1927, which was the greatest measure of financial liberalism ever offered to the Indian people. In the Bill the Bank was designed as a shareholders' Bank "free from political pressure and concerned only with the main finance of monetary stability in the country."\textsuperscript{17} But after acrimonious and kaleidoscopic discussion and the Reserve Bank Bill of 1927 was eventually dropped. The Report of the Central Banking Enquiry Committee published in 1931, laid strong emphasis on the early establishment of a Reserve Bank. The issues again came up when changes in the central government machinery involving the transfer of the financial responsibility to an Executive responsible to
a Federal legislature were being discussed. The Second Report of Federal Structure Committee described that an independent Reserve Bank was a condition precedent to the success of the new constitution so that no room should be left for doubts as to the ability of India to maintain her financial stability and credit both at home and abroad. Thus the successful institution and functioning of a Reserve Bank was made a prerequisite to Federation, and it was on the basis of that the Reserve Bank Bill was resuscitated after the necessary transformation and passed into law early in 1934.

The passing of the Reserve Bank of India Act, 1934 opened a new era in the monetary organization of India. It constituted "a Reserve Bank of India to regulate the issue of bank-notes and the keeping of reserves with a view to securing monetary stability in India and to operate the currency and credit system of the country to its advantage." 

1.5.4 Constitutional ‘Frame’ of the Bank:

With a view to understand the role and achievements of the Reserve Bank of India in the field of monetary management, it is both necessary and feasible to scan the constitutional frame within which the bank was originally set into function. Though the Bank
deviated from its constitutional path to be swayed with the currents of time and conditions, establishing new ways of life and methods of work, the original constitution did have its mark on all its actions. To know its achievements and failings in the field of monetary management it will be necessary to review briefly the constitutional background, against which the bank was put to act and play by its architects.

The Reserve Bank, as envisaged in the bill, was originally set up as a shareholders bank with a share capital of Rs. 5 crore which were divided into 5 lakh equity shares of Rs. 100 each in 1935. In order to prevent centralization of the equity shares in the hands of the few people, the Reserve Bank of India was nationalized on January 1, 1949.

The general administration and direction of Reserve Bank of India is managed by a Central Board of Directors consisting of 20 members which includes one Governor, four Deputy governors, one Government official appointed by the union government of India to give representation to important strata in economic life of the country. Besides, four directors are nominated by the union government to represent local boards. Apart from the central board there are four local boards also and their head offices are situated in
Mumbai, Chennai, Kolkata and New Delhi. Five members of Local Boards are appointed by the Union government for a period of four years. The local boards work according to the instructions and orders given by the central board of directors, and from time to time they also lend useful advice on important matters.

The Reserve Bank was designed to act as an efficient 'lender of the last resort' as a 'shock-absorber' and as 'an emergency bank' to which all eyes may be turned for help, advice and guidance. It had to keep the financial structure of the country on an even keel. The using of currency and the running of the credit structure in the interests of the nation were the specific duties entrusted to the Reserve Bank. In the capacity of a Central Bank, the Reserve Bank was assigned the following specific functions:

a) to manage the note-issue
b) to regulate the banking system
c) to act as government's banker, agent and advisor
d) to maintain the stability of the external value of rupee.

The statutory function of note-issue was assigned to the Bank on the monopoly basis under section 22 of the Reserve Bank of India Act, 1934. The method of note issue adopted in India was originally
based upon the Proportional Reserve System. In July 6, 1956 the Reserve Bank has been authorized to issue notes on the basis of Minimum Reserve Method against the minimum reserve of Rs. 400 Crores in foreign securities and a minimum of Rs. 115 crore in Gold coin and Gold bullions. But this was amended in 1957, prescribing that minimum reserve held in the issue department at any time should not be less than Rs. 200 crores of which the value of Gold should not be less than Rs. 115 crores.

Another statutory function of the bank is to act as bankers, agent and advisor to the government. As bankers, the bank has been given a statutory obligation to accept monies for account of the central government and state government and to make payments upto the amount starting to their accounts respectively and to carry out their exchange remittances and other banking operations including the management of public debt. Besides, the Bank was designed to act as the financial advisor to the government so that it could mould the policy of the government itself in matters of financial transactions or in either direction.

The Reserve Bank was designed to function as the crowning edifice of the financial structure of the country and other financial institutions belonging either to the call money market or short-term
money market and the capital market. It was armed with all the traditional weapons of credit control possessed by the Central Banks of other countries. To achieve the objective it makes extensive use of quantitative and qualitative techniques to control and regulate the credit effectively in the country.

To maintain the stability in the external value of rupee, the bank got the statutory right to buy and sell the foreign currencies and protects the country's foreign exchange funds.

1.6 Financial Sector Reforms:

The guiding objectives of financial sector reforms are to improve financial sector efficiency while strengthening financial stability. It is a general believe that stable and efficient financial system provides the foundation for implementing effective stabilization policies, stepping up savings and improving the efficiency of investment, which help in achieving sustainable and higher rates of economic growth. The unprecedented balance of payment crisis and prolonged fiscal deficit forced the government to take corrective measures, and in this consonance a Committee on Financial Sector Reforms were constituted under the Chairmanship of Shri M. Narsimham, which submitted its report in 1991. Since then
various measures were initiated in all segments of financial markets aimed at improving depth and liquidity in the markets. The reforms also emphasized on improving the transparency and efficiency of the markets. The key reform measures undertaken in different market segments are presented below:

**Money Market:**

1. A ceiling of 10 percent on call money rates imposed by the Indian banks Association was withdrawn in 1989.

2. Initially, the participation in the call market was gradually widened by including non-banks, such as, financial institutions, non-banking finance companies, primary/ satellite dealers, mutual funds, corporates (through primary dealers), etc. the process of transformation of call money market to a pure inter-bank market commenced effective May 2001.

3. The 182-day treasury bills were introduced effective November 1986, followed subsequently by phasing out of on-tap treasury bills, introduction of auctioning system in 91-day treasury bills since January 1983, and introduction of 14-day and 364-day treasury bills. The system of ad hoc treasury bills (with a fixed 4.6 percent interest rate since July, 1974), which were issued by the Central Government to the Reserve bank, was abolished
effective April 1997. Currently only the 91-day and 364-day treasury bills exist.

4. The Discount and Finance House of India (DFHI) was set up in April 1988, and was allowed to participate in the call/notice money market both as a borrower and lender commencing from July 1988.

5. Several new financial instruments were introduced, such as inter-bank participation certificates (1988), certificates of deposit (June 1989), commercial paper (January 1990) and repos (December 1992).

6. Derivative products like forward rate agreements and interest rate swaps were introduced in July 1999 to enable banks, FIs and PDs to hedge interest rate risks.

7. A full-fledged Liquidity Adjustment Facility was introduced on June 5, 2000 with a view to modulating short-term liquidity under diverse market conditions.

8. With a view to adopting the sound risk management procedures and eliminating counter-party risk, the Clearing Corporation of India Ltd. was set up on February 15, 2002. The CCIL acts as a central counter-party to all trades involving foreign exchange.
government securities and other debt instruments routed through it and guarantees their settlement.

9. The segment refinance facility for banks is gradually being phased out.

**Government Securities Market:**

1. New auction-based instruments were introduced with varying maturities such as 364-day, 182-day, 91-day and 14-day treasury bills and the zero coupon bond. The auction system was also introduced for Government of India dated securities. An innovative feature of ‘part payment’ was added to the auction of Government of India dated securities.

2. In the long-term segment, Floating Rate Bonds (FRBs) benchmarked to the 364-day Treasury bill yields and a 10-year loan with embedded call and put options exercisable on or after 5 years from the date of issue were introduced.

3. A system of Primary Dealers (PDs) was made operational in March 1996.

4. Foreign Institutional Investors (FIIs) were allowed to set up 100 percent debt funds to invest in Government (Central and State) dated securities in both primary and secondary markets.
5. The system of automatic monetisation of budget deficit through ad hoc treasury bills which hampered the development of the market was phased out over a period of three years from 1993-94 to 1996-97 and was replaced by the system of ways and Means Advances (WMA) with effect from April 1, 1997.

6. The Delivery-versus-Payment system (DvP) was introduced in 1995 for the settlement of transactions in Government securities. A screen-based trade reporting system with the use of VSAT communication network complemented by a centralized Subsidiary General Ledger (SGL) accounting system was put in place.

7. The Negotiated Dealing System (NDS) (Phase-I) was operationalised in February 2002 to enable on-line electronic bidding facility in the primary auctions of Central/ State Government securities, OMO/ LAF auctions, screen-based electronic dealing and reporting of transactions in money market instruments, including repo and to facilitate information on trades with minimal time lag.

8. Since timely flow of information is a critical factor in evolving the efficient price discovery mechanism, improvements were brought in transparency of operations and data dissemination.
9. A practice of pre-announcing a calendar of treasury bills and government securities auctions to the market was introduced.


**Foreign Exchange Market:**

1. The current account was gradually made convertible leading to the acceptance of obligations under Article VIII of the IMF. The exchange rate, which was pegged to a basket of currencies, was made market-determined in a phased manner. Several transactions in the capital account were also gradually liberalized over the years.

2. In line with the liberal policy environments of the 1990s, the Foreign Exchange Regulation Act, 1973 (FERA), was replaced by the Foreign Exchange Management Act (FEMA) in 1999.

3. Banks were given increased freedom for operating in the forex market. These related to the following: (a) freedom to fix overnight position limit and gap limits approved by RBI, replacing the system of across-the-board or RBI-prescribed limits; (b) freedom to initiate trading position in the overseas market; freedom to borrow (up to 25 per cent of Tier-I capital or up to US $ 250 million, whichever is higher) or freely invest
funds in the overseas market; (c) freedom to determine the interest rates (subject to a ceiling) and maturity period of Foreign Currency Non-Resident (FCNR) deposits (not exceeding three years); (d) freedom to use derivative products for asset-liability management.

4. Corporate were allowed to undertake active hedging operations by resorting to cancellation and rebooking of forward contracts, book forward contract based on past performance without having to produce documents endorsing a forex exposure, use foreign currency options and variations thereof like range forwards and ratio range forwards. They can access a range of products including Foreign Currency Rupee Swap to manage longer-term exposures arising out of External Commercial Borrowings.

Capital Market:

1. With the repeal of the Capital Issues (Control) Act, 1947, companies were given freedom to price their issues. The book-building process in the new issue of capital was introduced with a view to further strengthen the price discovery process.
2. In the secondary market, the floor-based open outcry trading system was replaced by electronic trading system in all the stock exchanges.

3. The account period settlement system was replaced by rolling settlement, thus, reducing the scope for speculation. The rolling settlement cycle was shortened from T+5 to T+3 with effect from April 1, 2002. This process was enabled by a shift to electronic book entry transfer system through depository mechanism.

4. The risk management system was made more comprehensive with trading members being subject to margins based on trading volumes and some other parameters and exposure norms based on the capital deposited with the exchange. The mark-to-market margins based on 99 per cent value at risk were introduced to capture the risk profile of trading members.

5. The Indian companies were allowed to raise funds from abroad, through American/ Global Depository Receipts (ADRs/ GDRs) foreign currency convertible bonds (FCCBs) and external commercial borrowings (ECBs). The Reserve Bank allowed two-way fungibility of ADRs/ GDRs in February 2002.
6. Foreign institutional investors (FIIs) were allowed to participate in the capital market.

7. For strengthening the process of information flows from the listed companies, several measures were introduced: (i) while sufficient disclosures are mandatory for the companies at the stage of public issue, the listed companies are also required under the listing agreement to make disclosures on a continuing basis; (ii) for ensuring quick flow of information to the public, the decision pertaining to dividend, bonus and right announcements or any material event are now required to be disclosed to the public within 15 minutes of the conclusion of the board meeting in which the decisions are taken; (iii) the accounting practices were streamlined with norms introduced for segment reporting, related party transactions and consolidated balance sheets.

8. Insider trading was made a criminal offence. The regulations governing substantial acquisition of shares and takeovers of companies were also introduced aimed at protecting the interests of minority shareholders by making the takeover process more transparent.
9. For providing market participants instruments for hedging and risk management, several types of derivative products on equities were introduced. Non-transparent products like 'badla' were banned.

The analysis of cross-country experiences relating to financial sector reforms exhibit significant diversity, both overtime and across countries. Significant differences observed in respect of the content, pace and sequencing reforms. There was significant liberalization of the financial sector both in industrial and developing countries over the period 1973 – 2002. Interest rate controls were almost universally eliminated and barriers to entry for most non-bank financial institutions were lowered, and in certain instances, rationalized. Asian countries like Japan, Korea, Malaysia and Indonesia followed a gradualist approach to financial liberalization in contrast to transition economies of Eastern Europe and some of the Latin American countries which adopted the 'big-bang' approach. The Table-1.2 shows the financial liberalization measures taken by different countries including India depicting the transition from controlled to market oriented measures.
### TABLE-1.2
Financial Liberalisation in Select Countries: 1973-2002

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Credit controls</th>
<th>Interest Rates</th>
<th>Entry Barriers</th>
<th>Government Regulation of Operations</th>
<th>Privatisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1973</td>
<td>B: L; S &amp; L: R</td>
<td>LL</td>
<td>PR</td>
<td>L</td>
<td>L</td>
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<tr>
<td></td>
<td>2002</td>
<td>L</td>
<td>L</td>
<td>LL</td>
<td>L</td>
<td>L</td>
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<tr>
<td>United Kingdom</td>
<td>1973</td>
<td>LL</td>
<td>B: LL</td>
<td>B: LL</td>
<td>L</td>
<td>L</td>
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<tr>
<td></td>
<td>2002</td>
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<tr>
<td>Korea</td>
<td>1973</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td></td>
<td>2002</td>
<td>LL</td>
<td>LL</td>
<td>B: PR</td>
<td>PR</td>
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<tr>
<td>Phillipines</td>
<td>1973</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>PR</td>
<td>PR</td>
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<tr>
<td></td>
<td>2002</td>
<td>PR</td>
<td>LL</td>
<td>LL</td>
<td>PR</td>
<td>LL</td>
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<tr>
<td>Thailand</td>
<td>1973</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>-</td>
<td>PR</td>
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<td></td>
<td>2002</td>
<td>LL</td>
<td>L</td>
<td>LL</td>
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<td>LL</td>
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<tr>
<td>Argentina</td>
<td>1973</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td></td>
<td>2002</td>
<td>LL</td>
<td>LL</td>
<td>L</td>
<td>-</td>
<td>PR</td>
</tr>
<tr>
<td>Brazil</td>
<td>1973</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>-</td>
<td>PR</td>
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<tr>
<td></td>
<td>2002</td>
<td>PR</td>
<td>LL</td>
<td>LL</td>
<td>-</td>
<td>PR</td>
</tr>
<tr>
<td>India</td>
<td>1973</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td></td>
<td>2002</td>
<td>LL</td>
<td>LL</td>
<td>PR</td>
<td>LL</td>
<td>PR</td>
</tr>
</tbody>
</table>

L: Liberalised: A liberalized system is one where the role of the Government has been largely curtailed.
LL: Largely liberalized: Largely liberalized denotes a system governed more by market forces, with Government role in certain important spheres.
R: Repressed: A repressed system is one in which virtually all decisions in the relevant dimension are made by the Government.
PR: Partly repressed: A partly repressed system is one where repression is not complete, but the system is closer to that end of the spectrum.
B: Banks: NBFls: Non-banking financial institutions; S & L: Saving and Loan Associations.
Source: The position on 1973 is from Williamson and Mahar (1998) and position for 2002 is compiled from the websites of different Central Banks.
1.7 Conclusion:

To conclude, due to financial liberalization and globalisation, the relationship between money, output and prices has turned increasingly volatile and unpredictable. The price stability has become the dominant objective of almost all Central Banks in the world. The uncertain transmission channels have posed a considerable challenge for the conduct of monetary policy and accordingly, different Central Banks have abandoned monetary targeting and experimented with interest rates, exchange rate etc., which could provide a fix on inflation. Thus with the rising volumes of cross-border transactions and the growing interdependence across countries, more need of coordination in policy actions and higher degree of openness on the choice of monetary policy strategy are required by the Central Banks of different countries.
References:


4. Park Willis (1936): The Theory and Practice of Central Banking, pp. 50 - 1.


10. The Silver and Gold Coinage Act. (Act, XIX of 1835)
11. Proposal for a government paper currency were instituted in 1859 by Mr. James Wilson on his coming to India as the First Finance member. (CF) Gupta, GP (1959): Reserve Bank of India and Monetary Management, p. 56.

12. Fowler Committee Report, Para 54.

13. In 1836, a large body of merchants proposed a Great-Banking Establishment for British India.


15. Imperial bank of India Act (XLVII of 1920), passed in September 1920.


Chapter 2
2.1 Introduction:

Credit is an important part of monetary management. It plays a predominant role in the settlement of monetary and business transactions of all kinds, and thus represents a powerful force for good or evil. It is thus universally accepted that the creation and distribution of credit, under the existing intricate economic organization, should be subjected to some form of regulation and control.

The regulation of credit is accepted generally as the main function of a Central Bank. "It is the function", observes a celebrated writer on Central Banking, "which embraces the most important questions of Central Banking policy and the one through which practically all other functions are united and made to serve a common purpose". Credit control is the principal means by which a Central Bank fulfils the three objectives of monetary policy: exchange stabilization, price stabilization and economic stabilization.
The primary methods available with the Central Bank for regulation or adjustment of credit are:

(i) The lowering or raising of its discount rate (bank rate) with a view to lowering or raising money rates generally and encouraging the expansion or contraction of credit, i.e. regulation of the size and flow of credit through changes in the bank rate.

(ii) Open market operations in securities, investments and bills. i.e. the buying and selling of securities or bills of exchange in the open market with a view of putting additional funds into the market or withdrawing funds from there and thus expanding or contracting credit.

(iii) Varying the reserve requirements of the banking system. i.e. the lowering or raising of minimum reserves to be kept by the commercial banks in the form of credit balances with the Central Bank to expand or contract the credit creating capacity of the commercial banks.
2.2 Loans and Rediscount Policy of the Reserve Bank:

The significance of rediscount policy lies in the fact that it increases the elasticity and liquidity of the entire credit structure. By affording rediscounting facilities, the Central Bank provides the member banks with additional or alternative means for the conversion of certain of their earning assets into cash, when their cash reserves are adversely affected and tend to fall below the statutory or traditional minimum, or when they find it necessary or desirable to increase their cash reserves for one or other purposes. The foundations of the credit organization, on which the policy of monetary management vitally depends, can not be solid unless the Central Bank supplies adequate rediscounting facilities, which alone enable the other banks to convert into cash a maximum of their assets with a minimum of disturbance in the conditions of the money market. Without rediscounting facilities the most legitimate assets of the banks in the shape of short time advances against goods represented by commercial bills cannot become quick assets readily convertible into cash in an emergency. In fact the success and effectiveness of rediscount policy presupposes three major components:

(i) The development of local money market
(ii) The dependence of the commercial banks upon the Central Bank for rediscounting and their inter dependence

(iii) The degree of cooperation between the Central Bank and other banking institutions.

2.2.1 Rediscounting Powers of the Reserve Bank:

Even before the Reserve Bank was actually delivered by its framers, it was conceived by Hilton-Young Commission as 'the regulator of currency and credit' in the country. Later, the Central Banking Enquiry Committee in 1931 expressed their hope that "the establishment of such a bank would, by mobilization of the banking and currency reserves of India in one hand, tend to increase the volume of credit available for trade, industry and agriculture and to mitigate the evils of fluctuating and high charges for the use of such credit caused by seasonal stringency". With such pious hopes and aspirations, it was but natural that the Reserve Bank should have been constituted by its framers "to regulate the issue of Bank Notes and the keeping of reserves with a view to securing monetary stability in India adequately to operate the currency and credit system of the country, to its advantage". To meet this gracious objective in the most expedient manner, the Bank was vested with statutory powers to buy and rediscount eligible commercial paper, to
extend loans and advances against the security of eligible documents, to purchase and sell government securities, to maintain the cash reserves of the eligible banks and to publish from time to time its bank rate, at which it is prepared to buy or rediscount bills of exchange or other eligible commercial paper.

The Reserve Bank of India Act, while giving the Bank such powers, has defined the 'eligible paper', which the Bank can accept for rediscount. These are: (i) bills drawn on and payable in India, arising out of bonafide commercial or trade transaction and bearing the prior endorsement of either a scheduled bank or a state Cooperative Bank, (ii) bills drawn and payable in India for purposes of financing seasonal agricultural operations or the marketing crops, endorsed by either a scheduled bank or a state cooperative bank (iii) bills drawn and payable in India for the purpose of financing the production or marketing activities of cottage and small scale industries approved by Bank and supported by either a state Cooperative Bank or a State Financial Corporation and guaranteed by the State government (iv) bills drawn and payable in India for the purpose of holding or trading in government securities, (v) bills (including Treasury Bills) drawn in any place in any country outside
India, which is a member of the International Monetary Fund (I.M.F.) and endorsed by a scheduled bank.

Consistent with the technique of Central Banking, the Reserve Bank is authorized to publish from time to time its Bank Rate – the standard rate at which it is prepared to buy or rediscount bills of exchange or other commercial paper eligible for purchase or rediscount. The Bank has also an explicit power to engage in open market operations involving purchase and sale of Central government securities or state government securities of any maturity and of such securities of local authorities as may be specified in this behalf by the Central government.

Besides, these powers, the Reserve Bank Act provided for an 'escape clause' by which the bank could, if a special occasion arose for regulating credit in the interest of Indian trade, commerce, industry and agriculture, resort to direct discounts and direct loans without the mediation of a scheduled or a state cooperative bank.

The Reserve Bank of India provides credit to banks in two forms: (a) as advances against eligible securities, such as government securities and 'other approved securities' and (b) as rediscounts of eligible usance bills under its Bills Rediscounting Scheme of November 1970. Credit is provided to banks partly in fulfillment of
the traditional Central Banking functions and partly for promoting certain new policy objectives. The Reserve Bank of India also uses its lending power to banks (a) to influence their credit allocation and (b) to develop a genuine bill market in India. It does the former under its refinance facilities to banks and the latter under its Bills rediscounting scheme, and both at concessional rates of interest.

The Bank Rate principle is divided into two:

(i) Operation of the bank rate as a weapon of control of money supply – according to it, an increase in the bank rate by raising the cost of borrowed reserves, other things being the same, discourages bank borrowings from the Central Bank. The reverse is supposed to happen when the bank rate is lowered. This varies the rate of expansion of High-powered Money (H) and so of Broad Money (M₃), assuming the money multiplier to remain unchanged. But the success of this effect will depend on several factors such as (a) the degree of banks dependence on borrowed reserves, (b) the sensitivity of banks demand for borrowed reserves to the differential between their lending rates and borrowing rates. (c) the extent to which the other rates of interest have already changed or change subsequently, and (d) the state of the demand for loans and the supply of funds from other sources, etc.
(ii) The other part of the bank rate theory relates to the effect of the bank rate changes on the domestic level and structure of interest takes and thereby on the level of economic activity and the balance of payments of the country. An increase in the bank rate is supposed to be followed by a rise in the market rates of interest all along the line – more so and rapidly on the end than on the short end than on the long end of the interest rate spectrum. This happens because the lending rates of banks are likely to be revised upward, partly to absorb the higher cost of borrowed reserves and partly to take in the stock in their lending rates which, being sticky, might have become too low than what the market could pay and because banks’ supply of credit tends to be reduced consequent on their reduced borrowing from the Central Bank. The ‘announcement effect’ of changes in the bank rate is supposed to hasten the spread process, as the market has come to interpret an increase in the bank rate as the official signal for the onset of a period of relatively dearer as well as tighter money, and the reverse in the case of a reduction in the bank rate.

2.2.2 Loans and Discounting Operations of the Bank:

The application of monetary policy instruments has witnessed distinct qualitative change overtime. Though the instruments available at the disposal of the Reserve Bank remained more or less
unchanged throughout the period, their relative efficacy and the environment in which they have been applied have undergone a sea change, particularly during the nineties.

During the pre-independence period of the instruments, the Bank rate was particularly important since it was the signaling rate and the Reserve Bank used to provide accommodation uniformly at the Bank rate except its Ways and Means Advances to the Central and Provincial governments at one percent less than the Bank rate. During early 1950s when monetisation was becoming high consequent upon passive buying of the government securities by the Reserve Bank from commercial banks, which the latter had accumulated during the period, the Reserve Bank required commercial banks to borrow from it against the government and other approved securities at the Bank rate. However, the effectiveness of the Bank rate dwindled sharply with the emergence of differential interest rates system initially in the form of a quota-cum-slab system in October 1960 followed by a similar but more stringent system based on net liquidity position of borrowing banks in September 1964 as also the absence of genuine bill market. In the post nationalization phase, with increased emphasis being bestowed on priority sector lending and consessional lending, the Bank rate lost much of its
significance till the announcement of resurrecting it was made in April 1997. The Bank rate was changed nine times during 1951 - 74 and only thrice during the period 1975 - 96 despite the substantial growth of the financial sector and the pressures on liquidity exerted at different points of time over the 45 years between 1951 to 1996 and from 1997 to onwards the Bank rate is continuously on decline with the exception of January 17, 1988 and July 2000.

Table-2.1: Use of the Bank Rate

<table>
<thead>
<tr>
<th>Decade</th>
<th>Bank rate</th>
<th>Inflation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of times changed</td>
<td>Range</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1950s</td>
<td>2</td>
<td>3.0 - 4.0</td>
</tr>
<tr>
<td>1960s</td>
<td>4</td>
<td>4.0 - 6.0</td>
</tr>
<tr>
<td>1970s</td>
<td>3</td>
<td>5.0 - 9.0</td>
</tr>
<tr>
<td>1980s</td>
<td>1</td>
<td>9.0 - 10.0</td>
</tr>
<tr>
<td>1990s</td>
<td>10</td>
<td>8.0 - 12.0</td>
</tr>
<tr>
<td>April 2000 - Feb 2003</td>
<td>6</td>
<td>6.25 - 8.0</td>
</tr>
</tbody>
</table>


The above table 2.1 shows the decade-wise changes in the bank rate and the average inflation rate and the table 2.2 summarises the bank rate changes from 1935 to 2003 and the chart 2.1 depicts the bank rate changes after the liberalization i.e., from 1991 to 2003.
### TABLE-2.2

**Changes in Bank Rate**

(Percent)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Date</th>
<th>Bank Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>July 04, 1935</td>
<td>3.5</td>
</tr>
<tr>
<td>2.</td>
<td>November 28, 1935</td>
<td>3.0</td>
</tr>
<tr>
<td>3.</td>
<td>November 15, 1951</td>
<td>3.5</td>
</tr>
<tr>
<td>4.</td>
<td>May 16, 1957</td>
<td>4.0</td>
</tr>
<tr>
<td>5.</td>
<td>January 03, 1963</td>
<td>4.5</td>
</tr>
<tr>
<td>6.</td>
<td>September 26, 1964</td>
<td>5.0</td>
</tr>
<tr>
<td>7.</td>
<td>February 17, 1965</td>
<td>6.0</td>
</tr>
<tr>
<td>8.</td>
<td>March 02, 1968</td>
<td>5.0</td>
</tr>
<tr>
<td>10.</td>
<td>May 31, 1974</td>
<td>7.0</td>
</tr>
<tr>
<td>12.</td>
<td>July 12, 1981</td>
<td>10.0</td>
</tr>
<tr>
<td>14.</td>
<td>October 09, 1991</td>
<td>12.0</td>
</tr>
<tr>
<td>15.</td>
<td>April 16, 1997</td>
<td>11.0</td>
</tr>
<tr>
<td>16.</td>
<td>June 26, 1997</td>
<td>10.0</td>
</tr>
<tr>
<td>17.</td>
<td>October 22, 1997</td>
<td>9</td>
</tr>
<tr>
<td>18.</td>
<td>January 17, 1998</td>
<td>11</td>
</tr>
<tr>
<td>No.</td>
<td>Date</td>
<td>Number</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
<td>--------</td>
</tr>
<tr>
<td>20.</td>
<td>April 3, 1998</td>
<td>10</td>
</tr>
<tr>
<td>21.</td>
<td>April 29, 1998</td>
<td>9</td>
</tr>
<tr>
<td>22.</td>
<td>March 2, 1999</td>
<td>8</td>
</tr>
<tr>
<td>23.</td>
<td>May 1999</td>
<td>8</td>
</tr>
<tr>
<td>24.</td>
<td>January 05, 2000</td>
<td>8</td>
</tr>
<tr>
<td>25.</td>
<td>April 2, 2000</td>
<td>7</td>
</tr>
<tr>
<td>26.</td>
<td>July 2000</td>
<td>8</td>
</tr>
<tr>
<td>27.</td>
<td>February 2001</td>
<td>7.5</td>
</tr>
<tr>
<td>28.</td>
<td>March 23, 2001</td>
<td>7</td>
</tr>
<tr>
<td>29.</td>
<td>October 22, 2001</td>
<td>6.5</td>
</tr>
<tr>
<td>30.</td>
<td>January 04, 2002</td>
<td>6.5</td>
</tr>
<tr>
<td>31.</td>
<td>October 29, 2002</td>
<td>6.25</td>
</tr>
<tr>
<td>32.</td>
<td>October 29, 2003</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Chart-2.1: Variations in Bank Rate
As regards interest rate policy, the Reserve Bank derives its authority to regulate the interest rate of banks under sections 21 and 35A of the Banking Regulation Act. In consonance with the statute, it prescribed lending rates with a view to influencing the demand for credit and imparting an element of discipline in the use of credit. This was sought to be achieved by stipulating minimum lending rates introduced in October 1960, and occasionally by clamping ceiling rates for either dampening credit growth exercised in September 1964 or protecting a certain economic activity/ borrowers e.g. on exports credit stipulated in March 1968. With regard to deposit rates, prior to September 1964, these were governed by a voluntary agreement amongst the most important Indian and foreign banks fixing ceilings on interest rates on deposit barring for a short period during September 1960 – February 1961 when the Reserve Bank stipulated the interest rates for periods upto 14 days. However, regulations of deposit rates came into being from September 1964. Effective from September 1969, the Reserve Bank prohibited interest payment on current accounts and on deposits upto 14 days. Subsequently, particularly since 1970s, coupled with the increasing proliferation of directed credit arrangements, multiple interest rate prescriptions based on variety of criteria such as economic activity, commodity.
location, specific group of borrower etc., and the resultant cross subsidization created a very complex administered interest rate structure with virtually no role for market forces to play in pricing and allocation of credit. A major reform was initiated with a view to simplifying the complex lending rate structure effective September 22, 1990: "The structure was characterized by a multiplicity of rates with concessionality in the interest rate dependent on numerous criteria such as, size of loan, priority nature of a sector, location of activity, programme specific lending, income of borrowers, and so on."4

2.2.3 Post-Liberalisation Phase:

The unprecedented balance of payments crisis during the summer of 1991 emanating from high and prolonged fiscal and balance of payments deficits prompted the government to take a number of policy measures. These policies of financial stabilization and structural adjustment helped the economy to quickly recover and facilitate integration of the Indian economy with the world economy. In the financial sector, reforms were initiated following the recommendation of the committee on the financial system under the chairmanship of Shri. M. Narsimham, which submitted its report in 1991. The reform measures addressed a number of issues such as:
(i) Improving the external constraints having a bearing on the profitability of the banks,

(ii) Strengthening banks and financial institutions through application of prudential norms, and

(iii) Improving the competitiveness of banks and financial institutions.

The transition from a planned economy to a market economy in the 1990s, sharpened the Reserve Bank’s monetary management dilemma of providing credit to both the government and the commercial sector at a reasonable cost, while at the same time containing inflationary pressures. While sudden external shocks required a hardening of monetary conditions in order to ensure orderly conditions in the financial markets, the growth objective presaged a softer interest rate regime. In view of the increasing complexities of monetary management, the Reserve Bank adopted a multiple indicator approach in which a host of macroeconomic variables are monitored for the process of monetary policy formulation. Furthermore, the monitory authority had to simultaneously hone up an array of monetary policy instruments — quantum and rate-in order to harness monetary conditions to the
desired macroeconomic objectives in this environment of uncertainties.

2.2.4 Intermediate Target:

The Reserve Bank broadly followed a monetary targeting regime since the later half of the 1980s till 1997-98, based on the recommendations of the Chakravarty Committee. The cornerstone of the monetary strategy was a stable relationship between money, output and prices. The available empirical evidence then had clearly suggested that the demand for real money was a reasonably stable function of a select set of variables. In fact, some of the factors that have contributed to the instability of the demand function for money in the industrial economies such as financial innovations and large movements of funds across the border were yet to have the same impact in India. The Reserve Bank was, thus, able to estimate the appropriate growth in money supply, given the expected increase in real output and the acceptable level of inflation. An increase in money supply was seen not only resulting in an increase in demand but also influencing output through the availability of credit. The concept of monetary targeting that was being used in India was a flexible one, which accounts the various feedbacks. In this connection, Governor Rangarajan had remarked that “our approach
to money supply has been eclectic. We have not bound by a fixed rate of growth of money. This is a far cry from 'mindless monetarism' of which we are sometimes accused."

The growing complexities of monetary management during the 1990s increasingly required that the formulation of monetary policy be based on the information gleaned from a large number of macroeconomic indicators rather than being predicated on a single monetary aggregate.

In the new monetary management framework, although the exclusive use of monetary aggregates has been de-emphasised, it remains an important indicator of the monetary policy stance, with the monetary and credit policy statements announcing monetary projections for the year. Monetary aggregates continue to be relevant for India for two reasons. First since the money demand function for India has remained reasonably stable, it remains helpful in predicting price movements with reasonable accuracy at least over a period of time, say 3 to 5 years. Secondly, the money stock target is relatively well understood by the public at large. With the money supply target, the stance of monetary policy is unambiguously defined and gives a clear signal to market participants.
2.2.5 Changes in operating procedures of monetary policy:

The operating procedures of monetary policy have been changing the world over in response to financial liberalization. The key challenge before the contemporary monetary management is to modulate liquidity conditions in the financial markets consistent not only with the macroeconomic objectives but also with the market outcomes.

The operating procedures of monetary policy of most Central Banks are now beginning to converge to variants of three closely related paradigms.

(a) Need for a market-oriented policy mix of open market operations and interest rate signals consistent with the process of price discovery.

(b) Need to sterilise capital flows following the opening up of the economy.

(c) Need for swift policy reactions to maintain orderly conditions in the financial markets.

The operating procedure of the conduct of the Reserve Bank’s monetary policy have witnessed, in many ways, the most dramatic shifts during the 1990s. The Reserve Bank has gradually shifted from
direct to indirect instruments of monetary management in order to align monetary policy to the new market based environment. The emerging liquidity management framework is broadly in line with cross-country experiences in respect of changes in operating procedures of monetary policy in response to the challenges of financial liberalization. There are now an array of monetary policy levers, including open market operations and interest ratio signals – which are able to effectively modulate monetary conditions consistent with the process of price discovery. Besides, the shifts in the monetary policy transmission channels as a result of financial liberalization necessitate policy impulses through both quantum and rate channels. Finally, the experience of sudden switches in capital flows has emphasized the need for swift policy reactions with a view to balancing the domestic and external sources of monetisation to maintain orderly conditions in the financial market ensure price stability.

With the gradual liberalization of interest rates by the mid-1990s, the Reserve Bank was able to reactivate the Bank Rate as a signaling device in 1997–1998. The role of the Bank Rate has been changing over the years with the deepening of financial sector reforms. It was initially used as a single lever to change financial
prices, with the entire liquidity support from the Reserve Bank, and for a time before full liberalization, commercial bank deposit rates were linked to it. As the price of the bulk of primary liquidity is now, more or less, market determined, the Bank Rate now essentially acts as a signal of the Reserve Bank’s medium-term monetary policy stance. A number of rates, such as the interest payable on eligible CRR balances, and the interest charged on Ways And Means Advances to the Government and a portion of export credit refinance, continue to be at the Bank Rate.

The deregulation of interest rates was Central to the new market-oriented monetary strategy in terms of rejuvenating the price discovery process, on the one hand and in terms of developing an interest rate channel of monetary transmission on the other. The first step in this direction was taken in September 1991 with the discontinuation of Sector-specific and Programme specific prescriptions excepting for a few areas like agriculture and small industries, the Differential Rate of Interest (DRI) scheme and export credit. The process of deregulation was carried forward with the withdrawal of the minimum lending rate in October 1994, thereby providing banks full freedom to determine lending rates for loans above Rs. 2 lakhs. Banks were only required to announce their Prime
Lending Rates (PLR), subsequently in October 1996, in view of high spreads over the PLR and to impart a degree of transparency, banks were advised to announce the maximum spread over the PLR. Banks were later permitted to operate different PLRs for different maturities and lend at sub-PLR to creditworthy borrowers.

The process of deregulation for Deposit rate began in April 1992 by replacing the existing maturity-wise prescription by a single ceiling rate, which was subsequently varied in line with the modifications in the minimum lending rate and evolving macro-economic developments followed by complete deregulation in October 1997. At present, the only domestic deposit rate that continues to be prescribed in the saving deposit rate fixed at 3.5%. The deposit rates in respect of non-resident rupee deposits were also deregulated on broadly similar lines while that on foreign currency deposits are subject to a ceiling rate linked to London Inter-bank Offer Rate (LIBOR). All these changes are summarised in the table-2.3.
**TABLE 2.3**

**Interest Rates on Domestic Term Deposits: Deregulation**

<table>
<thead>
<tr>
<th>Month</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1992</td>
<td>The existing maturity-wise prescription replaced by a single ceiling rate of 13 percent for all deposits above 46 days of maturity</td>
</tr>
<tr>
<td>November 1994</td>
<td>To ceiling rate brought down to 10.0 percent.</td>
</tr>
<tr>
<td>April 1995</td>
<td>The ceiling rate raised to 12.0 percent.</td>
</tr>
<tr>
<td>October 1995</td>
<td>Deposits of maturity of over two years exempted from the ceiling.</td>
</tr>
<tr>
<td>July 1996</td>
<td>Deposits of maturity of over one year exempted from the ceiling.</td>
</tr>
<tr>
<td>April 1997</td>
<td>The ceiling rate for deposits of '30 days up to one year' linked to the Bank Rate less 200 basis points.</td>
</tr>
<tr>
<td>October 1997</td>
<td>Deposit rates fully deregulated by removing the linkage to the Bank Rate.</td>
</tr>
<tr>
<td>April 1998</td>
<td>Banks allowed to offer differential rates of interest depending upon the size of the deposit.</td>
</tr>
</tbody>
</table>

*Source: Report on Currency & Finance, RBI (2003)*
2.3 Open Market Operations – A Technique of Monetary Management:

Open market operations relate to the dealings of the Central Bank directly with the market on its own initiatives with a view to effecting necessary variations in the supply of money. These dealings consist of a deliberate and direct purchase or sale by the Central Bank of its assets – bills, securities, bonds, Gold, Silver and foreign exchange generally. But dealings in government and other gilt-edged securities, both long term and short term have been undertaken by various Central Banks in such huge amounts and so frequently that open market operations have, by practice, come to confined to those referring to government securities only. However, a purchase or sale of assets, may be of government securities only by the Central Bank constitutes a direct method of aiming at the desired expansion or contraction of money and credit and of general economic activity. This is done in two ways. In the first place, purchases and sales of securities by the Central Bank tend directly and immediately to increase or decrease the quantity of money in circulation and the cash reserves of the commercial banks. This increase or decrease in the supply of bank cash, on which depends the credit creating capacity of the commercial banks tends still further to increase or
decrease the quantity of money thereby bringing about relative changes in the money rates and credit conditions. Secondly, a purchase or sale of securities by the Central Bank affects, to some extent, the prices of government securities and, therefore, influences the long-term rates of interest. Through both these devices the Central Monetary Authority is able to introduce the desired adjustments in the domestic levels of prices, costs, production, trade and employment. The policy of rediscounting brings about an indirect influence on money and credit through primary changes in short-term money rates and secondary repercussions on long-term interest rates or yields, where as open market policy of the Central Bank has a direct and immediate effect on the volume of money and credit as well as on money and interest rates.  

The open market operations possess a degree of superiority over rediscount policy because of the fact that the initiative is in the hands of the monetary authority, whereas Bank Rate is passive because its effectiveness depends upon the response of the commercial banks and their customers. In fact the open market policy has two doors, one through which to enter and another one by which to get out again. But the open market operations are by no means intended to do entirely away with the Bank Rate policy, but rather a
useful and indispensable complement of each other. Open market operations may be used to make the bank rate effective or to prepare the ground for a change in bank rate; to support government credit or to prepare the market in connection with the issue of new loans or the conversion of existing loans; to create and maintain conditions of cheap money as an aid to business recovery; to effect the movements in the balance of payments; to offset seasonal movements in the economy and thus to control the money market generally. Thus open market policy of the Central Bank is an important technique of monetary management.

2.3.1 Statutory Power of the Reserve Bank ‘To Operate’ in the Market:

The nature and the quality of the assets in which the Reserve Bank of India could operate are originally defined in section 17 of the Reserve Bank of India Act, 1934. There are two principal ways assigned to the Reserve Bank to influence the money markets directly by its operations. The first is the traditional form of the purchase and sale of bills of exchange, promissory notes, treasury bills and government securities. Sections 17 (2) and 17 (3) of the Act authorizes the Bank “to purchase and sell bills and promissory notes arising out of bonafide commercial or trade transactions or for the
purpose of seasonal operations". The bank is also authorized to purchase and sell bills of exchange and Treasury bills of any foreign country, which may be a member of the International Monetary Fund.

To second instrument of operation in the open market policy of the Reserve Bank is provided by section 17(12) of the Reserve Bank of India Act, whereby the bank is authorized to purchase and sell Gold coin and bullion and foreign exchange. Open market operations in these assets has potentially unlimited scope provided they are available in the market.

2.3.2 Pre-Liberalisation Phase:

When the Reserve Bank of India was inaugurated in April 1935, it had, in its banking department, the government securities to the value of Rs. 5 crores which the government of India had contributed towards the reserve fund of the bank. Soon after its inauguration, the money market was caught into stringency and the Reserve Bank, entered the market and purchased the securities to ease the situation. Thus the open market operation is being used (upto 1970s) as an instrument of monetary control right from the beginning. But for this instrument to be successful at least three conditions must be satisfied: (i) the market for government securities should be well
organized and developed, that is broad, deep and resilient (ii) the Central Bank should have enough capacity to buy and sell securities and (iii) the Central Bank in its conduct of these operations should not be weighed down by weightier consideration than monetary control. Of these, only condition (ii) is well satisfied and the other two conditions are not well satisfied. The Indian gilt-edged market is not well developed. The Treasury Bill Market representing the short end of the market is practically under developed – it is limited largely to the RBI itself and scheduled commercial banks. The market for government bonds, on the demand side is largely a captive market, comprising mainly financial institutions such as commercial banks, the Life Insurance Corporation (LIC) the General Insurance Corporation (GIC) and subsidiaries and provident fund. These institutions are required by law to invest a certain minimum proportion of their total liabilities in government securities and certain 'other approved securities'. On the supply side, the RBI is the main reservoir of government securities and enjoys a near-monopolist position. The other reason for the relative unimportance of open market operations as an instrument of a monetary control is that they are weighed heavily by considerations of public-debt management. The RBI's prime objective has been to use these
operations to assist the government in its ever-growing borrowing programmes by maintaining orderly conditions in the gilt edged market and to keep the interest cost of debt to the government as low as possible.

Though the open market operation along with the other instruments used continuously but its relative efficacy decreased continuously due to the under development of the money market. In 1950s, bank rate was more effective but with the emergence of differential interest rates system the effectiveness of the bank rate dwindled sharply and gradually the CRR and SLR became the active policy instruments. With the weakening fiscal position of the Central government, the resources of the banking sector increasingly absorbed to support the market-borrowing programme of the government on longer-term basis at highly concessional rates of interest through prescriptions of higher statutory liquidity ratio. As the resources thus garnered often fell short of financing of the fiscal deficit, the Central government took recourse to the Reserve Bank through issue of ad hoc treasury bills at relatively low rates of interest. These and other statutory liabilities not only 'crowded out' the private sector, the government securities market which had been once vibrant with wider participations, lost its depth as the rates of
interest and maturity period of securities reflected essentially the perceptions of the issuer i.e. the government rather than those of the market and investors. As a result, open market operations were rendered ineffective. Since 1970s, the increasing proliferation of directed credit arrangements, multiple interest rate prescriptions based on variety of criteria such as economic activity, commodity, location, specific group of borrower etc., and the resultant cross subsidization created a very complex administered interest rate structure with virtually no role for market forces to play in pricing and allocation of credit. Thus during 1980s open market operations were not used as an active instrument of monetary management.

2.3.3 Post-Liberalisation Phase:

As the functioning of the monetary system in India had not been the subject of comprehensive review, the Reserve Bank of India appointed a committee in December 1982 under the chairmanship of Professor Sukhmoy Chakarvarty to review the working of the monetary system and suggest measures for improving the effectiveness of monetary policy as an instrument for promoting the basic objectives of planned economic development. The committee submitted its report in April 1985, which formed the basis for the
changes in monetary policy. A Working Group on the Money Market under the chairmanship of Shri N. Vaghul was formed to examine certain recommendations of the Chakarvarty Committee relating to the development of the money market. The Working Group submitted its report in January 1987, following which several money market measures were undertaken in the late 1980s. The 182-day Treasury Bill was introduced on an auction basis. The Discount and Finance House of India (DFHI) was set up to promote a secondary market in various money market instruments. From May 1, 1989 all interest rate ceilings on money market instruments were withdrawn. In order to encourage the use of commercial bills and short-term liquidity in the banking system, inter-bank participation certificates, certificates of deposit (CD) and commercial paper (CP) were introduced. Interest rates on CDs and CPs, were left to be determined by the market.

Though the reform were initiated in late 1980s, but the unprecedented balance of payments crisis during 1991 and prolonged fiscal deficits prompted the government to take a number of policy measures. The Committee on the Financial Sector Reforms (Chairman: Shri M. Narsimham) which addressed a number of issues such as (i) improving the external constraints having a bearing on the profitability of the banks (ii) strengthening banks and financial
institutions through application of prudential norms, and (iii) improving the competitiveness of banks and financial institutions, submitted its report in 1991. In consonance with the recommendations, number of changes were brought in different areas.

But the most significant change was brought in the area of Government Securities market. Concomitant with the sharp fiscal adjustment of the Central government, the interest rates on government paper have been made market related and the maturity periods reduced substantially to a maximum of 10 years. A Supplemental Agreement has also been reached between the Government and the Reserve Bank, first in September 1994 followed by the one in March 1997 relating to automatic monetisation of fiscal deficit. As a result, ad hoc and Tap Treasury Bills were completely phased out, effective April 1, 1997. Apart from these, six well-capitalized Primary Dealers (PDs) for dealing in government securities were instituted, the Delivery versus Payment (DvP) was introduced for Government securities in July 1995, new techniques of floatation and introduction of new instrument were adopted to impart greater transparency in operations. Repos, on all Central government dated securities and Treasury bills of all maturities were allowed from April 1997. In order to enhance the depth of the market, the
Reserve Bank also issued guidelines for institution of Satellite Dealers (SDs) in December 1996. All these measures have brought about significant changes and developed a new treasury culture amongst banks and institutions, which forced the Reserve Bank of India to switch over from direct instruments of monetary management to indirect instruments. In fact the operating procedure of monetary management that changed dramatically in the 1990s were driven by three inter-related factors.9

(i) Need for a market-oriented policy mix of open market operations and interest rate signals consistent with the process of price discovery.

(ii) Need to sterilize capital flows following the opening up of the economy.

(iii) Need for swift policy reactions to maintain orderly conditions in the financial markets.

Finally, the Reserve Bank of India reactivated open market (including repo) operations in an attempt to move from direct to indirect instruments of monetary management in 1992-93. Since the early 1990s, the monetary targeting approach in the conduct of monetary policy came under stress with increasing interplay of
market forces in the determination of interest rates and exchange rate as a consequence of deregulation. The excess liquidity engendered by capital flows imparted an upward pressure on money supply. The Third Working Group on Money Supply (Chairman: Dr. Y.V. Reddy), which submitted its Report in June 1998, found that the output response to monetary policy operating through the interest rate channel tends to be stronger and more persistent than that through the credit channel. With pricing decisions left increasingly to market forces, the interest rate and exchange rate gained in importance vis-à-vis quantity variable. Accordingly, RBI gradually switched over to a more broad-based multiple indicator approach and an Interim Liquidity Adjustment Facility (ILAF) was introduced initially in April 1999. This later transited into a full fledged LAF, put in place on June 5, 2000. Thus, the monetary management in the system is carried out through open market operations in the form of outright purchases/sales of government securities and repo and reverse repo operations under Liquidity Adjustment Facility (LAF). The LAF enables the Reserve Bank to modulate short-term liquidity under varied financial market conditions in order to ensure stable conditions in the overnight (Call) money market. It operates through daily repo and reverse repo auctions thereby setting a corridor for the
short-term interest rate consistent with policy objectives. Although there is no formal targeting of overnight interest rates, LAF operation has enabled the Reserve Bank to de-emphasize the targeting of bank reserves and focus increasingly on interest rates. At present, there is a multiplicity of rates at which liquidity is absorbed/injected. In an interest rate corridor framework, with the system being in surplus mode, it is generally witnessed that there are normally two rates through which liquidity is absorbed and one rate through which liquidity is injected, and vice-versa when the system is in deficit mode. Since the repo rate has emerged as the policy-signaling rate, its relative position within the corridor becomes important. The cross-country experiences show that policy signaling rate is placed in the middle of the corridor. However, in the present framework, the repo rate has been acting as both the policy rate as well as the rate for passive sterilization of excess liquidity emanating from capital flows. The chart 2.2 clearly depicts the above explanations.
Chart-2.2: LAF CORRIDOR

Surplus Mode

Note: Reverse Repo (Repo) in Indian Context is Equivalent to Repo (Reverse Repo) in International Parlance.

As the repo rate provides the floor for call rates, it has created some infirmities in the system. The RBI's LAF repo operations have the tendency to substitute market activities in call/notice money, term money and market repo operations. Banks may have less incentive to lend fully in call/notice market in a scenario of narrow spread between call rate and repo rate. After taking into account relative credit risk, bank may prefer to lend even at a marginally lower rate by repoing with RBI than lending in call. This combined with substantial improvement in liquidity has caused call/notice money turnover to shrink from Rs. 35,144 crore during 2001-02 to Rs. 19,920 crore during April – October 2003. The average amount of repo outstanding with RBI (taking into account both one day and 14-day repo) has increased from Rs. 3,503 crore during 2001-02 to Rs. 11,196 crore during 2002-03 and further to Rs. 29,290 crore during April – October 2003. The repo amount has witnessed marked upturn particularly from April 2003 onwards following call rates falling below the repo rate, as shown in the table-2.4
### TABLE-2.4: Relative Volumes in Call, Repo (RBI) and Term Money Markets

<table>
<thead>
<tr>
<th>Month</th>
<th>2001-02</th>
<th>2002-03</th>
<th>2003-04</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Call Turnover</td>
<td>Avg. Repo Outstanding</td>
<td>Term Money</td>
</tr>
<tr>
<td>April</td>
<td>35785</td>
<td>10968</td>
<td>-</td>
</tr>
<tr>
<td>May</td>
<td>36458</td>
<td>2132</td>
<td>199</td>
</tr>
<tr>
<td>June</td>
<td>38606</td>
<td>2458</td>
<td>283</td>
</tr>
<tr>
<td>July</td>
<td>37793</td>
<td>2350</td>
<td>320</td>
</tr>
<tr>
<td>August</td>
<td>36891</td>
<td>3243</td>
<td>264</td>
</tr>
<tr>
<td>September</td>
<td>36100</td>
<td>1139</td>
<td>208</td>
</tr>
<tr>
<td>October</td>
<td>37539</td>
<td>1325</td>
<td>117</td>
</tr>
<tr>
<td>November</td>
<td>32836</td>
<td>4553</td>
<td>125</td>
</tr>
<tr>
<td>December</td>
<td>32681</td>
<td>2469</td>
<td>65</td>
</tr>
<tr>
<td>January</td>
<td>31693</td>
<td>4821</td>
<td>90</td>
</tr>
<tr>
<td>February</td>
<td>33677</td>
<td>3590</td>
<td>290</td>
</tr>
<tr>
<td>March</td>
<td>3167</td>
<td>2986</td>
<td>185</td>
</tr>
<tr>
<td>Average</td>
<td>35144</td>
<td>3503</td>
<td>195</td>
</tr>
</tbody>
</table>

In order to address the problem of excess liquidity engendered by the surge in capital inflows, the Reserve Bank undertook large-scale open market operation. This helped absorption of excess liquidity by outright sales of Government of India rupee securities from its portfolio of Rs. 9,047 crore during 1993-94. During the fiscal year 1994-95 there has been a sharp increase of Rs. 17,496 crore in Net Foreign Exchange Assets of RBI, which has been partly countered by a decline of Rs. 1,886 crore in net RBI credit to the Central government. Open market operations have been so timed that they do not conflict with the borrowing programme of the Government. In 1994-95, open market operations have led to a net sale of Rs. 1,032 crore.

Due to slow down in foreign exchange inflows and large expansion in non-food bank credit, open market operations during 1994-95 were lower than in the previous year. On face value basis the sale of securities by RBI from its portfolio in 1994-95 at Rs. 2291 crore were far less than the sales (Rs. 9717 crore) in 1993-94. Purchases at Rs. 1440 crore were higher than the Rs. 1142 crore in 1993-94. The net sales in 1994-95 were Rs. 748 crore compared to Rs. 9837 crore in 1993-94.
The close linkage between foreign exchange markets and short-term money markets, observed in developed countries, manifested itself prominently for the first time in India in 1995-96. A sharp rise in industrial production increased demand for credit as well as for imports. The increased credit demand was reflected in rising call money rates and certificate of deposit rates, as well as in increased volatility of call rates. Rising imports and lower portfolio and aid inflows were not however reflected in exchange rate changes in late 1994-95 or early 1995-96. This lack of comprehension by foreign exchange markets was manifested in falling 3 month and 6 months forwards premia during the early past of 1995-96. This contradiction between fundamentals (demand-supply) and market perception, resulted in increasing volatility in foreign exchange markets, followed by rising foreign exchange premia. In October-November 1995, when lightened speculations led to excessive volatility RBI intervened by selling substantial amount of dollars. Such intervention reduces money supply by withdrawing rupee from the banking system, and raises inter-bank call money rates. A rise in short-term rates helps in stabilizing foreign exchange markets. Call money rates, however, rose to excessive heights, given the undeveloped state of the markets, necessitating a softening of the impact of the foreign
exchange intervene. RBI injected funds into the call market through reverse repos and refinance facilities to banks, against government and other approved securities. These measures stabilized the rupee dollar exchange rate and brought down the call money rate to 12-13 percent by end November 1995. Repo auctions were resumed from November 4, 1996 and were effectively used for money market interventions. In order to absorb liquidity from the system and to even out call money rates a system of announcing calendar of Repos auctions on a monthly basis was introduced with effect from January 13, 1997. The fixed rate repo was introduced with effect from November 29, 1997. The repo rate and the period of repo is announced by the Reserve Bank in the evening of the previous day. Initially, the repo rate was fixed at 4.5 percent but was successively raised in steps and reached 7.0 percent on December 11, 1997 and further to 9.0 percent on January 17, 1998. However, subsequently the repo rate was brought down in stages to 6 percent from April 30, 1998.

As a result of greater reliance of the Reserve Bank on open market operations the net sales of Government securities were much higher at Rs. 10,435 crore in 1996-97 as against Rs. 583 crore during 1995-96 when tight monetary conditions prevailed in the economy.
The volume of securities available for open market operations was enhanced by converting special securities of value aggregating Rs. 20,000 crore at 4.6 percent into marketable securities of different maturities and interest rates: 10 year, 8 year, 7 year and 5 year maturities were compared at 13.05 percent, 12.59 percent, 11.19 percent and 11.15 percent on June 3, 1997, June 18, 1997, August 12, 1997 and September 1, 1997 respectively. Net sales of securities were lower at Rs. 3,154 crore during the financial year 1997-98, than that of Rs. 8,071 crore for the corresponding period of fiscal 1996-97. The open market operations including repo activities went a long way in neutralizing excess liquidity in the banking system. Reflecting this, the net sales of Government securities during 1998-99 till February 5, 1999 remained at a very high level of Rs. 25031 crore against Rs. 3151 crore in the corresponding period of 1997-98.
2.4 The Reserve Requirements Policy of the Reserve Bank

2.4.1 Introduction:

Banks always keep a certain proportion of their total assets in the form of cash, partly to meet the statutory reserve requirement and partly to meet their own day-to-day needs for making cash payments. Cash is held partly in the form of 'cash on hand' and partly in the form of 'balances with the RBI'. All such cash is called cash reserves of banks, usually divided under two heads: (a) required reserves and (b) excess reserves. Required reserves are cash balances, which a bank is required statutorily to hold with the RBI calculated on average daily basis over a fortnight. The modern purpose of statutory reserves, to serve as an instrument of monetary management, evolved and gained acceptance after World War-I. By changing the amount of member bank reserves, the amount of required reserves and the cost of borrowed reserves, the monetary authorities can exert a strong influence on the amount of money, and in lesser degree, on total money expenditures, employment, production and prices.

2.4.2 Efficacy of the Reserve Requirement Policy:

The statutory reserve requirements were originally sought to be enforced upon the commercial banks in India, as elsewhere, with
three objectives in view — (i) to ensure the liquidity and solvency of individual banks and therefore of the banking system, as a whole; (ii) to ensure to the Reserve Bank a supply of deposits and thus with adequate resources for its local operations; and (iii) to ensure that the Reserve Bank, using open market operations or other means should be able to influence and ultimately to restrict the commercial banks extension of credit. All these objectives are inter-related since an ultimate objective of credit control is to ensure the liquidity and solvency of the banking system as a whole. However, in the course of time, the first two objectives have come to be regarded as much less important than the third one. The important purpose of statutory reserve requirement is to endow the Central bank with an additional instrument of credit control.

The control measure of variable reserve ratio attempts to affect the stock of money via the impounding or release of bank reserves. When the average CRR is revised upward, banks are required to hold larger reserves or balances with the RBI than before for the same amount of liabilities. This amounts to leaving the required reserve ratio unchanged but impounding of additional reserves by the RBI. Since reserves are a part of high powered money (H), this amounts to a virtual withdrawal of a part of H from the public equal to the
amount of additional reserves impounded. Similarly when the CRR is lowered or the incremental CRR withdrawn, this amounts to releasing of reserves which would have been otherwise impounded and so virtual increase in H, the virtual changes in H is called adjusted H. This adjusted H serves as the base of the unchanged money-multiplier. From the change in adjusted H we can estimate the resulting change in money supply (M) as well as the bank deposits attributable to the change in the required reserve ratio.

Thus the essential function of changes in the required reserve ratio is to bring about derived changes in the effective/adjusted amount of H and through it in the amount of money (and bank credit) and that, in this sense, the method of variable reserve ratio can act both as a supplement and as an alternative to other methods of monetary control.

2.4.3 Statutory powers of the Reserve Bank:

Under the original Reserve Bank of India Act, 1934, the Reserve Bank was given the statutory right to have with it, free of interest at all times, a cash reserve of not less than 5 percent of the demand liabilities and 2 percent of the time liabilities of every scheduled bank in India – the bank whose paid-up capital and
reserves would aggregate to not less than 5 lakhs of rupees and whose name is included by the bank in the second schedule of the Reserve Bank of India Act, 1934.

In 1949, with the enactment of Banking Companies Act, every non-scheduled bank has also been obliged to maintain by way of cash reserve in cash with itself, or in account with the Reserve Bank, or partly in cash with itself and partly in such accounts a sum equivalent to at least 5 percent of its demand liabilities and 2 percent of its time liabilities (Section 18 of the Indian Banking Companies Act, 1949). Now under the existing, The Reserve Bank of India (Amendment) Act, 1956, the RBI is empowered to impose statutorily 'Cash Reserve Ratio' (CRR) on banks anywhere between 3% to 15% of the net demand and time liabilities (NDTL) as of the last Friday of the second preceding week which changed to fortnight from March 29, 1985. The CRR is a two-part requirement: One is certain percentage of Net Demand and Time Liabilities (NDTL) and other is 10% of the increase in these liabilities known as Incremental Cash Reserve Ratio (ICRR) after November 11, 1984. On the additional required reserves over the minimum CRR of 3%, the RBI pays interest to banks at a specified rate.
2.4.4 Pre-Liberalisation Phase; (Before 1991)

The changes in reserve requirements form a powerful instrument for influencing the volume of bank credit and money. Such changes may not directly alter the total of reserves but they change the proportion of bank deposits that must be held as reserves with the Reserve Bank of India. Thus changes in the reserve ratio affect the liquidity position of member banks and consequently the amount available for lending or investing. These changes also affect the rate of multiple expansions of deposits in the entire banking system.

The importance of reserve requirement in respect of credit control grows with the growth of bank money in relation to currency in circulation. The CRR, which was once considered as prudential requirements to safeguard the interests of banks and of depositors, increasingly became the active policy instrument particularly since 1970s with the gradual downgrading of the Bank Rate as a policy instrument. The basic CRR was kept constant for 38 years during 1935-72 while the SLR was changed only once during 1949-69. With the weakening fiscal position of the Central government there was a phenomenal increase in the reserve money and the major component of this increase was the rise in Reserve Bank credit to government on
which the Central bank had little control, resulting high inflation in the country. This inflationary situation prompted Dr. I.G. Patel, former Governor of the Reserve Bank of India to remark that, "I think there is general agreement in India now that inflation is harmful both from the growth and equity point of view. Not long ago, there were at least some businessmen who advocated inflation as a deliberate policy to promote higher savings and investment and thus accelerate the pace of development". In view of this, drastic monetary control measures were needed, and the only feasible approach to control the monetary expansion was to influence the value of money multiplier by raising the Cash Reserve Ratio. This was done repeatedly and the rise in the average money multiplier was more or less arrested after the mid 1970s and stabilized at a level slightly below 3.0. In fact the main burden of containing the growth of liquidity fell on the reserve requirements i.e. the Cash Reserve Ratio, because, the use of other policy instruments were very much limited, resulting unidirectional change which stood at the high of 25 percent in 1991-92 as against the 3 percent in 1962, as shown in the table-2.5
### TABLE-2.5

Changes in Cash Reserve Ratio of Scheduled Commercial Banks

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>On Outstanding NDTL</th>
<th>On Incremental NDTL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) 5% of demand liabilities</td>
<td>25% of the increase in total liabilities since March 11, 1960</td>
</tr>
<tr>
<td></td>
<td>(b) 2% of time liabilities</td>
<td></td>
</tr>
<tr>
<td>July 5, 1935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 6, 1960</td>
<td>(a) 5% of demand liabilities</td>
<td>50% of the increase in total liabilities since March 11, 1960</td>
</tr>
<tr>
<td></td>
<td>(b) 2% of time liabilities</td>
<td></td>
</tr>
<tr>
<td>March 6, 1960</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November 11, 1960</td>
<td>(a) 5% of demand liabilities</td>
<td>The above requirement was withdrawn</td>
</tr>
<tr>
<td></td>
<td>(b) 2% of time liabilities</td>
<td></td>
</tr>
<tr>
<td>September 16, 1962</td>
<td>3% of demand and time liabilities</td>
<td></td>
</tr>
<tr>
<td>June 29, 1973</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>September 8, 1973</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>September 22, 1973</td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>June 29, 1974</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>December 14, 1974</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>December 28, 1974</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>October 27, 1975</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>September 4, 1976</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>November 13, 1976</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>January 14, 1977</td>
<td>6.0</td>
<td>10% of increase in NDTL over the level as on January 14, 1977</td>
</tr>
<tr>
<td>July 1, 1978</td>
<td>6.0</td>
<td>10% of increase in NDTL over the level as on January 14, 1977</td>
</tr>
<tr>
<td>June 5, 1979</td>
<td>6.0</td>
<td>10% of increase in NDTL over the level as on January 14, 1977</td>
</tr>
<tr>
<td>Date</td>
<td>Cash Balance</td>
<td>Notes</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>October 31, 1980</td>
<td>6.0</td>
<td>The above measure was discontinued. The cash balances remained impounded</td>
</tr>
<tr>
<td>July 31, 1981</td>
<td>6.5</td>
<td>-</td>
</tr>
<tr>
<td>August 21, 1981</td>
<td>7.0</td>
<td>-</td>
</tr>
<tr>
<td>November 27, 1981</td>
<td>7.3</td>
<td>-</td>
</tr>
<tr>
<td>December 25, 1981</td>
<td>7.5</td>
<td>-</td>
</tr>
<tr>
<td>January 29, 1982</td>
<td>7.75</td>
<td>-</td>
</tr>
<tr>
<td>April 10, 1982</td>
<td>7.25</td>
<td>-</td>
</tr>
<tr>
<td>June 11, 1982</td>
<td>7.0</td>
<td>-</td>
</tr>
<tr>
<td>May 28, 1983</td>
<td>7.5</td>
<td>-</td>
</tr>
<tr>
<td>May 30, 1983</td>
<td>8.0</td>
<td>-</td>
</tr>
<tr>
<td>August 27, 1983</td>
<td>8.5</td>
<td>-</td>
</tr>
<tr>
<td>November 12, 1983</td>
<td>8.5</td>
<td>10% of increase in NDTL over the level as on November 11, 1983. Additional cash balances as on October 31, 1980 were not released.</td>
</tr>
<tr>
<td>February 4, 1984</td>
<td>9.0</td>
<td>10% of increase in NDTL over the level as on November 11, 1983. Additional cash balances as on October 31, 1980 were not released.</td>
</tr>
<tr>
<td>October 27, 1984</td>
<td>9.0</td>
<td>a) 10% of increase in NDTL over the level as on November 11, 1983.</td>
</tr>
<tr>
<td>December 1, 1984</td>
<td>9.0</td>
<td>b) 1/5th of additional cash balances impounded under 10T incremental CRR as on October 31, 1980 released in two equal instalments.</td>
</tr>
<tr>
<td>October 26, 1985</td>
<td>9.0</td>
<td>a) 10% of increase in NDTL over the level as on November 11, 1983.</td>
</tr>
<tr>
<td>Date</td>
<td>Index</td>
<td>Event Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| November 22, 1986   | 9.0   | a) 10% of increase in NDTL over the level as on November 11, 1983.  
                               |       | b) Release of first instalment of one-half of remaining impounded balances under incremental CRR as on October 31, 1980.  
                                      |       | b) 1/3rd of outstanding cash balances impounded under 10 percent incremental CRR as on October 31, 1980 was released. |
| February 28, 1987   | 9.5   | 10% of increase in NDTL over the level as on November 11, 1983. |
| May 23, 1987        | 9.5   | 10% of increase in NDTL over the level as on November 11, 1983. |
| October 24, 1987    | 10.0  | 10% of increase in NDTL over the level as on November 11, 1983. |
| April 23, 1988      | 10.0  | a) 10% of increase in NDTL over the level as on November 11, 1983.  
                               |       | b) The remaining balances under 10% incremental CRR as on October 31, 1980 was released. |
| July 2, 1988        | 10.5  | 10% of increase in NDTL over the level as on November 11, 1983. |
| July 30, 1988       | 11.0  | 10% of increase in NDTL over the level as on November 11, 1983. |
| July 1, 1989        | 15.0  | -                                                                                                                                                 |
| May 4, 1991         | 15.0  | 10% increase in NDTL over the level as on May 3, 1991. |

Source: RBI Occasional Paper, Vol. 18, No. 2 & 3 (June - September), 1997
2.4.5 Post-Liberalisation Phase; (After 1991)

In view of the acute foreign exchange situation and the consequent need to contain overall demand by moderating monetary expansion, an incremental cash reserve ratio of 10 percent was stipulated with effect from May 4, 1991 in addition to the cash reserve ratio of 15 percent. Simultaneously the unprecedented balance of payments Crisis (1991) emanating from high and prolonged fiscal and balance of payments deficits prompted the Government to take a number of policy measures which helped the economy to quickly recover and facilitate integration of the Indian economy with the world economy. In the financial sector, reforms were initiated following the recommendation of the committee on the Financial System (Chairman: Shri M. Narasimham), which submitted its report in 1991. The reform measures addressed a number of issues such as: (i) improving the external constraints having a bearing on the profitability of the banks, (ii) strengthening banks and financial institutions through applications of prudential norms, and (iii) improving the competitiveness of banks and financial institutions.
In consonance with the objectives of financial sector reforms, it was considered feasible to moderate the levels of statutory pre-emption in terms of both the cash reserve ratio (CRR) and statutory liquidity ratio (SLR). The cash reserve ratio was brought down from 15 percent to 14 percent in two phases in April and May 1993. However, the build up of Reserve Bank of India's foreign exchange reserves, resulting in an increase in primary liquidity, necessitated a temporary deviation from the medium term strategy and to sterilize a part of the foreign exchange inflow, the CRR was raised from 14 percent to 15 percent in three phases from June 11 to August 6, 1994. With the abolition of the Foreign Currency (Non-resident) Accounts (FCNRA) scheme, there was a corresponding growth in deposits mobilized under other Non-Resident Deposits Schemes, leading to attenuation of the overall CRR. In view of this, for the first time a CRR of 7.5 percent, was required to be maintained by banks on liabilities under FCNR (B) from October 29, 1994. CRR was subsequently raised to 15 percent for FCNR (B) scheme and a CRR of 7.5 percent was introduced for the first time for the Non-Resident Non-Repatriable Rupee Accounts (NRNR) scheme, with effect from January 21, 1995. With these conditions reversed and money growth slowing, the CRR was lowered to 14.5 percent effective November
11, 1995 and 14 percent effective December 9, 1995. Preferential CRRs for NRER, NRNR and FCNR (B) deposits, which were eliminated earlier, were reintroduced in 1995-96. This reduction in average CRR and in CRR against FCNR (B) deposits, which were eliminated earlier were reintroduced in 1995-96. This reduction in average CRR and in CRR against FCNR (B) account released about Rs. 5050 crore of cash balances to the scheduled commercial banks. Finally CRR on outstanding deposits was removed for FCNR (B) and NRNR schemes and CRR on outstanding NRE deposits was reduced to 10 percent from 14 percent with effect from the fortnight beginning January 6, 1996. These measures together augmented banks' resources by Rs. 2475 crore. The reduction of the CRR continued and reduced from 14 percent to 13 percent in two phases of 0.5 percent point each, effective April 27 and May 11, 1996. The CRR on Non-Resident (External) Rupee Accounts [NR(E)RA] was brought down to zero. There was another phase of CRR reduction to 12 percent, effective July 6, 1996. CRR was further reduced by one percent point in two phases of 0.5 percent point each to 11 percent effective from October 26, 1996 and November 9, 1996, respectively. Further one percent point reduction to 10 percent was made in two phases of 0.5 percent point each from the fortnight beginning January
4 and 18, 1997, respectively. All these reductions of CRR freed cash balances and augmented the lendable resources of the scheduled commercial banks.

For developing the inter-bank call money market a new system to exempt them started from April 26, 1997 against the earlier practice of including positive net inter-bank liabilities as part of NDTL for CRR subject to a minimum of 3 percent CRR on overall NDTL. Reduction in CRR by two percentage points in eight phases of 0.25 percentage point each was announced in 1997-98, but of the eight phases only the first two phases were effected on October 25 and November 22, 1997, respectively. The development in the external environment tending to speculative activity and the pressures induced in the foreign exchange market resulted in the deferment of further CRR reduction till January 31, 1998. The sale of US dollars resulted in contraction of liquidity, subsequently; liquidity was further tightened by raising CRR to 10 percent from December 6, 1997 and to 10.5 percent from January 17, 1998. However, after reviewing the monetary and credit situation it was reduced to 10.25 percent and 10.0 percent from the fortnight beginning from March 28, 1998 and April 11, 1998 respectively. The CRR was reduced continuously in accordance with expansionary
monetary policy but in 2000 when rupee value fell below the psychological benchmark of Rs. 46 to the dollar the RBI decided to stabilize the rupee by choking off credit and rendering it more expensive by raising CRR to 8.5 percent from 8.0 percent. After this the CRR is reducing continuously and at present it is 4.5 percent which is likely to reach the minimum level of 3 percent with the objective of providing adequate liquidity to support investment demand in the economy while keeping an eye on inflation, as shown in table-2.6 and depicted in chart 2.3

**TABLE-2.6**

<table>
<thead>
<tr>
<th>Changes in Cash Reserve Ratio of Scheduled Commercial Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Percent)</td>
</tr>
<tr>
<td>January 11, 1992</td>
</tr>
<tr>
<td>April 21, 1992</td>
</tr>
<tr>
<td>October 8, 1992</td>
</tr>
<tr>
<td>April 17, 1993</td>
</tr>
<tr>
<td>May 15, 1993</td>
</tr>
<tr>
<td>June 11, 1994</td>
</tr>
<tr>
<td>July 9, 1994</td>
</tr>
<tr>
<td>August 6, 1994</td>
</tr>
<tr>
<td>November 11, 1995</td>
</tr>
<tr>
<td>December 9, 1995</td>
</tr>
<tr>
<td>April 27, 1996</td>
</tr>
<tr>
<td>Date</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>May 11, 1996</td>
</tr>
<tr>
<td>July 6, 1996</td>
</tr>
<tr>
<td>October 26, 1996</td>
</tr>
<tr>
<td>November 9, 1996</td>
</tr>
<tr>
<td>January 4, 1996</td>
</tr>
<tr>
<td>January 18, 1997</td>
</tr>
<tr>
<td>1998</td>
</tr>
<tr>
<td>13 March 1999</td>
</tr>
<tr>
<td>8 May 99</td>
</tr>
<tr>
<td>6 November 1999</td>
</tr>
<tr>
<td>20 November 1999</td>
</tr>
<tr>
<td>8 April</td>
</tr>
<tr>
<td>22 April 2000</td>
</tr>
<tr>
<td>29 July 2000</td>
</tr>
<tr>
<td>12 August 2000</td>
</tr>
<tr>
<td>24 February 2001</td>
</tr>
<tr>
<td>19 May 2001</td>
</tr>
<tr>
<td>3 October 2001</td>
</tr>
<tr>
<td>3 November 2001</td>
</tr>
<tr>
<td>29 December 2001</td>
</tr>
<tr>
<td>1 June 2002</td>
</tr>
<tr>
<td>16 November 2002</td>
</tr>
<tr>
<td>19 June 2003</td>
</tr>
</tbody>
</table>

2.5 Conclusion:

To conclude we can say that – monetary policy has an active role in the economy has been well recognized and cross-country experiences show that maintaining low and stable order of inflation should constitute the fundamental objective of the monetary policy. It emerged as the chief instrument of macroeconomic stabilization as well as a vehicle for the subsequent structural reforms in the financial system. The growing integration of various markets and increasing globalisation called for reforms in the monetary policy operating framework in terms of instruments, procedure and institutional architecture. Replacement of ad hoc Treasury Bills by a System of Ways and Means advances provided monetary policy the necessary flexibility. In order to improve the efficiency of resource allocation, the operating procedure shifted from administered and direct instruments of monetary control towards indirect instruments. The open market operations has been reactivated and the bank rate is being used as the signaling rate. This transformation has been facilitated by wide ranging reforms in the government securities market, and in the interest rate structure, coupled with reduction in the reserve requirements. The reforms also touched upon institutional
and structural areas of monetary and financial policy. These should go a long way in realizing the twin objectives of– price stability and adequate provision of credit for the productive sectors of the economy.

Lastly we conclude that though all the three instruments have their own merits but no single instrument is adequate to the task; instead all the three need to be employed in proper combination. In the changing conditions monetary authorities be empowered to use discretion in choosing the proper combination of instruments to achieve policy objectives, but no rigid legal formula with respect to techniques of control can be expected to apply effectively to unknown future conditions. The table-2.7 clearly shows the active utilization of different instruments simultaneously for effective monetary management.

**TABLE-2.7: Monetary Policy Instruments**

<table>
<thead>
<tr>
<th>Instruments/ Decade</th>
<th>1950s</th>
<th>1960s</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Reserve Ratio</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Standing Facilities</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Credit Control</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Open Market Operations</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Reactivated in 1992-93</td>
</tr>
<tr>
<td>Bank Rate</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Reactivated in 1997-98</td>
</tr>
</tbody>
</table>

Note: ✓ denotes an active use of the instruments.
References:

7. Vide Sections 17 (2), 17 (3) and 17 (12) of the Reserve Bank of India Act. (CF) Gupta GP (1959): Reserve Bank of India and Monetary Management, p. 129.

Chapter-3
3.1 Introduction:

In exercising general instruments of monetary management the aim of the Reserve Bank is primarily to affect the cost and availability of bank-credit in general without regard to its distribution in particular directions. But the problem of credit control in India, as elsewhere, is not only to regulate the total quantity or the cost of credit but also to prevent its overflow in particular directions. Thus the regulation of credit for specific purposes is termed as selective methods. It has two main aspects: positive and negative. On the positive front, methods can be used to encourage greater channeling of credit into particular sectors. On the negative side, methods are taken to restrict the flow of credit to particular sectors or activities. All demands made for bank credit are not ‘legitimate’ in the sense of being essential to the genuine demands of development. Some of them may be for socially unimportant or even harmful purposes. The risk of antisocial use of credit becomes particularly serious when the money supply in the economy is substantially expanding and prices are tending to rise because production and
economic activity are lagging behind. On such occasions it becomes profitable for producers or traders to hold on to their stocks in a rising market, and if bank credit is freely available to them for financing such carrying of stocks, hoarding and profiteering are encouraged. The tendency of prices to rise is aggravated and, moreover, the keen demand for bank-credit for speculative purposes further extends money supply and stimulates its unhealthy pressure on the economy. Under great pressure the banker's efforts can be defeated by the seepage of money from good uses to bad and at most times the channels of credit are sufficiently embanked by market imperfections to make selective methods worthwhile. In the context of planning and development, selective method is necessitated to canalize bank credit to socially desirable and economically useful purposes befitting the broad objectives of the plan. In such circumstances, the Central Bank has to step in and see that bank credit is not abused. It has to discriminate between different types of borrowers and the purposes for which they are borrowing. It has to see that bank finance does not become easily available for the speculative holding of stocks, while doing nothing, which will withhold funds from genuine business needs. "The good banker is one who can distinguish the sound from the unsound borrower. His
whole life is spent in selecting, in deciding which lines of activity may be safety supported, as well as distinguishing the wise and honest from the foolish men and knaves.¹ⁱ This is the selective aspect of credit control in the field of monetary management.

Even in advanced countries it has been realized that the control of distribution, as distinct from quantitative variations in the total supply of credit, which was formerly regarded as outside the sphere of Central Bank is essential for an anti-cyclical monetary policy. In a developing country like India the need for selective control is far greater than in an advanced country, because of varying degrees of responsiveness of the different sectors of the economy to changes in money supply and the rate of interest. Qualitative Control of the flow of credit into different channels can work more effectively than quantitative changes. To quote an expert, "restricting money where non-essentials were concerned and releasing money where essentials were concerned is a wise policy of the Central Bank."²

3.2 Statutory Powers to the Reserve Bank of India:

In India, no provision was made in the Reserve Bank of India Act, 1934 to equip the Reserve Bank with the powers of selective credit control methods. The provisions with regard to purchase and
rediscounting of 'eligible bills' may had some qualitative implications on the distribution of bank loans, the inclusion of such provision, was inspired more by the desire to confirm to the practices of the bank of England and to improve banking standards rather than to any conscious efforts to introduce qualitative credit control. An abnormal expansion of bank loans to the stock market occurred in 1946 when the Reserve Bank of India had to issue warnings to all banks reminding them of the dangers of granting too large a proportion of loans against stocks and shares. In his speech at the Annual General Meeting the Governor of the bank regretted that, "this warning does not seem to have been heeded in some quarters." The Governor stated that, "the bank did not possess the power to deal with the situation." The statutory provision in this direction was, therefore, made in September 1948, more than a decade after the birth of the bank, when the banking companies (control) ordinance authorized the Reserve Bank to issue directives to banks in regard to their lending policies in general and any transaction in particular. Later in 1949, with the enactment of banking legislation, permanent powers were conferred upon the bank to effect selective credit control in the country. Section 21 of the banking companies Act,
1949, empowered the Reserve Bank to control and direct advances by banking companies. The section reads as:

(1) Where the Reserve Bank is satisfied that it is necessary or expedient in the public interest so to do, it may determine the policy in relation to advances to be followed by banking companies generally or by any banking company in particular, and when the policy has been so determined, all banking companies or the banking company concerned, as the case may be, shall be bound to follow the policy as so determined.

(2) The Reserve Bank may give directions to banking companies, either generally or to any banking company or group of banking companies in particular, as to the purposes for which advances may or may not be made, the margins to be maintained in respect of secured advances and the rates of interest to be charged on advances, and each banking company shall be bound to comply with any directions as so given.

Section 20 (3) of the banking companies act also authorizes the Reserve Bank that "if any loans or advances are granted by any banking company to the detriment of the interests of the depositors, the bank may, by order in writing, prohibit the banking company from granting any such further loans or advances and may by like
order direct the banking company to secure the repayment of any such loans or advance within such time as may be specified in the order."

Section 36 of the same act further empowers the Reserve Bank to prohibit banking companies against entering into any particular transactions. The section reads as: The Reserve Bank may caution or prohibit banking companies generally or any banking company in particular against entering into any particular transaction or class of transactions and generally give advice to any banking company.

The Reserve Bank has been also empowered to issue directives to banking companies in relation to matters of policy or administration in the national interest or in the interests of the institutions themselves. The section 35 A of the Banking Companies Act reads as:

Were the Reserve Bank is satisfied that in the national interest; or to prevent the affairs of any banking company being conducted in a manner detrimental to the interests of the depositors or in a manner prejudicial to the interest of the banking company; or to secure the proper management of any banking company generally; it is necessary to issue directions to banking companies generally or to
any banking company in particular, it may from time to time, issue such directions as it deems fit, and the banking companies or the banking company as the case may be shall be bound to comply with such directions.

3.3 Techniques of Selective Credit Controls:

3.3.1 Credit Rationing: This method is adopted only when the country is facing exceptional and serious monetary crisis or when gold reserves decline. In this method, the Central Bank imposes restrictions on demand of accommodation for more credits by the commercial banks. The Central Bank limits the credit available to each of the commercial banks. Thus, this method of credit rationing also directly affects the credit granting capacity of the commercial banks.

3.3.2 Fixation of Margin Requirement: The margin is the difference between the "loan value" and the "market value" of securities offered by borrowers against secured loan. By prescribing the margin requirements on secured loans, the Central Bank does not permit the commercial bank to lend to their customers the full value of securities offered by them but only a part of their market value.
3.3.3 Publicity and Notifications: The 'Central Bank' publishes weekly reports, periodicals, reviews, the statement of assets-liabilities and balance sheets for the guidance and reference of commercial banks. These publications provide latest information for the money market, public fiancé activities, trade and industries. From these data, the commercial banks can plan and adjust their credit activities.

3.3.4 Direct Action: The method of direct action is most extensively used by Central Banks to implement their credits. This method can be used to enforce both quantitative as well as qualitative credit control by the Central Bank.

3.3.5 Moral Suasion: Moral suasion is the policy of the RBI of persuasion and pressures used on commercial banks to do certain things or refrain from doing certain things. This is exercised through discussions, letters, speeches and hints thrown to banks. The RBI sends periodical letters to banks urging them to reduce their advances against particular commodities or unsecured advances. Frequent discussions are also held for this purpose. The RBI has been able to build a good informal relation with the banks over the years. Moral suasion had proved quite useful in exercising control over credit supply in the country.
The selective credit controls in India have been used to prevent the speculative hoardings of essential commodities like food grains and agricultural raw materials to check the undue rise in their prices. A restricted availability of bank credit for financing the purchase and holding of some commodities will restrict the capacity of traders to hold their stocks. This will improve the market supply of commodities and will thereby check the price rise. At present, the RBI fixes minimum margins to be maintained by commercial banks in respect of their advances against food grains, oilseeds, vegetable oils, cotton, sugar, cotton textile, etc. The RBI operates the selective credit controls under the directive powers conferred on it by the Banking Regulation Act. The techniques of selective credit controls used generally are:

(i) Minimum margins for lending against securities. The margins vary from the low of 20% to the high of 75% in 1997. The RBI fixed a minimum margin of 45% on bank advances against stock of wheat as against minimum margins of 10% and 15% for advances against levy and free sugar, respectively.

(ii) The RBI fixes ceilings on maximum advances to individual borrowers against certain stocks of goods. Commercial banks are required to get the permission of the RBI to grant loans to new
borrowers and increase the credit limits in the case of existing borrowers.

(iii) Minimum discriminatory rates of interest are charged on certain types of advances.

(iv) The RBI prohibits clean advances for financing the hoarding of sensitive commodities.

(v) The RBI prohibits the discounting bills covering sale of sensitive commodities.

3.4 Sectoral Allocation of Credit:

The policy of sectoral allocation of credit has undergone several changes from time to time over the past 50 years. The full period may be subdivided into three sub-periods:

- Pre-nationalisation period: 1951 – 1968
- Post-nationalisation period: July 1969 – 1991
- Post-liberalisation period: After 1991

3.4.1 Pre-nationalisation Period: (1951- 1968)

The economy is generally divided into four sectors:

(i) Agriculture (ii) Industry (iii) Trade and (iv) Others. Whenever necessary, each sector can be further sub-divided into smaller sub-sectors, such as large and medium-scale industry and small-scale
industry. During the pre-nationalisation period (1951-68) there has been a dramatic increase of credit in the Industry and decline in the trade and others. The share of industry in bank's credit rose rapidly from 34 percent in 1951 to 51 percent in 1961 and to 67.5 percent in 1968. On the other hand the share of trade declined from 36 percent to 19 percent and that of the miscellaneous category from 28 percent to 11 percent. The factors responsible for shift in advances pattern operated on both the demand and supply sides of bank credit. On the one hand, the state policy, under the framework of a mixed economy and five-year plans initiated in 1951, sought the industrial development of the country largely through the promotion of large industries in the corporate sector. On the other hand, large industry and established business houses, because of their ownership and control of big commercial banks, could claim easily an increasing proportion of the incremental bank credit and banks themselves were perfectly happy to fall in line.

Throughout the period (1951 - 68) agriculture continued to command a very low proportion of total commercial bank credit, firstly because commercial banks were reluctant to provide such credit and so were not geared to that end and secondly because as a matter of deliberate policy the needs of agricultural credit were
supposed to be met by the cooperative credit system. But the severe shortage of food grains production in the country and the consequent need for promoting the High Yield Variety Programme (HYVP) and to support the weaker sections on political considerations, pressures came on the RBI to provide adequate refinance to the cooperative credit system. The RBI as the Central Banking authority considered it inadvisable to stretch its help beyond a reasonable limit and there were inherent organizational and structural limitations on the cooperative banking system in raising its own resources, a multi-agency approach for the provision of agricultural credit with commercial banks as the other source of credit came into existence, and the State Bank of India (SBI) was assigned the role of providing credit to agricultural marketing and processing societies.

3.4.2 Post-nationalisation Period: (July 1969 - 1991)

The classification that divides the economy into only two broad categories: (i) priority sectors and (ii) non-priority sectors was adopted for policy purposes for the first time in 1968. Initially, on the recommendation of the National Credit Council, three sectors – agriculture, small industries and exports were recognized as priority sectors. Later on, road and water transport operators, professional and self employed persons, retail trade and small business, and
education were also included into the priority sector. The targets of priority sector credit for public sector banks were set and revised from time to time as a matter of government policy. Thus the increasing emphasis on credit to 'priority sectors' and emergence of food credit (i.e. credit for the procurement of food grains) as an important item has led to the reallocation of sectoral credit from what it was in the pre-nationalisation period.

There has been a persistent decline in the share of bank credit from scheduled commercial banks to industry as a whole and to large and medium industry in particular. The share of industry decreased from 67.5% in March 1968 to 48.8% in March 1986. The share of large and medium industry declined from 60.6% in March 1968 to 34.7% whereas the share of small industry rose from 6.9% in March 1968 to 14.1% in March 1986. With the increased diversification in industry, the structure of industry wise allocation of bank credit has also undergone changes – the relative shares of textiles, engineering and sugar have declined and those of newer industry groups have improved.

With the rising trend in the domestic output of food grains, market surpluses of food, public distribution of food grains, public procurement of food, and the size of buffer stocks of food, a rising
share of bank credit has taken the form of food advances. In March 1968, the amount outstanding of food advances of Rs. 109 crores constituted only 3.5% of total advances of scheduled commercial banks, which increased to Rs. 5600 crores constituting about 10% of total advances in June 1979. In order to encourage banks to meet the growing demand, the RBI not only issued appropriate guidelines to banks, but also offered them its refinance facilities. Under the RBI policy, food advances enjoy priority over other advances as well as concessional rate of interest.

In view of the paramount need to promote exports to earn sufficient foreign exchange to be able to meet the country’s large and growing foreign exchange obligations, several measures have been adopted:

To induce banks to increase their credit for exports, the RBI has been providing increasingly liberal refinance to them for such credit and at low concessional rate of interest.

The RBI has been fixing credit ceilings from time to time and requiring commercial banks to observe specified incremental net non-food credit-deposit ratio.
All export credit from scheduled commercial banks, pre-shipment as well as post-shipment, used to be offered at very low concessional rates of interest.

Under the Integrated Rural Development Programme (IRDP) banks provided terms loans to identified poor families. This programme was started in 1978-79 as a major poverty alleviation programme and the objective was to take above the poverty line the families in the identified target groups by creating substantial employment opportunities in rural areas and by enabling them to acquire productive assets with the help of government subsidy and term loans from banks. In consonance with this objective during the 6th plan period, term loans of Rs. 31,000 crores were disbursed by banks to about 16.6 million families against the target of 15 million families.

3.4.3 Post-liberalisation Period: (1991 onwards)

The 1990s opened with a severe balance of payments crisis and a high rate of inflation, reflecting the growing internal imbalances of 1980s. The Reserve Bank responded swiftly with monetary and credit measures aimed at import compression and demand containment. With the liberalization of the external sector, the management of capital flows posed a fresh challenge to monetary management. The
Reserve Bank absorbed surplus capital flows in its balance sheet in order to maintain the export competitiveness of the economy and at the same time attempted to sterilize the monetary impact. During 1994-95, the evolution of prices and output led to a tightening of selective credit controls on a number of goods from May 16, 1994. Minimum margin on bank advances against pulses, oilseeds and vegetable oils and Cotton and Kapas were, raised by 15 percentage points. The credit ceiling on them was reduced from 100 percent to 85 percent of the peak level during the three-year period ending October 1993. The concessional margin of 10 percent for bank advances (with state guarantee) to state level cooperative institutions was raised from 10 percent to 25 percent. But in the mid year review that expected a bumper Kharif crop, the selective credit controls on bank advances against paddy/ rice were eliminated. With the sign of improvement in price-output trends in Cotton/ Kapas, the minimum margins on bank advances against these commodities were reduced by 15 percentage points and the credit ceiling raised from 85 percent to 100 percent of each borrower’s peak level of credit during the three year period ending October 1993. There was no change in the selective credit controls imposed by RBI against price sensitive essential commodities during financial year 1995-96 (Table-3.1).
### TABLE-3.1

**Selective Credit Controls on Bank Advances (Effective April 18, 1995)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pulses</td>
<td>60</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>2.</td>
<td>Other food grains (other than paddy/ rice, wheat and pulses)</td>
<td>45</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>3.</td>
<td>Oilseeds (viz. groundnut, rapeseed/ mustard, cotton seed, linseed, castorseed and all imported oilseeds)</td>
<td>60</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>4.</td>
<td>Vegetable oils (viz. groundnut oil, rapeseed/ mustard oil, cottonseed oil, linseed oil, caster oils)</td>
<td>60(^1)</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>5.</td>
<td>Sugar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Buffer</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>b) Unreleased</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>c) Released</td>
<td>75</td>
<td>75(^3)</td>
<td>60</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Gur and khandari</td>
<td>45</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>7.</td>
<td>Cotton &amp; kapas</td>
<td>2</td>
<td>60</td>
<td>45</td>
</tr>
</tbody>
</table>

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\(^1\) Applicable to registered oil mills and vanaspati manufactures – Not applicable
\(^2\) Exempt from the stipulations.
\(^3\) Applicable other than cotton mills including spinning mills.
\(^4\) A concessional minimum margin of 25 per cent (effective from May 27 to the end of November 1994) against stocks of sugar imported on cash basis for a period of not exceeding 8 weeks (reduced to 6 weeks from September 3, 1994) after the arrival of sugar stocks in India.

At the beginning of the financial year 1996-97, there was an across the board liberalization of selective credit controls on bank advances against price-sensitive essential commodities. In the context of the favourable price-supply situation, bank advances against a large number of price-sensitive essential commodities, were exempted from selective credit controls from October 21, 1996. These commodities include pulses, other food grains (coarse grains), oilseeds (viz. groundnut, rapeseed/ mustard, cottonseed, linseed, castorseed), oils there of including vanaspati, all imported oilseeds and oils, sugar, gur and khandsari and cotton and kapas to ‘others’ (other than cotton mills including spinning mills). However, selective credit controls were retained for advances against buffer stock and unreleased stocks of sugar-to-sugar mills. In the case of unreleased stocks of sugar, the margin was reduced from 20 percent to 15 percent, effective October 21, 1996, while in the case of buffer stock of sugar, the existing prescription of a zero percent margin continued. The above explanations are summarized in the table-3.2.
TABLE 3.2
Selective Credit Controls on Bank Advances

<table>
<thead>
<tr>
<th></th>
<th>Effective July 2, 1996</th>
<th>Effective October 21, 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum Margins</td>
<td>Minimum margins</td>
</tr>
<tr>
<td></td>
<td>Mills/processing units</td>
<td>Others</td>
</tr>
<tr>
<td>1. Pulses</td>
<td>45</td>
<td>60</td>
</tr>
<tr>
<td>2. Other food grains (other than paddy/ rice, wheat &amp; pulses)</td>
<td>30</td>
<td>45</td>
</tr>
<tr>
<td>3. Oilseeds (viz. groundnut, rapeseed/ mustard, cottonseed, linseed, castorseed &amp; all imported oilseeds)</td>
<td>45</td>
<td>60</td>
</tr>
<tr>
<td>4. Vegetable oils (viz. groundnut oil, rapeseed/ mustard oil, cotton seed oil, linseed &amp; all imported oils)</td>
<td>45(^1)</td>
<td>60</td>
</tr>
<tr>
<td>5. Sugar</td>
<td>a) Buffer stock</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b) unreleased stock</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>c) Released stock</td>
<td>45</td>
</tr>
<tr>
<td>6. Gur &amp; khandasari</td>
<td>30</td>
<td>45</td>
</tr>
<tr>
<td>7. Cotton &amp; kapas</td>
<td>Exempt</td>
<td>30</td>
</tr>
</tbody>
</table>

- Not applicable
\(^1\) Applicable to registered oil mills and Vanaspati manufacturers.
\(^2\) Applicable to other than cotton mills including spinning mills.

The selective credit controls were virtually eliminated in October 1996, the only exception being advances against buffer stock of sugar and unreleased stock of sugar-to-sugar mills. In order to counter temporary deterioration in price supply situation, selective credit controls were re-imposed only for a period of three months (April 8 – July 7, 1997) on bank advances against stocks of wheat. A minimum margin 45 percent was stipulated on bank advances against (a) stocks of wheat to mills and processing units and (b) warehouse receipts covering wheat stocks and a higher margin of 60 percent was imposed on advances to others, i.e. parties other than mills and processing units. A credit ceiling of 100 percent of the peak level of bank credit maintained by the party in any of the three years commencing 1993-94 (November-October) was also set. Effective from October 22, 1997, differential minimum margin of 10 percent and 15 percent were stipulated for advances against levy and free sale sugar respectively, leaving advances against buffer stock free from margin. During the financial year 1996-97 out of the total increase in gross non-feed credit of Rs. 19742 crore, 35.3 percent (Rs. 6,972 crore) flowed to medium and large industries, 19.4 percent (Rs. 3,830 crore) to agriculture and 11.3 percent (Rs. 2,229 crore) to small scale industries.
During 1997-98, out of the total increase in non-food gross bank credit amounting to Rs. 36404 crore, 41.0 percent (Rs. 14926 crore) flowed to medium and large industries, 9.4 percent (Rs. 3427 crore) to agriculture and 20.8 percent (Rs. 7564 crore) to small scale industries. The outstanding export credit of scheduled commercial banks as on March 27, 1998 stood at Rs. 34430 crore forming 10.6 percent of total outstanding Net Bank Credit (NBC) as against Rs. 30112 crore forming 10.8 percent of NBC as on March 28, 1997. As on December 4, 1998 aggregate export credit of banks was Rs. 34873 crore (10.3 percent of NBC). Effective from the fortnight beginning January 17, 1998, banks were provided export credit refinance upto 50 percent of the increase in outstanding export credit eligible for refinance over the level of such credit as on February 16, 1996. After reviewing the monetary and foreign exchange situation, the export credit refinance limits were restored to 100 percent of the incremental export credit eligible for refinance with effect from May 9, 1998. In order to ensure internationally competitive interest cost for exporters, RBI advised banks on June 11, 1998 to limit the spread to 1.5 percentage points over LIBOR on foreign currency loans (as against LIBOR + 2.0/2.5 points earlier).
The proportion of food credit in the flow of gross bank credit increased from 15.1 percent in 1999-2000 to 20.9 percent in 2000-01, whereas the corresponding proportion during April – October 2001 was as much as 37.7 percent compared with 23.6 percent in the corresponding previous period. The non-food gross bank credit flowed to the priority sectors in 2000-01 was 41.8 percent and credit to the industry was 28.7 percent. The corresponding figure for 1999-2000 was lower at 34.5 percent in the case of priority sectors while it was higher at 33.7 percent in respect of the industry sector. The flow of credit to the wholesale trade (excluding food procurement) was lower at 1.9 percent in 2000-01 than that at 5.7 percent in 1999-2000. The share of non-food credit flowing to medium and large industry and wholesale trading during April-October in 2001-02 was lower at 23.0 percent and 0.3 percent than the level of 46.2 percent and 3.6 percent, respectively, in the corresponding period of the previous year, whereas the flow of credit to housing and consumer durables during this period exceeded that in the corresponding previous period. Responding to the implications of international developments in September 2001, the Reserve Bank effected a reduction in the ceiling rate an export credit by one percentage point for a period of six months ending March 31, 2002. As regards export credit
refinance limit, the refinance limit increased from Rs. 7,350 crore in April 2001 to Rs. 9297 crore as on November 30, 2001. Scheduled commercial banks have been assigned targets and sub targets under the system of priority sector lending in order to ensure timely flow of credit to vital sectors like agriculture and SSI, and to cater to the credit requirements of the weaker sections. In the case of domestic banks (Public and Private) aggregate advances to the priority sector should constitute 40 percent of the total Net Bank Credit (NBC). The sub-target in respect of agriculture is 18 percent of NBC, while that in respect of weaker sections is 10 percent. (Table-3.3)
**Table-3.3**

**Sectoral Deployment of Gross Bank Credit**

<table>
<thead>
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<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td>November</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I. Gross bank credit</td>
<td>9718 (6.6)</td>
<td>40746 (26.0)</td>
<td>34875 (17.7)</td>
<td>27131 (11.7)</td>
<td>41292 (15.9)</td>
<td>12638 (4.2)</td>
<td>58805 (17.2)</td>
<td>469153 (17.0)</td>
<td>536727 (14.4)</td>
<td>41053 (7.6)</td>
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<td></td>
<td>2 (4.4)</td>
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</tr>
<tr>
<td>1. Public food procurement</td>
<td>4164 (51.6)</td>
<td>1368 (12.5)</td>
<td>-2484 (20.2)</td>
<td>-2194 (22.4)</td>
<td>4888 (64.3)</td>
<td>4243 (34.0)</td>
<td>8875 (52.8)</td>
<td>39991 (55.7)</td>
<td>53578 (35.0)</td>
<td>358 (0.7)</td>
</tr>
<tr>
<td>2. Gross non-food credit</td>
<td>5554 (3.9)</td>
<td>39378 (27.0)</td>
<td>37359 (20.2)</td>
<td>29325 (13.2)</td>
<td>36404 (14.5)</td>
<td>8395 (2.9)</td>
<td>49931 (15.4)</td>
<td>428162 (14.4)</td>
<td>482749 (12.5)</td>
<td>40665 (6.4)</td>
</tr>
<tr>
<td>(a) Priority sectors (i+ii+iii)</td>
<td>4048 (8.1)</td>
<td>10261 (19.0)</td>
<td>9168 (14.3)</td>
<td>11551 (15.8)</td>
<td>14627 (17.2)</td>
<td>3924 (3.9)</td>
<td>17216 (15.0)</td>
<td>154414 (17.1)</td>
<td>175259 (13.5)</td>
<td>7132 (4.1)</td>
</tr>
<tr>
<td>(i) Agriculture</td>
<td>1245 (6.2)</td>
<td>2772 (13.1)</td>
<td>3061 (12.8)</td>
<td>4398 (16.3)</td>
<td>3427 (10.9)</td>
<td>1750 (5.0)</td>
<td>4747 (12.0)</td>
<td>51922 (17.0)</td>
<td>60761 (17.0)</td>
<td>4980 (6.2)</td>
</tr>
<tr>
<td>(ii) Small scale industries</td>
<td>2591 (13.0)</td>
<td>4995 (22.1)</td>
<td>4246 (15.4)</td>
<td>4060 (12.7)</td>
<td>7564 (21.0)</td>
<td>592 (1.4)</td>
<td>4331 (8.9)</td>
<td>56002 (6.0)</td>
<td>57199 (2.1)</td>
<td>-139 (-0.2)</td>
</tr>
<tr>
<td>(iii) Other Priority Sectors</td>
<td>212 (2.1)</td>
<td>2494 (24.8)</td>
<td>1861 (14.8)</td>
<td>3093 (21.5)</td>
<td>3636 (20.8)</td>
<td>1582 (7.5)</td>
<td>81338 (30.7)</td>
<td>46490 (34.2)</td>
<td>57299 (23.3)</td>
<td>2291 (4.0)</td>
</tr>
<tr>
<td>(b) Medium and large industries</td>
<td>-771 (-1.3)</td>
<td>17476 (30.2)</td>
<td>18381 (24.6)</td>
<td>9551 (10.3)</td>
<td>14926 (14.5)</td>
<td>2293 (2.0)</td>
<td>16803 (12.9)</td>
<td>162837 (10.5)</td>
<td>172234 (5.8)</td>
<td>16505 (9.6)</td>
</tr>
<tr>
<td>(c) Wholesale trade (excluding food procurement)</td>
<td>361 (5.2)</td>
<td>2419 (33.0)</td>
<td>2231 (22.9)</td>
<td>360 (3.0)</td>
<td>877 (7.1)</td>
<td>-51 (-0.5)</td>
<td>2854 (20.4)</td>
<td>17845 (6.1)</td>
<td>20459 (14.6)</td>
<td>672 (3.3)</td>
</tr>
<tr>
<td>(d) Other sectors</td>
<td>1916 (7.6)</td>
<td>9222 (34.2)</td>
<td>7579 (21.0)</td>
<td>7863 (18.0)</td>
<td>5974 (11.6)</td>
<td>2239 (3.9)</td>
<td>13058 (18.8)</td>
<td>94066 (18.8)</td>
<td>114707 (21.9)</td>
<td>16376 (14.3)</td>
</tr>
<tr>
<td>II. Export Credit</td>
<td>1730 (11.3)</td>
<td>8296 (48.6)</td>
<td>4539 (18.1)</td>
<td>418 (1.4)</td>
<td>3939 (13.1)</td>
<td>-1056 (-3.1)</td>
<td>3227 (9.0)</td>
<td>43321 (10.7)</td>
<td>42078 (-0.8)</td>
<td>328 (0.8)</td>
</tr>
</tbody>
</table>

*Note: Data relate to 50 scheduled commercial banks which account for 90-95 percent of the credit of all scheduled commercial banks. Gross bank credit data include bills with RBI, IDBI, EXIM Bank and other approved financial institutions.*

*Source: Economic Surveys, Govt. of India.*
3.5 Conclusion:

Thus to conclude we can say that: In the context of planning and development, selective credit control is necessary to channelise bank credit to socially desirable and economically useful purposes befitting the broad objectives of the plan. In a country like India, where the resources are very much limited it becomes essential to use these resources in the most efficient way. In India the selective credit controls have been used mainly to prevent speculative hoarding of essential commodities like food grains and agricultural raw materials to check an undue rise in their prices. Since May 1956 selective credit controls are in operation in India and have expanded in coverage, scope and content over the period. But the degree of success of Selective Credit Controls (SCCs) are very much dependent upon the factors like – the extent of effective credit restrictions, because, the SCCs are generally security-oriented and not purpose oriented.

The availability of non-bank finance – Traders may not depend upon banks for financing their inventories and have other sources of finance such as black money.
The degree of shortfall in supply in relation to normal demand – if the shortfall will be greater, greater will be the speculative fever. All these will definitely jeopardize the basic purpose of selective credit controls.

Therefore, if the selective credit controls are to succeed in preventing the rise in prices of sensitive commodities, they have to be accompanied by general credit controls aimed at reducing the capacity of banks to lend money. The end-use or purpose of all credit ought to be taken into account by the banks and credit advanced accordingly if selective credit controls are to be effective.

As the selective credit controls are focused mainly on credit to traders for financing inventories, the RBI generally ensures that credit for production movement of commodities and exports is not adversely affected by such controls. It has made frequent changes in its SCC directives with changing market conditions, but it is very difficult to have definite information about the degree of success or failure of the SCCs. However, there is a general audacity that they do moderate speculative pressures on the prices of sensitive commodities to some extent.
Reference:


Chapter-4
4.1 Introduction:

The design and conduct of monetary policy has an important bearing on aggregate economic activity, cyclical fluctuations in economic activity are a feature of the behavior of most economies, and so an understanding of their patterns and causes is important to the decisions of both policy makers and market participants. Thus the main objective of macroeconomic policy is the avoidance of protracted recessions in which resources go under-utilized, and of periods of unsustainable growth that can jeopardize the price stability. There is widespread acceptance that monetary policy is being actively considered as an instrument of stabilization, working through aggregate demand to smoothen oscillations of economic activity around the desired path.

The transmission mechanism depicts as to how monetary policy affects output and inflation, which are the final objectives of monetary policy. The monetary policy action imparts to the ultimate objectives through two broad sets of channels – financial prices (such as, interest rates, exchange rates, yields asset prices, equity prices)
and financial quantities (money supply, credit aggregates, supply of
government bonds and foreign denominated assets etc.). Though
these channels are not mutually exclusive, the relative importance of
each channel may differ from one economy to another depending on a
number of factors including the underlying structural characteristics,
state of development of financial markets, the instruments available
to monetary policy, the fiscal stance and the degree of openness.

With the erosion of the stability of money demand and the
explanatory power of monetary aggregates on account of financial
innovations, globalisation and the growing sophistication of financial
markets, monetary authorities have increasingly resorted to interest
rates, to the almost complete exclusion of monetary or reserve
aggregates, both as sources of information for determining policy as
well as operating instruments for conducting monetary policy. Now a
days, the main operating instruments for most Central banks is
(i) a short-term interest rate. Markets are the deepest in the short-
end, allowing Central Banks to intervene in support of policy
objectives without generating serious repercussions on market
activity. The impulses from the short-end are transmitted quickly
across the term structure of interest rates and this makes for
efficiency in intervention. The experience has shown that Central
Banks have been proactively moving target interest rates in support of output/employment and financial stability considerations, even if this has meant a temporary departure from their commitment to price stability. Therefore, the interest rate channel emerges as the dominant transmission mechanism of monetary policy. It induces movements in other asset prices to generate wealth effects, in terms of market valuations of financial assets and liabilities, like through exchange rates – higher interest rates induce an appreciation of the domestic currency which, in-turn, leads to a reduction in net exports and hence, in aggregate demand and output.

4.2.1 Real Interest Rates:

The real interest rate assumes critical importance in the transmission of monetary policy to growth. The classical view of the real interest rate is being determined by the real forces of saving and investment and unaffected by variables like monetary growth or inflation that does not fit well with the operational conduct of monetary policy. Given wage and price rigidities, monetary factors can influence real interest rates in the short run and even in the long run, variations in the rate of monetary growth can have effects on real interest rates through Tobin-Mundell Portfolio effects. Similarly as per Keynesian view, the interest rate is purely a monetary
phenomenon, which is determined in the money market is also a partial explanation of the determination of interest rate. The third concept that reconciles the two approaches is a 'neutral rate of interest' — a rate consistent with the stock and flow equilibrium of households and firms at the natural rate of growth of the economy. The synthesis identifies a host of real and monetary factors such as; savings, investment, technology and other preference shocks, stance of fiscal policy, the stance of monetary policy and its interventions, credit restraints, the efficiency of the financial system and the degree of financial liberalization as determinants of real interest rates in a general equilibrium framework. There is a growing acceptance that there is no unique fundamental equilibrium real long term interest rate. Empirical evidence for the US, the UK, France and Germany suggests that the real interest rate increased from 1980s onwards over the levels prevailing during the 1950s and 1960s. The low real interest rates during the 1950s and 1960s caused by the greater policy weightage assigned to output expansion, whereas, the surge in real rates from 1980s onwards reflected tighter monetary policy to contain inflation. Higher real interest rates since the 1980s also reflected a looser fiscal policy stance and an overall tendency towards deregulation of financial markets.
The issue of the appropriate real interest rates for India has achieved a growing focus with the switch over from a planned economy to a market determined economy in the context of financial sector reforms. The Committee to Review the Working of the Monetary System (RBI, 1985) recognized that the depositor need to be assured of a 'reasonably high positive real rate of interest' on savings to deter 'leakages' of financial saving in the form of gold, real estate and physical assets. Therefore, it recommended a real positive interest rate of up to 3 percent depending upon maturity, issuer and instrument marginally positive real return on 91-day Treasury Bills, a positive real return of 2 percent per annum for bank deposits of maturity of 5 years or more and a positive real return of 3 percent per annum on 15-year government dated securities. There is also an influential view that the optimum real interest should be closer to the expected long-term growth rate of the economy.

4.2.2 Nominal Interest Rates:

In India, interest rates as an instrument of monetary policy, were activated in the 1990s. With the financial sector reforms, the monetary management has been extensively relying upon the use of indirect instruments like interest rates and open market operations including repos. In the pre-reform period, the Bank Rate had a
limited role as a monetary policy instrument. It was activated and made as a signaling and reference rate in April 1997 attaching it to rates at which accommodation is provided by the Reserve Bank. The changes in the Bank Rate are seen as an integral part of the monetary policy stance of the Reserve Bank announced from time to time and prepare a direction to general level of interest rates in the system. With the Reserve Bank's stance to move away from the sector specific refinance schemes, the liquidity in the system is managed largely through the Liquidity Adjustment Facility (LAF). The operating procedures of the LAF including auction methods and periods are being refined periodically to make it more efficient. With a procedure for a smooth transition of call money market into a pure inter-bank market, the liquidity support available from the Reserve Bank has been rationalized. As such, the repo and reverse repo rates emerging from the LAF auctions essentially reflect the market conditions of availability of liquidity in the system along with the rate at which the liquidity is available from the Reserve Bank. The LAF injects/ absorbs liquidity on a day-to-day basis in a flexible way and in the process provides a corridor for the call money and other short-term interest rates. The deposit interest rate structure has been, by and large, deregulated except the savings deposits rate, which is
prescribed by the Reserve Bank. Commercial banks have been given virtual freedom to determine their lending rates. The interest rates, particularly at the short-end of the market, are more aligned and integrated.

A contractionary monetary policy is reflected in an increase in the nominal short-term interest rate. As wages and prices take time to adjust to the interest rate change, the higher nominal interest rates translate into higher real short-term as well as long-term interest rates which lessen investment and consumption leading to a fall in aggregate demand and contraction in output. Over a period of time, as wages and commodity prices begin to adjust, aggregate demand is restored and real activity, the real interest rate and the real exchange rate return to their fundamental levels.

Thus, the interest rate is treated as the principal instrument of monetary policy in consonance with monetary policy operating procedures all around the world under which monetary authorities adjust interest rates in response to economic developments. The interest becomes an overall index of financial conditions and all financial prices move in a stable and predictable way with changes in the policy rate.¹
4.3 Growth - Inflation Trade-off:

For monetary policy to be effective in supporting the revival, it must exert a systematic effect on economic activity, i.e., output, employment, real interest rates and real exchange rates. Thus, the question of what monetary policy can or cannot do in the context of the deceleration is inextricably linked to the debate on the issue of neutrality of money. Though by and large, the debate on the neutrality of money remains unsettled but the swings in the paradigm across the spectrum of the debate have been a powerful force in shaping the stance and conduct of monetary policy. Till the 1950s, monetary policy was subordinated to fiscal policy. Expansionary fiscal policy supplemented by the discretionary financing of fiscal deficits by monetary policy and keeping interest rate low to stimulate investment was the preferred combination due to the dominance of Keynesianism after the Great Depression of 1929. But the influential work on the US economy in 1960s, showed that peaks and troughs of money supply changes systematically preceded the peaks and troughs of economic activity, leading upto the premise that monetary policy has powerful effects on real variables in the short run.\(^2\) Accordingly, the debate produced a transitory synthesis during the 1960s and the 1970s within the dominance of the Keynesian paradigm. Money
started to matter and Central banks began to employ monetary policy to reduce fluctuations in real variables. Several developed countries including the USA, Canada and Britain pursued expansionary monetary policies. But the massive oil price hike of 1973 stepped up global inflation and the persistent high unemployment rates led to the stagflation. The stagflation of the 1970s fuelled skepticism about the beneficial effects of expansionary monetary policy. The counter-revolution, were led by Milton Friedman, the keeper of the 'living tradition' of the classical faith. Continuous inflation was found to be largely or solely the result of excessive monetary growth. Expanding the Phillips Curve with expectations showed that the trade-off between unemployment and inflation could possibly exist in the short run; in the long run, however, there was no trade-off. Further, it was argued that long and variable lags in the operation of monetary policy can destabilize the impact of counter-cyclical monetary policy and accordingly the desired short run impact was virtually unpredictable. The expansionary monetary policy to fight a down turn can take effect when the economy is booming. All this led to the advocacy for resisting the temptation to exploit the possible short run trade-off and to set up a rigid rule fixing the growth rate of money stock to the trend growth rate of output. Thus, the first half of the
1970s was characterized by a considerable amount of uncertainty regarding the conduct of monetary policy and the ability of policy makers to 'fine tune' the economy. But in the second half of the 1970s and up to the mid-1980's, monetary targeting became the **raison d'être** of the conduct of monetary policy. Empirical investigation turned out systematic evidence of stability in the money demand function, which strengthened the case for using monetary aggregates as the intermediate target since changes in money supply could be traced to predictable changes in prices, interest rates and income. Money supply rules were also seen as a means of securing freedom from fiscal policy by eschewing discretionary actions. Germany, Switzerland and the USA were the first to adopt monetary targets in the operating framework of monetary policy in 1975, followed by Canada in 1976, and France and Australia in 1977. In 1980s, many developing countries also adopted various formulations of the money rule.

In the latter half of the 1980s, Central banks all over the world were experimenting with a variety of operating instruments and analytics with a broad preference for indirect instruments and a market orientation of monetary policy. Beginning in 1989, a number of countries have put in place institutional settings for directly
achieving the primary target of monetary policy-inflation. While inflation targeting has been characterized alternatively as ‘constrained discretion’ and ‘the interest rate analog of a money growth rule’, it has opened up a number of dilemmas for practitioners of monetary policy, i.e., the lack of complete integration into economic theory, the neutrality hypothesis and the relationship between growth and inflation. Growing recognition of the powerful effects of monetary policy on the real economy has implied that monetary authorities have been forced to take positions on the short run trade-off between growth and inflation and the choice severely conditioned by the losses of macroeconomic welfare that can arise as a result of an inappropriate position along the growth-inflation curve. This choice has become even more severely constrained given the conviction that this curve has non-linear segments, implying that growth and inflation are positively related along a certain portion of the curve, and negatively related elsewhere, as shown in the chart 4.1
In business cycle terminology, this means that growth and inflation are both pro-as well as counter cyclical. At the operational level, it implies that inflation at low levels is beneficial for growth by 'greasing the wheels' of the economy, but there is a point beyond which inflation becomes inimical for growth. In recent years, monetary authorities have increasingly come out of the closet to reflect growth considerations, both explicitly and implicitly, in their objective functions. Even in countries, which have adopted inflation targets as the goal of monetary policy, output considerations are explicitly incorporate in their monetary policy frameworks.

4.3.1 The International Experience:

Multiplicity of objectives entails assignment of degrees of importance, depending on the hierarchy of macroeconomic priorities. A proximate starting point to the resolution of the dilemma is the identification of the threshold/ optimal level of inflation beyond which it has negative effects on growth. Empirical investigations of the location of the threshold have proliferated in the literature since the 1970s. Early efforts were based on estimating Phillips' curve type relationships with high frequency data. Consequently, the threshold inflation was estimated under growth accounting frameworks. The empirical affirmation produced in the second half of
1990s suggests that there exists a significant and negative correlation between high inflation and growth. Inflation instability is robustly and negatively correlated with growth variability at high levels of inflation. In industrialized countries the threshold rate of inflation is placed in the range of 1 – 3 percent. Several recent studies incorporating developing countries, including India, have empirically located threshold inflation rates in the range of 8 percent to 40 percent. The range is relatively wide because measured productivity in the traded sectors in these Countries is generally higher than in the non-traded sectors. Measuring threshold inflation in a cross-country framework runs the risk of being influenced by extreme values since samples include countries with inflation as low as 1 percent and as high as 200 percent and even higher. That's why it will be appropriate to estimate threshold inflation for each country separately in order to avoid the risk of being influenced by extreme values.

4.3.2 The Indian Experience:

In the face of oil price hikes and agricultural supply shocks, there was a considerable concern about inflation in the 1970s, but there was a lack of consensus about the tolerable rate of inflation. The reference of the Chakarvarty Committee to 4 percent as the
acceptable rise in prices can be regarded as the first influential fix on
the threshold rate of inflation in India Testing for the threshold
within the framework of a macro-econometric model suggested a
range of 5 to 7 percent, initially 6 – 7 percent and eventually 5 – 6
percent. Employing a variety of methodologies, studies conducted in
the Indian context obtain a range from 4 to 7 percent for the
threshold inflation rate. The lower bound of 4 percent regarded as
output neutral inflation rate with the positive effects of inflation
petering off after 7 percent. There is not much empirical support for
the trade-off between the anticipated rate of inflation and output
growth although the negative effects of inflation on output are
robustly confirmed. A recent study suggests that for inflation up to
6.5 percent, the growth objective of monetary policy can take
precedence over the price stability objective. However, once the
inflation level reaches 6.5 percent, price stability objective should be
given greater relative importance. But with prolonged price stability
at the global level as well as in India, the threshold rate is expected
to move downwards.

Several empirical studies conducted for estimating the
threshold inflation for India show that the results are sensitive to the
methodology, the period of study and the choice of possible factors
determining growth or conditioning variables. There is no unanimity on the specification of the appropriate model for estimating the growth – inflation relationship, possibly because the relationship itself is changing fairly rapidly. The monetary authorities should try and ensure that the inflation rate stabilizes in the 'near-neighbourhood' of its threshold level. For this an optimal rate of money growth becomes essential because there is a long run relationship between money, inflation and growth. This relationship is represented by an equation.

\[ \pi_t = \mu_t - Y \times g_t \]

Where, \( \pi \) is the rate of inflation, \( \mu_t \) is the rate of money supply, \( Y \) is the income elasticity of money demand and \( g_t \) is the rate of growth.

Let's assume that:

\( Y = 1.25 \)

\( \pi = 5\% \) (threshold level)

\( g = 7\% - 8\% \) (targeted)

If we put all these values in the given equation, then the optimal level of monetary expansion would be around 14-15 percent.
Money supply less than this may decrease the growth rate and lead to recession whereas money supply greater than this will rise the inflation and jeopardize the price stability objective. Thus, the results broadly suggest that money growth of about 14 to 15 percent would be sufficient to ensure that economic activity is maximized without fueling inflationary expectations.

4.4 Conclusion:

Thus we conclude that with financial liberalization and globalisation, the relationship between money output and prices has turned increasingly volatile and unpredictable. Long and variable lags in monetary policy and changeable transmission channels have posed a considerable challenge for the conduct of monetary policy. As a result various Central banks have abandoned monetary targeting and experimented with a number of different nominal anchors, such as interest rates and the exchange rate, which could provide a fix on inflation. The growing complexities of monetary management during the 1990s required that the formulation of monetary policy be based on the information gathered from a large number of macro-economic indicators rather than being predicated on a single monetary aggregate. Thus, in view of the changing monetary dynamics, the Reserve Bank of India formally switched from monetary targeting
and broad-based its list of policy indicators in April 1998. The Monetary and Credit Policy Statement of April 1998 announced that the Reserve Bank would: "Adopt a multiple indicator approach wherein interest rates or rates of return in different markets (money, capital and government securities markets) along with such data as on currency, credit extended by banks and financial institutions, fiscal position, trade, capital flows, inflation rate, exchange rate, refinancing and transactions in foreign exchange available on high frequency basis are juxtaposed with output data for drawing policy perspectives."

Although the exclusive use of monetary aggregates has been de-emphasized, it remains an important indicator of the monetary policy stance, with the monetary and credit policy statements announcing monetary projections for the year. It continues to be relevant for India simply because of two basic reasons. First, since the money demand function has remained reasonably stable, it remains helpful in predicting price movements with reasonable accuracy at least over a period of time. Secondly, the money stock target is relatively well understood by the public at large, with the money supply target, the stance of monetary policy is unambiguously defined and gives a clear signal to market participants. The table-4.1
and the chart 4.1a and 4.1b clearly depict the stable relationship between money supply and price level. The correlations and coefficient between M₃ and inflation also shows the same relationship. During the first half of the nineties, there is a strong positive relationship between money supply and inflation but in the second half of the nineties due to the sterilization policy inflation remained under control.

Therefore, in the context of Indian economy, the quantity of money continues to play an important role in determining prices. However, the monetary authority must watch the behavior of interest rates in various markets and must intervene and smooth the volatility. At the same time, it is necessary to decompose the sources of inflation in view of the repeated occurrence of supply-side shocks in the economy since the late 1990s.
### TABLE-4.1

**MONEY SUPPLY, INFLATION AND GROWTH**


<table>
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<tr>
<th>Year</th>
<th>Growth Rates</th>
<th>3-Year Moving Average</th>
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<tbody>
<tr>
<td></td>
<td>Real GDP</td>
<td>Inflation (WPI)</td>
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<tr>
<td>1990-91</td>
<td>5.4</td>
<td>10.32</td>
</tr>
<tr>
<td>1991-92</td>
<td>0.8</td>
<td>13.90</td>
</tr>
<tr>
<td>1992-93</td>
<td>5.3</td>
<td>10.00</td>
</tr>
<tr>
<td>1993-94</td>
<td>6.2</td>
<td>8.40</td>
</tr>
<tr>
<td>1994-95</td>
<td>7.8</td>
<td>10.90</td>
</tr>
<tr>
<td>1995-96</td>
<td>7.6</td>
<td>7.80</td>
</tr>
<tr>
<td>1996-97</td>
<td>7.8</td>
<td>6.40</td>
</tr>
<tr>
<td>1997-98</td>
<td>5.0</td>
<td>4.80</td>
</tr>
<tr>
<td>1998-99</td>
<td>5.8</td>
<td>6.00</td>
</tr>
<tr>
<td>1999-2000</td>
<td>6.0</td>
<td>3.20</td>
</tr>
</tbody>
</table>

- $r^*=-0.465\
- $r^{**}=-0.43$

*Correlation between inflation and growth

**Correlation between inflation and money supply

**Source:** Economic Surveys, Govt. of India (1990-2001)
Reference:


Chapter-5
CONCLUSION AND SUGGESTIONS

To conclude we can say that in the contemporary macroeconomic thinking, there is no clear winner. No doctrine can claim universal dominance once enjoyed by Classicals, Keynesians or Monetarists. The Central banking community has had to compete with a radical transformation of the financial environment originating from the impact of liberalisation and financial innovations. Such as, wide ranging deregulation, globalisation of finance and acceleration of competitive pressure leading to a mind boggling variety of financial instruments and a spectacular rise in the volume and value of transactions. There is no doubt that the conduct of monetary policy shaped the process of financial sector reforms, but financial liberalization itself posed fresh challenges to the conduct of monetary management. Though the battle against inflation was won by the latter half of the 1990s, domestic growth declined to 5.0 percent levels during 1996-1997 to 2001-2002 from 7.0 percent levels during 1993-1994 to 1995-1996, which forced the institution of an easy liquidity regime to stimulate investment demand. The evolution of interlinked money, government securities and foreign
exchange markets, posed challenges to monetary management in terms of heightened risks of contagion. The transition from a planned economy to a market economy sharpened the Reserve Bank's monetary policy dilemma of providing credit to both the government and the commercial sector at a reasonable cost, while at the same time containing inflationary pressures.

Despite generalized recognition of price stability as the primary goal of monetary policy of most of the Central banks, there is little evidence that inflation targeting on an average improves performances of output. Though it is clear that inflation has a non-linear relationship with the economic growth. The global inflationary trend, which shows a continuous decline in the inflation rates of different countries including India are shown in the table-5.1 and also depicted in the chart 5.1.

**TABLE-5.1:**

<table>
<thead>
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<tbody>
<tr>
<td>USA</td>
<td>3.0</td>
<td>2.6</td>
<td>2.8</td>
<td>2.9</td>
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<td>0.1</td>
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<td>0.7</td>
<td>-0.3</td>
<td>-0.7</td>
<td>-0.7</td>
</tr>
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<td>2.9</td>
<td>2.8</td>
<td>2.3</td>
<td>2.0</td>
<td>1.5</td>
<td>1.2</td>
<td>2.3</td>
<td>2.5</td>
</tr>
<tr>
<td>India</td>
<td>6.4</td>
<td>10.2</td>
<td>10.2</td>
<td>9.0</td>
<td>7.2</td>
<td>13.2</td>
<td>4.7</td>
<td>4.0</td>
<td>3.4</td>
</tr>
<tr>
<td>East Asia</td>
<td>5.3</td>
<td>6.2</td>
<td>5.8</td>
<td>5.3</td>
<td>4.6</td>
<td>13.0</td>
<td>3.4</td>
<td>1.1</td>
<td>3.7</td>
</tr>
<tr>
<td>South Asia</td>
<td>6.8</td>
<td>10.1</td>
<td>10.3</td>
<td>9.0</td>
<td>7.5</td>
<td>11.6</td>
<td>4.9</td>
<td>4.1</td>
<td>3.6</td>
</tr>
</tbody>
</table>

*Source: World Economic Outlook, IMF, September, 2003.*
It means up to a certain level inflation is beneficial for the economic-growth and beyond that it becomes harmful for the economy. Thus there is a need to have an appropriate fix on the acceptable level of the inflation in India. In the 1970s, the average annual inflation rate, as measured by the WPI was 9 percent and real GDP growth rate was 2.9 percent. In the 1980s, inflation rate was 8 percent while real GDP growth rate was 5.9 percent. In the 1990s the average inflation rate was 8.07 percent and the real GDP growth rate was 5.77 percent. In fact the objective of the policy is to keep the inflation rate near to the threshold level, which is accepted in the range of 4 – 5 percent estimated from the different methods. The developing economics like India are subject to greater supply shocks than developed economies.
Fluctuations in agricultural output have an important bearing on prices. However, continuous increase in prices cannot occur unless it is sustained by a continuing increase in money supply. Therefore the monetary growth must be so moderated that meeting the objective of growth does not push inflation rate beyond this tolerable level on an average.

Thus we can say that though the price stability is of prime importance, growth is equally a matter of policy concern. Although the two objectives are mutually reinforcing in the long run, short-run trade-offs are often live and real, especially in case of structurally constrained economies. It is in this context, Governor Jalan has summed up. "There is a growing consensus now-in theory as well as in practice that Central Bank should have instrumental independence, and concentrate on a single target of inflation control with the use of a single instrument. The position, no doubt, is theoretically sound, but as I look at the history of economic thought and changing fashions in economic policy making, I must confess to a sense of discomfort on whether the current dominant view on 'one target, one instrument' will survive the test of time. In developing countries this whole question of trade-off-particularly at the margin and during periods of external or domestic uncertainties, becomes
even more relevant because of a large non-monetised and agricultural economy. It seems to me that a certain amount of target flexibility and balancing of conflicting objectives are unavoidable.”

(December, 2000)

Therefore, the hypothesis that Central bank should pursue a single target single instrument is rejected.

Since the financial instability is the core of economic instability as demonstrated by the recent financial crises in Asia, Russia, Brazil, Turkey and Argentina, and the Central bank, being placed at the nucleus of the financial system, has a vital role to play in restoring and maintaining financial stability. The role of the Central bank in maintaining financial stability varies cross-sectionally according to the stage of development of the economy as well as overtime, for a given economy. This is due to the fact that domestic financial system is subject to different kinds of shocks – both home grown and external, depending upon the degree of its integration with the global economy. The financial liberalization and technological advances coupled with special characteristics of developing countries have not only increased the scale of financial transactions significantly, but have also greatly enhanced the
inherent risks associated with them, especially by making the transmission of panic easy and fast and often spilling over to other economies. For instance, in 1996 – that is just before the outbreak of the Asian financial crisis – short-term debt as percentage of foreign exchange reserves had shot up to 100 percent for Thailand, 177 percent for Indonesia, and as much as 203 percent for Korea, which made the financial crisis much more severe. Whereas, short term debt as percentage of foreign exchange reserves was only 8 percent for India, which explains the resilience of the Indian financial system during the recent financial crisis. In this context, Governor Jalan remarked in the mid-term review of the monetary and credit policy for 1998-1999 that: "The financial crisis in south-east Asia and Japan has brought to the fore the problems that weak and fragile domestic financial sector can pose for the real economy. It is now established beyond reasonable doubt that while a persistent and unexpected down turn in the real economy creates difficult problems for the financial sector, a fragile financial sector can deepen the real economy crisis and impose heavy social costs. It is, therefore, of utmost importance to strengthen capital adequacy, income recognition and provisioning norms for banks as well as other financial institutions and to move towards full disclosure and
transparency in banking operations in line with international best practice."

The external sector strategy based on – a sustainable current account balance, sufficiency of reserves, stability of reserves, stability in the foreign exchange market, and prudent external debt management has paid rich dividends in terms of attaining macroeconomic stability, that was demonstrated during the South-East Asian crisis, wherein the Indian economy came out relatively unscathed. There is no doubt that the judicious management of the external sector in India is one of the success stories of the 1990s. The most visible indicator of this success story has been the sharp increase in foreign exchange reserves to US$ 75 billion as at end March 2003, equivalent to an import cover of 14 months from an import cover of 2 months in 1990-91, which has now crossed to US$ 100 billion. The external debt to GDP ratio has improved from 38.7 percent in 1991-92 to 20.0 percent in 2002-03. This became possible due to a conscious policy entailing a cautious and prudent approach towards external debt management. The Reserve Bank has been refining its supervisory framework by buttressing the traditional onsite supervisory practices with off-site supervision and increasingly, risk-based supervision. The Reserve Bank instituted a
supervisory strategy comprising on-site inspection, off-site monitoring and control systems internal to the banks. In order to exercise integrated supervision over the financial system, the Board for Financial Supervision (BFS) with Advisory Council was constituted on November 16, 1994. Under the Reserve Bank of India (BFS) Regulations, 1994 it has been gradually developing a risk-based supervision methodology in line with international best practices. Banks have been advised to voluntarily build in risk-weighted components of their subsidiaries into their own balance sheets on a notional basis from year ended March 2001. Besides developing a supervisory rating based on the CAMELS methodology for domestic banks and the CALS methodology for foreign banks for optimizing scarce resources, the Reserve Bank has put in place a framework for Prompt Corrective Action (PCA) based on early warning triggers.

Thus we can say that the Indian financial system on the whole, is in sound health and the Reserve Bank’s record of financial stability is indeed impressive. Therefore instead of pursuing a single-target single instrument rule, it is important that Central banks must, at any time, simultaneously pursue three objectives of price stability, growth and financial stability. Though these objectives are mutually
reinforcing in the long run, the challenge of contemporary Central banking is to manage their short run conflicts and trade-offs.

If we have to judge the efficacy of monetary management by a single criterion, definitely it should be the inflation performance of the economy. Considering the need for development finance in a capital scarce economy monetary management need to be evaluated in an integrated framework in terms of the inter-relationship among money, output and prices. During the 49-year period from 1951-52 to 1999-2000, broad money (M3) expanded at an average annual rate of 13.5 percent while the real GDP grew at a rate of 4.45 percent and the inflation rate (measured as variations in the whole sale price index, WPI) at 6.62 percent. As shown in the table-5.2 and chart 5.2.

**TABLE-5.2**

**MONEY SUPPLY, INFLATION AND GROWTH DECADE WISE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rates</th>
<th>In Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real GDP</td>
<td>Inflation (WPI)</td>
</tr>
<tr>
<td>1951-52 to 1959-60</td>
<td>3.6</td>
<td>1.20</td>
</tr>
<tr>
<td>1960-61 to 1969-70</td>
<td>4.0</td>
<td>6.30</td>
</tr>
<tr>
<td>1970-71 to 1979-80</td>
<td>2.9</td>
<td>9.0</td>
</tr>
<tr>
<td>1980-81 to 1989-90</td>
<td>5.9</td>
<td>8.0</td>
</tr>
<tr>
<td>1990-91 to 1999-2000</td>
<td>5.77</td>
<td>8.07</td>
</tr>
</tbody>
</table>

In terms of inflation performance, the decade of ‘fifties’ was the best and ‘seventies’ was the worst. In terms of overall macroeconomic performance also the seventies was perhaps the worst. During this decade the M₃ accelerated to 17.7 percent per annum, with a preponderant effect on prices, as the inflation rate rose on an average to 9.0 percent a year and the average real GDP growth plummeted to a little under 3.0 percent. During the ‘Nineties’ the first half was highly disturbing because the inflation was continuously in double digit and GDP growth was low and monetary expansion was very high. However, in the second half of the ‘Nineties’ the Reserve Bank was able to control it effectively which results in the considerable
reduction in the inflation rate, slowing down in the monetary expansion and moderate increase in the real GDP growth rate. The reform process has helped accelerate the healthy economic growth of the 1980s in a more sustainable manner, bolstered by greater competitiveness and efficiency gains. Real gross domestic product (GDP) grew at 6.2 percent during the reform period (1992-93 to 2002-2003) higher than that of 5.6 percent in the pre-reform decade (1981-82 to 1990-91). Per capita income grew at 3.9 percent in the reform period as against 3.2 percent in the pre-reform period resulting in a healthy reduction in the poverty ratio. In totality, India’s reform programme has had a definite positive and significant impact on the economy as compared with the past. A plot of 3-year moving averages of variations in money output and prices for the 49-year period from 1951-52 to 1999-2000 brings out this point vividly, showing pointers to what constitutes prudent monetary management. The table-5.3 and the chart 5.3a and 5.3b depict the above explanations.
### TABLE-5.3

**MONEY SUPPLY, INFLATION AND GROWTH**

*(In Percent)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rates</th>
<th>3-Year Moving Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real GDP</td>
<td>Inflation (WPI)</td>
</tr>
<tr>
<td>1951-52</td>
<td>2.33</td>
<td>6.51</td>
</tr>
<tr>
<td>1952-53</td>
<td>2.84</td>
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<tr>
<td>1953-54</td>
<td>6.09</td>
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</tr>
<tr>
<td>1955-56</td>
<td>2.64</td>
<td>-5.23</td>
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<tr>
<td>1956-57</td>
<td>5.69</td>
<td>13.79</td>
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<td>1957-58</td>
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<td>3.03</td>
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<tr>
<td>1958-59</td>
<td>7.59</td>
<td>4.12</td>
</tr>
<tr>
<td>1959-60</td>
<td>2.19</td>
<td>3.95</td>
</tr>
<tr>
<td>1960-61</td>
<td>7.08</td>
<td>6.52</td>
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<td>1961-62</td>
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<td>0.00</td>
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<tr>
<td>1962-63</td>
<td>2.12</td>
<td>4.08</td>
</tr>
<tr>
<td>1963-64</td>
<td>5.06</td>
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<tr>
<td>1964-65</td>
<td>7.58</td>
<td>11.11</td>
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<td>1965-66</td>
<td>-3.65</td>
<td>7.50</td>
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<tr>
<td>1966-67</td>
<td>1.02</td>
<td>13.95</td>
</tr>
<tr>
<td>1968-69</td>
<td>2.61</td>
<td>-0.91</td>
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<tr>
<td>1969-70</td>
<td>6.52</td>
<td>3.69</td>
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<tr>
<td>1970-71</td>
<td>5.01</td>
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<td>1971-72</td>
<td>1.01</td>
<td>5.63</td>
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<tr>
<td>1972-73</td>
<td>-0.32</td>
<td>10.13</td>
</tr>
<tr>
<td>1973-74</td>
<td>4.55</td>
<td>20.34</td>
</tr>
</tbody>
</table>

194
| 1974-75 | 1.16  | 25.15 | 10.92 | 4.90  | 14.78 | 14.43 |
| 1975-76 | 9.00  | -1.13 | 14.99 | 3.80  | 8.73  | 16.50 |
| 1976-77 | 1.25  | 2.11  | 23.58 | 5.90  | 2.09  | 19.00 |
| 1977-78 | 7.47  | 5.10  | 18.45 | 4.74  | 2.46  | 21.30 |
| 1978-79 | 5.50  | 0.00  | 21.90 | 2.59  | 7.46  | 19.33 |
| 1979-80 | -5.20 | 17.27 | 17.74 | 2.49  | 11.77 | 19.23 |
| 1980-81 | 7.17  | 18.22 | 18.10 | 2.69  | 14.87 | 16.10 |
| 1981-82 | 6.10  | 9.29  | 12.51 | 5.46  | 10.80 | 15.73 |
| 1982-83 | 3.10  | 4.90  | 16.62 | 5.79  | 7.24  | 15.77 |
| 1983-84 | 8.25  | 7.63  | 18.23 | 5.04  | 6.30  | 17.93 |
| 1984-85 | 3.77  | 6.38  | 18.96 | 5.37  | 6.17  | 17.73 |
| 1985-86 | 4.08  | 4.41  | 15.99 | 4.07  | 5.57  | 17.87 |
| 1986-87 | 4.28  | 5.82  | 18.63 | 4.23  | 6.15  | 16.87 |
| 1987-88 | 4.32  | 8.21  | 15.99 | 6.42  | 7.11  | 17.47 |
| 1988-89 | 10.65 | 7.45  | 17.79 | 7.29  | 7.68  | 17.73 |
| 1989-90 | 6.89  | 7.39  | 19.36 | 7.64  | 8.39  | 17.43 |
| 1990-91 | 5.40  | 10.32 | 15.10 | 4.35  | 10.50 | 17.43 |
| 1991-92 | 0.80  | 13.90 | 19.30 | 3.83  | 11.40 | 16.70 |
| 1992-93 | 5.30  | 10.00 | 15.70 | 4.1   | 10.76 | 17.73 |
| 1993-94 | 6.20  | 8.40  | 18.20 | 6.43  | 9.76  | 18.70 |
| 1994-95 | 7.80  | 10.90 | 22.20 | 7.2   | 9.03  | 17.86 |
| 1995-96 | 7.60  | 7.80  | 13.20 | 7.73  | 8.36  | 17.13 |
| 1996-97 | 7.80  | 6.40  | 16.00 | 6.80  | 6.33  | 15.40 |
| 1997-98 | 5.00  | 4.80  | 17.00 | 6.20  | 5.73  | 15.40 |
| 1998-99 | 5.80  | 6.00  | 13.20 | 5.6   | 4.66  | 14.93 |
| 1999-200| 6.00  | 3.20  | 14.60 |       |       |       |

\[ r^*=-0.063 \quad r^{**}=0.250 \quad r^*=0.176 \quad r^{**}=0.486 \]

*Correlation between inflation and growth

**Correlation between money supply and inflation

**Source:** RBI Occasional paper Vol.18, No. 2 & 3 (June & Sept.), 1997 and Annual Reports, 1998 to 2003.
Chart-5.3a: Variations in Money Supply, Inflation & Growth
(1951-52 to 1999-2000)
Chart-5.3b: Variations in Money Supply, Inflation & Growth (1951-52 to 1999-2000) (Three Year Moving Averages)
Therefore, in a globalized world the monetary management has become much more complex and interdependent. A key factor that guides the conduct of monetary management is how to achieve the benefits of market integration while minimizing the risks of market instability. An integral component of Central bank work is the development of financial markets that can increasingly shift the burden of risk mitigation and costs from the authorities to the markets. Central banks need to take into account, among others, developments in the global economic, inflationary and interest rate situations, exchange rate movements and capital movements while formulating monetary policy. In fact, the hazard of conducting modern day monetary policy is that, if you meet expectations, the markets get disappointed. Thus monetary policy has a dual task of economic and expectations management. The additional challenge of monetary management in the current macro environment is to keep the long rates stable while reducing the rates at the short end.

Lastly, we conclude that the record of the Reserve Bank in monetary management has been on balance satisfactory. In fact, it will be appropriate to conclude that the degree of credibility that the Reserve Bank has earned overtime, is in itself an effective instrument of monetary policy in meeting the future challenges.
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