

RESERVE BANK OF INDIA  
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MONETARY AND CREDIT POLICY ISSUES

**Narendra Jadhav**

The Unsettled State of Macroeconomics and  
Implications for the Conduct of Monetary Policy

**A. Vasudevan**

Analytics of Monetary Management

**Y. S. R. Sarma**

Money, Output and Prices

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Need for Fresh Approach to Credit and Monetary  
Policy Formulation in India : A Few Suggestions

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Role of the Reserve Bank of India :  
Regulatory, Developmental and  
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Some Suggestions on Monetary Policy

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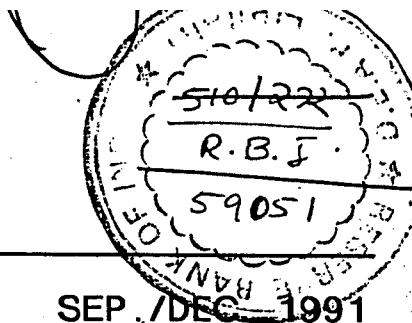
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### *Editor's Remarks*

It is by now well recognised that there are many unsettled issues in the theory and practice of monetary policy. These issues have assumed large dimensions, particularly in the wake of the ongoing economic policy reforms towards liberalisation and deregulation of real as well as financial sectors.

A critical appraisal of monetary policy issues had become imminent when the first signs of the need for economic adjustment and stabilisation were experienced in early 1991. A few senior officials of RBI had attempted to address some of the issues by preparing special papers in the first half of 1991. These papers were initially meant for discussion in an internal seminar which however, could not take place due to certain exigencies of circumstances. But, as the papers raise a number of critical issues and contain some suggestions for policy action, the editorial committee of the Occasional Papers felt that they should be made available with minimal editorial changes, to the academic community and professional economists elsewhere, through a special issue combining the two numbers for September and December, 1991. We hope that they would make a profitable reading.

A. Vasudevan

# The Unsettled State of Macroeconomics and Implications for the Conduct of Monetary Policy

NARENDRA JADHAV\*

This paper presents an eclectic survey of macroeconomic thinking focussing in particular on 'rational expectations' and 'new classical' schools and discusses issues arising out of corresponding paradigms in monetary theory and conduct of monetary policy. It is argued that though the recent post-Keynesian developments in macroeconomic thinking have cast a shadow of doubt on the efficacy of monetary policy, it has not undermined the scope for meaningful monetary policy. First, new classical economists are not always anti-policy. Credibility is an essential precondition to a successful anti-inflation policy. Second, policy ineffectiveness proposition has been derived under extremely restrictive and contrived premises which is often overlooked.

## Introduction

ECONOMISTS as a tribe are notorious for disagreement and yet, few professional economists today would disagree that the present state of macroeconomics is an unsettled one. Admittedly, macroeconomics was always in a fluid state, as is the case with any lively discipline. It is also true, however, that until recently there generally was a view that could be called 'the mainstream thinking' notwithstanding occasional heretical viewpoints. In contrast, macroeconomic thinking today is characterised by several competing schools of thought, *none* of which overwhelming the others by its theoretical and empirical dominance.

The unsettled state of macroeconomics has naturally permeated to the arena of monetary economics and as such, has important implications for the conduct of monetary policy. This paper presents an eclectic survey of vicissitudes in macroeconomic thinking and corresponding paradigms in monetary theory with a view to offer a perspective on the conduct of monetary policy in a developing economy like India.

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The paper is organised as follows :

Section I traces the evolution of macro economic thinking. Against that backdrop, Section II recounts various strands in monetary theory. Section III is then devoted to the feasibility and efficacy of monetary policy in the context of developing countries. The final Section offers some concluding observations.

### I. Evolution of Macroeconomic Thinking

Much of the academic literature during the 1980's comprised contributions by the protagonists and antagonists of the 'rational expectations hypothesis' and the so-called 'new classical macroeconomics'. In order to clearly discern and delineate what is *new* and what is *classical* about the new classical macroeconomics, it is appropriate to start with the classical economics.

#### Classical Economics

Keynes referred to disparate economists such as Smith, Ricardo, Mill, Marshall and Pigou as classical economists<sup>1</sup>. The classical school postulated that prices and wages are 'perfectly flexible' and there is 'perfect information' on the part of market participants. As a result, the labour and product markets function like the 'auction markets' - thereby remaining in the continuous state of equilibrium. Under these circumstances, demand for and supply of labour determine its price, i.e., the *real* wage rate and the quantity, i.e., level of employment. Given the economy-wide production function, the volume of employment, in turn, determines the aggregate output. Since the production function for the economy depends on technology, capital stock and population, productivity and the like, it is clear that output is determined *solely* by these *real* or non-monetary factors i.e, factors that affect aggregate supply rather than aggregate demand.

To classical economists, aggregate output would automatically reach the full employment level if working of the market forces is unimpeded. The rationale for this contention was derived from the *Say's Law of Markets* which stated that 'supply creates its own demand'. When commodities are produced, simultaneously, income is generated for the factors of production. According to the Say's Law, *incremental* income generated in the production activities is sufficient to 'demand' the *incremental* production; a process which logically culminates into the attainment of full employment.

The working of the labour market is conducive to this process of attainment of full employment in the absence of interference such as government regulations (like minimum wage laws), unions, cartels or monopolies. In the face of incipient unemployment, given the assumed 'perfect flexibility' of wages, and 'perfect' information, money wages fall until all those who wished to work at the going wage rate are employed. Consequently, unemployment is eliminated and full employment output is restored. In this set up, unemployment, if any, is attributable entirely to government regulations which prevent the real wage rate from reaching its market clearing level.

In the classical framework, hardly any attention was paid to aggregate demand, and as such, no role was accorded to the demand management (i.e., monetary or fiscal) policies. Changes in aggregate demand, it was argued, would reflect in price movements but *not* have any impact on output and employment. For example, if prices rose, the real wage rate would fall and employers would wish to hire more labour. Given the full employment of labour, no additional labour would be forthcoming. Indeed, given the assumption of 'perfect' information, a part of labour would be unwilling to work at the reduced real wage rate. The demand for labour would thus, exceed its supply, and this situation would continue till the nominal wage is bid-up by the same proportion as prices, restoring the equilibrium real wage level again, leaving the aggregate output unaffected. It follows therefore, that demand management policies are entirely unwarranted. Accordingly, the *'laissez faire'* turns out to be the ideal strategy for the attainment of full employment equilibrium.

### Keynesian Revolution, Neo-Classical Synthesis and Neo-Keynesianism

Keynes challenged the premises and prescriptions of the classical theory. Keynes' new macroeconomic theory was welcome because it seemed to fill the yawning gap between economic analysis and the real-world problem of the Great Depression of the 1930's<sup>2</sup>. The Keynesian economics offered a plausible explanation and suggested a feasible course of policy action.

In the simple version of the Keynesian model (where prices are assumed to be fixed), aggregate output is determined solely by aggregate demand (i.e., desired aggregate spending). If actual output exceeds aggregate demand, 'unwanted inventories' accumulate leading to reduction in output till it matches the level of aggregate demand. Since



aggregate output is determined by aggregate demand alone, it follows that variations in output must be caused by fluctuations in the components of aggregate demand, i.e., private consumption expenditure, private investment spending, and government expenditure.

Among the components of aggregate spending, consumption expenditure is primarily *induced* by aggregate income while government spending is an exogenous variable determined by the policy-makers which leaves only private investment spending as the component of aggregate demand contributing to volatility of aggregate output. Keynes argued that private investment, *inter alia*, depends on the 'state of business expectations' regarding the future profitability of investment projects, which, being based on 'flimsy foundations' are subject to frequent and, at times, radical swings leading to fluctuations in aggregate output. Inadequate investment and the resultant deficiency of aggregate demand was the Keynesian explanation for massive unemployment during the Great Depression.

A more elaborate version of the Keynesian model conceded that wages and prices were not inflexible, but it was argued that they did *not* move in such a manner to clear the labour market either, as was assumed by the classical school. The Keynesian school emphasised the 'stickiness' of the money wage and the failure of market participants to perceive the real wage correctly. As a consequence, the labour market does not remain in continual equilibrium at full employment. Full employment equilibrium is thus, an exception rather than a rule.

In a situation of less than full employment, which is deemed to be a common place occurrence, if prices rise, real wages fall and employers find it desirable to hire more labour. So long as unemployment is there, workers would be forthcoming and additional output would be generated. If prices continue to rise, real wages ultimately fall to the market-clearing levels; unemployment is eliminated and full employment equilibrium is established, just as in the classical model. It is precisely for this analysis of aggregate supply that encompasses *both*, the case of unemployment and the classical case of full employment that Keynes referred to his analysis as a *general theory*.

The Keynesian view of macro economics developed into the so-called 'neo-classical synthesis' which, in turn, became the standard textbook approach to macroeconomics. The neo-classical synthesis claimed that the Keynesian analysis explains unemployment and suggests remedies. Once full employment is attained, however, the

classical analysis of resource allocation, income distribution and welfare economics, all of which are well grounded, in micro economics, becomes relevant. The neo-classical synthesis, to an extent, was schizophrenic in character, subscribing to *both* the Keynesian as well as classical doctrine.

Later day Keynesians, neo-Keynesians as they are often called<sup>3</sup> did attempt to correct this schizophrenic character by providing microeconomic foundations to Keynesian macro relationships. Tobin, Ando, Modigliani, Jorgenson, among others, tried to demonstrate that aggregate behaviour encapsulated in Keynesian macro relationships is consistent with optimisation by individual economic agents<sup>4</sup>.

In the 1960's, neo-Keynesians added the so-called Phillips Curve to their kit of analytical tools. The Phillips Curve depicts an inverse relationship between inflation and unemployment i.e., lower unemployment is said to be consistent with higher inflation - a trade-off. A logical implication of this relationship is that higher economic growth can be achieved only at the cost of acceleration of inflation.

Policy implications of the Keynesian and neo-Keynesian thinking are clear. Keynes dispelled the resolute faith of classical economists in the market force and legitimacy of the *laissez faire*. Neo-Keynesians took the same argument further and proclaimed that government intervention could remedy market failures. Problems associated with deficiency of aggregate demand for example, could be resolved by expansionary fiscal policies. Neo-Keynesian economists regarded the Phillips Curve relationship as stable and asserted its usefulness for demand management policies. Fiscal measures were especially deemed to be effective in moving the economy along the Phillips Curve - setting it at a preferred combination of inflation and unemployment. These policy prescriptions were widely accepted during the 1960's<sup>5</sup>.

The neo-Keynesian hegemony was called into question by a chain of traumatic events in the early 1970's: breakdown of the fixed exchange rate system, the first OPEC oil shock, and bad harvests combined with the aftermath of the Vietnam War leading to high inflation rates *and* high unemployment rates in the USA. Economies of several other countries also faltered during the same period. The phenomenon of 'stagflation' became commonplace. The incidence of high inflation rate contemporaneous with high unemployment rate and stagnating (or even faltering) output seemed at odds with the neo-Keynesian Phillips Curve.

Professional response to these events was characterised by a significant polarisation in favour of the so-called monetarism. During the 1950's and 1960's, the influence of monetarism was minimal. Indeed, Milton Friedman, the eloquent champion of monetarism was deemed to be a heretic until then. The events of the early 1970's brought forth the monetarism as a paradigm to reckon with<sup>6</sup>.

### Monetarism<sup>7</sup>

Monetarists appeal to the classical belief in market forces which Keynes had decisively rejected. According to them, there exists an equilibrium level of output and employment referred to as the *natural rate*, determined by capital stock, technology, productivity and the institutional framework. The natural rate of output and employment is determined much the same way as in the classical model; in contrast, however, the economy, is *not* assumed to be at these natural levels in the *short run*.

Monetarists believe that the Phillips Curve relationship is valid only in the short run. Accordingly, expansionary demand management policies aimed at lowering the unemployment rate are useful at best in the short run. The unemployment rate will gradually return to the natural rate and the lasting impact of expansionary policy will be a higher inflation rate. The reasoning behind this prognosis is as follows :

When the government adopts an expansionary policy, it results in more production and higher prices. Initially, workers consider the price increases as temporary and do not revise their price expectations (which following the adaptive expectations hypothesis are formed only on the basis of past inflation rates). Consequently, employers getting higher prices without having to pay commensurately higher wages, increase their demand for labour. Over a period of time, workers begin to realise the fall in real wages, revise their expectations upwards and demand higher nominal wages. The adjustment takes time, but in the long run, the price expectations catch up with the actual inflation rate and the classical long-run equilibrium position is restored.

In spite of the convergence of views regarding potency of demand management policies<sup>8</sup> in the short run, policy prescriptions of monetarists and neo-Keynesians are poles apart; monetarists plead for minimal or no government intervention while neo-Keynesians press for active demand management policies. This irreconcilability of policy stance emanates from differences in accent between the short run and

long run as also the disparate beliefs in the inherent stability of the private sector.

Monetarists emphasise the long run, in which they see the neo-Keynesian conclusions regarding effectiveness of demand management policies falter and the classical belief in the independence of the real side of the economy from the demand management policies vindicated. Of course, monetarists do concede that in the short run, demand management policies (especially monetary policy) have impact on output and employment. They are, however, skeptical of their usefulness. According to them all kinds of lags interfere which encumber the timing of policy measures. If the government is too early or too slow in response, the consequences could be disastrous. In any case, the private sector is inherently stable and shock absorbing in nature. The government, therefore, did better to keep its hands off and let the market forces work unimpeded.

Neo-Keynesians, on other hand, stress the short run, adhering to Keynes' well known phrase: "in the long run we are all dead". They question the self-correcting ability of the economic system, as the private sector is inherently unstable and shock-producing rather than shock - absorbing. According to neo-Keynesians the short run is long enough to warrant active demand management policies. To be sure, there could be errors of judgement on the part of the policy-makers due to informational constraints. Neo-Keynesians perceive that it is less harmful to adopt an 'interventionist' strategy rather than wait for long-drawn and costly macroeconomic adjustment. For them, 'fine tuning' of the economy through appropriate demand management policies *needs* to be done, *can* be done and, therefore, *should* be done.

#### Rational Expectations Revolution and New Classical Economics

Around the late 1970's when the debate between monetarists and neo-Keynesians stalemated, a new paradigm emerged on the macro-economic scene- the so-called new classical economics, which has had a pervasive influence on macroeconomic thinking<sup>9</sup>. Leading protagonists of new classical economics include Lucas, Sargent, Wallace, McCallum and Barro<sup>10</sup>.

The new classical economics is based on three principal tenets:

1. Real economic decisions - i.e. about saving, consumption or investment, by economic agents are based entirely on real, not nominal or monetary factors.
2. Economic agents are consistently successful optimisers within the bounds of their information and are, therefore, *continuously* in equilibrium.
3. Economic agents hold rational expectations i.e. they do not make any *systematic* errors in evaluating the economic environment.

The first of these three tenets, more than anything else, reflects the 'classical' tradition in the new classical doctrine. The remaining two, however, are its new and distinctive characteristics and, as such, need elaboration.

(a) While most other economists treat the state of equilibrium as a limiting case, new classical economists take a radically different view in treating it as *always obtaining*. Neo-Keynesians consider this assumption absurd in the light of the observed instability of markets and recurrence of crises, as well as phenomena such as unemployment and business cycles which indicate the persistence of disequilibrium. Even monetarists who are, in a way, kinsmen of new classical economists, object to the assumption of equilibrium on the grounds that it takes time to adapt expectations of a variable to its actual value, during which time, the economy is in disequilibrium.

The obsession of new classical economists regarding equilibrium appears to emanate from their relentless drive for microfoundations. New classical economists believe that macroeconomic (i.e., aggregate) relationships are crude heuristic devices that do not reveal the underlying behaviour of optimising individuals. As a result, such relationships are not stable and invariant and must not form the foundations of any fundamental economic analysis. In his survey of the new classical macroeconomics Sargent (1982) characterises it as going beyond (aggregate) *ad hoc* supply and demand curves. He argues that, in order to explain the behaviour of macroeconomic aggregates, we must go back to the underlying objective functions and the constraints that economic agents face. In a static framework, among others, it requires the assumption that economic agents are consistently successful optimisers, i.e., in a continuous state of equilibrium.

(b) The rational expectations hypothesis (REH) is perhaps the most

striking feature of new classical economics; so much so that early new classical economists were also called the 'rational expectationists'. This perception has changed, however, in the 1980's with the realisation that the REH is a necessary but *not* a sufficient condition for the new classical economics, i.e., every new classical economist necessarily believes in the REH but *not* every economist using the REH is a new classical economist.

The REH has several interpretations. The commonsense interpretation of the REH is that economic agents use *all* available information and their knowledge of the way economy works to form their expectations. In the conventional monetarist approach, expectations are formed adaptively, i.e., economic agents adjust their current expectations to correct expectational errors made in previous periods. In this approach, current expectations are determined, *in entirety*, by the past observations. Adaptive expectations are *not* rational in the sense that such expectations could be left unaffected by changes in government policies even when economic agents actually know that those changes influence the variable under consideration. The REH, in contrast, argues that economic agents do the best they can with the information that they have. For example, if people have information that money supply will increase and know that this will result in higher prices, then under the REH they will raise their price expectations and alter their behaviour accordingly.

The concept of rational expectations has an obvious intuitive appeal. Its incorporation into analytical models is, however, not as straightforward. Analytically, in a milder version, it takes the form that economic agents learn from their mistakes and do not persist in making systematic errors. A stronger version of the REH takes the form that economic agents *actually* know the economic structure that truly characterise the world and use it to form their expectations.

Both versions are used extensively in analytical models. The milder version appears plausible though the precise process by which economic agents learn from their past mistakes is never explicitly specified. On the other hand, the stronger version seems to imply that the common man performs in his head calculations that even expert economists find conceptually difficult and often, mathematically intractable. Moreover, as Hahn (1986) points out, to jump from "... the respectable proposition that an economic agent will not persist in expectations which are systematically disappointed. ..." to the proposition that "economic agents have expectations which are not systematically

disappointed (is a ) *non sequitur* of an obvious kind" (p. 281).

From the view point of new classical economists, the REH is consistent with their attempt to derive macroeconomic relationships from neoclassical microeconomics. In the stronger version, the REH implies that economic agents do except what the true model says they *should* expect. This ensures that economic agents are consistent and successful optimisers in a dynamic framework as well.

Policy implications of the new classical economics are devastating. Notably, there is some divergence of views within the adherents of the new classical doctrine. Yet, all their models gravitate towards the conclusion that the government should abstain from active demand management policies. This characteristic feature of the new classical school is referred to as the 'policy-ineffectiveness proposition'.

New classical economists contend that monetarists like Friedman are too generous in ascribing power to demand management policies (especially the monetary policy) over output and employment *even* in the short run. It may be recalled that in the monetarist framework, initial price rise in the wake of an expansionary policy is treated as temporary by workers and given the adaptive nature of their expectations, does not get immediately translated into an upward revision of price expectations. Consequently, output and employment expand until the price expectations catch up with the actual inflation rate, thus, making the expansionary policy potent in the short run. New classical economists argue that expansionary policies operate essentially by inducing expectational errors. With adaptive expectations, such errors might persist for some time but with rational expectations they cannot persist beyond an initial surprise. If economic agents have rational expectations, they use their knowledge of the monetary authority's policy rule to form their expectations of prices. As a result, the authorities cannot trick economic agents into incorrectly forecasting prices and since there are no *systematic* expectational errors, there is no systematic effect on output and employment. The demand management policies are, thus, ineffective.

In view of this startling conclusion, which is attributed primarily to Lucas, the new classical economics was seen initially as a sort of *radical monetarism*, until Sargent and Wallace demonstrated that monetarist policy prescriptions may not be capable of achieving monetarist ends : inflation may sometimes be beyond the control of monetary policy. Sargent and Wallace demonstrated the ineffectiveness

of active demand management policies in a standard Keynesian model with rational expectations<sup>11</sup> and also developed econometric procedures to allow empirical tests of new classical postulates. Barro and Gordon, McCallum and Townsend have made further refinements in the new classical doctrine including application of the game theoretic approach. In all these analyses, the policy ineffectiveness proposition comes through as a common theme.

In the contemporary macro economic thinking, there is no clear winner. No doubt, the academic literature is overwhelmed with studies in the new classical tradition, yet, the doctrine cannot claim universal dominance once enjoyed by Classical, Keynesians or Monetarists by turns. Adherents to monetarism as well as the neo-Keynesian school continue to hold their beliefs though neo-Keynesian are now less sanguine about the policy makers' abilities to fine tune the economy and monetarists are now somewhat skeptical about the length of the short run. On the other hand, there is a new class of eclectic economists like Fisher, Mishkin and other sometimes called the *non-classical rational expectationists* who accept the rational expectations hypothesis as a convenient analytical device in modelling expectations but do *not* subscribe to other tenets of the new classical thinking.

The field of macroeconomics is more divided today than ever before. There is probably, a wider menu of macro economic paradigms available now than at any other time in history. This is precisely why the state of macro economics is unsettled as never before.

## II. Developments in Monetary Theory

In consonance with the evolution of the macroeconomic thinking, monetary theory also has come a long way. Extensive surveys of monetary theory are available in Johnson (1962), Barro and Fischer, (1976) and elsewhere<sup>12</sup>. The focus here, however, is on recounting only the major developments in monetary theory with a view to provide a general flavour of its development.

In the classical tradition, money was treated as a 'veil' - determining the *nominal* values of macro economic aggregates like output and yet, *not* having any effect on the real economic activity (which as may be recalled, was deemed to have been determined by real factors like capital stock, productivity, technology and the like). Money was, thus, regarded as a *reflector* of economic activity rather than its *regulator*.



The classical view of money is encapsulated in the well-known equation of exchange<sup>13</sup>:

$$MV = Py$$

Where M = stock of money  
 P = general price level  
 y = aggregate output  
 V = income velocity of money

The equation of exchange is a simply an identity - a tautology. It merely says that the total value of payments (money stock times the velocity, MV) must equal the total value of sales (output times price, Py). Nothing could follow from an identity, except perhaps, another identity. Classical economists, however, introduced some important assumptions and converted the tautology into a meaningful theory - the celebrated quantity theory of money.

It was postulated that all variables in the equation of exchange *except* the price level are determined elsewhere - output in the real sector by non-monetary factors, money stock by policy makers and the velocity of money by institutional factors (such as payments habits and payments technology). Moreover, output is at full employment equilibrium and velocity is constant in the short run. Under these circumstances, the general price level would vary *proportionately* with money stock- 10 per cent increase in money stock leading to exactly 10 per cent increase in the price level.

It may be noted that in the classical doctrine, interest rate is a non-monetary phenomenon; it is determined by supply of loanable funds (i.e., savings) and demand for them (i.e., investment) which classical economists referred to as the forces of 'productivity and thrift'. The stock of money has no bearing whatsoever on interest rates - a proposition consistent with the so-called *classical dichotomy* i.e., absence of any linkage between the real and monetary sectors of the economy. It was Keynes who established the missing linkage later in his own exposition of monetary theory.

Keynes argued that demand for money (for holding purposes) arises out of three motives : transaction motive, precautionary motive and speculative motive. The transaction demand (prompted by temporal gap between income receipts which are discrete and expenditure which is

continuous) and precautionary demand (prompted by the likelihood of unforeseen contingencies) are subsumed under the classical quantity theory while the speculative demand for money is Keynes' own novel contribution.

Keynes sought to establish a nexus between the real and financial sector of the economy by linking demand for money with interest rates in the context of speculative money holdings. According to Keynes, in a 'given state of expectations', the higher the current rate of interest, the lower would be the real money balances that public would want to hold for speculative purposes. This inverse relationship is on account of two factors :

(i) Money being a non-interest bearing asset, holding a given amount of money entails higher cost in terms of interest income foregone, and,

(ii) Greater likelihood for the interest rate to fall which, given the inverse relationship between interest rates and bond prices, implies likelihood of capital gains for those holding their wealth in the form of bonds rather than in money.

(iii) Classical economists had emphasised only the transaction function of money and treated money demand as an increasing function of output or real income only. In contrast, Keynes emphasised the 'transaction' as well as the 'store of value' function of money and postulated money demand as an increasing function of output but a decreasing function of interest rates. This broadening of the money demand function eliminated the classical dichotomy and accorded a role for money in *real* economic activity.

In the classical or quantity- theoretic view, with an increase in money stock, individuals seek to dispose off their excess money balances. Since velocity of money is constant and output is fixed (at the full employment level), the entire effect of the enlarged money supply is reflected in an upward movement of the price level, leaving the real economic activity unaffected. In the Keynesian framework, on the other hand, increase in money stock spills over not only in the commodity markets as in the classical model but *also* over to the bonds markets. The increased demand for bonds raises bond prices causing interest rates to fall. To the extent that investment spending is interest sensitive, the lower interest rates stimulate investment spending which, in turn, promotes aggregate output. Monetary expansion can thus influence the scale of real economic activity.<sup>14</sup>

Keynes' monetary theory was expanded and refined further by neo-Keynesians. For example, Tobin-Baumol expanded the Keynesian formulation of the transaction demand for money using inventory-theoretic approach; Tobin, Brainard and others extended Keynes' notion of speculative demand for money in the form of portfolio models. These modifications provided further insights without jeopardising the basic contentions of the Keynesian monetary theory.

The Keynesian reformulation of demand for money had significant implication for the conduct of monetary policy. In order to appreciate the early Keynesian stance on monetary policy, one has to examine a 'special twist' that Keynes had introduced in the demand function for money in the form of 'liquidity trap'. Keynes argued that people have a relatively fixed conception of the 'normal' interest rate level. If the current rate of interest is sufficiently below the 'normal' level, most people expect it to rise, and consequently, the bond price to fall. Thus, at very low level of the interest rate, holding bonds may entail capital losses *more* than the interest income receivable, and hence, there would be a large speculative demand for money. Under these circumstances, at some low but finite level of the interest rate, the demand for money curve becomes horizontal. In other words, any increase in money stock would simply be absorbed in money holdings. Consequently, any increase in money stock would merely be reflected in a compensatory decline in the income velocity of money, leaving output and prices almost completely unaffected and thus rendering monetary policy ineffective.

With the benefit of hindsight, it is often argued that Keynes' followers went much farther than Keynes himself. While Keynes regarded the 'liquidity trap' as strictly a 'limiting case', the early Keynesians accepted it as the actual state of affairs. The general conclusion, therefore, was that monetary policy is relatively ineffective and it is the fiscal policy that has the potential to restore full-employment.

Early empirical evidence also seemed to support the belief of the early Keynesians in the ineffectiveness of monetary policy. It was pointed out for example, that during the Great Depression, interest rates in the USA fell to extremely low levels, the three-month Treasury bill rate had declined below 1 per cent. In spite of this 'easy' monetary policy, the worst economic contraction in the US history had occurred. Moreover, early empirical studies found no linkage between movements in nominal interest rates and investment spending. Since the early

Keynesians saw this link as *the* channel through which changes in money stock affect aggregate demand and hence output, finding that the link was weak led them to believe that monetary policy was relatively ineffective.

The first major salvo at the Keynesian monetary theory was fired by Milton Friedman in 1956 with his restatement of the quantity theory of money. Keynesian emphasise on the role of money as an asset was accepted by Friedman, and he generalised it further. Rather than analysing the specific motives for holding money as Keynes did, Friedman simply argued that the demand for money must be influenced by the same factors that influence demand for any asset.

According to Friedman, demand for money is a positive function of the resources available to individuals (i.e., permanent income as measured by the present discounted value of all expected future income), and a negative function of the opportunity costs of holding money (as represented by the expected returns on other assets relative to the expected return on money holdings). Friedman categorised alternatives to money as bonds, equity (common stocks) and goods where the rate of return on goods was proxied by the expected inflation rate

There are two crucial differences between the money demand theories of Keynes and Friedman. First, unlike Keynes' theory which indicates that interest rates are an important determinant of the money demand, Friedman's theory suggests that changes in interest rates have little effect on demand for money<sup>15</sup>. Secondly, in contrast to Keynes who was skeptical about the stability of money demand function, Friedman stressed that the money demand function does not undergo pronounced shifts and hence is stable.

Stability of the money demand function is crucial to the monetarist school for it implies predictable velocity of money. If velocity of money is predictable, then a change in the money stock would have a predictable impact on *nominal* income (*a la* equation of exchange). In the classical view, real income or output was determined by non-monetary factors whereas the price level was determined exclusively by the stock of money in the economy. In other words, the money stock determined *nominal* income. Friedman's analysis demonstrated that even though velocity of money is no longer assumed to be constant, the money stock continues to be the primary determinant of *nominal* income, as in the quantity theory of money. It is in this sense that the Friedman's theory is regarded as a restatement of the quantity theory of money

Friedman and his associates challenged the statistical evidence provided by the early Keynesians regarding ineffectiveness of monetary policy :

(i) Friedman - Schwartz's classic book, 'A Monetary History of the United States, 1867-1960' published in 1963 showed that contrary to the early Keynesian beliefs, monetary policy during the Great Depression was not 'easy'; indeed, it had never been more contractionary. They documented the numerous bank failures of this period and the resultant massive decline in money supply - the largest ever experienced in the U.S. by then.

(ii) A weak link between *nominal* interest rates and investment spending, they argued, does not rule out a strong link between *real* interest rates and investment spending. Indeed, the real interest rates on the Treasury bills were far higher during the Great Depression than was the case during the next 40 years. Nominal interest rates on lower grade bonds (such as Baa corporate bonds), it was pointed out, were also phenomenally high during the Great Depression.

Monetarists, accordingly, argued that the Great Depression could not be singled out as a period that demonstrates the ineffectiveness of monetary policy. If anything, the available empirical evidence, properly interpreted, actually vindicates the potency of monetary policy.

Besides repudiating the Keynesian empirical evidence, monetarists also attempted to provide some positive evidence in support of their claim that money does matter. While the Keynesian statistical evidence relies on the 'structural models' in contrast, the monetarist evidence is typically from the so-called 'reduced form' models<sup>16</sup>.

Monetarist reduced form evidence comprised the following :

(a) Timing evidence, which is based on the philosophical principle called '*Post Hoc, Ergo propter Hoc*' which means that if one event occurs after another, the second event must have been caused by the first. Friedman - Schwartz (1963) study found that over nearly a hundred-year period, in every business cycle the growth rate of money stock declined *before* the growth rate of output. On average the peak in the money growth rate occurred 16 months before the peak in the output. Friedman and Schwartz concluded from this evidence that money growth causes business cycle fluctuations although with 'long and

variable lags'.

(b) Statistical tests were conducted, *inter alia*, by Friedman and Meiselman (1963), to examine what was highly correlated with output - money stock as believed by monetarists or the autonomous expenditure (i.e., investment spending plus government expenditure) as contended by neo-Keynesians. They found that the monetarist model performed better.

The monetarist evidence, in turn, was challenged by neo-Keynesians. First, the statistical tests based on correlation analysis were questioned on the grounds that correlation does not necessarily mean *causation*. The reduced form models deployed by monetarists treated effect of money on output as if the economy were a *black box* in which its working could not be seen. After all, the movements in one variable being closely linked to another does not necessarily mean that one causes the other. The possibility of reverse causation in which changes in output cause changes in money or that a third factor driving *both*, changes in output and money, cannot be ruled out. Similarly, in the case of the timing evidence, one cannot be sure that one variable is causing the other unless the variable deemed to be the leading one also happens to be an exogenous one.

Monetarists in their rebuttal, presented historical evidence which identified an episode of decline in money supply which could reasonably be characterised as an exogenous event and showed that it was soon followed by major business cycle contractions<sup>17</sup>. The historical evidence supplemented by the other statistical evidence did seem to strengthen the monetarist claim that money does matter.

The debate between monetarists and neo-Keynesians had major implications. Neo-Keynesians, in general, accepted that their earlier position that money does not matter at all was not correct. Monetarists, on the other hand, went to the extreme of suggesting that "Inflation is always and everywhere a monetary phenomenon." While neo-Keynesians conceded the inappropriateness of the position that money does not matter, they do not accept the monetarist view that money is *all* that matters. The neo-Keynesians believe that money is important but that fiscal policy as well as 'animal spirits' also contribute to fluctuations in aggregate demand.

After the successful monetarist attack against the early Keynesian position, economic research developed further in two directions. One

was to improve the Keynesian structural models using *additional* channels of monetary influence on aggregate demand<sup>18</sup>. This line of research led to several modifications in the structural macro econometric model such as the FRB-MIT model used by the Federal Reserve Bank of USA. The second direction was to improve upon the monetarist reduced form evidence using more sophisticated models. This line of research culminated into the St. Louis Model which was developed at the Federal Reserve Bank of St. Louis in the late 1960's and early 1970's.

Present day monetarists and neo-Keynesians agree that monetary policy actions will have a substantial effect on output and prices. The difference between them now concerns *not* whether monetary policy can affect output and prices but regarding *how* it should be used for economic stabilisation. In the academic literature, this debate is referred to as the controversy involving 'rules versus discretion'.

Monetarists are non-interventionists; they favour a constant money growth rate which they believe will create an environment in which the inherently stable private sector can function effectively. On the other hand, neo-Keynesians are interventionists. They see the need for discretionary monetary and fiscal policies to keep an unstable private economy on track.

According to monetarists, since money is the dominant influence on nominal income and in the short run, on output as well, stabilising the money growth rate will eliminate the major source of instability in income determination<sup>19</sup>. In any case, discretionary policies are beset with several lags, such as the *data lag* (i.e., the time it takes for policy makers to obtain data that tells them what is happening in the economy), the *recognition lag* (i.e., the time it takes for policy makers to be sure that the data signal impending problems) the *implementation lag* (i.e., the time it takes for policy makers to change the relevant policy instruments) and the *effectiveness lag* (i.e., the time it takes for policy actions to actually impact the economy). In view of these lags, according to monetarists, discretionary policies are at the best useless and at worst maladjusted and destabilising.

On the other hand, neo-Keynesians ridicule the constant money growth rule advocated by monetarists. The neo-Keynesian response is, perhaps, best exemplified in the following quotation from Modigliani (1977) : According to him, the fixed policy rule is equivalent to "... arguing to a man from St. Paul wishing to go to New Orleans on important business that he would be a fool to drive and should instead

get himself a tub and drift down the Mississippi : that way he can be pretty sure that the current will eventually get him to his destination, whereas if he drives, he might take a wrong turn and, before he notices he will be going further and further away from his destination and pretty soon he may end up in Alaska, where he will surely catch pneumonia and may never get to New Orleans" (p. 11).

According to neo-Keynesians, policy makers can anticipate shocks and design policies to combat them. No doubt, there will be errors of judgement, but, on the whole, such policies will result in a more stable economic performance than would be the case with fixed policy rules.

For the new classical economists, the issue of rules versus discretion simply does not arise. In a way, on this they are one with monetarists but for different reasons altogether. Monetarists favour the rules on account of the difficulties of obtaining accurate and timely information about the economic conditions and the perceived inability of the policy makers to adjust policies quickly. The new classical case, in contrast, rests not on the inefficiency of the policy makers but on the efficiency of the private sector in ascertaining the true nature of policy and taking countervailing steps rendering it ineffective.

The new classical economists are extremely skeptical about monetary policy. Their famous 'policy ineffectiveness' proposition is derived from the two essential planks of the new classical doctrine : the Lucas aggregate supply function and the rational expectations hypothesis. The Lucas aggregate supply function postulates that deviations of output from its natural level occurs because of expectational errors. Equivalently, actual prices that are different from expected prices lead economic agents to believe that relative prices have changed which induces them to adjust their output. If people have rational expectations they cannot be misled into incorrectly forecasting prices. With the rational expectations, economic agents use their knowledge of the policy reaction of the monetary authority to form their expectations of future prices. Any systematic policy response is, therefore, anticipated and incorporated into expectations regarding future prices. Consequently, there are no systematic expectational errors and as such, the monetary policy has no systematic effect on the real economic activity. In other words, anticipated monetary policy has no effect on output; only unanticipated policy matters. The monetary authorities could, of course, affect the output by randomly varying the stock of money (i.e., unanticipated policy action) but such an approach would be undesirable on account of the resultant destabilisation.



The 'policy ineffectiveness proposition' demonstrates (under the assumed conditions) limitations on the ability of policy makers to 'fine tune' the economy. The same theme is carried over to Sargent and Wallace's famous monetarist arithmetic<sup>20</sup> in which they generate very non-monetarist conclusions from apparently monetarist postulates.

Sargent and Wallace address the dynamic problem of policy strategies *rather* than individual independent policy *actions*. They show, *inter alia*, that under certain conditions tight monetary policy today would mean inflation later.

Sargent and Wallace assume that

1. Output or real income grows at a constant rate;
2. Prices are directly proportional to the money stock;
3. The government maintains the ratio of government deficit to income constant, and is financed exclusively by government debt outside the central bank;
4. The real rate of interest is constant at a level greater than the rate of real income growth.

Since the rate of interest exceeds the real income growth, the debt-income ratio must rise steadily as deficit is *not* financed by money creation. As the debt-income ratio grows, the public simply will *not* passively go on absorbing the government debt. Sargent and Wallace postulate that there is some upper-bound beyond which the public will not hold debt (as a ratio of income). The government must honour the inter-temporal budget constraint (i.e., government's primary deficit plus interest payments on outstanding government debt must be financed through some combination of created money or additional government debt). As a result, when the debt-income ratio reaches its upper limit, the authorities have to allow the monetary base to grow if the government budget constraint is to be respected, which leads to inflation. The tight monetary policy today could thus, mean inflation later.

New classical economists do not speak with one voice. Lucas, for example, argues that conventional macro econometric models shed no light on the consequences of alternate policies because estimated macro-economic relationships are not invariant to alterations in policy rules. According to Lucas empirical evidence is obtainable but is relevant only

for *steady states*, not for periods of transition between policy regimes. Sargent on the other hand, attempts to estimate macroeconomic relations using economic theory to identify the precise manner in which they are connected to the choice of policy regimes. Barro and Gordon argue that the policy makers have preferences and constraints just as the private individuals do. According to them, the new classical principles consistently applied to policy makers as well as the public imply that the choice of alternative policy regimes is usually not open. Sims and others follow the same tune of reasoning but unlike Barro and Gordon, do not conclude that it leaves no rule for the policy adviser; merely that his role is to help implement the best policy rule, rather than to discover what the rule is.

### III. Whither Monetary Policy?

There is no doubt that the recent developments in macro economic thinking has had a profound impact on the way most economists now think about the conduct of economic policies including the monetary policy. The rational expectations hypothesis and the new classical economics seem to cast a shadow of doubt on the efficacy of monetary policy. A relevant question then is whether it has totally debunked the earlier macroeconomic thinking. From the view point of central bankers, even more pertinent question is whether the new classical economics has irreparably discredited the rationale of monetary policy or equivalently whether it has seriously undermined its efficacy so that there is no scope for any meaningful monetary policy. Contrary to widespread and yet, often perfunctory belief, it is argued that it is *not* so.

*First* of all, new classical economists are not always anti-policy. A case to the point is Sargent's historical analysis (1982) of the 'ends of four big inflations'<sup>21</sup>. Sargent has documented that these four hyper-inflations were halted by (i) the creation of an independent central bank legally committed to resist government attempts to finance deficits by printing money; and (ii) substantial reduction in the government deficit by cuts in government spending and increase in taxes. Given the conventional Phillips Curve trade-off between inflation and output, this should have meant a formidable loss of output. Yet the German hyper-inflation was stopped in its tracks within two months in late 1923 with a loss of only 10 per cent of GNP. Sargent attributes this achievement to the rational expectations on part of the public *and* credibility of the announced policy actions. According to him, credibility is an essential pre-condition to a successful anti-inflation policy.

*Secondly*, even the much-talked-about 'policy ineffectiveness proposition' has been derived under extremely restrictive and contrived promises, which is often overlooked.

(a) The aggregate supply function by Lucas, which is a cornerstone of the ineffectiveness proposition may be appropriate for *temporary* departures from full employment output but its usefulness in capturing the substantial and persistent deviations from full employment, as observed in reality, is highly questionable. If markets always clear and there is no involuntary unemployment as presumed in the formulation of the new classical aggregate supply function, then as Modigliani (1977) puts it, to the new classical economists,

"What happened to the United States in the 1930's was a severe attack of contagious laziness" (p. 6).

(b) With the benefit of the hindsight, it is clear that neo-Keynesians and monetarists made naive assumptions regarding formation of expectations. The rational expectations hypothesis appears to err in the opposite direction by assuming that economic agents are unrealistically sophisticated forecasters. As Benjamin Friedman (1979) puts it,

"...macro economic models based on the assumptions of rational expectations hypothesis do not demonstrate the short-run ineffectiveness of policy because, they are not really short-term models. The information availability assumption of the rational expectations hypothesis implicitly places such models in a long run equilibrium context..." (pp. 39-40).

(c) The policy-ineffectiveness proposition breaks down even if the rational expectations hypothesis is retained, provided that another tenet of the new classical doctrine, i.e., perfect flexibility of prices and wages is dropped. Several economists have argued that on account of contractual arrangements, cost of adjustment and other sources of inertia many prices are sticky<sup>22</sup>. Fisher (1977) has demonstrated that in a model with wage contracts as a likely source of inertia, the policy-ineffectiveness proposition fails *even* though expectations are rational. The failure of the policy-ineffectiveness proposition emanates in the model because of an institutionalised inability of some firms to make full use of all available information<sup>23</sup>.

(d) Policy making authorities do gather what they consider to be all the relevant information on variables they wish to forecast and control.

Moreover, in contrast to individuals they often invest considerable resources in estimating the relationship that characterise the economy. The assumption of rational expectations may, therefore, be closer to reality in respect of the policy makers. In such cases, demand management policies could affect output and employment *even though they are systematic* because individual economic agents who are not rational will not anticipate them.

On the whole, therefore, it appears that the policy-ineffectiveness stance of the new classical should not be taken too literally - certainly not without proper understanding and appreciation of the underlying assumptions.

Of course, this does not mean that the contribution of the new classical economics need to be denigrated. It is just that their conclusions need not be exaggerated out of context. The new classical school demonstrates that 'extreme' conclusions could be derived under a set of 'extreme' assumptions. In that process, it brings out several constraints on the meaningful conduct of monetary policy.

The new classical contributions demonstrate that the effect of a particular policy depends critically on the expectations of economic agents about the policy. Policy makers cannot be overly confident about efficacy of policy actions if they are anticipated by economic agents and countervailing measures are possible.

The rational expectations revolution has also highlighted the importance of credibility to the success of anti-inflation policies. If an anti-inflation policy is not believed by the public, it may be less effective in reducing the inflation rate when implemented and may also lead to a larger loss of output than necessary. Achieving credibility should then be an important goal for policy makers. In order to achieve credibility, policy makers would have to pursue consistency in their policy actions.

In the meantime, what Solow expressed in 1980 continues to remain valid: it is "much too early to tear up the IS-LM chapters in the textbooks of your possibly misspent youth" (p.11).

**Notes :**

1. Keynes was aware that in doing so, he was perpetrating a solecism. See Keynes (1936, p.3).
2. Real GNP in the USA fell by as much as 30 per cent during 1929 and 1933 and the unemployment rate rose from 3.2 per cent to 25.2 per cent during the same period, *despite*, reduction in money wages by 33 per cent as prescribed by classical economists.
3. Tobin, Modigliani, Solow, Blinder are some of the better known neo-Keynesians.
4. Tobin's work on 'portfolio analysis', Ando and Modigliani's work on life-cycle theory of consumption, and Jorgenson's work on investment function are some prime examples.
5. In 1960, the U.S. President Kennedy appointed a Keynesian Council of Economic Advisers with Walter Heller as its Chairman. In 1962 he explicitly endorsed the Keynesian position and adopted an expansionary fiscal policy stance in the form of a massive tax cut.
6. There were other notable deviations as well. Clower, Leijonhufvud attempted to provide models of disequilibrium process consistent with neo-Keynesian results and optimising behaviour. Solow, Stiglitz, Barro and Grossman in the similar vein, initiated a long series of explorations in disequilibrium economics. The underlying notion here was that disequilibrium rather than general equilibrium is more compatible with what Keynes had in mind. By implication, therefore, there is no contradiction in high unemployment *and* high inflation occurring simultaneously.

Another noteworthy deviation was towards the Marxian thinking. Gordon, Bowles, Harris, Weisscoff regarded neo-Keynesianism as ideological and unrealistic. They criticised the neglect of power and class-conflict in neo-Keynesian models. The interest in Marxist thinking, in the form of development of a full-fledged macro-economic alternative however, appears to have subsided.

7. Any attempt to assign economists to well-defined schools of thought is difficult task as any economist is described most fully by a vector of characteristics. The task is even more difficult in the case of monetarists. As a matter of fact, defining monetarism and deciding who was and who was not a monetarist was, for sometime, a kind of intellectual parlour game [See Stern (1976), Mayer (1978) Laidler (1981, 1982) and Meade (1981)]. Milton Friedman's ambiguous assertions did not help the matter either. As Koldor (1984) put it, Friedman is ".....an impish character for whom one can never be sure whether he is serious or just kidding."
8. To be precise, only monetary policy as far as monetarists are concerned.
9. The new classical economics is believed to have begun with Muth's seminal paper in 1961 on rational expectations. However, a series of papers by Lucas (i.e., Lucas and Rapping (1969), Lucas and Prescott (1971), and Lucas (1972, 1973, 1976)) is said to have laid its foundations as a school of thought.
10. Barro who had earlier advocated disequilibrium economics abandoned it to become a fervant protagonist of the new classical economics while Rapping left the new classical tradition later to be a non-conformist.
11. Specifics of some of these conclusions are covered in the next section.
12. Fischer (1987), Rotemberg (1987) and Blanchard (1988) also contain breif surveys.
13. Fischer's original formulation used volume of *all* moentary transactions (T) rather than output (y) which involves only 'currently produced final goods and services'.
14. New money market equilibrium is restored again when money demand rises, on both counts - higher output *and* lower interest rates, sufficiently to match the enhanced money stock.

15. Friedman's belief emanates *not* from the perceived insensitivity of money demand to the opportunity costs of holding money but from the conviction that any rise in the expected returns on other assets as a result of the rise in interest rates would be matched by a rise in the expected return on money, leaving the opportunity costs of holding money unchanged.
16. *The structural model approach* examines whether one variable affects another by using data to build a model that explains the channels through which the variable under consideration affects the other. The reduced form approach, on other hand, examines whether one variable affects the other simply by looking directly at the relationship between the two variables.
17. During 1936-37, the Federal Reserve raised the reserve requirements with a view to improve its monetary control and admittedly *not* in response to economic conditions. Yet soon after this, the severe recession of 1937-38 occurred.
18. Tobin's 'q' theory of investment, Modigliani's life cycle theory of consumption are some prime examples.
19. An appropriate growth rate for money could be easily calculated. For example, the equation of exchange implies that for achieving zero inflation rate, the money stock should grow at the rate of output growth *minus* the growth rate of velocity of money.
20. See Sargent and Wallace (1981).
21. After World War I, Germany, Austria, Poland and Hungary underwent hyperinflation. The magnitude was immense, for example by the mid-1920's, the German Mark was worth one-trillionth of its pre-war value.
22. Fisher (1977), Phelps and Taylor (1977), Taylor (1974) and Gordon (1982), for example.
23. This model belongs to a new emerging paradigm sometimes called non-new classical rational expectationists.

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## Analytcs of Monetary Management

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This paper is concerned mainly with the principles of monetary management in transitional economies like India. It attempts to scan the major issues in the literature on monetary economics with a view to gaining analytical insights into the transmission channels at work. The theoretical literature serves to show that changes in money supply will have price effects but may not necessarily have definite output effects. But it is possible to have effects on fixed investment or inventory and thereby on output through policies that have a bearing on the rate of interest. The applicability of theories to conditions obtaining in transitional economies like India would, however, have to be empirically tested.

The key issue in transitional economies is domestic debt management. To ensure that the massive dependence on the banking system for financing budget deficits is reduced, a programme of reduction of such dependence should be prepared for a medium term by both the fiscal and central banking authorities. In the short run, liquidity management would be best facilitated if the authorities introduce as much interest rate flexibility as possible together with market based procedures for monetary control (e.g., open market operations or discount policy) and measures for development of money markets. All these three areas of policy are closely related and would reinforce one another. They would, therefore, have to be considered together. They may have to be supported by relaxing rules regarding security holdings or portfolio allocation, and regarding cash reserve requirements.

### Introduction

A look at some of the current economic indicators would show that policy makers would have to act swiftly in several areas of policy. There is a potential threat of a *run-away* inflation, triggered *inter alia* by the uncertainties surrounding the recently concluded Gulf War. The 'twin' deficits on the fiscal and balance of payments fronts have been large and may not be easily manageable in the short run. The domestic savings ratio has been generally stable in recent years. Aggregate demand has been buoyant, its rise being considerably high in relation to the modest output expansion.

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\* Prepared in January- February months of 1991, for an internal seminar, this paper is reproduced here with minimum of changes. The author is presently working as Adviser, Department of Economic Analysis & Policy.

Against this background, one might like to have a fresh look at the present monetary management with a view to pursuing what might be called "appropriate" monetary policy.

This paper attempts to scan the major issues in the literature on monetary economics with the purpose of gaining analytical insights into the transmission channels at work. One has to recognize that the relevance of analytical literature or theories would have to be empirically tested to be of use for policy-makers. But this would have to be done only when we intuitively feel that the logical reasoning behind a particular theory or theories *could* be valid in the economic circumstances obtaining in India today.

For purposes of convenience, the paper has been divided into three sections. Section I gives a brief view of some of the major analytical ideas that have emerged in monetary economics historically. We had to be selective here, so that we could take up only those ideas that may be of some pertinence to situations generally obtaining in developing countries. Section II provides a snapshot picture of some of the important monetary policy issues faced by transitional economies like India. In the final section, an attempt is made to highlight some of the areas of policy that need to be focussed on.

## I

The main proposition that provided the foundation stone for the development of monetary economics is that changes (very often, increases) in money supply tend to bring about changes (increases) in prices. This is the well-known quantity theory of money in its simplest form. This theory, or rather the relationship between money supply and prices, could however be presented in different degrees of sophistication. Whatever version that one may embrace, it is usually taken for granted that the impact runs *uni-directionally* from changes in money supply to changes in prices. There are no feedbacks. In its crude version, the impact is regarded as *direct* and proportionate, if not *instantaneous*. Many text books leave the impression that classical and neo-classical economists,<sup>(1)</sup> as well as the present day "monetarists" advocated the crudest form of the quantity theory of money. With the exception *perhaps* of Adam Smith,<sup>(2)</sup> who seemed to have accepted the quantity theory of money without questioning, classical economists did not consider the impact of money supply changes on prices to be direct, and any case, immediate. In fact, David Hume who is often credited as the first or atleast the early, exponent of the quantity theory of money,

had argued that "betwixt the acquisition of money and rise prices. . . . the increasing quantity of gold and silver is favourable to industry"<sup>(3)</sup>. It is the favourable effect in this interregnum - the time - period needed for effects of money supply changes to be felt on prices - that was noted in the writings of many famous writers, such as Henry Thornton<sup>(4)</sup>, David Ricardo,<sup>(5)</sup> John Stuart Mill,<sup>(6)</sup> Knut Wicksell,<sup>(7)</sup> and Alfred Marshall<sup>(8)</sup>. Indeed, it is this favorable effect that provided the sustenance to the concept of 'forced savings' as may be seen in the versatile writings of Dennis Robertson<sup>(9)</sup> in the 1920s and of John Maynard Keynes<sup>(10)</sup> in the '30s - a concept which was used as the *raison d'etre* of inflationary financing in the early stages of economic development<sup>(11)</sup>.

Barring perhaps John Maynard Keynes, all the writers mentioned above regarded the quantity theory of money to be valid *in the long run*. More importantly, the theory was couched in terms of the *ceteris paribus* clause, from at least the days of John Stuart Mill. One of the elements of the clause was, and is, the velocity of circulation of money (*v*), or as Mill had called, the 'rapidity' of circulation of money<sup>(12)</sup>. Money hoarded, money kept aside to meet contingencies and money in the coffers of the bank are said to have no impact on prices. Fisher<sup>(13)</sup> explained, while presenting his famous equation of exchange,  $MV = PT$ , that both *V* and *T* (the index of the physical volume of transactions) are determined by *real* factors and cannot change in the short run. Under this constraint, *P*, the aggregate price level would respond passively to shifts in *M*, the money supply.

The equation of exchange however elicited perhaps the largest amount of criticism in the literature. It is dismissed as a truism or mathematical identity. Even the finer Cambridge version attributed to Alfred Marshall<sup>(14)</sup> and A.C. Pigou<sup>(15)</sup> ( $P = kR/M$  where *R* stands for total income, and *k* the proportion of it held in the form of cash balances) was not spared of the criticism that the equations do *not* have "the advantage of separating out those factors through which, in a modern economic system, the causal process actually operates during a period of change"<sup>(16)</sup>. It has often been said, that *V* need not be stable even over a period of time, when institutional arrangements and technology are constantly changing. The motives for holding cash balances could be several, and could, it is said, affect *k*'s value. *T* (or *R*) too could shift owing to technological changes within a relatively compact time horizon. *P*, the concept of the general price level, as Hayek contended, would have to be thrown overboard, since "almost any change in the amount of money, . . . must *always* influence relative prices."<sup>(17)</sup>

It was not until Keynes' *The General Theory* appeared in 1936, <sup>(18)</sup> that the dominance of the quantity theory as a major feature of monetary economics was ever in serious doubt. This has to do, one has good reasons to suspect, with the very logical framework of thinking of the classical and neo-classical economists. Yet, it is often believed, erroneously though, that the effects of changes in money supply are felt entirely in the commodity market, *not* in the loan or bond market. This, however, was not the case with the classical and neo-classical framework. In this world, an increase in money supply is generally brought about through the banking system, thereby resulting in an increased supply of loans. When the supply of loans increase, the rate of interest - the money rate, as against the 'natural' rate of interest on capital - would decline. But this decline was considered to be only temporary. For, in the meantime, prices would have gone up, and would have caused an increase in either the volume of borrowing necessary to finance the purchase or the cash holdings. The demand for loans, as a consequence, would increase, as Marshall would have us believe, and cause a return of the money interest to its original level in the long run. In Wicksellian analysis, however, the price increases would generate an internal drain which draws bank reserves down and hence forces banks to raise their rates again. Whatever route- whether Marshallian or Wicksellian - that one takes to find the interest rates to eventually reach equilibrium, the point that one needs to note is that changes in money supply would have symmetrical effects on the demand for and supply of loans and would therefore leave the rate of interest invariant *in the long run* <sup>(19)</sup>

It would be misleading to suggest that the early discussion in monetary economics, which focussed on the quantity theory of money, could be reduced to common-place impressions that money is *completely neutral* to output, and that the aggregate demand for goods represented by  $MV$  is *independent* of the rate of interest. No doubt, one could take a critical stance that the literature on the equation of exchange did not fully exploit the potentialities of arguments regarding the forces at work behind  $MV$  and  $T$ , and the ways of integrating them. But it must be recognized that the strands of thought that (a) individuals hold cash balances for transactions and precautionary purposes, (b) there could be a possible favourable impact of monetary expansion on productive capital (via forced savings) and (c) the increase in money occurring through the banking system would disturb the initial interest rate position, and thereby would entail decision-taking on the part of investors with reference to cost of borrowing weighed against the rate of return, are some of the important insights on which later day

monetary economics and empirical investigations have drawn much support.

Keynes' *The General Theory*, it is commonly recognised, has led to dominance of fiscal policy, and eclipse of monetary economics for a number of years till the emergence of the recent monetarist revolution. But it must be noted that Keynes gave critical importance to the quantity theory of money. Keynes rescued the theory from being seen as totally neutral with respect to output. Treating money as "a subtle device for linking the present to the future", Keynes enunciated: "So long as there is unemployment, *employment* will change in the same proportion as the quantity of money; and when there is full employment, *prices* will change in the same proportion as the quantity of money"<sup>(20)</sup>. The allusion to employment here, it is well known, is really to output. Keynes referred to a number of factors that would impact on the relation between changes in money and changes in the price level *in the short run*. Some of the important ones Keynes mentioned in Section IV of Chapter 21 of *The General Theory* were: the rate of interest reflecting the liquidity preference, the response of investment to interest rate changes, the investment multiplier, the worker's remuneration relative to their efficiency, the production bottlenecks that impact on supply elasticity, the degree of 'money illusion' in a period of buoyancy in effective demand, and the supply elasticities responding to changes in the money rewards that are effected. The long run relationship between the national income and the quantity of money will depend on liquidity - preferences. And price stability in the long run should be viewed with reference to the upward trend of costs and the rate of increase in the productive efficiency.

The quantity of money also plays an important role in the Keynesian theory of rate of interest. Defining the rate of interest at any time as "the reward for parting with liquidity", and the 'price', which "equilibrates the desire to hold wealth in the form of cash with the available quantity of cash", Keynes observed that liquidity preference is a "functional tendency which fixes the quantity of money which the public will hold when the rate of interest is given."<sup>(21)</sup> Keynes agreed with the 'Cambridge' quantity theorists (and some of the earlier writers) that people hold cash for transaction and precautionary balances. But he added that people hold money to speculate in the bond market. At high interest rate (which implies low bond prices), people will tend to hold bonds rather than money. As the rate of interest falls, bond prices rise, and yields on bonds would decline. Selling bonds would then be attractive because of the rise in bond prices (which

permits capital gains). People would choose to hold more of assets in the form of money as rate of interest falls. But there is a minimum rate of interest, say two per cent, where bonds would not at all be attractive and all assets would be held only in money form. Such a situation, called the liquidity trap, would imply that at very low rate of interest, both investment and consumption would remain unaffected, and monetary policy would become helpless. This view was relevant to the economic circumstances that were brought about by the Great Depression of the 1930s, since it implied that it is only through fiscal actions that the economy could be revived out of depression.

The rate of interest is a critical variable in Keynes' *The General Theory*. It affects not only the demand for money, but also—indeed, more importantly—investment spending in the typical Keynesian world. Firms would be induced to invest when the marginal product of capital exceeds the rate of interest, but investment spending as a rule, simple as it may look, would be negatively related to the rate of interest.

The brilliance of Keynes' monetary ideas is best attested by the development of the financial sector that has been taking place as a part of the process of economic development since the end of the Second World War. The growth of financial intermediaries—both bank and non-bank—and markets has given rise to growth in the number of financial instruments. This is a clear signal that money—be it currency or currency plus interest-free bank deposits—alone cannot be the preferred asset of economic units. There are a number of other assets too that could form part of economic agents' holdings, because they have 'moneyness' and could be liquid or readily convertible into cash.<sup>(22)</sup> Holdings of such assets would imply a certain individual behaviour towards spending with obvious implications for aggregate demand or expenditure. In such a context, demand for money and expenditure functions cannot be regarded as dependent only on income and the rate of interest, as the simple Keynesian framework would suggest. Several other factors come into play. Of these, wealth, as the writings of Patinkin<sup>(23)</sup> and Leijonhufvud<sup>(24)</sup> would suggest is the most important one. *Other things being equal*, wealth is positively related to money demand. Wealth also influences income via its effects on consumption spending and thereby on savings.

Much the most of monetary thinking that has emerged since the appearance of *The General Theory*, revolves round the important idea that economic agents attempt to *optimize* their asset portfolios, under

the given constraints. Friedman's "restatement" of the quantity theory of money<sup>(25)</sup> is one of the early approaches to portfolio balance analysis. This analysis, to put it in a most simple way, attempts to postulate the relationship between money and income, and more generally to delineate individual behaviour in the context of the interaction between real and financial markets.

If this is the correct interpretation, it would be misleading to regard Friedman's "restatement" and the subsequent defences of the "restatement" by Friedman, Brunner, Sargent, Laidler and a number of others who are often identified as "monetarists"<sup>(26)</sup> as a mere rehash of the old quantity theory of money. In fact, it is not. For, the restatement was formulated as a theory of demand for money and as a theory of stock - money and assets. Monetarists including Friedman do not adhere strictly to neutrality of money. In fact, they acknowledge output effects of shifts in money in the short run. They can also live with a weaker assumption about velocity, which reflects the relationship between money and income rather than money and volume of transactions in the classical and neo-classical literature. The effect of temporary factors on velocity has been duly recognized and the impact that structural aspects could well have to bring about a general downward drift in velocity over secular period has been noted by monetarists.

The portfolio balance of monetarists operates under two critical constraints. Individuals hold cash balances as a proportion of their expenditures, and this ratio has to be constant. Moreover, the ratio of cash balances to other assets holdings of individuals would also be constant.

The transmission mechanism of monetarists could be simplified thus. An injection of money into the system say by deliberate fiscal action would imply that people would hold more money than before. There would thus be an excess of money supply over its demand. This will create additional spending in the commodities and asset markets through the effect upon the rate of interest. The result would be to affect either prices or quantities or both, in the two markets, depending on the elasticity of supply of goods and assets. In any event, there would be a rise in nominal income and asset values. This process would continue till the demand for and supply of money become equal once again. This would be possible when the values of commodities and assets (i.e., incomes) increase as much as the money supply.

The simplified monetarists' transmission process resembles the



classical and neo-classical position - only superficially. But there are two differences. Monetarists include the rate of interest and give it a critical role. Moreover, they recognize the impact of money supply shifts on asset market. Because of these two assumptions, the monetarists are able to present a *proportional* relationship between money and income. What if we do not rely on these assumptions?

James Tobin provides an answer to this question by adopting a general equilibrium approach<sup>(27)</sup>. Under this approach, the individual maximizes his utility by allocating his wealth across a range of assets, including cash. The determination about his asset portfolio - holdings of cash and other assets - would be done *simultaneously* but not for all time to come. Wherever there is an external impetus (such as injection of money), the individual will adjust his asset portfolio, subject of course to budget constraint. This would imply that there is perfect substitutability among assets. In Tobin's framework, housing and equity shares are the two assets which tend to respond closely to monetary policy stances. The effect of monetary policy on the price of these assets would be best reflected in the effect of, what Tobin noted, the valuation ratio on investment. This ratio is a ratio of the market price of an asset to its replacement cost. If the market price exceeds the replacement cost, say, of a house, a potential purchaser of a house may have a house built, rather than buy an existing house. House building would be a form of investment. A rise in the valuation ratio could arise if there is an increase in market value of the asset or a fall in replacement cost.

Tobin's approach that monetary policy has an effect on asset and share prices, would imply that the policy should be employed to bring about a stability in these markets. One way of realising this objective is through a stability of money growth, as monetarists would seek, or through interest rates that have an influence on mortgage rates, as is the case in the United States.

While this approach has no serious limiting assumptions that the monetarists often make, it does not deal with situations where individuals could borrow to optimise their asset portfolios. Credit mechanisms have no role to play in the general equilibrium approach. It is essentially a framework of analysis, and hardly, as Tobin himself admitted in 1989 in his essay on the state of macro-economic theory, a source of specific conclusions about the signs and magnitudes of relationships among economic variables<sup>(28)</sup>

It is in this context that mention must be made of the reputation of invincibility that an innocent looking downward sloping Phillips curve<sup>(29)</sup> enjoyed for over a decade since it first appeared in 1958. Phillips' main point was that (money) wage rate ( $w$ ) increases could be explained by recent values of the unemployment rate ( $U$ ). Phillips stated: "When the demand for labour is high and there are very few unemployed we should expect employers to bid wage rates up quite rapidly, each firm and each industry being continually tempted to offer a little above the prevailing rates to attract the most suitable labour from other firms and industries."<sup>(30)</sup> Phillips presented the hypothesis, viz., the percentage rate of increase in wage rates is inversely related to  $U$ , by using the data for U.K. for the period 1861 - 1957. As inflation rate and increase in the wage rate are highly correlated in steady state situations, say by a given parametric value,  $\lambda$ , one could well regard Phillips' curve as reflecting a trade-off between  $U$  and the inflation rate. The curve essentially gives the message that the economy cannot reduce, on a permanent basis, its inflation rate without causing additional unemployment.

Milton Friedman and Edmund Phelps destroyed the invincibility of the logic behind the Phillips curve by substituting the word 'real' in place of 'money' wage rate increase - one of the two macro variables of the Phillips Curve<sup>(31)</sup>. For, workers are interested in real wages, not in money wages. Hence the real wage rates would rise when demand for labour increases. The wage rate in nominal terms at time 't' would, in such an event, be determined by the unemployment rate in the previous period and the 'expected' inflation rate in period 't' (One has to consider only the expected inflation rate since the actual inflation rate for period 't' cannot be obtained before completing the period). The result is the *expectations - augmented* Phillips Curve. The newly derived curve however, needs to be interpreted with caution since what we would get as the ultimate outcome in respect of the trade-off is entirely different from the one that was obtained under the original Phillips Curve<sup>(32)</sup>.

The wage rate increase in steady state as mentioned above would be equal to the inflation rate plus the above-mentioned linking parameter,  $\lambda$ . The steady state relationship between inflation and unemployment would be:

$$\Delta P + \lambda = f(U) + \Delta p^e$$

where  $p$  is the log of inflation rate, and the superscript 'e' signifies the

expectation. In steady state, however,  $p = p^e$ . Therefore,  $\lambda = f(U) - a$  - a result that clearly demonstrates that steady state unemployment is *not* related to steady state inflation rate but by  $\lambda$ , which is a historically observed parameter. But this reasoning was initially *not* given due credence, because  $\lambda$  was found out to be low at 0.5 in Solow's book<sup>(33)</sup> which assumed that expectations are formed adaptively. (Friedman - Phelps hypothesis suggested the value to be 1). However, Sargent<sup>(34)</sup> and McCallum<sup>(35)</sup> showed that the parameter value (of  $\lambda$ ) would be close to 1, if expectations are *rational*.

In addition to the intellectual efforts of Friedman, Phelps and other monetarists, two other aspects worked to negate the validity of the Phillips Curve. The seventies, were characterised by a combination of inflation and stagnation - stagflation - a situation which was unthinkable as per the Phillips Curve's postulate. Besides, Lucas<sup>(36)</sup> and Barro<sup>(37)</sup> came out with extra-ordinary contributions to show that Friedman - Phelps position is not a mere critique, but has theoretical underpinnings.

From these developments arose the theory of rational expectations as an approach to the study of expectations. It suggests, in the words of Grossman, that "monetary and fiscal policies may not be able to produce systematic expectational errors, and this implies that the ability of the government to improve the aggregate performance of the economy is.. limited . . . . Specifically, the idea of rational expectations suggests that it may not be feasible to design monetary and fiscal policies that can actively stabilize aggregate output and employment relative to their natural levels".<sup>(38)</sup> A critical assumption underlying the theory is that information available to private agents should be perfect and adequate, in the sense that it should enable the agents to have knowledge of the structure of the economy and knowledge of the past and current data, that underlie the economic structure. It is taken for granted that private agents use the information efficiently. Another assumption, critical as it is, is that commodity markets always clear. The theory however sets out to lay labour market micro-foundations, which in effect means that labourers will move voluntarily where the incentives (real wages) are attractive. Labour markets would *over time* attain equilibrium or natural rate of unemployment, but there would be some sectors which would be expanding and some declining. Such a continuous search for equilibrium could, however, be thwarted from occurring if there is monetary policy uncertainty - uncertainty about inflation and relative wages. If monetary policy is certain, then there would be "efficient" equilibrium.

Systematic monetary actions, under the rational expectations theory, would affect nominal variables such as the *level* of prices and *inflation rate*. And *unanticipated* changes in money supply alone, as Barro has informed<sup>(39)</sup>, would affect output. But this result did not last long. Gordon<sup>(40)</sup> suggested that both anticipated and unanticipated money stock matter. By 1980, it was increasingly getting clear from the econometric evidence that effects of anticipated shifts in money supply would be evident on real side, though in a transitory way<sup>(41)</sup>. Such effects would work either through fixity of prices or wages, so that not all markets clear instantly, or through the expected rate of inflation and thus on real interest rate, so that inventory or fixed capital formation and/or labour supply would be affected<sup>(42)</sup>.

An interesting implication for policy that arises from the rational expectations literature<sup>(43)</sup> is that the ability of economists to predict responses of economic agents to policies under discretionary policy-making would be limited, since the environments in which the agents believe they are operating in, may not be fully understood. In reality, it would be possible to assess the consequences of only those policies which are guided by fixed, transparent, relatively permanent and predictable policy-rules. For instance, a 4 per cent increase in money supply could be laid down as a rule if this order of expansion is consistent with the observed trends in the rate of growth in output, and with the objective of price stability. Policy rules would not face the problem of "dynamic inconsistency" of optimal policy, under conditions of discretionary policy-making. For, time consistency in respect of monetary policy can be achieved only if a specified growth of nominal prices is maintained. But this effect cannot be achieved by a pre-set path for the quantity of money, because the interaction of fiscal and monetary policy would permit tax policies to alter the effects that a monetary policy may have on prices. Moreover, specific policy rules help to achieve inflation control, and to maintain reputation and credibility of actions.

In spite of the preference of those who advocated the rational expectations approach for policy rules, it is not clear as to how to test the usefulness of rules *vis-a-vis* discretion, and how rules provide better predictions than discretionary policy-making.

The developments in the literature in the eighties are not as heavily weighted in favour of rational expectations as in the seventies. Attempts are being made to represent nominal rigidities in the commodities markets and the absence of market clearance as part of

economic life. This approach which attempts to capture the underlying micro and perhaps micro-micro level of relations between individuals and firms, being termed "new Keynesian" economics,<sup>(44)</sup> is now being increasingly taken up by economists as a new challenge.

The above discussion related implicitly to closed economy situations. Money's role in open economies was for a long time guided by the classical (and neo-classical) idea of price-specie flow mechanism.<sup>(45)</sup> First enunciated by David Hume, this mechanism may be stated thus : Wealth maximization through continuous trade surplus is a pre-classical (mercantilist) belief, since it entailed gold and silver accumulation. But it ignores the impact that gold and silver inflows would have on money supply, and consequently on the prices of goods including exportables. Foreign countries by paying for their imports in gold and silver would have reduced their money holdings, and experience a fall in prices relative to those in the home country. Foreign countries would therefore buy less goods from the home country. At the same time, domestic consumers in the home country would buy more of foreign goods and turn away from domestically produced goods. Eventually, the trade surplus of the home country would turn into deficit and gold would flow out. This process of inflows and outflows of gold and silver is assumed to occur incessantly in a cyclical fashion.

The burden of adjustment in the case of either a trade surplus or a trade deficit, has as the above description showed, fallen on domestic prices. If however one assumes domestic prices to be sticky, then adjustment would have to take place through exchange rate changes. However, as the experience has shown in the early part of the 20th century, competitive devaluations often take place to deny the trading partner an edge in trade balancing. To avoid uncertainties that arise from a competitive devaluation process, a system of 'fixed' rate was evolved. This was in fact made a part of the post-war international economic plans with the International Monetary Fund charged with the responsibility of having surveillance of exchange rate policies. This implied that all nations would pursue policies for price stability which by definition would have to be the same for the world at large. The fixed rate system too broke down in 1973 when the US delinked itself from the free convertibility of currency into gold and adopted a floating rate system.

The case for a flexible exchange rate system was made by Milton Friedman in 1953 through an influential essay.<sup>(46)</sup> Friedman assumed that nominal prices would be sticky, so that during a period of payment

imbalance, free exchange rates could obviate socially undesirable fluctuations in real income and employment levels. Friedman also made out a case for a permanent system of floating rates in preference to occasional changes in speculative transactions. Floating exchange rates have the added advantage of freeing the monetary authorities from pursuing exchange rate stability as an objective. Now they could focus on price stability with a greater degree of single-minded devotion than would be possible under a fixed rate system.

However, the experience of the floating rate system since 1973 has not been on the expected lines. Exchange rate volatility was high, but this fortunately did not impede trade.<sup>(47)</sup> But the volatility took place partly because most major nations have in recent years eliminated exchange and capital controls. The movements of capital across national boundaries often in line with changes in interest rates and inflation rates were very large. But in recent years they could be influenced if the major countries concerned pursued both monetary and fiscal policies on predicted lines. The present efforts at international policy coordination among the seven major countries (the USA, the UK, Germany, Japan, France, Canada and Italy) to bring about exchange rate stability within a zone indicate that whether the exchange rate regimes are fixed or floating, the need to pursue appropriate monetary policies cannot be ignored.

This is true in the case of developing countries as well. If capital is immobile, interest rates inflexible, and output inelastic, as is the situation in many developing countries, an increase in domestic money supply would cause a deterioration in the external current account and a depreciation of the domestic currency. The excess money supply would be eliminated by a proportionate rise in the domestic price level. If there is a general proneness to inflation and inflationary expectations, a floating exchange rate could well foster rapid and unstable inflation, which will damage saving, investment and growth. It is for this reason that flexibility in exchange rate management has been generally accepted by many developing countries as one of the objectives of macro-economic policy management.<sup>(48)</sup>

## II

Section I gives an important insight that while monetary policies will have price effects, their output effects cannot be established in a firm manner. Nonetheless, it is important to recognise that policies bearing on the rate of interest could well have impact on the levels of

fixed investment or on inventory and thereby the output.

For economies in transition (i.e., those which are diversifying and modernizing activities at relatively high rates by *historical* standards and are pursuing flexible economic policies), there are no well laid down monetary policy strategies that could be considered as appropriate. The issues they face are somewhat different from those of typical developing economies. The Indian case is typically that of a transitional economy.

First looking at the demand side means of monetary management, it is widely accepted that there cannot be one measure of money stock that can be uniquely related with income. Many economies - industrial and developing have adopted *at least* two measures - the 'narrow' money supply (M1), in which currency with the non-bank public and non-interest-bearing bank deposits of the public figure in, and the broad money (M2, and in India M3) which includes narrow money and interest - bearing bank deposits - as indicators to gauge the level and expansion of aggregate demand. The focus in most economies however is more on the broad measure, since the pace of expansion of time deposits is often high, bringing in its wake large potential liquidity effects.<sup>(49)</sup>

Assuming for the present the currency component to be given, bank deposits which are supposed to grow with income expansion, and at a faster pace than currency with the public, would determine the size of the total monetary stock. In transitional economies, there is a general acceptance among the monetary authorities that interest rates on bank deposits should be attractive, so that resources could flow into the banking system in a regular and predictable manner and in substantial amounts. In reality, however, this principle is not widely applied. Administered interest rates on bank deposits and advances are most commonly seen in many transitional economies. These interest rates are often at low levels, with the result that resources flow out of the banking system, setting in motion what has come to be known as financial disintermediation.

Why does this happen? Is it because there is no standard criterion by which one could test the attractiveness of interest rates?

The general perception is that if nominal interest rates are equal to or higher than the inflation rate derived from some officially recognised price index during a time-period, say of one year, *real* interest rates

would be either zero or positive. This, according to the economic literature, is all that is needed to enhance savings. But if the price index is imperfect because of stickiness in the prices of commodities that are included in it, <sup>(50)</sup> a better method of deriving real interest rates would be to deflate the nominal rates by the inflation rate in the parallel commodity markets, where available, or by the exchange rate changes or by the expected rate of returns. In many developing economies where exchange controls exist and capital restrictions are rampant, exchange rates too may not truly reflect the competitiveness of the economies in question. Notwithstanding these limitations, the authorities in transitional economies should set interest rates at such levels that they are perceived by economic units to be positive in real terms. The authorities could judge the economic units' perceptions from the rate at which bank deposits have been growing, the speed and order of expansion of non-bank financial intermediaries (NBFIs), and the rate at which new assets have proliferated.

Essentially this would mean that interest rates should be market-determined. The rates on saving instruments (and on claims created) should reflect such characteristics as their riskiness, maturity, their liquidity and the convenience of their use. Yields should be positively related to their riskiness and negatively related to their liquidity. Longer-term finance for investment would be facilitated if deposits for long-maturity periods offer attractive returns. The spreads between average deposit rates (the cost of loanable funds) and average loan rates should be sufficient to cover costs of intermediation, risks, and 'normal' profits. In many transitional economies, these spreads however, are large. Such spreads reflect high intermediation costs, or large portfolio of non-performing loans or high reserve and liquidity requirements which are inadequately remunerated, or lack of competitiveness in the financial sector.

Interest rate management is crucial for incipient financial liberalisation and for bringing about eventually optimal allocation of resources. <sup>(51)</sup> But interest rate liberalisation is not all that monetary authorities should aim to achieve. The main issue before them is how to go about freeing the interest rates and *at the same time* take steps to increase competition in the banking system through the strengthening and restructuring of banks. Interest rate liberalization without the accompanying measures to improve the competition could lead to significant distortions in the level and responsiveness of the interest rates.

In many transitional economies, governments attempt to influence



interest rates through the mechanism of financing of their budget deficits. This however is an important constraint to the interest rate liberalization strategy, since deficit financing could distort interest rates. To eliminate or soften this constraint, either the governments would have to reduce their budget deficits to levels which could be financed by borrowing directly from the markets or the governments should be required to finance only those expenditures where social rate of return, or at least rate of return on each government project, as suggested by Dasgupta, Sen and Marglin<sup>(52)</sup>, are above the market rates of interest. Governments' efforts to reduce budget deficits or expenditures could be possible only if there is coordination between public domestic debt management and monetary management.

The currency component is often given to central banking authorities since the only overwhelming source of change in reserve money is the net bank credit to Government. Cash holdings of the public, however, could be influenced by interest rates, in the sense that people's proclivity to demand cash would be reduced in an environment of high interest rates on instruments which are relatively liquid and have short maturity periods.

From the supply side means of monetary management, the familiar balance sheet equation, or identity  $\Delta M = \Delta NBC^{Gs} + \Delta BC^{Cs} + \Delta NFA - \Delta OL$  provides a basis for evolving monetary policy strategies in tune with the overall economic policy framework. OL (other liabilities, which are known in India as non-monetary liabilities of the banking system) may be ignored for the present, since these are not fully accounted for in many developing economies, and are derived as residual thus:  $OL = NBC_{Gs} + BC_{Cs} + NFA - MS$ . NFA (net foreign exchange assets of the banking system) represents the outcome of the external sector performance and could be regarded as 'given' to the authorities of countries which are not "open", notwithstanding the fact that monetary authorities could influence NFA through exchange rate management and freeing of exchange controls and payment restrictions.  $NBC_{Gs}$  (net bank credit to the government sector) which represents the financing of the government deficit by the banking system, is exogenously given to monetary authorities.  $BC_{Cs}$  (bank credit to commercial sector which in India includes public sector enterprises as well) is the only variable which is, effectively speaking, amenable to manipulations by central banks.

These manipulations could occur through interest rate changes or/and quantity changes or through the impounding of the resources of

banks for meeting legal requirements. Preferential interest rate treatment or/and credit allocation to any class(es) of borrowers, with stipulations about the extent of preferences that need to be provided within a discrete time period, would impose a constraint on banks' ability to optimise their profits. Interventions such as cash reserve ratios and statutory liquidity ratios reduce flexibility of banks in expanding credit and impose budget constraint on efforts of banks in optimizing their loan and investment portfolios. To the extent that the rates of return on the funds placed for fulfilling legal requirements are lower than the market rates of return on comparable claims, banks would find their profits eroding. If, in addition, refinancing from the central banks is made completely discretionary and/or made available generally at penalty rates, banks would be discouraged from taking any actions that could create resources crunch problem for themselves.

The above description is often a good representation of the state of monetary management in many transitional economies. Typically, the situation described requires banks to undertake asset management under severe constraints. Money markets' role would be very exiguous in such an environment, characterised as it is by limited or absence of interest rate flexibility and by portfolio allocation rules. Removal of ceilings on lending rates and provision of some discretion in paying deposit rates on term deposits (or deposits of very short maturity periods) would not be sufficient to give impetus to money markets so long as portfolio allocation rules exist, central banks' refinancing facilities are not subject to definite rules, and cash reserve ratios are relatively high.

Typically, central banks in such situation would have to - there is little choice here - influence prices or nominal incomes by targetting only a quantity variable, simply because rate variables - interest rate or exchange rate - are not free to move. The quantity variables that would be most amenable to targetting would be bank credit or reserves or un-borrowed reserves that would influence money supply which, in turn would influence prices and/or economic activity, as the theoretical exposition in Section I has shown. If the target is, on the other hand, bank credit to commercial sector, one would postulate changes in it as dependent on the level of and rate of change in economic activity. The estimated bank credit to commercial sector thus obtained could be added to the exogenously given net bank credit to government and net foreign exchange assets, to obtain the final figure of money stock. In either case, the central bank would not be able to *directly control* money stock. Under the money multiplier approach at least, money stock would, theoretically speaking, depend upon two types of

behavioural responses of economic units, viz., holdings of currency *vis-a-vis* deposit holdings, and bank reserves to deposits ratio. If the behavioural ratios are not stable, the outcomes would deviate from the targetted money stock. Monetary authorities therefore watch the movements in these variables and examine the factors that affect them. It is often for these reasons, authorities announce only a range of money stock expansion as a target rather than a pointed single-value increase in money supply as a target.<sup>(54)</sup>

Besides the money multiplier and additive approaches, one could work out an estimate of increase in money supply, based on a historically given money demand function, on the assumption that money supply (MS) would always be equal to money demand (MD). MD in real terms, as is well known, is positively related to real income, and negatively related to short-term interest rate which represents the opportunity cost of holding cash balances. As interest rates in transitional economies are largely administered, MD would largely reflect the developments in the real sector. From this follows the possible MS increase. If the monetary planner has at the same time information about the fiscal position and external sector performance, she could easily deduce how much the envisaged money stock increase could be sourced to the rise in bank credit to commercial sector. In case the fiscal deficit is large, given the external position, commercial credit would stand crowded out under this approach to money supply determination.

The three approaches are often utilized to get a harmonized or synthetic money supply target or target range. A harmonized target clearly cannot meet the Friedman's rule<sup>(55)</sup> that money stock expansion should equal output growth rate adjusted for a change in income velocity of money : it will exceed the real output growth rate simply because of the presence of the large fiscal deficit. If the harmonized target is *stabilized*,<sup>(56)</sup> the liquidity impact it would produce would be reflected in commodity price increases. As interest rates are not adequately flexible, the excess liquidity would not flow back into the banking system in its entirety : it would find itself flowing partly into the curb (financial) market which will serve to meet the credit demands of the commercial sector at a premium. The commercial sector would be tempted to take advantage of the curb market finance if the expected rate of inflation, served favourably by excess liquidity continuously every year, is high.

The stable level of the harmonized money stock target would provide a signal to the markets that money supply change would not

show any shift - a signal that keeps alive price expectations. Money stock targets, to have the necessary sobering effect on prices, should, *over time* drift *towards* the Friedman rule - a 'gradual' prescription favoured by some economists.<sup>(57)</sup> A medium-term money supply expansion path tending ultimately to the average output growth rate in recent periods, may perhaps be indicated, so that there is an advantage of putting pressure on the fiscal authorities to shift away from dependence on the banking system for financing the deficits. It would also emit signals that the monetary authorities are keen on bringing about flexibility in the financial system through reform measures.

### III

Transitional economies have the unenviable task of coping with the challenges posed by partial flexibility in monetary management. The key issue is the uncertainty about domestic debt management. Obviously, no financial reforms and no abatement of price elasticity and expectations would be possible if fiscal deficits are very large and are massively financed by the banking system. Even though informal consultations between the fiscal and monetary authorities take place on the issue of deficit financing by the banking system, it is common to see that the actual outcomes relating to fiscal deficits are much larger than the initially projected figures, even when there are no exogenous random shocks on the fiscal position. The uncertainty in this regard could be obviated if there is a *transparent* and *revealed* agreement about the gradual reduction in government's reliance on the banking system over a *medium term*, irrespective of the actual random influences on the fiscal deficit. To elaborate on this point, a kind of a memorandum of understanding could be prepared, and agreed to both by the Treasury and Central bank. It has to specify, over, say, a 5-year period, the *annual* support to government's short and long term borrowing by the central bank of the country and by commercial and co-operative banks separately. This support should decline year by year, tending ultimately to zero. This exercise is needed for improving resource allocation and thus productivity, and for achieving the objective of price stability which the central banks should single-mindedly pursue. It could also subserve the incipient financial reforms programme.

Consistent with the given medium-term profile of fiscal constraint, central banks in transitional economies would do well to give a medium term money supply growth path as indicated in Section II. In addition, these economies would have to pursue short term policies that are flexible. They have to introduce a greater measure of interest rate

flexibility supported by market based procedures for monetary control (e.g., open market operations or discount policy with a view to influencing the level of reserves) and measures for development of money markets. In other words, the medium term monetary policy should be dovetailed with short-term monetary policy. In the short-term, liquidity management would take precedence. To this end, the central bank should essentially discount *only* short-dated government paper, *not* long dated ones in *normal circumstances*. The central bank may on behalf of the government issue treasury bills on a weekly tender basis rather than on tap. These bills could be of different maturities. There could be 6-week (42 day) bills, 3-month (91-day) bills, 17-week (119-day) bills and 6-month (182-days) bills<sup>(58)</sup>. The central bank could allow dealers in money market to operate without bestowing on them any benefit of special privileges. Commercial banks may be permitted to hold balances for settlement of transactions with the central bank in excess of what is required. The central bank, however, should pay market rate of interest on excess balance held with it by commercial banks.

Management of liquidity would be better facilitated if the rules regarding security holdings or portfolio allocations are relaxed, if not totally eliminated. The relaxation can be undertaken even if fiscal deficit continues to be substantial, requiring financing by the banking system, as a part of the efforts to strengthen the banking system. Unless price stability considerations do not warrant, cash reserve ratio would have to be kept at relatively low levels so that banks' lending rates are more meaningfully related to their deposit rates.

Fostering of money market and enabling banks to involve themselves in liability management need not necessarily lead to price increases. By enabling banks to do business on commercial basis, the central bank encourages banks to meet demands on credit. When credit is utilized to give rise to output, the price situation would be better manageable.

The speed and the extent to which the central banks could go, in introducing full scale financial liberalisation has to be judged with reference to the price situation. If reforms are introduced when price expectations are dormant, there is a greater success of their becoming internalized into the system. To ensure that there are no systemic threats it would be necessary to focus attention on the measures needed to strengthen the financial system before the edifice of liberalization is built. Some of these measures are briefly reported below.

Commercial banks should be re-capitalized and allowed to structure themselves. Improving the capital base is necessary : it would give an opportunity to the existing public sector commercial banks to reduce the ownership share of the government by raising equity capital from the general public. Commercial banks should also be allowed to make larger loan loss provisions, if they felt so necessary. To enable the banks to restructure themselves, it might become necessary to unify and preferably reduce the portfolio allocation rules as well as to bring down the cash reserve requirements.

Secondly, bank supervision systems should be thorough and efficient. Prudential regulations should be clearly laid down, so that the banks do not overextend themselves and face potential losses. Finally, competition among banks should be fostered by allowing new entrants into banking, giving greater autonomy to government-owned managements, and permitting greater transparency of operations, through disclosure of information, and through better risk assessments of the assets held by banks.

The measures to strengthen commercial banks may fruitfully be extended to other financial institutions as well. The question whether these institutions should come under the purview of the central bank is important if their combined operations are significant, and if the central bank's own supervisory system over commercial banks has been fully evolved. The exercise of surveillance by the central bank over the entire financial sector would help boost confidence in the working of the financial system and the banks to re-intermediate.

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## Money, Output and Prices

Y.S.R. SARMA\*

This paper makes an attempt to study the relationship between money, output and prices in India. Two variants of the price equation specified in double-logarithmic form have been estimated following a partial adjustment mechanism for the period 1971-72 to 1989-90. Various tests conducted on the price equation show that the behaviour of prices is well explained by changes in output and  $M_3$ . The distributed lag effects of a one percentage once-for-all change in  $M_3$  on prices are significant for about three years following the change and peter out progressively in the subsequent years.

### Introduction

The interaction between money, output and prices has received considerable attention both in theoretical and empirical analysis. The alternative theories regarding the role of money in economic activity, however, emphasise that variation in money supply is an important cause of the variation in nominal income. The causality or the nature of transmission mechanism between the three macro-economic variables, money, output and prices, has a bearing on the formulation and conduct of monetary and fiscal policies to achieve the goals of economic growth and price stability. Deficit financing by the Government has a significant influence on money supply. Deficit financing or net Reserve Bank Credit to Government is itself determined, among others, by prices as Government receipts and expenditure are influenced by inflation. Thus, the objective of price stability along with stepping up the rate of economic growth assumes importance.

The relationship between money, output and prices is generally summarised in one equation which takes the form of the demand function for real money balances. The real money balances are formulated

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as function of real income and interest rates, etc. The increase in real income *ceteris paribus* necessitates an increase in the demand for real money balances. So long as money supply expands to this extent, there would be no rise in the price level. The demand for money function can be restated as a price equation as follows :

### Price Equation

$$P = f(\text{GDPR}, M_3, P_{-1})$$

Where

P = Price level

GDPR = Real Gross Domestic product

$M_3$  = Broad Money (Currency with the public + Deposits with Banks + Other deposits with RBI)

The price equation is a partial adjustment equation. This equation facilitates measurement of the impact of past changes in the explanatory variables (viz.,  $M_3$  and GDPR) on the price level. According to the formulation, other factors remaining the same, an increase in real output (GDPR) lowers the price level and an increase in money supply ( $M_3$ ) raises the price level.

An attempt is made in this paper to explain the behaviour of prices in India during the period 1970-71 to 1989-90.

## 2. Behaviour of Money, Output and Prices.

Data relating to  $M_3$ , GDPR and Prices (Index Number of Wholesale Prices) for the period 1970-71 to 1989-90 are set out in Table 1. The annual compound growth rate of  $M_3$ , GDPR and Prices during the seventies and eighties and the whole period were as follows :

Annual compound rate of growth  
(per cent)

	$M_3$	GDPR	P
1970-71 to 1979-80	17.5	2.9	9.0
1980-81 to 1989-90	17.3	5.6	7.4
1970-71 to 1989-90	17.4	4.2	8.2

During the seventies, the annual compound rate of growth of money supply ( $M_3$ ) was 17.5 per cent while real output (GDPR) rose by 2.9 per cent. This decade witnessed an annual rate of inflation of 9.0 per cent. During the eighties, annual rate of growth of GDPR was higher at 5.6 per cent. The annual rate of growth of money supply was 17.3 per cent. The annual rate of inflation declined to 7.4 per cent. It would, therefore, be observed that a rise in the rate of growth of output accompanied by a moderation in the monetary expansion would contribute to lower price rise.

The movements in  $M_3$ , GDPR and Prices over the years 1970-71 to 1989-90 are depicted in Chart 1. A broad relationship between money supply and the price level can be noticed.

### 3. Empirical Price Equation

Two variants of the price equation have been estimated following a partial adjustment mechanism for the period 1971-72 to 1989-90. The equations are specified in double logarithmic form. These are :

$$\text{Log } P = f(\text{log } M_3, \text{log } \text{GDPR}, \text{log } P_{-1}) \dots \dots \dots (1)$$

$$\text{Log } P = f(\text{log } M_3, \text{log } \text{GDPR}, \text{log } \text{DMY}, \text{log } P_{-1}) \dots \dots \dots (2)$$

Lagged price variable in the above equations represents the influence of past values of output and money supply on the current period price level. A dummy variable (DMY) is included in the second equation to take into consideration the effect of special factors like international oil crisis in 1973-74 and 1974-75 and drought conditions that prevailed in 1979-80 and 1987-88 which had an adverse impact on the price level.

The regression equations are estimated by the method of ordinary least squares. The estimated price equations are presented in Table 2. The adequacy of the equations in explaining price behaviour is judged by the appropriateness of the signs and magnitudes of the regression coefficients, statistical criteria such as the coefficient of multiple determination ( $\bar{R}^2$ ), DW statistic for autocorrelation among residuals as also Durbin's H - statistic, 'T' values

of the regression coefficients and the standard error of estimate (SEE) and the ability of the equation in tracking the turning points in price level.

It would be seen from the two price equations that the price behaviour is well explained by money supply ( $M_3$ ) and output (GDPR) according to a partial adjustment mechanism. The coefficient of multiple determination ( $\bar{R}^2$ ) was about 99 per cent in both the equations, thereby indicating that about 99 per cent of the variation in the price level is explained by money supply and output. The regression coefficients of  $M_3$  and GDPR have the expected positive and negative signs, respectively. The regression equations are free from autocorrelation among the residuals which indicate that no other systematic factor explaining the prices is omitted from the price equations. The regression coefficients are statistically significant. Charts 2a and 2b show the actual and estimated values of the price level during the sample period in respect of both the equations. The movement in the actual price level is well captured by the estimated price equations.

The short-run and the long-run elasticities of price with respect to  $M_3$  and output (GDPR) are estimated as under :

	Short-run elasticity of price with respect to		Long-run elasticity of price with respect to		Implied income elasticity of demand for $M_3$
	$M_3$	GDPR	$M_3$	GDPR	
Equation (1)	+0.52	-1.03	+0.98	-1.95	1.99
Equation (2)	+0.41	-0.72	+0.88	-1.53	1.74

To test the goodness of fit of the price equation further, annual percentage variations in the actual price level and the estimated price level have been computed. This is a more rigorous test. These are plotted in the charts 3 a and 3 b in respect of the two equations. It would be observed from these charts that most of the important turning points in the inflation rate have been remarkably

captured by the two price equations. Magnitude-wise, there are, however, some differences (sometimes strikingly different) in the actual and estimated values of the inflation rate (column 10 of Table 3a and column 10 of Table 3b). However, there may not be any behavioural equation, be it in relation to consumption or investment, where a closer correspondence between percentage variations in the actual and estimated values can be found.

Commenting on the problem of predictability of percentage changes in prices on a year-to-year basis, Dr. Rangarajan observed, in his Presidential Address to the Indian Economic Association in December 1988, that the price relationship holds reasonably well over a period of time. He has shown that averages of price changes over a period of five years can be predicted with reasonable accuracy within a range that would be sufficient as a guide to policy<sup>1</sup>. Following Dr. Rangarajan's method, a 5-year moving average of both the actuals and estimates in respect of both price levels and percentage changes in the price level have been computed. These are shown in Tables 3 a and 3 b. Charts 4 a and 4 b show the actual and estimated price levels based on 5 year moving averages for equations 1 and 2 respectively. The corresponding variations are plotted in charts 5 a and 5 b. A comparison of the actual and estimated values shows that the differences are narrow (columns 7 and 13 of Table 3 a and columns 7 and 13 of Table 3b). Thus, price changes can be predicted with reasonable accuracy over a period of, say, five years by the price equation with money supply ( $M_3$ ) and output (GDPR) as the main explanatory variables.

#### **4. Distributed lag effect on prices of a one unit once-for-all in $M_3$ and output.**

The distributed lag effects on prices of a one per cent once-for-all change in  $M_3$  and output (GDPR) have been worked out from the two price equations. These are shown in Table 4. It is found that the lagged effects of a change in  $M_3$  are significant for about three years following the change and peter out progressively in the subsequent years.

Illustratively,  $M_3$  rose by 18.8 per cent in 1986-87. Other



factors remaining constant, the effect of the rise in  $M_3$  would be felt on the price level at least in the next four to five years (Table 5). According to the first equation, it is estimated that the prices would have risen by 9.8 per cent in 1987-88, 4.5 per cent in 1988-89, 2.1 per cent in 1989-90 and 0.9 per cent in 1990-91. According to the second equation, prices would have risen by 7.7 per cent in 1987-88, 4.1 per cent in 1988-89, 2.2 per cent in 1989-90 and 1.1 per cent in 1990-91.

### 5. Summary

An attempt is made to study the relationship between money, output and prices in India. For this purpose an empirical price equation with wholesale price index as the dependent variable and output (GDP in real terms) and money supply ( $M_3$ ) as the explanatory variables is estimated for the period 1971-72 to 1989-90. Various tests conducted on the price equation show that the behaviour of prices is well explained by changes in output and  $M_3$ . The distributed lag effects of a one percentage once-for-all change in  $M_3$  on prices, holding output constant are examined. It is found that the lagged effects of a change in  $M_3$  on prices are significant for about three years following the change and peter out progressively in the subsequent years.

### Reference

1. Dr. C. Rangarajan: "Issues in Monetary Management" Presidential Address at the Conference of the Indian Economic Association, Calcutta, December 1988

Table-1 : Money, Output and Prices

Year	Money Stock* M <sub>3</sub> (Rs. Crore)	Output GDP (Rs. Crore)	Prices P (Index No.)	Annual Growth Rate (g)		
				M <sub>3g</sub> (per cent)	GDP <sub>g</sub> (per cent)	P <sub>g</sub> (per cent)
1.	2.	3.	4.	5.	6.	7.
1970-71	10958	90426	36.2			
1971-72	12690	91339	39.1	15.8	1.0	8.0
1972-73	15033	91048	43.9	18.5	-0.3	12.3
1973-74	17571	95192	57.0	16.9	4.6	29.8
1974-75	19457	96297	62.8	10.7	1.2	10.2
1975-76	22286	104968	58.7	14.5	9.0	-6.5
1976-77	27280	106280	65.7	22.4	1.2	11.9
1977-78	32906	114219	66.0	20.6	7.5	0.5
1978-79	39890	120504	69.0	21.2	5.5	4.5
1979-80	46801	114236	83.7	17.3	-5.2	21.3
1980-81	55358	122226	97.7	18.3	7.0	16.7
1981-82	62426	129600	100.0	12.8	6.0	2.4
1982-83	72868	133469	107.2	16.7	3.0	7.2
1983-84	85899	144310	114.9	17.9	8.1	7.2
1984-85	101957	149966	121.8	18.7	3.9	6.0
1985-86	118338	157348	127.7	16.1	4.9	4.8
1986-87	140633	163924	134.2	18.8	4.2	5.1
1987-88	162660	170716	148.5	15.7	4.1	10.7
1988-89	192085	188481	156.9	18.1	10.4	5.7
1989-90	230352	196962	171.2	19.9	4.5	9.1

\* M<sub>3</sub> Outstanding as of last reporting Friday

GDP = Gross domestic product at 1980-81 prices.

P = Index number of wholesale prices (base 1981-82 = 100) as at the end of the year.

Table-2 : Relationship Between Money, Output and Prices

Price Equations (1971-72 to 1989-90)

## EQUATION 1

$$\log P_t = 3.86357 + 0.51929 \log M_{3t} - 1.03330 \log GDP_{Rt} + 0.47248 \log P_{t-1}$$

$$T \text{ value} = 2.84 \quad 4.22 \quad 2.92 \quad 3.22$$

$$\bar{R}^2 = 0.987 \quad D.W. = 1.66 \quad H = 0.96 \quad SEE = 0.02 \quad MEAN = 1.95$$

## EQUATION 2

$$\log P_t = 2.64967 + 0.41489 \log M_{3t} - 0.72031 \log GDP_{Rt} + 0.02985 \log DMY$$

$$T \text{ value} = 2.14 \quad 3.73 \quad 2.24 \quad 2.64$$

$$+0.52643 \log P_{t-1}$$

$$4.19$$

$$\bar{R}^2 = 0.987 \quad D.W. = 2.07 \quad H = (-) 0.18 \quad SEE = 0.02 \quad MEAN = 1.95$$

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$M_{3t}$  =  $M_3$  outstanding as of last reporting Friday as at the end of the year  $t$

$GDP_{Rt}$  = Gross domestic product at 1980-81 prices for the year  $t$ .

$P_t$  = Index number of wholesale prices (base 1981-82 = 100) as at the end of year  $t$ .

$DMY$  = Dummy variable taking the values 10 in 1973-74, 1974-75, 1979-80 and 1987-88 and 1 for other years.

Table-3 a : Moving Averages of Estimated Price Indices (Equation 1)

Year	Levels											
	Wholesale Price index						Percentage variation over the previous year					
	5-year moving averages			Wholesale price index			5-year moving averages			5-year moving averages		
	Ac-tual	Es-timated	Error	Ac-tual	Es-timated	Error	Ac-tual	Es-timated*	Error	Ac-tual	Es-timated*	Error
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1971-72	39.1	40.3	-1.2				12.3	17.1	-4.8			
1972-73	43.9	45.8	-1.9				29.8	14.1	15.7			
1973-74	57.0	50.1	6.9	52.3	51.2	1.1	10.2	3.5	6.7	11.5	8.2	3.3
1974-75	62.8	59.0	3.8	57.6	56.0	1.6	-6.5	-3.5	-3.0	9.2	5.9	3.2
1975-76	58.7	60.6	-1.9	62.0	60.7	1.3	11.9	9.7	2.2	4.1	5.2	-1.0
1976-77	65.7	64.4	1.3	64.4	65.3	-0.8	0.5	5.8	-5.3	6.3	9.2	-2.9
1977-78	66.0	69.5	-3.5	68.6	70.5	-1.9	4.5	10.3	-5.8	11.0	12.7	-1.7
1978-79	69.0	72.8	-3.8	76.4	77.5	-1.0	21.3	23.8	-2.5	9.1	11.7	-2.6
1979-80	83.7	85.4	-1.7	83.3	85.1	-1.8	16.7	13.7	3.0	10.4	12.4	-1.9
1980-81	97.7	95.2	2.5	91.5	93.0	-1.5	2.4	5.0	-2.7	11.0	11.4	-0.5
1981-82	100.0	102.6	-2.6	100.7	101.1	-0.4	7.2	9.0	-1.8	7.9	8.1	-0.2
1982-83	107.2	109.0	-1.8	108.3	108.6	-0.3	7.2	5.6	1.6	5.5	6.6	-1.1
1983-84	114.9	113.2	1.7	114.3	115.5	-1.2	7.2	7.0	-1.0	6.1	7.4	-1.4
1984-85	121.8	122.9	-1.1	121.2	122.8	-1.7	6.0	6.7	-1.8	6.8	7.6	-0.9
1985-86	127.7	129.9	-2.2	129.4	130.5	-1.1	4.8	6.7	-3.9	6.5	7.0	-0.5
1986-87	134.2	139.2	-5.0	137.8	138.3	-0.5	5.1	9.0	0.8	7.1	6.5	0.6
1987-88	148.5	147.4	1.1	147.7	146.5	1.2	10.7	9.8	0.8	7.1	6.5	0.6
1988-89	156.9	152.2	4.7				5.7	2.5	3.2			
1989-90	171.2	164.0	7.2				9.1	4.5	4.6			

\* Percentage change of current year's estimate over previous year's actual.

Table-3 b : Moving Averages of Estimated Price Indices (Equation 2)

Year	Levels												
	Wholesale price index			5-year moving averages			Wholesale price index			5-year moving averages			
	Ac-tual	Es-timated	Error	Ac-tual	Es-timated	Error*	Ac-tual	Es-timated*	Error	Ac-tual	Es-timated*	Error	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	
1971-72	39.1	39.8	-0.7										
1972-73	43.9	44.5	-0.6										
1973-74	57.0	52.4	4.6	52.3	51.9	0.4	12.3	13.8	-1.5				
1974-75	62.8	62.2	0.6	57.6	56.6	1.0	29.8	19.4	10.5				
1975-76	58.7	60.8	-2.1	62.0	61.5	0.6	10.2	9.1	1.1				
1976-77	65.7	63.2	2.5	64.4	65.4	-0.9	-6.5	-3.2	-3.3				
1977-78	66.0	68.8	-2.8	68.6	70.4	-1.8	11.9	7.7	4.3	11.5	9.4	2.2	
1978-79	69.0	71.9	-2.9	76.4	76.8	-0.3	0.5	4.7	-4.3	4.1	5.5	-1.3	
1979-80	83.7	87.5	-3.8	83.3	84.3	-1.0	4.5	8.9	-4.4	6.3	9.0	-2.6	
1980-81	97.7	92.4	5.3	91.5	91.9	-0.4	21.3	26.8	-5.5	11.0	11.7	-0.7	
1981-82	100.0	101.0	-1.0	100.7	99.9	0.8	16.7	10.4	6.3	9.1	10.8	-1.8	
1982-83	107.2	106.7	0.5	108.3	106.7	1.6	2.4	3.4	-1.0	10.4	11.2	-0.8	
1983-84	114.9	112.0	2.9	114.3	113.9	0.4	7.2	6.7	0.5	11.0	10.4	0.6	
1984-85	121.8	121.4	0.4	121.2	121.2	-0.1	2.2	4.5	2.7	7.9	6.1	1.8	
1985-86	127.7	128.6	-0.9	129.4	131.1	-1.7	6.0	5.7	0.3	5.5	5.2	0.4	
1986-87	134.2	137.5	-3.3	137.8	139.3	-1.5	4.8	5.6	-0.7	6.1	6.0	0.0	
1987-88	148.5	156.0	-7.5	147.7	148.0	-0.3	5.1	7.7	-2.6	6.8	7.9	-1.2	
1988-89	156.9	153.2	3.7				10.7	16.2	-5.6	7.1	7.5	-0.5	
1989-90	171.2	164.8	6.4				5.7	3.2	2.5				
							9.1	5.0	4.1				

\* Percentage change of current year's estimate over previous year's actual.

Table-4 : Distributed Lag effect on prices of a one per cent once-for-all change in the explanatory variable (per cent)

## EQUATION 1

Time Period	For a change in M3, GDPR held constant			For a change in GDPR, M3 held constant		
	Pt/GDPRt = constant	M3t	Pt-1	Pt/M3t = constant	GDPRt	Pt-1
1.	2.	3.	4.	5.	6.	7.
0	0	0	0	0	0	0
1	0.52	1	0	-1.03	1	0
2	0.24	0	0.52	-0.48	0	-1.03
3	0.11	0	0.24	-0.23	0	-0.48
4	0.05	0	0.11	-0.11	0	-0.23
5	0.03	0	0.05	-0.03	0	-0.11

## EQUATION 2

Time Period	For a change in M3, GDPR held constant			For a change in GDPR, M3 held constant		
	Pt/GDPRt = constant	M3t	Pt-1	Pt/M3t = constant	GDPRt	Pt-1
1.	2.	3.	4.	5.	6.	7.
0	0	0	0	0	0	0
1	0.41	1	0	-0.72	1	0
2	0.22	0	0.41	-0.39	0	-0.72
3	0.12	0	0.22	-0.20	0	-0.39
4	0.06	0	0.12	-0.11	0	-0.20
5	0.03	0	0.06	-0.06	0	-0.11

**Table- 5 : Illustration of distributed lag effect of the increase of 18.8 percent in M3 during 1986-87 on the price level in succeeding years with no change in output (per cent)**

	Equation 1	Equation 2
1986-87	0	0
1987-88	$0.52 \times 18.8 = 9.8$	$0.41 \times 18.8 = 7.7$
1988-89	$0.24 \times 18.8 = 4.5$	$0.22 \times 18.8 = 4.1$
1989-90	$0.11 \times 18.8 = 2.1$	$0.12 \times 18.8 = 2.2$
1990-91	$0.05 \times 18.8 = 0.9$	$0.06 \times 18.8 = 1.1$
1991-92	$0.03 \times 18.8 = 0.6$	$0.03 \times 18.8 = 0.6$

CHART 1 : MONEY, OUTPUT & PRICES  
(1970-71 TO 1989-90)

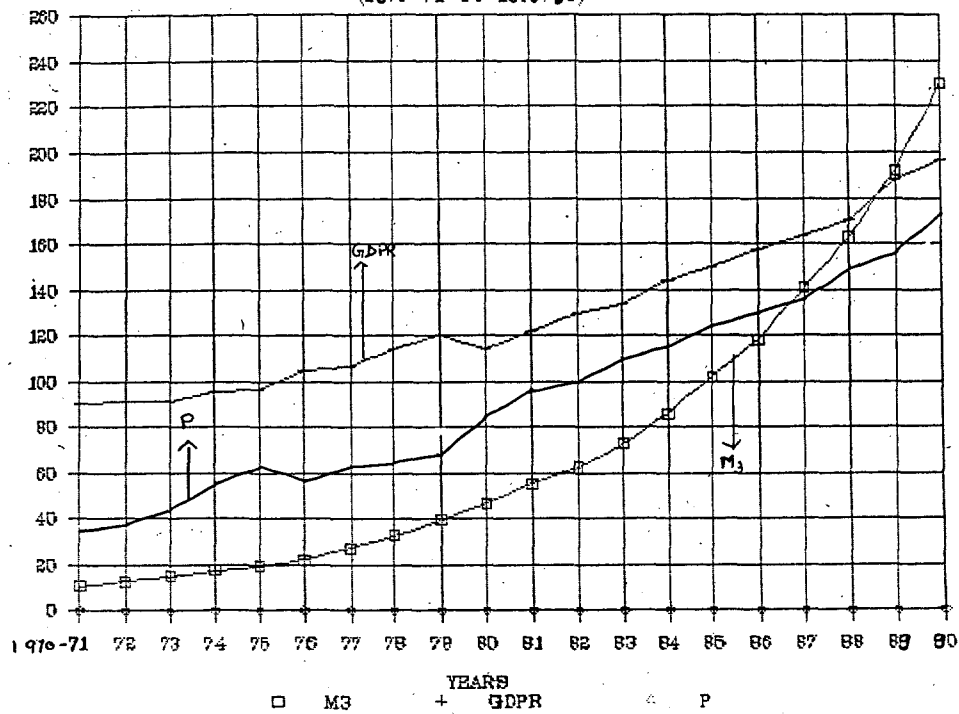




CHART 2a: INDEX NO. OF WHOLESALE PRICES

(ACTUAL & ESTIMATED -LEVELS)-EQUATION 1

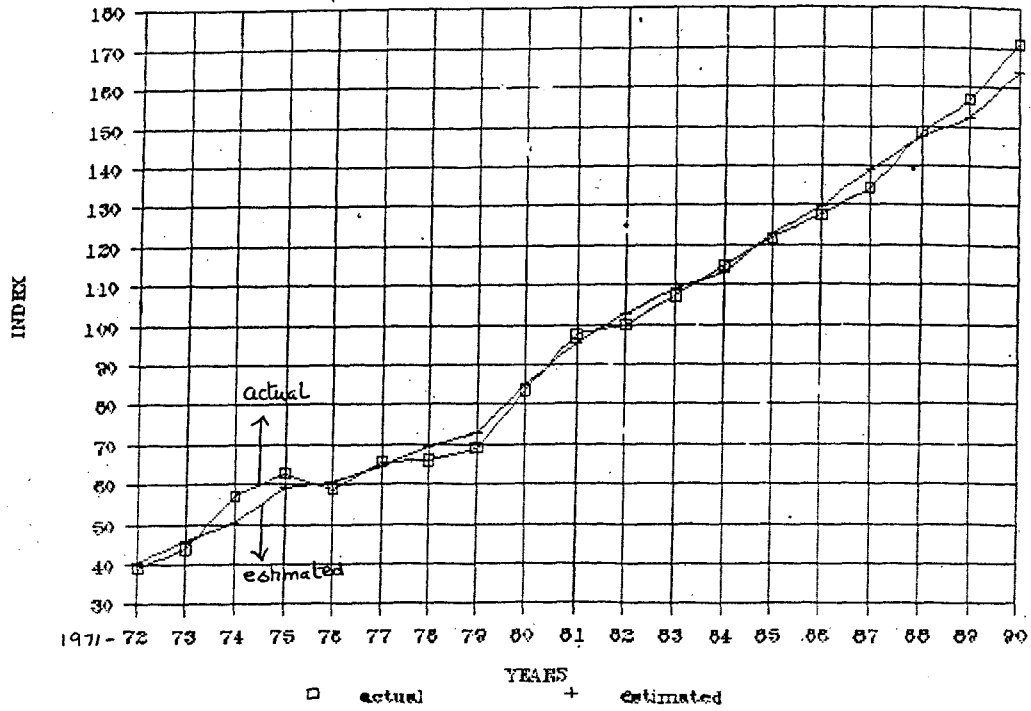


CHART 2b: INDEX NO. OF WHOLESALE PRICES

(ACTUAL & ESTIMATED -LEVELS)-EQUATION 2

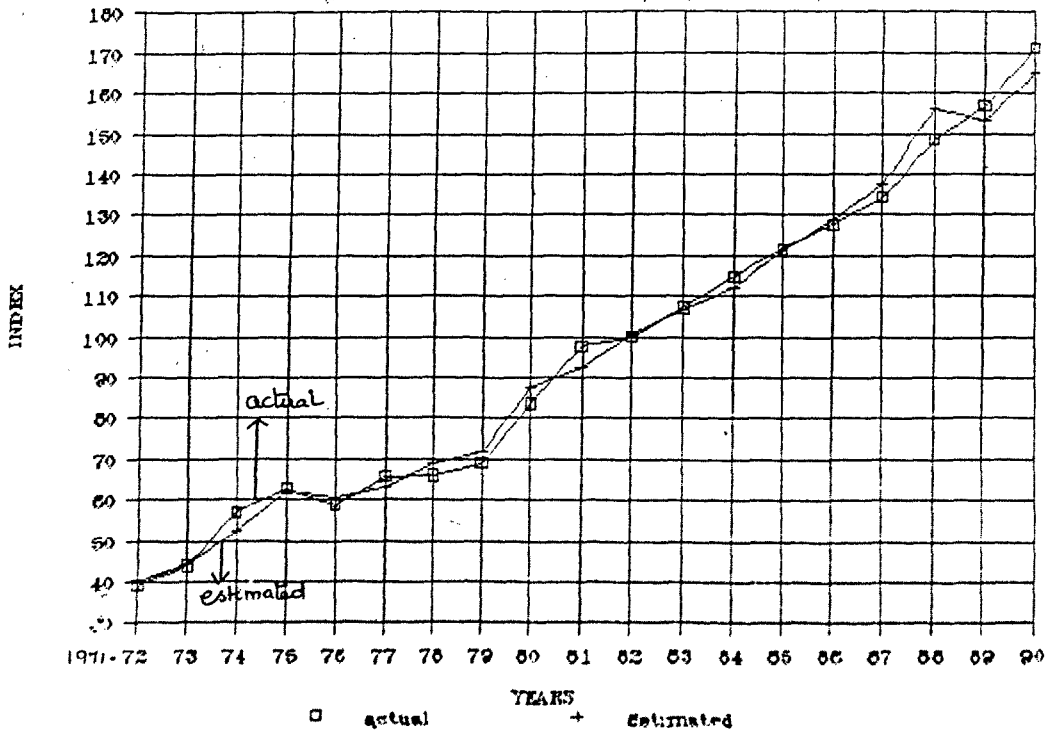


CHART3a:INDEX NO. OF WHOLESALE PRICES

(ACTUAL & ESTIMATED -% VARIATIONS)-EQ.1

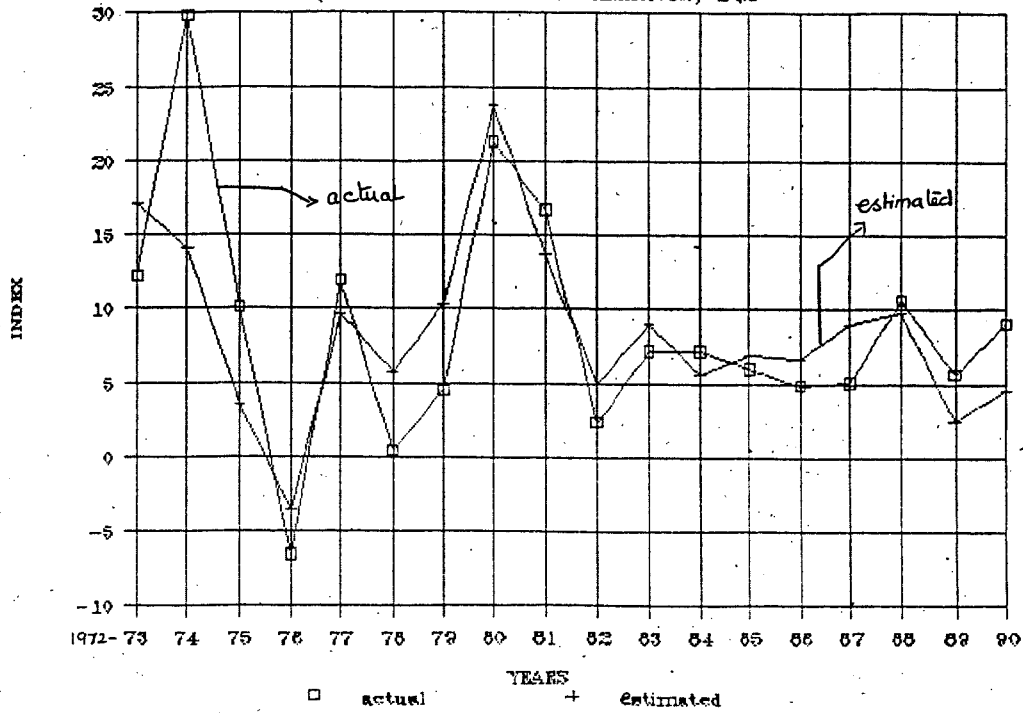


CHART3b:INDEX NO. OF WHOLESALE PRICES

(ACTUAL & ESTIMATED -% VARIATIONS)-EQ.2

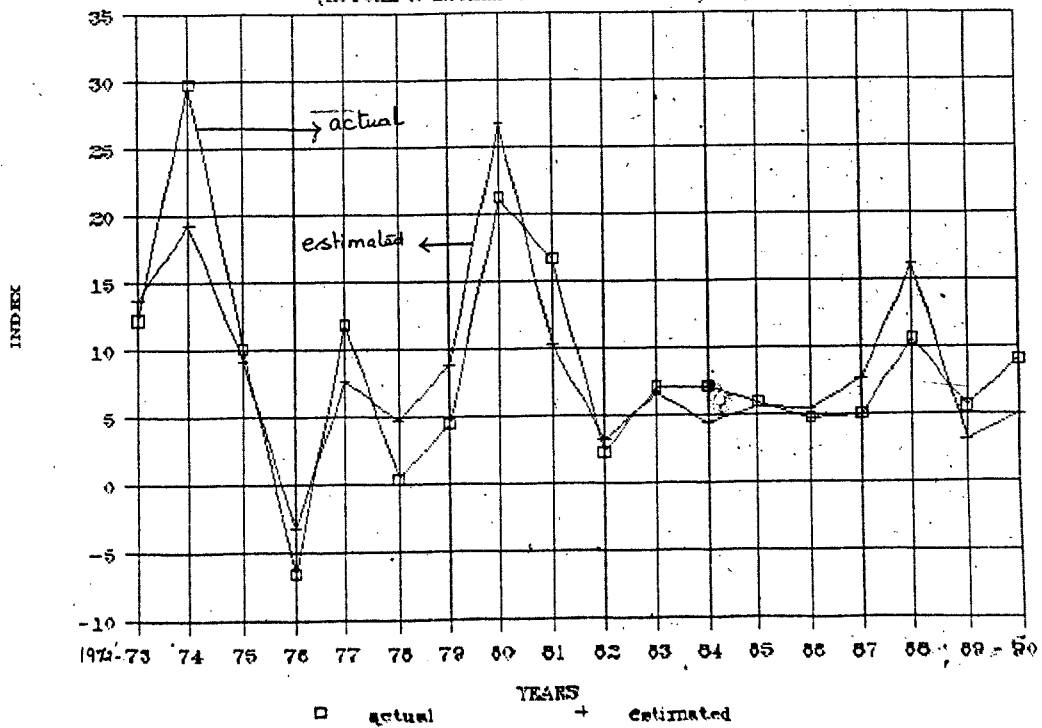


CHART 4a: INDEX NO. OF WHOLESALE PRICES

5-yr moving averages (levels) - Eqtn. 1

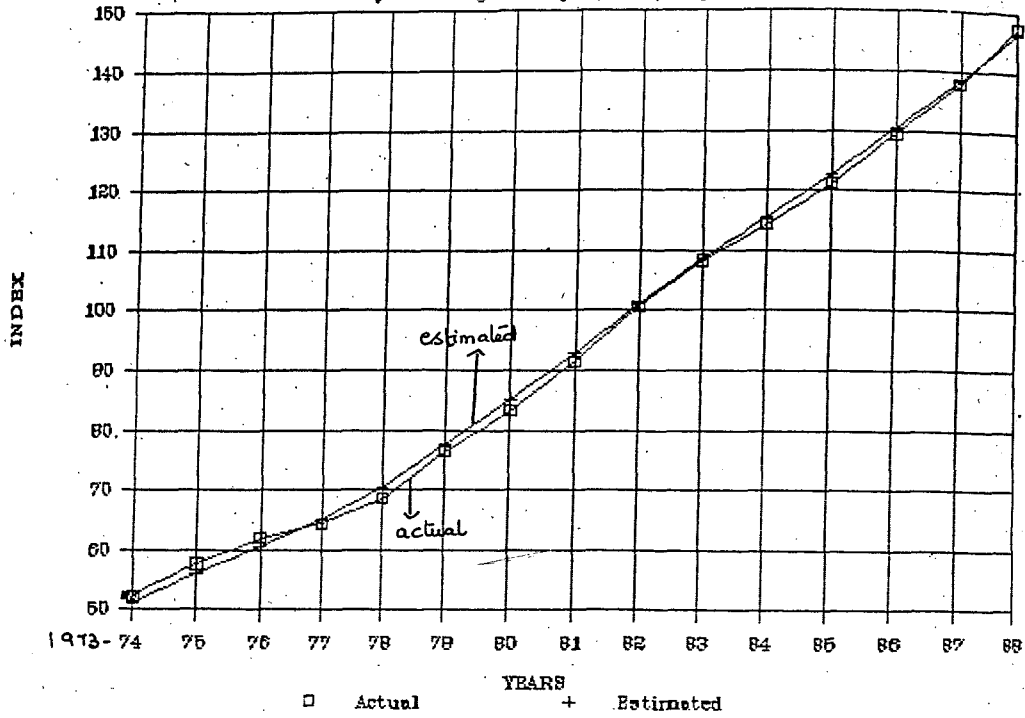


CHART 4b: INDEX NO. OF WHOLESALE PRICES

5-yr moving averages (levels) - Eqtn. 2

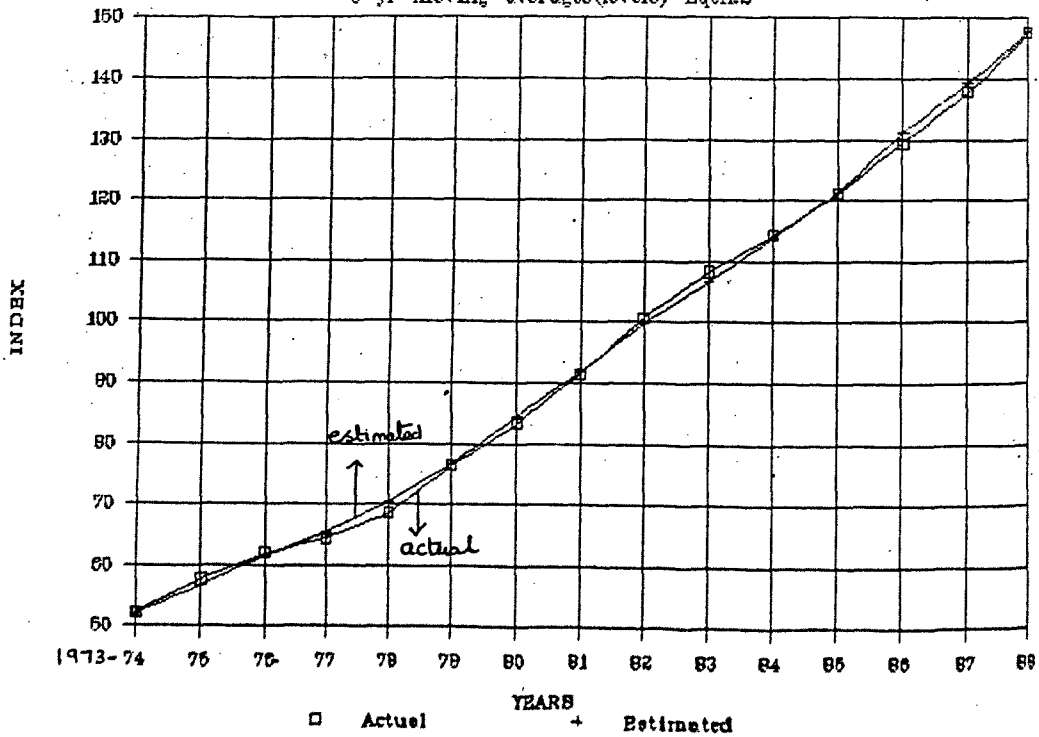


CHART5a: INDEX NO. OF WHOLESALE PRICES

5-yr moving averages(%-Vern)-Eqtn.1

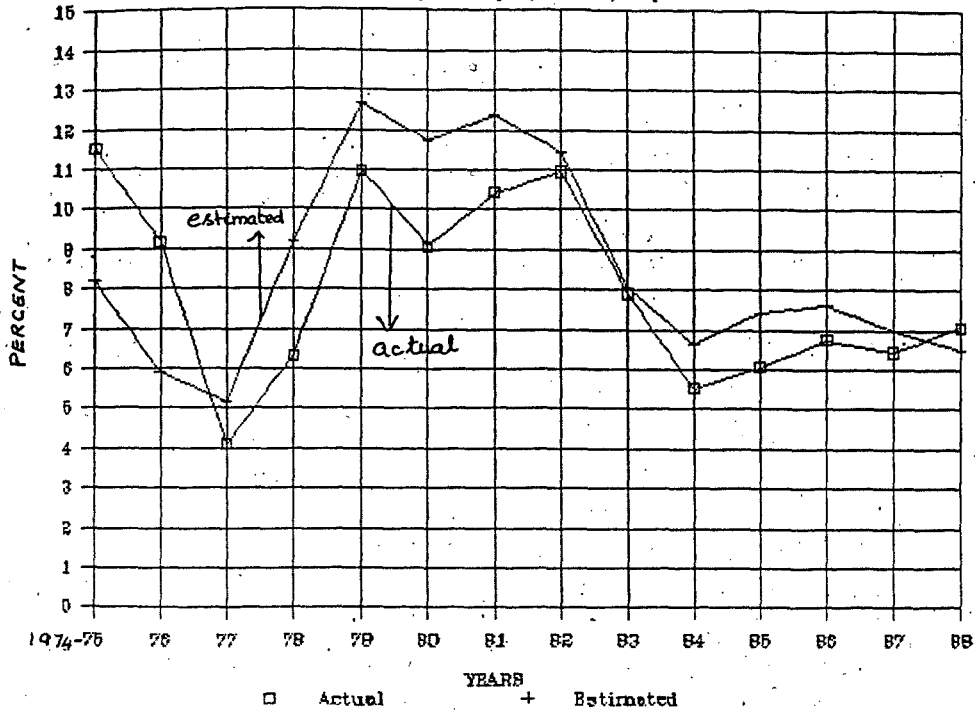
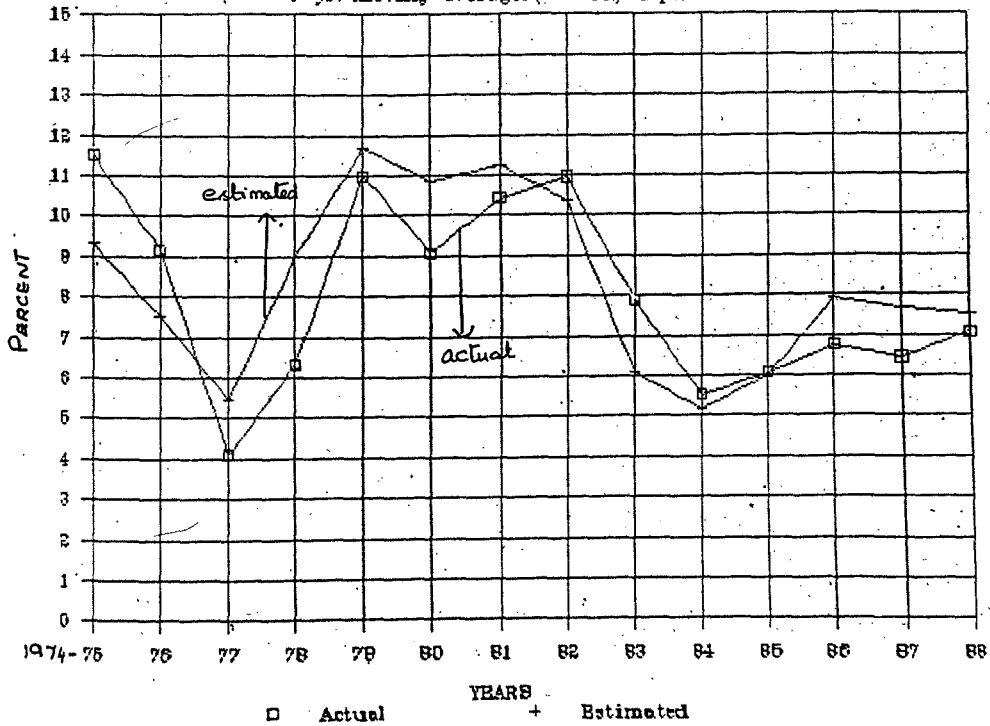


CHART5b-INDEX NO. OF WHOLESALE PRICES

5-yr moving averages(%-Vern)-Eqtn.2



## **Need for Fresh Approach to Credit and Monetary Policy Formulation in India : A Few Suggestions**

**S. L. SHETTY\***

Raising a few issues germane to the conduct and operation of credit and monetary policy in India, this paper suggests a possible re-ordering of perspectives and priorities with a view to achieving country's broader development goals. Monetary targeting with emphasis on price stability has neglected the wider and dynamic role that money and credit can play in output and employment generation. The primary cause of inflation in India lies in the non-monetary sphere and price formation takes place in the commodity markets. Money supply increases follow price increases. Since money is essentially credit-driven and endogenously-determined, incorporation of broader development perspectives into the monetary policy framework is favoured with linkage established between output and credit and with attempts to monitor them. A case for a flow-of-funds approach to credit policy is suggested with focus on credit aggregates and their distributional and discipline aspects. The paper also raises the broader question of the sustainable cost of interest for economic activities and visualises a more consistent role for interest rate in deposit mobilisation, in the demand for, and supply of, bank credit, and in government borrowing programmes.

### **Introduction**

THE purpose of this paper is to raise a few issues germane to the conduct and operation of credit and monetary policy in India and to offer some specific suggestions. Though the objective is to focus essentially on the appropriate policy package for the ensuing fiscal year 1991-92 against the backdrop of the current credit and monetary trends and the prospective economic situation, the note takes the opportunity to pose a few basic questions and suggests a possible re-ordering of perspectives and priorities in the conduct of monetary policy. In doing so, I am driven by the considered thought that the perspectives brought to bear on current policies, particularly with their main focus on issues concerning Government deficit and inflation control, are rather

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\* Prepared originally for an internal seminar in February-March 1991, is published with changes effected by the author and with some editorial changes. The author is presently Officer-in-Charge, Department of Economic Analysis & Policy.

limited, that the analytical inputs going into the conduct of policy are conventional and based on mainstream models which give inadequate attention to the broader development goals and to output and employment effects of institutional credit particularly at the level of unorganised industries, and that the operations of these policies have begun to contribute to the very many distortions observed in the macro-economic scene.

2. The issues I am posing and their elaboration would require considerable digression into the objectives and processes of short-term economic management *vis a vis* medium-term development plans in India, the current developments in macro-economic theory in general and the nature of inspiration that the conduct and operation of monetary and credit policy in India should derive from the current fashions in macro-economic theory as well as from the goals of development planning. The allusion to these aspects would be brief, in passing, only to the extent necessary to provide the backdrop for the newer perspective on credit and monetary policy. In order to retain its easy readability, many references to literature have been avoided in this note.

3. The note is divided into six sections. *Section I* dilates a while on the question of the relevant issues in monetary policy. It is argued here that preceiving price stability as the primary objective of monetary policy has resulted in a neglect of the wider role that money and credit can play in output and employment generation. It is the latter aspect which is indeed a challenge to us. Similarly, concentration on Government deficit has neglected the scope of measuring the sustainability of Government deficit (and public debt) by studying in totality the nature of resources mobilisation and the disposition of public expenditure for social and economic development. Large-size interest burden imposed on the Government for its borrowing programme has further contributed to the Revenue Account deficit and overall budgetary deficit; it may have also curtailed many worthwhile social and economic development schemes. Finally, this part argues for the incorporation of broader development perspectives into the framework of monetary policy in this difficult phase of development with linkages established between output and credit and with attempts to monitor them. This is also analytically feasible because money is essentially credit-driven and endogenously, determined. *Section II* deals with the implications of newer policy thrust on some specific targets and goals. In particular, it questions the relevance of the existing 'monetary targeting' exercises. It makes out a case for a flow-of-funds approach to credit policy formulation to focus on credit aggregates and their distributional and

discipline aspects, and to accept the implicit growth in  $M_1$  and  $M_3$  associated with the given size of projected domestic credit and other 'monetary survey' variables. *Section III* presents a set of specific credit and monetary policy proposals. It seeks in particular to place emphasis on linking the macro measures like the relief from cash reserve ratio (CRR) and the refinance facilities to the distributional aspects of bank credit. Arising from these macro perspectives and macro measures, there is the need to take a fresh look at the existing interest rate policy, which is addressed in *Section IV* of the note. It raises the specific question of the sustainable cost of interest for economic activities and thus visualises a more consistent role for interest rate in deposit mobilisation, in the demand for, and supply of, bank credit, and also, in Government borrowing programmes. This section also alludes to the longer term question of the overriding need to arrest intermediation cost in the banking industry in particular and in the financial system in general. Finally, *Section V* argues for a re-look at the role of the call and notice money market as it has been evolved over the years in order to circumscribe it within the objective of promoting financial development on healthy lines and suggests that the purity of the call and notice money market as an inter-bank market be retained. *Section VI* presents a brief summary.

## Section I

### Broader Perspectives on Policy

The basic approach to monetary policy formulation is contained in the framework suggested by the Chakravarty Committee<sup>1</sup> which has been adopted by the Bank in the consistency model/exercise for monetary policy formulation. Varied interpretations of this approach have been presented. A common thread running through all of them is that price stability is the prime objective of monetary policy. All other aspects of the Chakravarty Committee Report and the policy framework are directed at this goal. This is true of the monetary targeting exercise in which the focus is on the monetized budget deficit which in turn is required to be regulated as money supply needs to be regulated for price stability. Likewise, the finer thrust in policy is on inflation-adjusted, positive *real* interest rate as supportive of the regulation of money even for borrowings by Government (If the pure rate of interest for the economy stands at 4 to 5 per cent which is the rate of growth of the economy, Government should pay for its long-term borrowings a real rate of 3 per cent). Thus, the most crucial perspective exhibited in the current policy is that price stability becomes a major concern of monetary policy as monetary policy instruments are more effective in

relation to this objective than other policy instruments. It is my submission that such a view of monetary policy has prevented us from seeking a more positive role for money and credit in the development process. By focusing on the end-product, namely, budget deficit and the *real* interest rate on it, and not the composition of revenues and the character of expenditures, we have neglected the role of the Government in social and economic development. Finally, our assumption that high *real* interest rate is the instrument to regulate Government behaviour in regard to its borrowings has been disproved but the end result has been much more serious. Reductions in budgetary allocations have been effected for agricultural and rural development, primary health centres, educational programmes and many other social and economic development activities which produce immeasurable social benefits that cannot be judged in terms of the so-called pure rate of interest. Yet another fall-out of the high real interest rate policy is that interest as percentage of national income has risen rather disproportionately- disproportionate to the growth in financial assets. Yield on risk capital like equities deserved a better treatment. As Galbraith put it very perceptively, 'High interest rates operate against inflation by limiting that part of aggregate demand that comes from productive investment. And they accord income to the economically passive rentier class. To this policy, broadly denoted as monetarism, which is so favourable to the affluent and rentier interest, economics, as I have said, has been unduly accommodating (to the political pressure on low taxation and high real interest rates as the basic policy against inflation)<sup>2</sup>. A relatively high interest burden on the economy would have made many worthwhile projects unviable and investment suffer. Even for saving mobilisation, the by-now empirically proven hypothesis that while total household saving in financial assets is *not* sensitive to interest rate increases but holdings of individual financial assets are so sensitive, gives a useful guide for not raising overall interest yields beyond a point. It is a myth that we have weaned away households from holding gold and silver, real estate and consumer durable assets by increasing the real rate of return on financial saving. The estimated clandestine arrival of gold into the country has persistently grown and reached a peak of 170 tonnes a year now, likewise silver and consumer goods. On the other hand, by offering a 12 per cent rate of interest on employees' provident fund *plus* tax concessions, for example, we have built into the Government budget a massive current outgo which has contributed to larger Revenue Account deficit as well as overall budgetary deficit. The Central bank's perspectives on budget deficit, if they are restricted to monetary implications and the perceived inflationary effects alone without an insight into how the budget deficit is brought about, will



lack social relevance. Also, unless we restore a degree of realism into the whole gamut of interest rate policy, more diversified and dispersed pattern of development is sure to be hindered.

Coming back to the price stability goal of monetary policy, it is to be accepted that, to begin with, the primary causes of inflation are in the non-monetary sphere: food and raw material supplies, general cost-push factors and the mark-up system of pricing in manufacturing, petroleum price shocks and spurts in administered price (following cost increases), budgetary levies, higher import costs following the depreciation of the domestic currency, monopoly pricing and the trader's proclivity to hoard and speculate<sup>3</sup>. Wage cost in the organised sector may increase but by somewhat less than the increase in prices and also after a lag. At second remove, credit delivery system cannot but accommodate price increases. Thus, money supply increases follow price increases, but, being a continuous process of causation, econometric exercises give generally a bi-directional causality between money output and prices. What is our perception of the reality? For this, as the late Prof. Sukhamoy Chakravarty rightly observed, "It cannot really be distinguished on the basis of purely statistical evidence alone whether causation runs from money to prices. One has to supplement it by one's understanding of the process of price formation in this economy. In this process, if the economy were such that there was a situation where the money wages could be regarded as the determining factor in relation to price movement, there would be a particular type of position where the mark-up changes and money wage changes lead to adjustments, and so on. This is not true in this economy because the bulk of the population is not employed in sectors where the money wages are the most relevant variable, although money wages do play a major role in the context of determining government expenditure or the expenditure of the private corporate sector."<sup>4</sup>

A question that is generally asked is: how would price increases take place in the medium-term without money supply increases? The answer is three-fold. First, even if there is no acceleration in the *real* money growth attributable to fiscal deficits, price increases would occur when there is otherwise cause for it; this is made possible by a variety of phenomena: (i) increased and elongated use of trade credit; (ii) pre-emption and larger drawals of credit by bigger parties at the cost of the smaller parties which suffer in a credit squeeze; (iii) activation of idle balances; and (iv) increased velocity of existing liquid assets. Secondly, beyond a point, the credit delivery system cannot but accommodate price increases. Thirdly, it is not necessarily money that is increasing;

the increase is essentially in the form of credit to begin with.

This brings us to yet another contention that is generally advanced in support of the Chakravarty Committee framework. It is that if money demand function is not accepted as stable, then obviously monetary policy has very little role to play. This exhibits a narrow perspective of monetary policy as the one designed to control money. If, instead, we had conceived of money as the end result of our projections of domestic credit expansion and other building blocks in the monetary survey (each of them being determined essentially endogenously), the direct influence of credit on output (and employment) could have been discerned, such focus on credit rather than 'money' has many advantages. In the first place, though the process of money creation is a process of credit creation, the size of money stock (say,  $M_3$ ) is not the same thing as the size of domestic credit nor do the two move in the same direction and at the same pace. Secondly, the focus on credit facilitates attention on distributional aspects of credit in relation to output and employment goals and relative inter-sectoral price variations.

There is yet, a more subtle question to be answered: does the focus on a single measure like  $M_3$  prevent a more disaggregated focus on domestic credit and such other issues? It does, for the size of the domestic credit expansion for a given output (and employment) goal and at an assumed inflation rate would be quite different from the size of money supply ( $M_3$ ) expansion for a given rate of inflation consistent with a given output (and employment) goal. In other words, any control over  $M_3$  in the short-run may hurt investment, output and employment expansion, if it does not produce the required quantum of credit for the desired sectors (Empirical studies do point to the potential output losses on account of restrictive demand policies - whether through a squeeze on money supply or on public expenditure). On the other hand, the desired quantum of credit and its appropriate sectoral distribution may be consistent with a wide variety of  $M_3$  growth in individual years. The argument that the relationship between money, output and prices is valid over a period of time on an average basis for say, five years, does not explain the complex nature of the relationship and for determining the credit requirements of individual years. It can hurt the production process and the inequitable nature of the credit delivery system being what it is, it can hurt the vulnerable production sectors and units more than the big-size units. An approach with such monetarist perspective is somehow against emphasizing targeting and monitoring distributional goals. It is not without reason that during the past decade or so, the Reserve Bank of India has not come out with any new thought on the

need for the directed credit targets for 'priority' sectors or for any segment thereof even though the fact of economic life is that large employment opportunities are possible only through a more rapid growth of the millions of self-employed production units all along the production spectrum - small and marginal farmers, village artisans, small businesses and household enterprises and small-scale industries. Nor would the banking system wish to render such credit on a required scale voluntarily even if the yield on such advances is raised to commercial levels. This explains why the banking system has remained totally inattentive about the persistent decline in the share of 'priority' sector advances in total bank credit from about 45 per cent to now a little over 40 per cent, even though the share of output and employment activities of such sectors have improved. It is also interesting to note that in the myriad of our monetary policy regulations, never has a thought been given to linking any aspect to such distributional questions of bank credit. There was a time when the RBI refinance facility was linked to some aspect of priority sector advances by commercial banks.

Before concluding this section which pleads for a more direct targeting of credit supply and its distribution, it is necessary to point out that the targeting of broad money ( $M_3$ ) has also a wider conceptual inconsistency which is that the aggregate is composed of heterogeneous elements: those that serve essentially as means of payment and those that partake the character primarily as of financial saving (say time portion of saving deposits and term deposits held by households). The now famous Friedman- Meiselman attempt to define money as that set of financial assets which best explains nominal income is recognisably guilty of circular reasoning. Or, following Gurley and Shaw and the Radcliffe Committee, the broader the set of financial assets the closer is the *statistical* link with nominal income. Viewed in terms of income-expenditure streams, aggregate demand in the economic system is not determined by the quantity and velocity of money alone; the whole spectrum of liabilities created by the financial system is relevant for them. It is now recognised that for any level of income, the money supply is indeterminate until one knows the degree of substitutability between money created by banks and financial assets created by other intermediaries. In the same vein, money would be a weighted sum of various financial assets, the weights being determined by their respective degree of moneyness. The range of differences that exist in *turnover ratios* speaks for the irrelevance of using any single monetary aggregate as a target variable. Based on a debits to deposits study for 1987-88, it is found that *turnover ratios* in India vary as under<sup>5</sup>:

(i) current deposits : 52.2; (ii) saving deposits; 4.0; and (iii) cash credits and overdrafts: 13.0. Be that as it may , the essence of this argument is that it is a contradiction in terms to target and seek to control that component of  $M_3$  which partakes the character of financial saving.

Finally, it is questionable to argue, as it is generally assumed in monetary models (or even in the one used in the Bank), that the demand route and the supply route equilibrate at a given inflation level. In fact, the possibility recognised in contemporary literature, is that the speed of adjustment is such that the so-called equilibrium in commodity, wealth and financial markets is never achieved and that it is a question of moving from one disequilibrium state to another. An individual may get rid of money but not the economy as a whole for quite sometime. A good part of the increase in money supply may not have inflationary implications also because the structural factors favour redistribution of real incomes in favour of the saving classes. Any control over the growth in broad money ( $M_3$ ) may hurt the implied credit expansion and consequently, the expansion in output and employment. Therefore, it is time that we have a rethinking on the Pavlovian response to the inflationary situation in terms of cutting  $M_3$  growth. The current phase in India's economic development calls for a more insightful approach.

## Section II

### An Alternative Approach to Policy Targets and Goals : A Tentative Framework

As indicated in the previous section, singling out a summary measure like broad money ( $M_3$ ) involves an over-simplification of the reality and advances in research literature have reached a stage where any focus on 'targeting the broad money stock' is hardly helpful for policy. For that matter, even the bidirectional causality question between money , output and prices , does not lead us anywhere. The issue of credit and monetary policy formulation has to be addressed on a different plane altogether. We, therefore, wish to suggest an alternative approach which focuses on domestic credit aggregates and their discipline and distributive aspects. *First*, if the rate of GDP growth as well as the pattern of growth are a concern of credit policy, the Reserve Bank of India should have in the first place a perception, in a more disaggregated manner, of the possible GDP and sectoral growth rates at three stages in a year : pre-year, mid-year and year-end. This should be based on a short-term forecasting model on the Indian *economy*. We

have to acquire systematic insights into the growth and employment potentials of medium and large-scale industries as much as small-scale and unorganised sectors - and the role of institutional credit in those respects. *Second*, with multiple sources of credit - banking and non-banking - the focus on the monetary sector alone has become truly insufficient. A picture of total credit aggregates from the financial system as a whole is now a necessary requirement of any credit planning and monetary policy formulation. Therefore, a flow-of-funds matrix for the entire financial sector, built on the basis of projections of individual components, should form an input into annual credit planning exercises. *Third*, the same flow-of-funds approach be adopted for the monetary sector which should be consistent with the aggregative flow-of-funds for the system as a whole. *Fourth*, concerted attempts have to be made to incorporate into annual credit planning exercises distributional aspects of institutional credit in general and commercial bank credit in particular. Indicative targets of macro-level credit allocations amongst sectors and industries and their systematic monitoring become an integral part of the 'credit and monetary policy' exercise.

Based on production elasticity of bank credit in respect of commodity-producing sectors (and also for trade), it is possible to project the size of commercial sector credit in real terms and, taking into account the expected inflation rate in the immediate period, the size of nominal credit. Credit requirements of major industries and sectors can be worked out in a more disaggregated way. Massive amount of disaggregated bank credit data by institutional categories and by sectors and industries, gathered through the system of *Basic Statistical Returns*, has hardly been utilised for purposes of policy within the Bank. Such exercises have also greater relevance in the context of the Tandon<sup>6</sup> and Chore<sup>7</sup> Committee norms for short-term credit for manufacturing industries, which provide better link between output and working capital for holding inventories of raw materials, finished products and receivables. In determining the overall size of credit for the commercial sector, two important but somewhat divergent considerations have to be weighed. On the one hand, substantial injection of institutional credit, mainly production credit, for those millions of self employed, small size production units, has to be promoted, so that it contributes to an improvement in their production and employment activities and general purchasing power. On the other hand, the obverse of the above proposition is that any further re-orientation of commercial bank lending in favour of 'priority sectors' perforce implies a critical evaluation of credit absorption by the medium and large scale industries to which the banks have begun to lend relatively more credit and which have also

diversified their sources of finance. Two developments in recent years in this context are a telling commentary on the performance of institutional credit in India : first, the consistent decline in recent years in the share of 'priority sectors' in net bank credit; and second, a sizeable increase in short-term bank borrowings as percentage of total inventories in respect of the medium and large scale industries in recent years despite the availability for them also of alternative source of finance on a large scale.

Considering the link that the cash flows of public sector undertakings have with the budgetary allocations (or an absence of them), a separate estimate of credit needs of such undertakings would have to be made. Likewise, the total needs of the Government sector based on its productive or developmental expenditure in social and economic sectors could be targeted. This 'target' has to be estimated separately for (i) RBI credit to Government which has implications for currency growth; and (ii) other bank credit to Government. Again, these numbers have to be separately estimated in *real* and *nominal* terms. As it is, some estimates of these numbers are available in nominal amounts.

Once the size of domestic credit expansion for a year is estimated, other building blocks for a flow-of-funds approach to credit budgeting exercises can be easily chalked out. On the 'sources' side, each component of  $M_3$  would be projected independently and not on the 'demand for money' ( $M_3$ ) type of aggregative relationship. It is found for instance, that a model based on a structural equation consisting of *real* value added in agricultural, industrial and services sectors, as also an estimated inflation rate, as explanatory variables, gives us a reliable estimation of the demand for currency which in turn sets the limit for the injection of RBI credit to Government and the commercial sector [taking due account of variations in foreign exchange assets, the required cash and balances with the RBI and other items (net)].

This model, simplistic as it may look, requires considerable base-level and on going empirical work, treating each one of the major variables on 'sources' and 'uses' sides as endogenous variables and attempting reliable forecasts. It departs from the existing approach in many respects and possesses many advantages, the most important of which is that it is in a position to incorporate a system of credit planning that takes into account the credit needs of individual sectors which is the most proximate goal of credit and monetary policy in India. In order to ensure that excessive credit from the 'monetary sector' is not injected into different sectors and into the system as a whole as it would have

both price, distributional and other distorting effects; the processes involved in this credit planning exercise would be many and they would require, by their very nature, an iterative approach so that, based on output, inventories, investment and other norms, a limit on total domestic credit expansion is set.

I do appreciate that some of the above exercises are already being undertaken. Nevertheless, the perspective on credit policy formulation is based on an aggregative approach in which the estimates of monetary expansion derived from the demand route and the supply route are sought to be balanced, the equilibrating factor being the change in the general price level. The supply route is purely monetarist in character, using the money multiplier process, given the estimate of 'reserve money' which is in turn projected on the basis of estimated increase in RBI credit to Government and changes in net foreign exchange assets of the banking system. Such an aggregative approach has truly prevented the system from having to provide more insightful and disaggregated exercises for monetary and credit policy formulation. It assumes an excessive importance to money in price determination; it relegates to the background the importance of credit as an input for production. This approach is particularly adverse to the small business whose survival, let alone growth, is dependent on the availability of institutional credit. It is but true that a large body of knowledge in Post-Keynesian Monetary Economics and such other areas emphasizing structural issues has received scant attention in the mainstream literature; it has been truly to the detriment of a more realistic and socially desirable credit policy<sup>8</sup>. Even Charles Goodhart, the most prolific and incisive contemporary writer on Monetary Economics, takes a much more eclectic view and candidly questions the mainstream thinking that money is exogenously determined: "For such reasons it is common, indeed customary, in monetary models to take the high-powered money base as exogenously given, determined off-stage, and then to relate the money stock to this base by a multiplier relationship, incorporating the behavioural responses affecting the two ratios involved. . . . . This approach, however, abstracts from all the main operational problems facing the authorities. It reveals nothing about the difficulties possibly confronting the authorities in achieving any desired level for the monetary base. It suggests by itself nothing of the implications for interest rates, markets and financial institutions of the authorities' choice of targets and market procedures. It gives no idea of the underlying forces with which the authorities may have to contend in controlling the money stock. Indeed, in making the initial assumption that the monetary base is under their control, all their operational problems are

implicitly assumed to have been resolved"<sup>9</sup>.

The system proposed in this note implies a significant departure in these respects. Certainly its implications for policy and distribution of bank credit may turn out to be much more radical as compared with the present dispensation. The approach proposed by us obviates the need for depending on the money multiplier approach which is truly a mechanistic device and undependable for realistic money supply determination. It also obviates the need for pressing the presence of equilibrium conditions in the system. In this respect, the advice rendered by Nicholas Kaldor rings such a relevant note: 'In my view, the proper test of competence of a Central Bank is how far it succeeds in ensuring that the banking system grants sufficient credit at the disposal of industry and commerce so that the true economic potential of the economy can be reasonably fully exploited without being over-exploited. In other words, bank credit should expand at the right rate, neither more nor less. This is neither ensured nor prevented by attempts to control the vagaries of the money supply'<sup>10</sup>.

### Section III

#### Need to Focus on Credit Size and its Distribution

The conventional approach to such a macro-economic backdrop would be to curtail monetary growth not knowing, however, what impact it would have on the credit demands of the vast segments of the unorganised sectors. Not that we would know much about the impact of macro target setting on the organised industries but in their case their potential credit drawing power, the scope for tapping alternative sources of funds, and at times, even for passing on the incidence to the suppliers in small-scale industries, see them through a macro-level monetary restraint. This is cited here to emphasize the fact that while the transmission mechanism of monetary policy impulses on the real economy known to be working through various channels- interest rate and cost of capital effects, wealth effects and effects on the prices of financial assets, and credit availability effects - is indeterminate, there is some knowledge that the impact is generally asymmetrical and goes to crowd out the unorganised segments of the economy.

A few important lessons relevant for policy have to be discerned at this stage. *First*, about the disintermediation process. It is incorrect to perceive that the disintermediation *per se* is unhealthy. The structural changes in the economy with consequential changes in the pattern of



financing by companies (say, dependence on long-term capital as distinguished from working capital requirements) may bring that about to an extent. Likewise, more discriminating saving classes may prefer, to an extent, alternative avenues of saving with greater risk and higher yield. But, what is disquieting is that the disintermediation process has been hastened and made to register a quantum jump because of certain policies such as, the uneven playing fields permitted in terms of fiscal concessions and no discrimination made, as between pure household savings and corporate funds, in allowing bank subsidiaries to mobilise resources at such high costs and at the cost of the Exchequer. Apart from the fiscal concessions, the system of permitting all such non-banking institutions to operate in the call and notice money market, has also tended to encourage this process, to all of which we allude in a subsequent section.

For the present, it is necessary to note the *second* lesson which is also related to disintermediation - a very undesirable fall-out from whatever developmental angle we look at. It is that there is no way by which the non-bank resources so generated could be channelled into satisfying the needs of (a) the Government which will, in the changed context, require massive funds from the market for augmenting infrastructure facilities (energy, transport, water supply, irrigation, rural roads and health and education) which cannot be left to the market forces and without which even a 'free market' regime will face a stunted growth, and (b) the unorganised sectors including the small-scale industry. Therefore, a major challenge would be (i) to correct the policy imbalance without hurting the goal of diversification in the financial system; and (ii) to ensure that due requirements of the Government and small-scale and unorganised industries are met from out of the *real* savings of the community. If this challenge is not faced squarely, two unhealthy features would be the natural consequence: the Government turns to the Reserve Bank for created money, and the unorganised sectors go to the private financiers at usurious rates of interest. The latter phenomenon has become widely prevalent. Certain growth of private financiers cannot be avoided but the impetus from an inconsistent policy framework can be disastrous in the long run.

A *final* development, which is worth noting as a lesson for future policy, is that certain unhealthy features have developed in the system of credit draws by bigger parties. First, despite attempts made to reform the styles of bank lendings, the proportion of cash credit in the total credit limits of the big-size companies remains fairly high and now unchanged for some years. Secondly, there is substantial fluctuation in

the credit utilization ratio with the scope still remaining for larger drawals when there is credit stringency (The recent measures to impose a levy on unutilised portion may help to contain this phenomenon to an extent) It is also observed that there are now noticeable slippages from the implied discipline from Tandon and Chore Committee norms - a phenomenon which is evident from, amongst others, two sets of data : *first*, it is found that short-term bank borrowings as percentage of inventories have relaxed from a little over 40 per cent in 1982-83 to about 48 per cent now in the case of the medium and large public limited companies; and *second*, the drawals of credit for a large number of industrial categories exceed the permissible levels of bank finance by about 25 per cent under method II of lending under the Tandon Committee norms. A majority of the borrowers, in other words, seem to have failed to graduate themselves from Method I to Method II of lending.

Where do we go from here for policy formulation? My submission is that we should not depend, as a lead and guidance for credit and monetary policy, only on macro-economic considerations of inflation and GDP and even sectoral growth. Neither the past 'reserve money' growth nor the behaviour of 'money multiplier' is any useful indicator in this respect. We should desist from any macro-level monetary target setting which sends inappropriate signals to both the large borrowers and the banks. Our approach should rather be *direct* in attempting to ensure that the required quantum of bank credit for all segments of agriculture and industry alike for productive purposes based on well-established norms is supplied. In order to see that the overall size of credit drawals is not crossed beyond the prudent limits, a critical evaluation of the application of accepted norms of inventories, methods of lending and style of lending, for all parties with *credit limits* above Rs. 50 lakh should be undertaken immediately so that such parties do not pre-empt available resources at the cost of the other productive sectors. Therefore, the first measures should be an organisational one on the part of the Reserve Bank to monitor the norms which we ourselves have prescribed more than a decade and a half ago, rather rigorously. The intention is not to curb bank credit for productive purposes but rather to plug the leakage and lapses that take place in the deployment of credit by the big-size units in manufacturing and other sectors. This is an essential anti-inflationary measure. In this context, it is instructive to recall the favourable effect on inflation of introducing inventory and receivable norms and such other financial discipline on the manufacturing firms in the second half of the 1970s. Inventory to sales ratio in respect of public limited companies in the private sector

steadily declined from about 33 per cent in 1974-75 to 28 per cent in 1980-81. This was one of the significant factors responsible for containing inflation during the period 1975-76 to 1978-79. Therefore, attempts made through monetary models have failed to explain the inflation behaviour during this period and hence the phenomenon has been characterised as missing inflation: " (The traditional monetarist model) . . . . appears to completely break down in the five-year period between 1975 to 1980 during which the actual inflation rate was 10 per cent per annum lower on average than the conventional model would have predicted."<sup>11</sup>

Another essential fall-out of the Tandon and Chore Committee norms would be the prudential benefit as the norms, if effectively implemented, would place a restraint on bank lending against a given level of current assets without hurting the production process.

The *second* measure should be to send somewhat positive signals to the banks and the financial system that no macro-level monetary target would work as a serious limitation in extending credit facilities to the unorganised sectors- agriculture, small-scale, tiny and rural industries, artisans, road transport operators and small businesses. At the same time, banks should further gear up their internal machinery to be able to identify, promote, nurture, finance and monitor the activities of unorganised sectors. It has been brought out by many Planning Commission studies that if the large backlog of unemployment has to be mitigated in the economy, the focus of employment growth has to be there on these sectors.<sup>12</sup>

To quote a recent study, "A significant scope for expansion of productive employment opportunities in manufacturing sector thus seems to be developing in the small-sized enterprises in the rural areas and small towns. This potential needs to be recognised and positively encouraged by providing adequate and suitable infrastructural support and fiscal and financial instruments."<sup>13</sup> Likewise, there is similar scope in more diversified agriculture, particularly rain-fed agriculture, and allied sectors. In contrast, by the very nature of their need to achieve technological upgradation and export orientation and to derive economies of scale, the medium and large-scale industries tend to reduce their employment absorption. There has been an *absolute* decline in the size of employment in the organised manufacturing sector since 1982-83.

In view of the above, it is necessary that we take cognizance of the need for a reorientation of credit distribution in the country. In reality,

what is happening today is that the macro monetary targeting fails to send such signals to the credit delivery system of commercial banks. Once this basic principle is accepted, it is possible for us to prepare a comprehensive domestic credit budget for each year taking into account :

- (a) the bank credit targets for the Government sector including RBI credit to Government and commercial bank credit to Government (given the agreed budget deficit level);
- (b) credit needs of public sector undertakings;
- (c) credit needs of medium and large scale industries; and
- (d) expansion in credit for the priority sectors (It should be noted that with the recent rationalisation of the interest rate structure, the yield on bank advances from unorganised sectors have become substantially attractive for the banking industry).

*Thirdly*, the objectives set out above would have to be supported by, apart from moral suasion, a few concrete credit policy measures.

## Section IV

### Broad Thrusts of Interest Rate Policy

The perspectives that guide the present interest rate policy are the same ideas which govern monetary targeting and macro monetary policy issues. The Chakravarty Committee repeatedly emphasises the importance of inflation-adjusted real rates of interest for Government debt, for bank deposits and for bank lending. The Chakravarty Committee recommendations as well as the subsequent 'rationalisation' of interest rate structure had not considered issues in development planning such as economic and social rates of return; nor do they fully consider market-related concepts like appropriate differences in nominal rates of interest based on risk premium and the term structure of rates. In reality, a policy informed by societal considerations would not have conceived of a pattern of interest rate whereby public food procurement agencies, which have ensured a fair degree of 'food security' in the country, have to pay, on their bank borrowings, a rate of interest which is very close to the commercial rate (Even the benefit of a relatively very small operational cost for the lending banks is being denied to these public agencies). Similarly, other public procurement and

distribution agencies, which enjoyed some concessive rates of interest and which help to contain inflation, deserved continuance of their concessive rates.

Likewise, the existing policy makes no distinction between the rate of interest on genuine household financial saving and the short-term cash flow accumulations of corporate bodies which do not truly constitute a part of current savings. An aspect of the deposit rate changes in recent years has been the provision of high rate of return on short-term funds which has tended to create distortions in the term structure of rates and which can hardly help in preventing disintermediation. In regard to the phenomenon of disintermediation, a negative step was taken in April 1987 when the maximum maturity period was drastically cut from 5 years to 2 years (and now raised to 3 years). As a riskless form of saving, bank deposits have an attraction for a number of savers; long maturity deposits with recurring and cumulative yields offer security and also serve the function of social security in a society where social security benefits hardly exist. All these considerations have been overlooked for operational reasons thus surely hurting the intermediation process. Frequent renewal of deposits involves inconveniences and costs for the depositors. In an economic structure which is vastly differentiated and which possesses a large unorganised sector, the concept of market-related, inflation-adjusted rate of interest on bank credit cannot be stretched too far. Also, public policies have to act in concert at least to an extent. A number of small-scale units which enjoy credit limits of a little over Rs.2 lakh may not earn income above the minimum taxable limit. On the other hand, the bigger units enjoying cash credit limit of over Rs.5 crore have scope for deducting interest expenditure from out of their taxable profits. Thus, the effective incidence of interest burden turns out to be vastly higher for a small-scale unit say, the actual rate of 20 per cent as compared with that for a large-scale unit, say 12 per cent (at 40 per cent taxation on profit). Therefore, the differences in return on capital as between small-scale units and large-scale companies are not taken care of. While one does not deny the scope that existed for the rationalisation of interest rate structure, the rationale for the multiplicity of rates based on numerous criteria was sufficiently strong in a vastly differentiated economic system and for a banking and financial system which derived its strength from public ownership. In the same vein, if size alone should be the criterion, some further stratification was strongly desirable. Borrowers with large credit limits of say, over Rs.5 crore could be made to pay a higher minimum than what is prescribed at present. Such an increase in the rate for large-size borrowers becomes all the more relevant in the

context of the current inflationary situation where the tendency for higher inventory build-up is evident. Also, a growing size of bank funds is being obtained through high-cost Certificates of Deposit (CDs).

In regard to the cost of intermediation by banks, it should be borne in mind that one of the important causes of low profitability of the banking industry has been the unmitigated increases in wage cost and administrative expenses of banks. Otherwise an average earning of 13 to 14 per cent on bank advances should be considered as realistic from the banks' point of view when we take into account the average cost of funds and after allowing for some amount of risk premium and normal profit.

### Deposit Rates

On deposit rates, apart from the broader perspectives of minimising rentier income as suggested earlier, there are some micro issues which deserve consideration. First, the erstwhile term structure of rates, which had some strong rationale in terms of linking rates of interest to maturity periods, deserves to be restored. The payment of high rates of interest on short-term deposits with banks is truly unrealistic as it contributes to an increase in the average cost of capital. If banks are considered as major instruments of intermediation in the country, it is necessary that such costs are avoided. Such short-term deposits are essentially those of corporate bodies and do not - at any rate the bulk of them - constitute household saving. A major objection to reducing the short-term deposit rates would be that such funds would move away from banks and contribute to further disintermediation. This is true, but it has come about because of a major policy flaw of permitting companies to invest in units of UTI and now, in mutual funds. These saving instruments with fiscal concession should be earmarked for mobilising household savings in financial assets. Similarly, the regulation of portfolio management by banks to facilitate circumvention of the Reserve Bank's deposit regulations are required to be monitored more closely and preferably ban them. So long as these issues are not addressed and remedied, distortions in financial (and even capital) markets would persist. The reform of deposit rates need not await this long-term goal of making legislative provisions for preventing commercially-run corporate bodies from making investment in units of the Unit Trust of India and schemes of mutual funds. Until legislative provisions are effected, the Reserve Bank of India should use its powers of *moral suasion* to see that the UTI and the mutual funds managed by LIC, GIC and bank subsidiaries do not accept subscriptions by

corporate bodies into their schemes.

Secondly, the depositor preferences in favour of longer term maturities are proven. Because of total stability offered by public ownership and being riskless form of saving, bank deposits with longer maturities continue to constitute an attractive form of saving for households. The new interest rate policy on bank deposits has prevented the banks from exploiting this potential for mobilising long-term savings from the generality of savers in the country.

## Section V

### Money Market Operations

In the new dispensation of monetary policy pursued during the past few years, prominence has been bestowed on the money market. The measures relating to the promotion of bill financing, particularly the waiver of stamp duties and the increase in the number of participants in the bills rediscount market, should go a long way in reforming the style of bank lending in the country. Likewise, the setting up of the Discount and Finance House of India has contributed to imparting greater liquidity to money market instruments. Amongst the new money market instruments, the permission to float Certificates of Deposit (CDs) by banks is, to some extent, a useful measure to arrest disintermediation and help banks to offer competition for bulk funds. Nevertheless conferring such high yield on riskless forms of assets is to some extent indefensible when the average rate of return on capital in the country is not particularly buoyant. Such layers of cost built into the system finally affect capital formation and growth and also contribute to inflation. Likewise, in matters of instrument development, the securitisation of short-term debt of richer companies in the form of Commercial Paper (CP) has both positive and negative elements. There is no gainsaying that in effect CP confers an undue advantage on companies which are rich and enjoy cash surpluses. In a system which accepts the need for cross-subsidisation as a social and economic philosophy in the conduct of credit and monetary policy, allowing bigger companies to escape from such costs is indeed unfair and socially undesirable. Be that as it may, having set the process in motion for introducing new instruments, there is a degree of irreversibility about them. The only caution one may like to administer is that no further liberalisation be effected in the terms and conditions of issue of CDs and CP so that the in-built leakage or loophole in the system of intermediation and cross-subsidisation we administer does not get generalised.

A major aspect of the money market which calls for some fresh thinking is the enlargement of the number of participants in the inter-bank call and notice money market. The purity of the inter-bank market as a market for evening out day-to-day surpluses and deficits within the banking system deserves to be retained. With the widening of the number of participants in the call and notice money market, the Reserve Bank has surrendered a major barometer potentially available in its armoury to send signals and to receive feedback on the influence of its policies on money market conditions. The institutions with surplus funds now have the bills rediscount market as a short-term facility which requires to be promoted. Similarly, the commercial banks should not be allowed to over-extend themselves with the help of funds from outside the banking system in the call money market. To an extent, it may also contribute to the process of disintermediation which deserves to be arrested. There is thus a case for rescinding the decision to permit non-banking financial institutions for operating in the call and notice money market. If corporate bodies are discouraged from investing in units of UTI and mutual funds, the pressure for them to operate in the call money market would also be minimised.

## Section VI

### Summary

The perspectives brought to bear on credit and monetary policy in India have been conventional and unequal to the broader developmental goals. The emphasis on price stability as the primary objective of monetary policy has neglected the wider and dynamic role that money and credit can play in output and employment generation. Similarly, concentration on the size of Government's fiscal deficit has ignored aspects like nature of the deficit, the structure of Government spendings and the composition of revenues, all of which can be more inflationary.

Macro monetary target setting has conceptual limitations and it fails to send right signals to the borrowers and banks alike. The primary cause of inflation is in the non-monetary sphere. Price formation takes place in the commodity markets and money supply increases follow price increases. As Prof. Sukhamoy Chakravarty has emphasized, pure statistical evidence is not enough to judge if causation runs from money to prices. A more appropriate approach should be to



focus on credit and as Prof. Kaldor argued the vagaries of money supply do not ensure the supply of the right quantum of credit for the right sectors. Therefore, it would be in the interest of Indian economy if Pavlovian response to the inflationary situation in terms of cutting  $M_3$  growth is given up. At any rate, at least in the next decade, the phase of development calls for a more direct approach.

Befitting the broader perspectives which call for direct targeting of credit supply and its distribution it is proposed that :

- (a) we examine critically the application of accepted norms of inventories, method of lending and style of lending as certain unhealthy tendencies and lapses have surfaced ; and
- (b) we send positive signals to the banks that no macro-level target setting would work as a limitation in extending credit facilities to the unorganised sectors based on their genuine needs .

As for deposit rates, their levels should be such that they do not generate vast rentier income in the system and encourage riskless forms of fixed-yield financial assets to the detriment of risk-based equity capital. Besides , there is a strong case for restoring the earlier practice of prescribing separate rates for different short-term maturity periods and short-term deposits which flow from corporate bodies should not be offered unreasonably high rates of interest far beyond the rate offered on saving deposit accounts. To help arrest disintermediation, banks be allowed to offer longer maturity deposits with recurring yield facilities, the maximum interest rate being offered on 5 years and above maturity deposits.

Finally , with a view to retaining the purity of the inter-bank market as a bankers' market, there is case for restricting the call and notice money market to only commercial and co-operative banks and thus rescinding the decision to permit a large number of non-banking financial institutions for operating in it.

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3. One of the most comprehensive studies on inflation in India undertaken recently has the following to say;
 

"Empirical evidences on inflation in India suggest that money supply is only one of the important determinants of inflation rate. The pure monetarist model, therefore cannot explain inflation behaviour in India. The basic assumption of the monetarist model, namely , neutrality of money with respect to output and employment is also not valid in India. A reduction in money supply, at a given output therefore, may control inflation, if at all, only at the expense of output. There is also a strong evidence both from macro-econometric and causality studies that money supply itself adjusts to price level through government fiscal constraints. In this respect, monetary policy in India plays a secondary role with respect to fiscal policy in controlling inflation."

"Among non-monetary factors, food supply and government buffer stock operation through public distribution system and import price are found to be major determinants of inflation rate. The relative disparity between agricultural and non-agricultural income is another important factor behind inflation . In recent years, however, the importance of this factor has declined due to lower elasticity of employment with respect to non-agricultural income. There is also a possibility of increasing inflation rate on account of wider discrepancy between service income and commodity output growth, especially in the eighties". (Bhattacharya, B.B and Lodh, Madhumita (1990), "Inflation in India : An analytical survey", *Artha Vijnana*, March).
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## **Role of the Reserve Bank of India : Regulatory, Developmental and Constitutional Aspects**

**J.M. CHONA\***

This paper attempts to first trace the major landmarks in Reserve Bank of India's role in its traditional as also promotional and developmental spheres. Next, it provides an analytical sketch of the constitutional and legislative position and powers in respect of central banks of certain other countries. From this, it attempts to draw insights for the Indian case.

### **Introduction**

Consequent to both widening and deepening of the capital market, the financial system in India is undergoing an evolutionary change. With a gradual opening up of the economy and the thrust towards financial liberalisation, new institutions, new techniques and new instruments have been introduced requiring sophistication in the skills for the management of the financial system. Besides, a trend is emerging where commercial banks, primarily through their subsidiaries, engage themselves in investment business whereas long-term specialised financial institutions get involved in commercial banking business so that the distinction between investment business and banking business among a wide spectrum of financial institutions gets blurred. Since these transactions have an impact on the liquidity understood in the wider sense, it is but proper that the Reserve Bank of India, being at the apex of the financial system, should be vested with authority to monitor the entire financial system. The conferment of such an authority implies accountability in terms of keeping a tight leash on the expansion of liquidity in the system in consonance with the stable growth requirements of the economy. Such an accountability raises the question as to what is the

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kind of relationship that should exist between the Reserve Bank of India and the Central Government. Should the Reserve Bank be independent of the government? What kind of advice it should give to the government and what is the status it should enjoy so as to bring about an harmonious relationship between the fiscal and monetary policies of the country? Before we address these questions, we may examine the role played by the Reserve Bank in the Indian economy.

## I

### Evolution of the Role

The role of the Reserve Bank has been, and would continue to be, an evolving one undergoing changes in response to the emerging economic environment. These changes have pertained to instruments of monetary control, banking practices and institutional adaptations. While regulatory functions of the monetary system have remained intact, the Reserve Bank has been increasingly involved in the developmental or promotional functions consistent with the needs of the planned economy because monetary policy is conceived to be an arm of the overall economic policy. The problems of developing countries are different from those of the developed ones inasmuch as the former are characterised by heavy dependence on agriculture, relatively lower industrialisation and urbanisation, inadequate infrastructure, lower per capita incomes, social disparities, high incidence of poverty, population pressure, regional disparities and a complex structure of government. To tackle these problems, India has adopted development planning as a strategy. An important component of this strategy is the emphasis that has been placed on revitalising the rural sector which constitutes the backbone of the Indian economy accounting for over a third of GDP. It is also a sector where a large proportion of the population (nearly three fourths) draws sustenance getting employment opportunities. The growth of this sector produces expansionary impulses for the agro-based industries such as cotton, jute, edible oils, etc., as also, for other products where agricultural raw materials are used as inputs. It is but necessary that growth of this sector should be supported by matching credit at reasonable cost.

It was in recognition of the special credit requirements of the agricultural credit that right from its inauguration on April 1, 1935, a promotional role was envisaged for the Reserve Bank. In terms of the Act, the Reserve Bank set up an Agricultural Credit Department mainly to study and provide consultative service to the government and

banks and generally coordinate the activities in the area of agricultural credit with those agencies engaged in purveying such credit. The role of the Bank was initially conceived as mainly regulatory and in the context of the need for close integration between its policies and those of the government, the Bank was nationalised from January 1, 1949. The demand and events during the first fifteen years of its existence were marked by the consolidation of traditional banking functions. However, with a concerted thrust on economic development beginning from the early fifties, a variety of developmental and promotional functions came to be performed by the Bank.

As the developmental process moved ahead, the monetary system was called upon to meet the financial needs of growing economic activities implying organisational and structural changes. The task of central bank could not therefore be confined to mere regulation of overall supply of credit; it had to also ensure that a machinery is created for financing developmental activities in the country and for ensuring that the finance made available flowed into the desired channels. In this context, special credit facilities at concessional rates of interest to the priority sector that includes agriculture, small scale industries and exports have become necessary. The Reserve Bank presently performs the following tasks : (a) mobilising the savings of the community and enlarging the financial savings pool; (b) promoting efficiency in the allocation of savings of the community to relatively more productive purposes in accordance with national economic goals; (c) enabling the resource needs of the major 'entrepreneur' in the country, viz., the government to be met in adequate measure; (d) promoting price stability and (e) promoting an efficient payments system<sup>1</sup>.

### Credit and the Rural Sector

The role of the Reserve Bank has been unique in the development of the credit delivery system. Various schemes of concessional flow of credit to the rural sector have been evolved over a period of time. The institutional mechanism involved three types of cooperative credit flow : primary cooperative credit societies at the village level, central cooperative banks at the district level and State cooperative banks at the State level. With the increasing needs of the agricultural sector, the induction of commercial banks into the field of agricultural credit was strengthened under the policy of 'Social Control' over banks in 1967. This process was subsequently intensified with the nationalisation of 14 major commercial banks in 1969; in 1980 further 6 banks were nationalised. A later institutional innovation in 1975 was the

establishment of Regional Rural Banks (RRBs) with exclusive attention on the specific target groups of weaker sections comprising small and marginal farmers, agricultural labourers and rural artisans. Thus, the institutional credit system for the rural sector now comprises cooperative banks, commercial banks and the regional rural banks. A substantial part of the Reserve Bank's functions in relation to rural credit has been transferred to NABARD which was set up in July 1982. This has in no way diluted the commitment of the Reserve Bank in the orderly growth of the rural credit system in consonance with the broad national socialistic objectives and priorities of development. This is reflected in the line of credit provided by the Reserve Bank on highly concessional terms (3 to 5 percent rates of interest per annum) for NABARD's short-term operations. Reserve Bank also makes substantial contributions to the National Agricultural Credit (Long-Term Operations and Stabilisation) Funds every year for supporting NABARD's term financing activities.

#### **Concessional Credit for Priority Sectors**

While the banking industry is passing through a phase of consolidation after it has made strident advances both geographically and functionally, it would be somewhat simplistic to consider the banking system as being primarily concerned with the mobilisation of deposits and channeling credit to the desired sectors. The commercial banks have not only to fill the credit gaps but also to provide other services complementary to credit availability that would encourage entrepreneurial responsibilities. Two significant aspects of nationalisation have been : (a) rapid branch expansion and (b) channeling of credit according to plan priorities. Banking facilities are now available in areas hitherto not served by banks so that they not only mop up potential savings but also meet the credit gaps in agriculture, small scale industries and other neglected sectors thereby helping to bring large areas of economic activities within the organised banking system. This implies a deliberate effort towards institutionalisation of savings and investment within the economy. While banks are involved in promotional and developmental activities, their rural lending has been somewhat haphazard and its dispersal in a large number of villages spread over a wide area has made close supervision of the end use of funds difficult. Therefore, the Reserve Bank felt that it would be desirable to evolve a new policy to impart a greater thrust to rural lending involving an organised and concentrated approach to development through credit and other inputs. The Service Area Approach operational from April 1, 1989 represents a step in this direction with equal emphasis on growth and equity. In

terms of this approach, banks become the prime agents of rural development. This approach is aimed at bringing about an improvement in the quality of lending, optimising the use of credit, establishing improved linkages with production and productivity and proper recycling of bank credit. The emphasis is, therefore, on planning from below upwards.

### **Finance and Development**

It may be appropriate to discuss the impact of institutional credit, especially bank credit, in terms of the relationship between finance and development. The existence of regional imbalances in the growth process is not unusual. Consequently, with the positive involvement of the government to ensure that better regional development was taking roots, the process of building up a financial infrastructure coterminous with, and supportive of, the thrust on reducing disparities was initiated in the mid-sixties with the establishment of a string of development banks, namely Industrial Finance Corporation of India, Industrial Development Bank of India, and Industrial Credit and Investment Corporation of India at the national level and State Financial Corporations at the state level. A further support to investment activity was provided by the Life Insurance Corporation of India and its subsidiaries and the Unit Trust of India. In a way, the regional development strategy which was initially in the form of directing or influencing economic activity became a full fledged finance-led growth with due regard to the specific focus on backward area development in rendering financial assistance, conducting techno-economic surveys, identifying projects and encouraging entrepreneurship. The Reserve Bank has played an important role in promoting and nurturing these institutions<sup>2</sup> and then hived them off after they acquired maturity. Lately, to meet the growing need of housing finance, it has set up a National Housing Bank.

### **Liberalisation and Innovations**

The period since 1985 has seen a process of consolidation which has also involved (i) comprehensive Action Plans by individual banks covering organisation and structure, training, house-keeping, customer service, credit management, recovery of bank dues, productivity and profitability, (ii) phased introduction of modern technology in many areas of banking operations and (iii) emphasis on financial viability by easing some of the policy-related constraints on profitability, strengthening capital base of banks and allowing them flexibility regarding bank charges. Such a milieu for improving overall efficiency



was also conducive for relaxing control mechanisms and allowing for competition, innovation and diversification among banks and other financial institutions. Thus, a series of coordinated and integrated policy changes have been introduced to attain these objectives in the financial markets. These policy changes have encompassed all segments of the financial system. viz., credit and money market, capital market, foreign exchange market and gilt-edged securities market. This is in consonance with the economic liberalisation measures initiated with the advent of the Seventh Plan (1985-90) in industrial licensing and other regulatory devices, export-import trade and tariffs and stock market operations. The monetary policy in India is concerned with the regulation of both money supply and interest rates. Interest rate policy has evolved in a regulatory framework which, besides determining the structure of interest rates, also aims at directing bank credit flows to specific sectors in line with plan objectives and specific plan programmes. Concessional interest rates are widely used as a way to signal that certain target groups deserve special attention in the dispensation of credit. The system of administrative interest rates has become increasingly complex over the years. And to reduce this complexity, interest rates are now linked to the size of loans. The Monetary Committee (the Chakravarty Committee), which reviewed the operations of the Indian financial system from 1982 to 1985, recommended a scheme of flexible monetary targeting for India. The Reserve Bank of India has not adopted a formal system of monetary targeting but it does announce on the eve of the slack and busy periods of credit in each year the expected increase in bank deposits. Monetary and credit policy measures are designed to keep deposit growth within these limits.

The financial reforms have extensively touched the areas of commercial banking and short-term money market operations. In the recent period, significant flexibility has been introduced in the operation of the administered structure of interest rates. In doing so, the aim has been to ensure that deposit rates remain positive in relation to the inflation rate so as to promote savings; in lending rates the aim has been to facilitate, inter alia, better alignment between the banks's cost of funds and return on them. Banks now enjoy a degree of flexibility in charging rates of interest on their large and medium borrowers in the non-priority sectors; they may, beyond a floor rate (of 19 per cent), charge higher rates depending on their own assessment of individual borrowers. Credit Authorisation Scheme had been in operation since 1965. Following a gradual liberalisation of the scheme during the last three years, the requirement of prior authorisation of credit limits by the Reserve Bank has been withdrawn and replaced by a system of Credit

Monitoring Arrangement involving only post-sanction scrutiny. Simultaneously, restrictions on transfer of accounts from one bank to another have been withdrawn.

### **Developments in Short-Term Money Market**

A number of steps have been taken in the past two years to develop the money market in India. Briefly, these are : (i) introduction of 182 days Treasury Bills on an auction basis with flexible interest rates; (ii) lowering of the bill discount rate to encourage bill culture; (iii) stipulation of norms for use of bills for credit purchase and credit sales; (iv) setting up of the Discount and Finance House of India (DFHI) to develop an active secondary market in money market instruments; (v) introduction of two kinds of inter-bank participations, namely, with risk and without risk; (vi) removal of interest rate ceilings effective May 1, 1989 on call and notice money, inter-bank term money, rediscounting of commercial bills and an inter-bank participations without risk and introduction of two more money market instruments, namely Certificates of Deposits (CDs) and Commercial Paper (CP).

### **Innovations and Diversification**

Commercial banks have been encouraged to diversify into fresh areas of business, viz., merchant banking, equipment leasing, venture capital, mutual funds, financial services, etc. They have introduced innovative schemes of deposit mobilisation, providing consumer credit, issuing credit cards etc. Besides, some transactions have also been computerised to improve customer service. Government securities market in India has traditionally been narrow and captive. The coupon rate was low. Institutional investors such as banks and other institutions dominated the market to meet their statutory requirements. However, during the last few years, several measures have been taken including the raising of coupon rates so as to improve the yield and liquidity and encourage a more active market in the coming years.

### **Some General Observations**

The Indian economy now has an extensive financial superstructure consisting of a vast network of institutions deploying varied instruments facilitating the mobilisation and channeling of funds for working capital and production credit purposes as well as long-term investment. The Reserve Bank occupying the prime position has helped to promote and nurture a functionally varied and spatially diversified financial system.

The system has undergone far reaching changes, particularly since the nationalisation of banks two decades ago reflecting the needs of a developing economy to mobilise and direct savings in productive and socially preferred sectors. All the organised sector institutions - be it the Reserve Bank, commercial and cooperative banks, or the term financing institutions including the insurance companies and the Unit Trust of India conduct the delicate task of combining commercial considerations with the developmental and social imperatives. The development of the Indian economy requires a coordinated approach embracing the centre, the states, the local bodies and voluntary organisations. More important, it is the complementarity between the provision of infrastructure facilities and the availability of institutional finance that constitutes the essential philosophy of the development programme. However, the process of accelerating the growth of the economy through this complementarity has to be tempered by the consideration of achieving social equality in the distribution of income and wealth. While the policy framework for such an ambience is already in place, it has to be translated into reality by a deeper involvement of the banking system and institutional finance tailored to socially viable schemes. Through the geographical and functional coverage, the institutional mechanism is well dovetailed into the overall framework of the development strategy. While the Reserve Bank is, no doubt, involved in the developmental functions of the financial system, the primacy of its regulatory function is not diminished - on the contrary strengthened - for the extension of the financial system, insofar as it brings within its purview the non-monetised sector of the economy, enlarges the scope for an effective monetary regulation. There is no contradiction between the regulatory and the developmental aspects of monetary policy. To the extent the financial system gets more integrated, the transmission impulses emanating from the central bank would tend to become smooth creating the desired impact. In other words, both the regulatory and developmental functions of the Reserve Bank are mutually supportive.

## II

### Constitutional Issues

A considerable debate has taken place both in India and abroad on the question of granting autonomy to the central banks. Given the structural changes that have taken place in the financial system, it is only appropriate that the Reserve Bank should be in a position to discharge its role as a monetary authority as well as the regulatory body over the financial system. The Reserve Bank has voiced concern over

the erosion of monetary stability arising from automatic monetisation of fiscal deficits and suggested that the statutory provisions in respect of Reserve Bank lending to government are only enabling ones<sup>3</sup>. A case has been made by an academic to ensure 'functional autonomy' to the Reserve Bank so that its role can be dovetailed into that of the Planning Commission in terms of distribution of credit to different development and administrative agencies within the framework of overall objectives of planned development<sup>4</sup>.

In this context it would be useful to sketch the historical perspective of the constitutional and legislative position in respect of central banks of some other countries to draw insights, if any, for the Indian case. Among the various objectives of monetary policy, primacy is accorded to the maintenance of price stability and the debate about the autonomy for a central bank has to be analysed in the context of whether sufficient powers unencumbered by interventions by the government are available to achieve this objective.

#### **Experience of other Central Banks**

It is against this perspective that one has to appraise the ability of the Federal Reserve Board of the United States enjoying an autonomous status to break the back of the double-digit inflation in the U.S.A. at the end of the 1970s and then manage to contain inflation in the 1980s despite an extremely expansionary fiscal policy characterised by large cuts in taxation and increased public spending. The question has, therefore, been posed as to whether so much power should be wielded by a central bank not politically accountable, at least directly, to the people whose lives and fortunes are greatly affected by its decisions. Hence, the constitutional and legislative position of central banks which remains a lively issue in the U.S.A. and other countries would need to be re-examined. It may, therefore, be apposite to discuss how the constitutionality of central banking was established in the U.S.A. through a process that arguably laid the ground work and larger principles for its acceptance everywhere. In order to capture the nuances of legal positions of central banking, it would be worthwhile to discuss some differences in the positions of three leading central banks, namely the Federal Reserve, the German Bundesbank and the Bank of England and how they are reflected in the central banking laws of some other countries. The whole issue boils down to the consequences of the differences in various legal arrangements in terms of the relationship between the central bank and the treasury. And this relationship is still far from settled and is open to a variety of interpretations and

forms of implementation. The differences of opinion on whether the European Community should have a central bank and, if so what kind of central bank it should be, attest to the fact that legislative questions concerning central banking are as alive today as they ever were.

The constitutional history of the central banking in the United States spans over a period of two hundred years. And the issue of constitutionality of a central bank was perceived to be settled in terms of the implied powers that Hamilton espoused in the U.S. Constitution. Elaborating his general principle in defence of the establishment of the Bank of United States, Hamilton argued that there were in the constitution implied as well as express powers, and that his new doctrine of implied powers provided a criterion for determining what was, and what was not, constitutional:

"This criterion is the end, to which the measure relates as a means. If the end be already comprehended within any of the specified powers, and if the measure has an obvious relation to that end, and is not forbidden by any particular provision of the Constitution, it may safely be deemed to come within the compass of the national authority."<sup>5</sup>

Hamilton's doctrine of implied powers could be used to justify central banking if any constitutional doubts were raised provided that the doctrine became widely accepted. And it did become.

"The doctrine of implied powers, originally formulated as a principle of United States constitutional law, may at the present stage of legal development be considered as a general principle of the law recognised by civilised nations in the sense of Article 38(1) (c) of the Statute of the International Court of Justice, which is applicable in the field of constitutional law, corporation law and company law. From the view point of comparative central bank law, it appears particularly noteworthy that the doctrine was clearly formulated for the first time in response to an enquiry whether the establishment of a central bank in the United States constitution. The question was answered in the affirmative in a famous memorandum by Alexander Hamilton."<sup>6</sup>

Hamilton's doctrine of implied powers does more than settle the issue of constitutionality. And it also applies to the question of what a central bank may legally do. Even there are limits to the discretionary control of the monetary system which constitutes the essence of central banking.

Modern central bank laws list the areas in which discretionary powers may be applied. For instance, Section 8 (j) of the Australian Reserve Bank Act of 1959 reads :

“The Bank has such powers as are necessary for the purposes of this Act and , in particular, and in addition to any other powers conferred on it by the Act, has power - (j) to do anything incidental to any of its powers.”

Similarly, the Reserve Bank of India Act of 1934, Section 17(16) says :

“17. The Bank shall be authorised to carry on and transact the several kinds of business hereinafter specified, namely :- (16) generally, the doing of all such matters and things as may be incidental or consequential upon the exercise of its powers or the discharge of its duties under this Act.”

Similar provisions may be found in other central bank laws. It may, therefore, not be far fetched to suggest that these provisions which expand the banks' discretionary powers draw sustenance from the concept of implied powers adumbrated by Hamilton<sup>7</sup>

In fact, the Federal Reserve System is the third experiment with central banking in the U.S. history. Two earlier experiments establishing the Bank of United States were implemented and rejected. Despite the espousal of implied powers, many Americans continued to have doubts about the constitutionality of the two Banks of the United States. Hamilton's Bank of the United States, a corporate central bank similar to the Bank of England, was chartered for twenty years, 1791-1811. Although it was widely believed to have discharged its functions effectively, renewal of the charter failed by one vote in Congress. In 1816, a second Bank of the United States was chartered for twenty years, and performed equally if not more effectively. Nevertheless, the renewal of its charter was vetoed by the President. Many states-chartered and private banks began to resent the regulatory powers possessed by a large Bank that competed with them. A lesson that can be drawn from this aspect of the American experience is that although a central bank may be constitutional as perceived by Hamilton , it will always be at risk as long as it is not grounded in the constitution itself.

The Second American experiment with central banking lasting from 1840 to 1914 required the federal government's fiscal authority, the

Treasury Department, to also perform central banking functions. This experiment began as an attempt to make the government's fiscal operations independent of the banking and financial system. However, the latent fear of Americans that centralisation of power in government would threaten both economic stability and political freedom, led to abandonment of Treasury central banking in 1913 when Congress passed the Federal Reserve Act which dispersed central banking authority among twelve regional Reserve Banks and a coordinating Federal Reserve Board in Washington D.C. Privately owned but publicly controlled, the Federal Reserve System was explicitly designed to give private financiers (bankers) and public financiers (the Treasury) a voice in central banking without allowing either group to dominate it. In a sense, the Federal Reserve System became a fourth independent branch of government.

### III

#### Possibilities of Conflict

With the acceptance by governments of macroeconomic objectives of full employment, stable price levels, economic growth and foreign exchange stability since the first half of this century, it became clear in theory as well as in practice that the operation of central banks could affect the attaining of all of these objectives.<sup>8</sup> Consequently, the powers of central banks were often strengthened and made more explicit in law. Simultaneously, the obligation of central banks to coordinate their policies with the broad economic policies of national governments was also made explicit. There are, however, elements for reconciliation between the idea that central banks should have more powers and responsibilities in reaching macro-economic objectives and the idea that governments having the same responsibilities should, therefore, have more authority over central banks. If there are trade-offs between macro-economic objectives - if for example, measures to reach full employment make it more difficult to attain price stability - and if central banks and governments disagree on the relative weights to be attached to the macro-economic policy objectives, then the stage is set for conflict between the central bank and the government. It may, therefore, be instructive to see how the legislative changes affecting the American, German and British central banks between the 1920s and 1950s could handle such problems of conflict.

#### U. S. A.

During the first two decades of its existence, and especially when

the Great Depression of the 1930s occurred, structural weaknesses plagued the Federal Reserve system. The Federal Reserve Act, 1913 had not clearly delineated the authority of the Federal Reserve Board based in Washington D.C. in relation to that of the regional Federal Reserve Banks. Disputes arose as to whether the Reserve Banks or the Board had ultimate power over open market operations and rediscount rates. There were also concerns understandably given that World War I greatly increased the fiscal requirements of the U.S. Treasury - that the Treasury Secretary, who was an ex-officio member of the Federal Reserve Board, exerted too much dominance over it and the whole Federal Reserve System. Thus, the independent central banking system that had looked good on paper in 1913 never looked so good or independent during its early years of operation and its structural and operating weaknesses contributed significantly to the economic and financial debacle of 1929-1933. Out of that experience emerged a series of fundamental changes in the legislative underpinnings of the system. These changes centralised authority in the system and, in retrospect, strengthened its independence from special economic and political interests. The legislative changes of the 1930s - chiefly in the Banking Act passed by the Congress in 1935 - were most notable for increasing the authority of the Board in Washington over both the Reserve Banks and the member commercial banks of the System. The more substantive changes gave the Board of Governors authority to alter the legal reserve requirements of member-banks, to set maximum interest rates that banks could pay on time deposits and to set margin requirements on loans to purchase securities. Perhaps more important, the authority to determine open market operations was conferred on a new twelve-person Federal Open Market Committee consisting of the seven members of the Board of Governors and five regional Reserve Bank presidents who served on a rotating basis. The new Open Market Committee was clearly a governmental agency pursuing national goals in a unified manner in contrast with its predecessors. Apart from this, two changes made the Board more independent as well of governmental authority. First, the two ex-officio members of the Board, the Secretary of the Treasury and the Controller of the Currency, were removed and replaced by two additional Board members specifically appointed, as the other five members always had been, by the President of the United States thereby diluting direct Treasury influence on Board actions. Secondly, there was an increase in the terms of Board appointees to fourteen years making it difficult for any single U.S. President to make the Board of Governors sympathetic to executive will by appointing a majority of the Governors.



**Germany**

Something similar to what happened to U.S. central banking in the 1930s occurred in Germany in the 1950s. Before 1957, the Bank of German states, akin to the Federal Reserve Board before 1935, served as the central coordinating body for the individual state central banks. The 1957 law that created the Deutsche Bundesbank (German Federal Bank) converted the state central banks into branches of the Bundesbank and made the Central Bank Council consisting of the Bundesbank president, vice-president and other members of the Directorate, and the presidents of the state central banks into the supreme policy-making body.<sup>9</sup> Members of the Directorate are appointed by the Presidents of the Federal Republic usually for terms of eight years. Of all central bank laws, that of the Bundesbank would appear to be the strongest in making the central bank an independent and co-equal partner of the government. The key provisions of the law are:

*"Article : Legal form.* The Deutsche Bundesbank shall be an autonomous federal institution and a legal person under public law....."

*"Article 3 : Functions.* The Deutsche Bundesbank making use of the powers in the field of monetary policy conferred upon it under this law, shall regulate the note and coin circulation and the supply of credit to the economy with the aim of safeguarding the currency and shall ensure appropriate payments through banks within the country as well as to and from foreign countries."

*"Article 12 : The Bank's Relationship to the Federal Government.* The Deutsche Bundesbank shall be obliged, in so far as is consistent with its functions, to support general economic policy of the Federal Government. In the exercise of the powers conferred on it under this Law, it shall not be subject to instructions from the Federal Government."

Although these legislative provisions do not quite make the German central bank a fourth branch of government in addition to the executive, legislative and judicial branches, it may be argued that the Bundesbank's legal autonomy and its success in preserving the stability of the German mark have raised its status *de facto* to something akin to a constitutional rank.<sup>10</sup> In Germany, however, as in the U.S.A., the autonomy of the central bank is supported by strong feelings that elected officials have an inherent bias towards prodigality and inflation. Moreover, especially in an ambience of manipulated currencies, it is

thought wiser to entrust the setting of monetary policies to independent experts rather than the representatives of political parties and pressure groups. The overwhelming opinion in both countries is that an independent central bank is in keeping with a political system of checks and balances.

#### U.K.

In the U.K., the trend of modern central banking thought and action appears to have been quite different from that of the United States and Germany. The Bank of England Act 1946, Section 4 also set forth the principle on the relationship of the government to the Bank :

“Section 4 (1) The Treasury may from time to time give such instructions to the Bank as, after consultation with the Governor of the Bank, they think necessary in the public interest.

(2) Subject to any such directions, the affairs of the Bank shall be managed by the court of directors in accordance with such provisions (if any) in that behalf as may be contained in any charter of the Bank for the time being in force and any by-laws made thereunder.<sup>11</sup>

This “directions” clause apparently was less a new departure from, than a formal statement of the Bank’s subservience to, the Treasury which had been informally agreed upon by all the concerned parties for many previous years. The right of the government to insist on its perception of monetary policy regardless of what the Bank might think was not questioned. It is often pointed out that such “directions” have never been given and even contended that it is unlikely that they ever will be.<sup>12</sup> If that is so, then the question arises as to why the “directions” clause was written. There are two possible interpretations. One is that the “directions” clause merely codified and clarified the existing practice. The other is that the clause would exert what could be termed a chilling effect on the Bank and that it would fall into line with government thinking to avoid receiving directions. Under either interpretation, it is apparent that the autonomy or independence of the central bank is less important to the British than it is to the Americans and Germans.

In quite a number of countries, especially those with traditional ties to the U.K., subordination of the central bank to the government is generally the rule with possibly a few exceptions. And the British influence in terms of the “directions” clause was quite significant in a

number of the present SEANZA countries with the exception of Pakistan and Singapore. In the case of Singapore, a "directions" clause would appear to be superfluous because government officials control the Monetary Authority. Pakistan, therefore, is the only country with a British tradition that chose not to adopt a "directions" clause when it might have chosen to do so. In Australia, the cumbersome procedure indicates that while the government is supreme it would also be a good idea for the Reserve Bank Board and the Government to resolve their differences before resorting to it. In Papua New Guinea, the policy roles of the Bank Board and the Government appear to blend the British and the Australian approaches to "directions". In the Philippines, an interesting aspect of the law is that monetarism and price stabilisation are the guiding domestic principles of central bank administration and the Bank appears to have the independence reflecting the influence of the U.S. model.

In the case of China, there is some haziness concerning the actual independence of the central bank. Article 5 of the Provisional Regulations of the people's Republic of China on the control of Banks (Promulgated 7, January 1986 by the State Council) deals with central bank. It states in part that :

"The People's Bank of China is the State organ through which the State Council leads and controls the fiscal affairs of the nation , and it is the central bank of the State, and shall carry out in full the following duties : (1) research and draw up national guidelines and policies for financial activities, and arrange for their implementation *after approval (italics added)*<sup>13</sup>.

The possible interpretation of this provision is that the People's Bank of China recommends policy to the State Council, and implements policy only after the State Council approves it. In this sense, the Bank does not have independent policy-making powers. The law is, however , terse and one would need to observe how the proposals of the Bank are handled by the State Council before one can draw any conclusion about the actual independence of the Bank .

In possible contrast with China the Central Bank of Iran appears to have somewhat more latitude of action till recently. Article 10(d) of the Monetary and Banking Law of Iran, 1977 states that :

"Unless specifically stipulated by Law, Bank Markazi Iran shall not be subject to the general laws and regulations applying to ministries,

government corporations and agencies and agencies affiliated to the Government, nor to the provisions of the banking sectors set forth in this act.<sup>14</sup>

Subsequent sections of the Law indicate that the ministries of Finance and Economy participate in the councils and other authoritative bodies of the Bank, but the above quoted provisions seemed to give the Bank an independent voice in financial policy. However, a later law passed in 1983 appears to have reduced the independence of action of the Central Bank of the Islamic Republic of Iran. Article 19 of this later Law states :

“Policy for credit and short-term (one year) facilities shall be adopted upon recommendation by the General Assembly and approval by the Council of Ministers, and policy for credit and five-year and long-term facilities shall be incorporated in bills for five-year and long-term development plans and submitted to the Islamic Consultative Assembly for ratification<sup>15</sup> .

Governmental changes in Iran would appear to have altered the role of Bank Markazi from one of an independent central bank to a central bank strictly controlled by executive and legislative councils of the Iranian government.

The Central Banking Law of Malaysia appears to reflect the British influence. Article 34 of the Central Bank of Malaysia Ordinance, 1958 calls on the Bank Board to keep the Minister of Finance informed on the Bank's policies, but also specifies that if the Minister disagrees with the Bank's policy, he may issue binding directives to the Board on the policy to be pursued.<sup>16</sup> If the Board objects, it may submit its objections in writing to the Minister, who will lay the whole matter before the House of Representatives.

The question then one has to pose is whether the legislative status or position of the central bank relative to the government makes any difference. There are, no doubt, some marked differences in the legal position of central banks around the world. It is argued by Rasminsky, Governor of the Bank of Canada from 1961 to 1973, that statutory differences have little effect when he writes :

“The formal status of the central bank varies a great deal from country to country. In any case, this is a field in which the real inwardness of the situation is not likely to be revealed by the terms of

statute. Much depends on history and tradition and a fair amount even on the personalities involved....I do not believe that the real position of the central bank in government is determined by the statutory arrangements under which it operates. In the final analysis, the influence of the central bank on economic policy depends on the respect it can command for the objectivity and cogency of its views as judged in the light of experience and on the proven degree of competence it displays in performing its own specialised role. It depends too on the contribution that it is able to make to the public understanding of economic and financial issues in analysing, in understandable terms, the complex forces operating at all times on the economy and in elucidating the basic rationale underlying the practice it has followed"<sup>17</sup>.

In this view, the influence of the central bank depends more on its public relations than on the statutes that apply to it.

However, it is not an easy task to test whether differences in legal positions make for differences in outcomes. Let us consider a quantitative approach. The variable to be explained might be the rate of inflation since most central banks are charged with the responsibility of stabilising the currency. If central banks were rated on a scale ranging from subordinate to autonomous with respect to government, that variable could be treated as an independent variable in explaining the inflation rate. But so many other variables affect the inflation rate that it would be difficult to isolate the effect of the legislative status of the central bank among all of them. However, a more modest approach to the issue is feasible by reviewing six cases of central bank crisis.<sup>18</sup>

#### IV

##### Six cases of Conflict Between Treasury and Bank

##### U.S.A.

The crisis was triggered by the decision on December 4, 1965 by the Federal Reserve Board and the reaction to it by the then President Johnson. The Fed wanted to contain what it perceived as inflationary pressures and raised the discount rate by 1/2 per cent to 4 1/2 per cent without consulting the Administration. Apprehensive that the move would be restrictive of the economic expansion, the President criticised the timing of the move saying that the decision should have been postponed until after the budgetary and Vietnam decisions were known in January. House Banking Committee Chairman Patman called for a

congressional investigation to review the decision and all future relations between the Fed and the Administration. Fed Chairman Martin defended the decision and the conflict ended when he and President Johnson agreed that it was caused by differences in judgement. The Fed did not back down and the differences in judgment continued.

### Canada

In 1961, a personality conflict between Governor Coyne of the Bank of Canada and Finance Minister Fleming came to a head. In 1957 when the conservative party came into power, Coyne began criticising government policies. Although Fleming opposed the tight money policies of the Bank, he never publicly criticised them until 1960. He finally introduced a bill to remove Coyne saying that Coyne stood in the way of the government's programme to increase employment and production. After Coyne's resignation, the new Governor Rasminsky returned the Bank of Canada to its previous arrangement of responsibility to the government. He opined that the Bank would be responsible for day-to-day operations, but that ultimate responsibility would lie with the government. In the aftermath of this crisis between the Bank and Government, Canadian legislation (Bank of Canada Act, 1967) was changed to incorporate a provision whereby in future cases of sustained conflict, the government could issue a formal directive to the Bank which the Bank would be obligated to carry out. If the Governor objected to the directive, presumably he would resign.

### Sweden

On July 11 1957, the Swedish Riksbank increased its discount rate by 1 per cent to 5 per cent. This move was not unusual except that it was done without prior consultation with the government which has unconditional power to remove the chairman. The government did not dispute the conditions cited by the Bank as necessary for the increase although it did not feel that conditions were serious enough to require restrictive measures. The reason why the government was not consulted was that it was a coalition of the Labour Party and the Farmers' Party and it was thought that the Farmers' Party would have used any pretext to break the coalition. Not wanting to bring down the government and not wanting to be asked not to carry out a decision it believed to be economically necessary, the Riksbank unilaterally increased the discount rate avoiding involvement of the Bank in politics even though its chairman was forced, as a result, to resign.

**West Germany**

Beginning in 1970, a massive inflow of capital into the German economy was occurring. This inflow was overheating the economy, and by mid-1971, it could not be controlled by usual monetary means. Finance Minister Schiller argued for a free market currency policy and revaluation of the mark. Governor Klasen advised the government against revaluation of the mark and for controls on the flow of dollars into Germany. Without the confidence of the cabinet and his Chancellor, Schiller resigned. This crisis was not so much a conflict between the government and the central bank as between the Finance Minister and the cabinet. It is the privilege and responsibility of the Bundesbank to advise the government on monetary affairs. Both Schiller and Klasen were acting within their traditional roles. But the autonomous status of the Bundesbank undoubtedly strengthened its hand in the crisis.

**India**

The conflict in 1957 which however did not blow out of proportion between Finance Minister T.T. Krishnamachari and Governor Rama Rau was essentially a conflict of personalities. The Governor and his deputies are nominated by the government and the latter has unconditional power to remove them without even an explanation to parliament. It is considered the responsibility of the Bank to advise the government and the right of the Bank to criticise the government is recognised. The government does not interfere with the daily operations of the Bank. The latter recognises that the ultimate responsibility for economic matters lies with the government and, therefore, cooperates with the government in setting monetary policy.

**Sri Lanka**

In 1953, Governor John Exter of the Central Bank of Ceylon resigned after a conflict with Prime Minister Senanayake. The two had been in conflict for sometime over rice subsidies and government credit. The Governor realised that he held a losing position and resigned. Exter did not resign because of a weak position vis-a-vis the Prime Minister. As an American and the founding Governor of the Central Bank, he enjoyed great strength in his position. He was even able to hold his position after cutting off credit to the government. Exter felt frustrated, however, and though it was time for a native of Ceylon to become Central Bank Governor.

It may be argued that these six case studies do, in fact, indicate that the legislative position of the central bank is important in

predicting outcomes. In the two countries with the most autonomous central bank - the United States and West Germany - the central bank essentially came out on top in the struggle. On the other hand, in the four cases, government dominance of the central bank was greater. The Law governing central banking may not be all that matters for central bank - government relations, but that matters for central bank - government relations, but that does not mean, contrary to Rasminsky, that it does not matter at all.

## V

### Lessons for Indian Central Banking

Based on the foregoing analysis, the issue that needs consideration is whether the central bank can be put on firmer constitutional ground, akin perhaps to the judiciary, as a fourth branch of the government or it should continue to be the creation of an ordinary statute law. Against this background, attention may now be focussed on the lessons that can be drawn from the Indian point of view in the context of the evolving relationship between the Central Government and the Reserve Bank. Similar to the earlier American experiment to set up a central bank, the authority conferred on the Reserve Bank by the Act to exercise discretionary control on the monetary system would appear to derive from the concept of implied powers of the constitution. Set up on the pattern of the Bank of England, there are no explicit powers in the constitution to confer autonomy on the Reserve Bank though laterly the monetary system has been thoroughly reviewed by the Chakravarty Committee with a view to ensuring a greater degree of freedom and manoeuvrability to the Reserve Bank to conduct the monetary policy. The genesis of the demand for greater autonomy to the Reserve Bank can perhaps be traced to the recommendation of this Committee to formulate a monetary target with the feed-back from the real sector implying that this would bind the government in a common effort to control expansion of money supply. The concern for such an approach stems from the burgeoning fiscal deficit of the government and its automatic monetisation leading to liquidity pressures in the economy. Although the price rise is a complex phenomenon reflecting the interplay of various factors such as demand pull, cost push, administered prices and increase in cost of imported inputs, yet insofar as excessive expansion in liquidity impinges on prices, it is the primary objective of the Reserve Bank to ensure price stability through a controlled expansion of liquidity. It is, therefore, necessary that if the Reserve Bank has to act as a monetary authority as well as a regulatory body overseeing the



financial system, it ought to be governed by a provision in the Act in terms of which it can perform both these functions effectively. Against this perspective, the technique of monetary targeting envisaged by the Chakravarty Committee cannot be viewed as more than a euphemism for strengthening the technique of moral suasion exercised by the Reserve Bank vis-a-vis the government. Monetary target is thus more a persuasive device than a mandatory injunction with a legal binding on the government. Since it is the expenditure of the government that primarily leads to an enlargement of the fiscal deficit followed by its monetisation, the formulation of monetary target amounts to no more than an effort on the part of the Reserve Bank to impress upon the government the desirability of curtailing the growth of expenditure, especially the revenue expenditure.

It may thus be inferred that in the absence of explicit powers enjoined by the RBI Act, the control levers exercised by the Reserve Bank to contain the expansion of liquidity would get blunted if there is an unbridled growth in the expenditure of the government. Differences of perception, if any, between the Bank and the Government on various aspects of macro-economic management, more especially the growth in liquidity and the appropriate response of monetary policy, are at best sorted out by mutual discussion to which very few are privy. And considering that enlargement in government expenditure leads to automatic monetisation of the fiscal deficit, the impression remains one of the Reserve Bank being weak in enforcing financial discipline on the government. There is also the concern that in such a concatenation, the private sector is crowded out from the availability of adequate credit because, in order to offset the expansionary thrust of the RBI credit to the government, not only is the *base* small on which monetary contraction has to take place but the *extent* of contraction has also to be large. It may, therefore, be worthwhile to consider granting autonomy to the Reserve Bank insofar as its views on monetary policy are concerned and if there are differences in the perception between the government and the Bank, more particularly in relation to the fixing of the monetary target, then these should be thrown open for discussion both in Parliament as well as outside among the professional experts, as is the practice in Malaysia. There should, therefore, be greater opportunity for public debates on issues that seem to divide the government and the Bank and reasons underlying them. An appropriate course would be to confer a constitutional status on the Reserve Bank which should become the fourth branch of the government and lest the Bank should be viewed as being weak in practice even though vested with a constitutional cover, its formal status should be grounded in the Constitution, so that

there is both codification of, and clarity about, the constitutional status. A caveat may, however, be entered. The concept of autonomy that is thus sought to be conferred in this paper on the Reserve Bank through the constitutional provision should not be construed as providing a ground for confrontation between the government and the Bank for, apart from policy differences, there can arise occasions of personality clashes stalling the introduction of relevant monetary measures. The autonomy that is sought here in this paper is intended more to produce a chilling effect on the government than to be absolute in character. Indeed it would be desirable to have an inbuilt mechanism in the Constitution providing for constant dialogue between the government and the Bank. It is only when all avenues for a compromise or convergence of views are exhausted that there should be a recourse to the provision of Constitution implying that occasions for recourse would indeed be rare. In other words, the pendulum should not be tilted to the other extreme in favour of the Reserve Bank and the playfield should be levelled off for both the government and the Reserve Bank in a common endeavour to promote the growth of economy within the framework of general economic policies. All that is required is that there should be some kind of a safety net in the constitution which gives a greater say to the Reserve Bank in the formulation of the credit policy than has been the case so far. *Ispsso facto* the government should be subject to a greater degree of financial discipline.

In order to tender an objective assessment of the policy responses to the emerging economic conditions, the Governor should have a term of five years and the existing provisions in the Act that the Government can remove him at any time without specifying any reason should be deleted. This is necessary to ensure continuity in the administration of monetary policy even if there is a change of the government. This safeguard is imperative to ensure the rightful and independent position of the Reserve Bank.

## Notes &amp; References

1. See Report of the Committee to Review the Working of the Monetary System (The Chakravarty Committee), Reserve Bank of India, pp. 144-45,
2. Excluding the Life Insurance Corporation of India.
3. Reserve Bank of India, Annual Report, 1989-90, p.154.
4. In an article on *Planning Commission as a Constitutional Body*, H.K. Paranjpe writes as under :  
 "The main sanction behind the NPC (National Planning Commission) will be that, together with the Finance Commission, it will lay down the guidelines regarding the distribution of finances between the Union and state governments, and it will also be authorised, together with the Reserve Bank of India, to provide the basic guidelines for the grant of credit and authority for borrowing to different development and administrative agencies. A *sine qua non* of the revised centre-state relations will be to ensure that the Reserve Bank of India ceases to be an agency subordinate to the Union Government. By an amendment of the Act, if necessary, its functional autonomy must be ensured." (p. 2481, *Economic & political Weekly*, Nov. 10, 1990).
5. Alexander Hamilton, Letter to George Washington on the Constitutionality of the Bank of the United States, February 23, 1791, in Alexander Hamilton, *Papers on Public Credit, Commerce and Finance*, Samuel Mckee, Jr. ed. (Indianapolis and New York; Bobbs - Merrill, 1957), p. 101.
6. Hans Aufricht, *Comparative Survey of Central Bank Law* (New York: Frederick A. Praeger, 1965) p. 39.
7. R.S. Sayers, *Central Banking after Bagehot* (Oxford: Oxford University Press, 1957), p.1.
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13. See the paper on "*Constitutional and Legislative Position of Central Banks*" presented by Richard Sylla of the North carolina State University at the 17th Seanza Central Banking Course at Sydney, Australia, October/November 1988.
14. Ibid.
15. Ibid.
16. Ibid.
17. Louis Rasminsky, *The Role of the Central Banks Today*, in P. Ciocca, ed. *Money and The Economy* , pp. 66-68.
18. See Sid Mitra, *Central Bank versus Treasury : An International Study*. (Washington D.C. , University Press of America, 1978).

## Some Suggestions on Monetary Policy

D.K. BHATIA\*

With the objectives of maintaining a reasonable level of inflation and evolving a structure of nominal interest rates so as to encourage investment and mobilise savings, this paper makes several specific policy suggestions. The aspects covered include money market instruments and operations, lending and deposit rates and the role and structure of interest rates, extension of reserve requirements to non-banking financial sector and credit-targetting.

### I. Goals of Monetary Policy

The short-term and long-term goals of immediate concern to monetary policy should be :

#### (a) Maintenance of reasonable level of inflation

It should be neither too high as to hurt the unorganised sector nor too low as to stifle the initiatives of the producers. A critical balance between the requirement of both the consumers and producers is necessary for maintaining a reasonable rate of inflation, and it should be high on the agenda of monetary policy.

#### (b) Evolving a structure of nominal interest rates

As the interest rates cannot be changed frequently, the focus of monetary policy should be on the medium term rate of interest unless special circumstances such as the present crisis in the short run occur. In the medium term, the interest rate structure should be such as to encourage investment on the one hand and mobilising savings on the other. In this connection, action needs to be taken on the following :

### II. Some Policy Suggestions

#### (i) Money Market

The Medium term monetary policy should take account of two

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factors - (a) liquidity management and (b) the direction of the policy in the medium term to the desired goals. In central banking, liquidity management would have priority because if it is not properly managed, excess liquidity may overflow to the real sector or to one or two sectors, thereby building up pressure on prices. The monetary policy while continuing to manage the liquidity has to dovetail its policy in such a manner that the short term policy measures are in consonance with the medium term goals; medium term goal being to maintain a reasonable level of price inflation and its movement within the acceptable range from year to year. It is in this environment that the goals of output and larger employment can be achieved. While the monetary policy has overall concern for output and employment, its immediate concern should be that of maintaining appropriate level of liquidity and taking timely action and ensure reasonable level of price inflation.

As regards the money market operations, it is advisable to maintain the purity of the inter-bank market to even out the day-to-day surpluses and deficits within the banking system. No other player in the market except the banks be allowed to operate. A continually high rate of interest as reflected by the market for a long time would, in fact, give the right signals to the monetary authorities. The money market is an institution on the short end of the scale whereas the capital market is on the long end of the scale, and if the players other than the banks are to be allowed to operate, in the short-term market, there is a danger that the signals thrown up by the market may not be of right kind. There is thus a need to create an intermediate market in which the surpluses and the deficits of the non-banking financial institutions could be deployed for transactions in medium term financial instruments.

There is also a need to discourage the corporate entities from investing in the units of the Unit Trust of India (UTI). Let the UTI mobilise savings purely from the household; and the corporate entities which generally place funds with the UTI may be asked to operate in what is called 'intermediate market' or in the secondary market of the capital market.

Just as the Reserve Bank has been instrumental in developing the money market, there is a need for the Reserve Bank to take initiatives to develop a market for medium term instruments like the bonds of the public sector, units of the Unit Trust of India, instruments of National Housing Bank, IDBI, NABARD, Mutual Funds and other similar instruments which may also include the securities of the Government of

India. The whole idea is that the market should reflect or should provide indications about the medium term rates of interest. The players in the market should be other than the commercial banks whose primary job is to provide funds for short term purposes. The Reserve Bank would thus have on a continuous basis the rates in the short term money market and the medium term bond markets, and in the light of these rates the Reserve Bank may evolve the pattern of interest rates both down along the line and in the upper end of the Bank Rate.

The constitution of money market and the interest rates as reflected by the market is one of the indicators about the demand and supply conditions of the short-term liquidity in the economy. There was earlier a ceiling of 10 per cent on the money and call money rates, and now the ceiling has been removed and the movement of the call money rates have been made free. As the call money market is being managed by the Reserve Bank, and by keeping it purely as a money market of the bankers, the RBI could exercise a greater control. It should ensure that the gyrations in the call money rates are not so wide. The long term call money rate should remain somewhat below the Bank Rate. In other words, if the call money rates continue to remain high for a long time the indications are that immediate policy action is required; it can be in three areas - first is to take action which would make larger funds available from the banks by adjusting the CRR and SLR in the downward direction. Second, though considered unusual, the Bank Rate could be increased so as to keep a smaller differential between the Bank Rate and the long term call money rate. And thirdly, to allow more players if the market is to be confined only to the banks, by encouraging more banks to become participants in the market.

#### ii) Lending Rates

It would not be proper to complicate further the simplification that we have brought about in the interest rates on lending according to the size of loan by bringing inventory build up into the calculations. Further, the present rate of interest of 16 per cent on foodgrains procurement is not all that prohibitive; and if it is agreed that there is shortage of resources, the rate need to be raised and not reduced.

On the interest rate structure for short term advances, the present system of rate of interest need not be disturbed. In fact, the bigger companies come to the bank again and again to claim fiscal advantage of deductibility from taxes the interest payments on bank loans. While without disturbing the present interest rate structure, there is an urgent

need to completely dispense with the deductibility of interest payments for tax purposes. This would in fact release funds with the banks for lending to the smaller size companies.

At present, the rate of interest for non-priority consumer and personal loans has been allowed to remain free. There is no need to change except that a minimum of 18 per cent be fixed. In case, however, the banks or institutions want to charge more than 18 per cent that freedom should be allowed by the RBI.

### (iii) Deposit Rates

On the deposit rates, the present rate of interest for deposits of less than one year need not be disturbed. In fact, there is a need to increase the rate of interest on savings deposits from the present 5 per cent on the ground that these savings deposits are held mainly by the households of smaller income, and given the rate of double digit inflation their deposits in fact are earning negative real rate of interest. While the banks need some differential between the cost of their funds and their lendings, by keeping the rate of interest on savings deposits at as low as 5 per cent which has been there for a very long period, it not only discourages the savings at the lower end of the income scale but tend to subsidise the borrowers at the cost of savers. There is, therefore, a need to increase the rate of interest on savings deposits to say from 5 per cent to 6 or even 7 per cent .

### (iv) Interest Rates Pattern

The money market should be purely of the bankers and it should truly reflect the movement in the short-term rate; their movement should be such that the underlying rate should remain less than the Bank Rate whatever it may be. If it happens to be above the Bank Rate, the banks would approach the RBI for refinance. The present rate of 25 percent on the refinance provided by the Bank seems to be artificial and should be considered as a short-term measure. In the medium term this role should be performed by the Bank Rate, and if the underlying money market remains persistently high, and at the same time not below the Bank Rate, then there are indications that either the Bank rate should be revised upward, or action should be taken to provide more liquidity in the money market through appropriate changes in the SLR and CRR. Nevertheless, the policy stance should be to maintain the short-term money market rate somewhat below the Bank Rate or the rate at which the RBI would provide refinance.



In recent years, the pattern of interest rates has got distorted. Given the expectations of price inflation remaining strong it would be advisable to correct the distortion and maintain a term structure of the interest rate which would imply that the long-term rate should be higher than the short-term rate and it could be significantly higher than the Bank Rate depending upon how the expectations about the price inflation have been built into.

The difference that now exists between the lending and the borrowing rates need to be narrowed down by bringing about efficiency in the banks; and the deposit rate which is now allowed on savings account whose account holders generally belong to low income deserve better treatment in the sense that the rate which they get on their savings deposits need to be raised so that they do not earn negative real rate of interest or atleast the negative real rate of interest in their case is reduced to the minimum.

#### **(v) Differentiated Reserve Requirement**

One of the main functions of the Reserve Bank is to ensure the stability of the financial system. Not only the stability of the financial system is important but it is equally important that the credibility of the public in the financial system is continually enhanced. The mutual funds which have emerged recently as one of the institutions in the whole range of financial institutions are in fact not governed, in the strict sense of the term, by the Reserve Bank which would reflect or create credibility among the public about their viability.

Any bank or a term lending institution or a financial entity like the mutual fund must have reserve requirement. This is one way whereby the Reserve Bank can ensure the credibility of the public in the strength of the financial system. If the reserve requirement for a commercial bank is 15 per cent and taking into account that the term lending institutions are performing a developmental role, their reserve requirement could be fixed somewhat lower. Nonetheless, any entity which comes in the category of financial institution and the bank must be subject to the reserve requirement. For example, taking outstanding of demand and time liabilities of commercial banks say Rs. 211,000 (as on March 22, 1991), and that at 15 per cent rate of CRR, the Reserve Bank would be able to draw from the system Rs. 31,650 crores. If the term lending institutions at national and state level including IDBI, NABARD etc. have Rs. 120,184 crores<sup>1</sup> of financial assets (as on last Friday of March 1990) and if they are subject to CRR of 5 per cent that

is one-third of the rate fixed for the commercial bank, it should be possible to draw Rs. 5,109 crores. Further, if one were to assume that the drawl from the system by the RBI in the form of CRR is to be kept at Rs. 31,650 crores, that is, corresponding to the present rate of 15 per cent on demand and time liabilities of commercial banks, the imposition of reserve requirement of 5 per cent on the term lending and other financial institutions would imply drawal of Rs. 26,641 crores from the commercial banks, and at the current level of demand and time liabilities of Rs. 211,000 crores this would imply a reserve requirement of Rs. 12.58 per cent. Thus, with the policy of imposition of reserve requirement on institutions other than commercial banks, RBI is enabled to reduce the reserve requirement of commercial banks, from 15 percent to 12.58%. There is thus a need to have a system of differentiated reserve requirement - for all the banks and the financial institutions even including mutual funds to ensure credibility of the public in the financial system and stability of the financial system as a whole.

#### (vi) Statutory Liquidity Ratios

The imposition of Statutory Liquidity Ratio on all non-financial intermediaries is necessary; there need be no exception to this. Instead of giving exemption to the All India and State level financial institutions from this requirement, it will be appropriate to impose lower ratios on these institutions from this requirement, it will be appropriate to impose lower ratios on these institutions than on the commercial banks. If this is accepted, then RBI would be in a position to adjust marginally downward the SLR prescribed for the commercial banks.

Taking the outstandings of the demand and time liabilities of commercial banks of Rs. 211,000 crores (as on March 22, 1991) the amount under statutory Liquidity Ratio (SLR) at 38.5 per cent would work out to Rs. 81,235 crores. If the term lending institutions at the national and state level including IDBI, NABARD, etc., are subject to the SLR requirement at a lower level, say about 10 per cent, and given their assets of Rs. 1,02,184 crores (as on the last Friday of March 1990), it should be possible to have these institutions make investment to satisfy the SLR requirement were to remain the same that is, at Rs. 81,235 crores, then the adjusted SLR for the commercial banks would decline from the present 38.5 per cent to 33.7 per cent.

**(vii) Targetting of Credit**

Apart from the two board objectives mentioned above, it will not be appropriate for the Reserve Bank in a de-regulated and liberalised environment to get involved too much into the targetting of credit and its distribution. This policy of targeting the credit and its distribution had an important role to play when the financial system was fragmented, not diversified and weak. Now that the financial system is well integrated, highly diversified and fairly strong, it would be advisable to leave the institutions to themselves to determine the level of credit except providing broad indications about the size, direction and growth of money supply. The credit should get endogenous to the system. What at the most can be done is that the Reserve Bank should consider the transaction and the store of value functions of money separately which implies monitoring of  $M_1$  if the word targeting is repugnant and monitor the growth of time deposits which mainly represent the financial savings separately rather than monitoring or targeting  $M_3$  as such.

The high powered money and through its determination of the money supply via the money multiplier is a sound theoretical concept which has formed the anchor-sheet of the monetary policy so far. There is in fact no need to change the basis of the relationship between high-powered money and money supply; but what could be done is to investigate whether the proper monetary aggregate is  $M_3$  or  $M_1$ . When the financial system was not developed, and the financial assets comprised only the commercial banks' deposits there was the need for intermediation and mobilisation of savings from the households for development. In that environment, the commercial banks served a useful purpose and the concept that was used for policy formulation was  $M_3$ . Over the years, the composition of  $M_3$  in terms of the moneyness has drastically changed than what was earlier. In fact, there is a need for developing a new monetary aggregate based on the weighted characteristics of the money and this could form as well the target to be pursued in the monetary policy.

The development in the financial liberalisation started in the late eighties has injected further sophistication to the financial system. Now that the financial system is well developed and has become highly sophisticated with large number of instruments, it should be possible to draw a line where the role of money changes from that of serving as transactors' to that of a 'store of value' in the form of financial assets in which savings are held. To the extent the money serves efficiently the

transaction demand, this component has to be kept separate. In other words, a stage has come to consider two monetary aggregates - one which serves to indicate the transaction demand, and the other which in fact includes the financial savings of the community and each of these money aggregates would call for a different response so far as the monetary policy is concerned. The former would facilitate the payment system and make it more efficient and could be related to the output, whereas the latter which would mobilise savings and help in the intermediation process could have positive relationship with the rate of interest. Thus, the monetary policy should take cognizance of these two functions of money, and not the combined function reflected in  $M_3$ . While the former would, as the economic theory suggests, have its root in the money multiplier, the latter need not have the same relationship through the money multiplier but could depend upon several other factors.

The credit is a counterpart of the liabilities of the banks. Planning of credit, which policy has been pursued could continue but to plan entirely the credit and its distribution ignoring the transaction function of money and the stability of the financial system would not be a policy in the right direction.

The suggestion that there should be a direct targeting of credit and its distribution as an alternative to the targeting of the money supply has certain draw backs and goes against the concept of financial liberalisation pursued so far. Within the RBI, it will not be appropriate to bind the commercial banks for targeting credits because even otherwise the commercial banks as a part of their annual exercises and dialogues with the RBI are in fact doing the credit targeting. The RBI setting a target for credit for the country as a whole and its distribution among the banks would mean going too deeply into the affairs of the banks. As mentioned earlier, the Reserve Bank could target or monitor the growth of  $M_1$  instead of  $M_3$  to bring about greater efficiency into the payment system, alongwith  $M_3$ .

#### (viii) Medium Term Instruments

At the long end, as mentioned above, is the capital market and if the proper term structure of the interest rate is to be maintained, the long term rate needs to be higher than the short term rates. It would, therefore, be advisable to have a separate market somewhat in the middle between short term and the long term, and the players in this market be non-banking financial institutions and the instruments in

this market should not be short term instruments but instruments with medium to long term of maturities varying from 5 to 7 years or even 10 years. In order to develop this market, the instruments would have to be thought of and the number of non-banking financial players who have recently come up would need to be roped in so as to become active participants.

With indication only from the money market, it is extremely difficult for any central banking authority to maintain the pattern of interest rate and its structure properly aligned. The indications emerging from the short term markets may not serve as an appropriate guide in the interest rate that would emerge in the long run. The long end of the market i.e., the capital market is virtually out of the purview of the monetary authority so far as day-to-day operations are concerned except through the directives given to the commercial bank, and the introduction of the middle market as suggested would provide a continuum of the interest rates. It is like having two points which determine a line rather than having one point and not knowing which direction to go.

**Notes :**

1. Corresponding figures for commercial banks are Rs. 205,515 crores as on last Friday of March 1990.

## BOOK REVIEWS

**The Banking Odyssey - The Canara Bank Story**, by M.V. Kamath, Published by Vikas Publishing House Private Limited, New Delhi, 1991, pp. xii + 441, Price Rs. 495.

Francis Bacon once said, "Histories make men, wise; poets, witty; the mathematics, subtle; natural philosophy, deep; moral, grave; logic and rhetoric, able to contend". Perhaps, historical accounts of institutions too, going by Francis Bacon's observation, would make men dealing with the concerned institutions reflect and become wise. Realising this potential, M.V. Kamath in his book, "The Banking Odyssey - The Canara Bank Story" has successfully achieved the purpose of delineating the life history of Canara Bank in a simple but elegant style. His task, however, was not that easy, since he had only few model histories of banks before him to emulate. Only Punjab National bank, State Bank of India and Bank of Baroda have, before Kamath's own effort has appeared, chartered their histories. He was clearly aware that it is important to study the history of individual institutions as generalisations may not always be helpful, and yet, help us to draw some insights from the experiences of those who pioneered and developed such institutions. Fittingly enough, Kamath has laid emphasis on the importance of the 'human approach to development' and accordingly narrated 'the Canara Bank story' with the help of biographies of persons who have contributed to its development.

The book covers a span of 85-odd years of Canara Bank's existence since its inception in 1906. The book is divided into three parts. Part I contains three Chapters covering the period between 1906 to 1942. The first Chapter reviews the socio-economic and geographical environment of the South Kanara District and eventually traces the origins of the ancestors of the founder of Canara Bank, Shri Subba Rao Pai. The second Chapter describes how a family business which began in 1906 as a "Nidhi" named as 'Canara Hindu Permanent Fund', in order to assist small traders, was reconstituted as 'Canara Bank Ltd.' in 1910. Here, the author makes a comparison of two banks viz., Canara Bank and Corporation Bank whose histories totally differ from each other through

a statistical Table on page 49. The data in this regard relate to paid-up capital, reserves, deposits, advances, investments and net profits of the two banks at different points of time. The author concludes that the growth of Canara Bank was better than that of Corporation Bank due to the locational advantage of the former. This inference, however may not go unquestioned, as growth of banks depends upon many factors like volume of business, cost of funds, customer service, business strategy and a number of internal aspects such as management, staffing, recruitment, inspection, salary and branch operations. The third Chapter points out that the co-operative movement, which gained momentum during the first World War, served as a threat to other banks in South Kanara. Some of the banks failed eventually leading to the first banking crisis in the country. To explain the banking crisis, Kamath has cited the studies of eminent authors in the field and at one place refutes R.K. Seshadri's observation that the banking crisis did not spread to other banks in South India. According to Kamath, the Canara Bank experienced a heavy run, although it was restricted to one or two branches. Unfortunately Kamath stops short of full narration here. Readers could have greatly benefitted if the logical sequence to this run and the policies adopted by the bank to overcome this problem had been clearly spelt out. The Chapter also focuses attention on aspects like branch expansion, customer service, working conditions etc., besides innovations in accounting procedures. There is also a discussion on the "dollar famine" which arose due to export and import trade controls, prohibition of remittance abroad, prohibition of export of diamond, jewellery and other precious stones, etc., and the acquiring of all the U.S. dollar balances. Kamath has also recorded the strategies adopted by the bank to improve its earnings which had declined due to the war.

Part II of the book too has three Chapters. It covers the period between 1943 to 1969. Chapter IV deals with aspects like, changes in the organisation, management culture, recruitment and training methods. For explaining these aspects, Kamath has used the summary of the study by Sankar P. Thakurta and Sampat S. Singh, which compares Canara Bank with Punjab National Bank. This chapter covers the second banking crisis which was the outcome of partition, liquidation, amalgamations, mergers etc. A section of the Chapter extensively deals with bank mergers and amalgamations. As a business psychologist once said, "When companies merge, things become vague and the ambiguity causes stress" and probably this is quite true in respect of banks too. However, the story of Canara Bank, according to Kamath, was altogether different. Although the bank was merged with a large

number of banks (10), it sailed smoothly thanks to the persons behind it. The author also points out that the bank was subject to the impact of the two world wars, one depression and the major freedom struggle. But, one is not very clear of the policies and strategies that the bank had adopted to counter these difficulties. While discussing the bank failures as a result of partition between 1947 and 1952, the author could have elaborated on how failure of one bank had affected another bank. In this context, the author could have, for instance, drawn parallels from the experience of the State Bank of India or Punjab National Bank which had also faced similar situations in their history. The author's tables on mergers and amalgamations, however, will be found useful by research scholars. Chapter V portrays the performance of the bank under different persons. During this period the bank had made changes in the organisational structure, streamlined administration and procedures in order to achieve growth in deposits and advances. The trade-off between geographical and functional allocations were recognised and the bank went in for more geographical allocations of branches to foster competition and improve performance. The progress made by the bank has been explained through informative tables on estimates of deposits, advances, etc., and financial ratios which are self explanatory. Chapter VI presents a detailed account of the background of social control of banks and the subsequent nationalisation. It also discusses how the bank geared itself to fulfill the objectives of nationalisation and entered into unchartered areas like agricultural finance and rural development and innovating many social welfare schemes. It presents a table on sector-wise advances of scheduled commercial banks and classification of loans according to types which are illustrative. These tables indicate the mismatch between regional spread of banking and migration of credit.

Part III contains four Chapters covering the period between 1970 to 1991, of which, Chapters VII, VIII and IX read like tributes to the persons who were responsible for the success of the bank. Illustratively, it covers the progress made by the bank under the 20-point programme with tables. While discussing the progress made by Canara Bank, the author has shown that it took only six years for the bank to reach the fifth position among scheduled commercial banks, three years to reach the seventh position, and one year to reach the sixth position. In this chapter the author has also tried to draw parallels with the performance of other banks with respect to banking business, customer service and branch expansion. Interestingly, the author connects the opening of the 1001th branch near Mangalore after 71 years since inception, where the Bank was originally founded, to the 'banking odyssey'



signifying the homecoming of Ulysses.

It is pertinent to note here that during the seventies, emphasis was placed on the credit-deposit (CD) ratios as the target to reduce the inter-regional imbalances and the branch expansion programmes were oriented towards achieving this goal. Despite the efforts made by banks, the CD ratio showed large regional variations. This occurred because the CD ratios did not reflect the extent to which the resources mobilised from a particular region/State were utilised in that region/State and also due to the differences in the magnitude of deposits. Further, the disparities in the ratios were more pronounced if calculated as per utilisation.

Besides, the author points out that despite the problems that the bank faced in Bihar, it successfully mobilised deposits in that State. It is however not clear from the account as to what strategies were adopted by the bank to mobilise deposits in the State.

Chapter VIII and IX are devoted to the progress made by the bank in the more recent years since 1982. It was after the mid-eighties, the bank entered into a phase of innovation and diversification by establishing separate subsidiaries to undertake activities like, merchant banking, equipment leasing, mutual fund, housing finance, venture capital funds, etc. Chapter X is devoted to human resources development. Besides giving an account of the evolution of the trade union movement in the bank, it also brings out the role played by the bank in promoting sports.

At the end of Chapter X, there is a very well-written summary and a postscript. As part of the Appendices, are given a brief summary of the bank's annual reports starting from the year 1911 to 1954 which have been used extensively in the book; a useful calendar of the key events from 1906 to 1991 arranged chronologically which will serve as a ready reckoner; names of the boards of directors, chronologically tabled since inception; the horoscope of the bank in the Kannada script for astrologers to predict the bank's future; and a table presenting the time series data on selected indicators of growth since 1907 which will be a boon to empirical researchers. It also contains a glossary, an exhaustive reference list and an index.

In sum, the book contains a mine of information which can be put to analytical use. The author himself admits that, "The book is not an academic study or a scholarly effort."

It suffers from the limitations of not focussing on analytical issues. Despite the author's historical approach, there are gaps in linking of events and developments in a chronological order. Overlaps of periods of events were allowed to take place. For instance, the Part II of the book, which is supposed to cover the years between 1943 to 1969, begins with 1956, while Part I ends with 1961.

Despite these limitations, the author should be complimented for his stupendous efforts in writing the story of the bank in view, covering even the smallest of details. Histories of individual public sector banks should be encouraged since they often provide rich insights about the conditions that are required for launching of a commercial bank and about the requisites for nurturing the bank into an efficient and large-sized financial institution.

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**Rural Credit Issues for the Nineties**, edited by Surjeet Singh : Oxford and IBH Publishing Co. Ltd.; 1991; pp. vii+202; Price not mentioned.

Compulsory priority sector lending at lower than market-related rates of interest is at crossroads. Lending to agriculture and allied activities is an important part of such lending. There is a body of opinion which believes that such lending should be reduced in the immediate future, and over time dispensed with. According to this opinion, pre-emption of credit to priority sectors, and dichotomy in interest rate structure would lead to inefficiencies inasmuch as they amount to misallocation of resources and differential rates of lending to borrowers of equivalent degrees of credit worthiness. There are on the other hand those who maintain, altruistic as they appear, that the Government has a social obligation to perform and hence has to ensure that funds are provided for the development of priority sectors. It is the dominance of this school of thought that led to the existing position in regard to rural credit.

Considering the economic conditions in rural areas and the absence of adequate financing alternatives to entities with low economic means in these areas, one can see the rationale for having priority in lending to certain sectors of the economy but the question today is whether it is valid in the context of the financial sector reforms that are being envisaged. In other words, would compulsory concessional priority sector lending be consistent with competitiveness and efficiency which are the main objectives of financial reforms?

Given the present environment, one might feel that the book under review has been somewhat overtaken by events. But this can well turn out to be a superficial view. For, the rural credit issues remain unresolved, irrespective of one's perceptions about the desirability of priority sector lending. The book under review- a collection of the deliberations of a seminar held in August 1990 on rural credit, under the auspices of the Institute of Development Studies, Jaipur - helps us to sort out the issues and see how and to what extent they could be addressed even under the umbrella of reforms. As the book focusses on the challenges and problems faced by the rural credit system in the

nineties. it is pertinent and timely.

The book discusses four main issues viz. financial viability of rural credit institutions; cost effectiveness of banking services in rural areas; credit for small and marginal farmers, artisans and landless labourers and the by-passed regions; and lastly, the problem of overdues. All these are interrelated and have implications for the future institutional set-up in regard to rural credit.

Setting the tone for discussions, R. N. Malhotra, former Governor of the Reserve Bank of India, in his keynote address, expressed concern over the viability of Regional Rural Banks (RRBs) which have been under severe strain for quite sometime. RRBs lend only to the weaker sections and as such the interest spread available to them is unsustainably low (page 7). It, therefore, is axiomatic that unless these institutions are financially strong and operationally efficient they cannot meet the needs of the rural community. Echoing similar thought, and in a more emphatic way, C. V. Nair argued that RRBs which have accumulated huge losses- have not served the purpose for which they were set up. He contended that RRBs should be merged with commercial banks or, in the alternative, be made subsidiaries of sponsor banks.

One is tempted to ask whether this could be a worthwhile solution. One might also ask whether there can be nothing like social banking even if it means some dip in banks' profitability. There are, however, some as the Narasimham Committee has recently put, who believe that there is "no inherent contradiction between social obligations and profitable lending" and that social banking cannot be at the cost of sound banking. In this view, subsidisation of credit would clearly be a clear case of "misplaced emphasis". What is more important according to them is the need for "timely and adequate" access to credit, rather than dispensation of cheap credit. This point has been well brought out by the experience of the Grameen Bank of Bangladesh, an example given by Vinod Vyasulu and D. Rajsekhar in their paper based on a study in Pali district of Rajasthan, during 1984-85 to 1988-89. Besides, low interest rates generate excess demand and lead often to the need for imposition of rationing, thereby "crowding out" other investment opportunities. Low lending rates would also imply that banks would have to offer lower rates on deposits, which would in certain cases result in low deposit mobilisation. Active, sound banking practices and functions therefore are necessary for institutional strengthening in rural areas.

Should one swing from one end of the pendulum to another? Are there no half-way houses? Can we afford to stop all priority sector lending all of a sudden- or even within the next 2 years -without giving thought to real variables and employment situation? Should gradual reduction of proportion of priority sector lending in the total lending be universalized for the country as a whole?

These are indeed critical questions and need specific answers, preferably with quantification. This however is not the purpose of the book. Take for instance C.V. Nair's article. He simply favours the idea that the rural banking system in the nineties would have to move away from a plethora of interest rates and mandatoriness in many areas and move towards market-based and development oriented operations. But no specifics are provided regarding the implications of such a suggestion. Will, for example, the costs of such a suggestion be borne by the rural sector? Suppose the costs are too high and make rural banks uneconomical. Will the activity in the rural sector be then rendered unfinanceable? No doubt, one could still envisage some targeting in respect of the weaker sections, as C.V. Nair believes. It is possible that it will enhance credit discipline. But for a clearer understanding there is a need also to know as to what would happen if credit to the rural sector, and in particular to weaker sections, is reduced if not withdrawn. Will the slack be taken up by some other agency?

May be these are inconvenient questions. For, if one were to go by the paper by B.K. Ghose and K.V. Patel which examines the actual status of the credit institutions assistance to farmers, there is not a single state in which RRBs have covered even 10 per cent of the total marginal and small farmers. Also, the RRBs have not more than 7 per cent of the total small and marginal farmers on their loan registers (pg. 114). The authors, therefore call for urgent attention from all those concerned with the development of the farm sector to re-examine the role of farm credit.

If the coverage is so low, why are we so greatly worried about the costs of such lendings? Are costs higher than the benefits of lending in terms of real output and employment? Or, is it that the costs get magnified because there are no reverse flow of funds into the RRBs? This problem -- the one of overdues or recoveries of priority sector loans, is a very serious matter. Overdues have tended to increase despite increasing stability of agricultural production and despite the fact that a major part of agricultural credit flows to irrigated areas as pointed out by R.N. Malhotra. A number of factors are responsible for the alarming

growth of overdues according to D. Rajasekhar and Vinod Vyasulu. They are, among others, the inadequate field level staff with banks for recovering loans, insufficient transport facilities with the result loan use is not monitored, interference of governmental staff in identification of beneficiaries and political interference with the result farmers of questionable integrity get loans, and frequent crop failures and drought. In general, politicisation and official intervention have been cited by most writers as the most crucial factor responsible for the growth of overdues. If this is right, is it correct to call it a system's failure?

G.P. Bhave voicing his concern over the present interest rate policy, wholesale write-offs and overdues, provides somewhat of a refreshing breath of air. He feels it essential (and rightly so) to evolve a very realistic and long-term policy in regard to the rural credit system and financial discipline (pg. 144). Among some areas for special focus of attention, those identified by the author are those relating to transfer of technology, strengthening of marketing, enforcement of land reforms, better water management, comprehensive beneficiary education programme, and effective involvement of women in overall development efforts.

Some State Governments, acknowledging their responsibilities, are making efforts at improving recovery of bank loans. Recovery cells have been set up on an experimental basis at the district level with banks bearing 50 per cent of the cost, a point well brought out by Anil K. Gupta. But whether these cells have succeeded is a question on which some further work needs to be undertaken.

Notwithstanding the questions raised in this review, the book blends the views of the practitioner and the academician into a well-knit, crystallized discussion on issues and alternative policies for rural credit in the years to come.

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