CHANGING THEORY AND PRACTICE OF MONETARY POLICY IN INDIA

by

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Abstract:

This paper attempts to analyse the recent changes in the theory and practice of monetary policy in India vis-à-vis the international experience. Globally as well as in India the objectives, instruments and operating mechanism of monetary policy have undergone a sea change over the last few decades. Although maintenance of price stability – more so the domestic price stability if not the external price (exchange rate) stability - has long been considered as the dominant objective of central banks, the global financial crisis followed by the Euro zone debt crisis has changed the objectives spectrum of central banking in a fundamental way. The orthodoxy of central banking before the sub-prime financial crisis was: single objective - price stability; single instrument - short-term interest rate, although individual central banks deviated to different extents from this modest standpoint. The global financial meltdown came as a strong criticism against central banks for having neglected financial stability in their single-minded pursuit of price stability.

Even as central banks are struggling to balance the demands of price stability and financial stability, there is now yet another heavy assault on central bank orthodoxy arising from the euro-zone sovereign debt crisis. The European Central Bank is being called upon to bend and stretch its mandate to bail out countries whose current financial crisis is basically a result of their failure to pursue norms of financial prudence. If a central bank is committed to financial stability, it cannot ignore the feedback loop between financial stability and sovereign debt sustainability, and by extension therefore, it has to be mindful of sovereign debt sustainability concerns. The central banks of the developing countries in general and those of the emerging market economies in particular have an added responsibility to insulate their financial markets from the contagion of global financial crisis.

Thus in the fast changing global scenario, the mandate of central banks has extended from the single objective of price stability to triple objectives of price stability, financial stability and sovereign debt sustainability. Can central banks simultaneously support all these three objectives and do so efficiently? This in essence is what has come to be termed as the new trilemma. How do the three objectives underlying the trilemma reinforce each other, and in what ways do they conflict with each other? What is their impact on growth? Is the trilemma an

exclusive phenomenon of crisis times, or does it manifest in normal times as well? What is the nature and extent of the responsibility of central banks for each of these objectives? Are central banks equipped to handle these additional responsibilities? What does this extended mandate mean for the autonomy of central banks and effectiveness of monetary policy? This paper attempts to analyse how the central banks in the emerging market economies general and the Reserve Bank of India in particular address these and other related issues.

JEL classification: *E-5, F3, G1, G2, G3.*

Key Words: Reserve Bank of India, Monetary theory and policy, Trilemma of objectives, Price stability, Financial stability, Sovereign debt management, Instruments of monetary policy, Interest rates, Global financial crisis, Euro-zone debt crisis.

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1. Objectives of monetary policy – the latest 'Trilemma'

Globally as well as in India the objectives, instruments and operating mechanism of monetary policy have undergone a sea change over the decades. Although maintenance of price stability has long been considered as the dominant objective of central banks, the global financial crisis followed by the Euro-zone debt crisis has vastly changed the objectives spectrum of central banks. The orthodoxy of central banking before the 2008 global financial crisis was: single objective - price stability; single instrument - short-term interest rate, although most central banks deviated to different extents from this modest standpoint. The crisis came as a strong criticism against central banks for having neglected financial stability in their single-minded pursuit of price stability.

Even as central banks are struggling to balance the demands of price stability and financial stability, there is now yet another strong criticism against central bank orthodoxy arising from the Euro-zone sovereign debt crisis. The European Central Bank (ECB) is being called upon to bend and stretch its mandate to bail out certain European countries - especially the so-called PIIGS group - which have lost the confidence of markets. In reality, the ECB is being challenged on why it is being so stubborn about its mandate when the world around it is collapsing. The argument, in its essence, is that if a central bank is committed to financial stability, it cannot ignore the feedback loop between financial stability and sovereign debt sustainability, and by extension therefore, it has to be mindful of sovereign debt sustainability concerns.

Thus in the fast changing global scenario, the mandate of central banks is set to expand from the single objective of price stability to triple objectives of price stability, financial stability and sovereign debt sustainability. Can central banks simultaneously support all these **three objectives** and do so efficiently? **This in essence is the new trilemma (Subbarao, 2011).**

The new trilemma hurls several questions at once. The important ones are: How do the three objectives underlying the trilemma reinforce each other, and in what ways do they conflict with each other? What is their impact on growth? Is the trilemma an exclusive phenomenon of

crisis times, or does it manifest in normal times as well? What is the nature and extent of the responsibility of central banks for each of these objectives? Are central banks adequately equipped to handle these additional responsibilities? And finally, what does this expanded mandate mean for the effectiveness and autonomy of central banks? Literature on this trilemma has started building up, and time will tell us how the central banks are going to gear up their monetary actions to tackle this trilemma.

2. Global Changes in the Theory and Practice of Monetary Policy

Although the experiences of individual countries in the conduct of monetary policy vary, recent surveys point to a number of common features (Reddy, 2002). The important among them are as listed hereunder. **First,** at the macro level, there is now widespread concern about the potential harmful effects of persistently high fiscal deficits as it may lead to excessive monetisation. **Second,** there have been significant reductions in the reserve ratio to relieve the pressure on the banking sector and reduce the costs of financial intermediation. In fact, a number of countries now have done away with reserve requirement while in some countries, the level of minimum deposit at the central bank has fallen to such low levels that it is no longer considered an active monetary instrument.

Third, the deepening of financial markets and the growth of non-bank intermediation have induced the central banks to increase the market orientation of their instruments. A consequence of this is a greater focus of central banks on liquidity management. **Fourth,** the greater focus on indirect instruments led to a more intensive use of open market operations (OMOs) through flexible instruments like *repo*. The OMOs can be used for net injection or absorption of liquidity and can be resorted to irrespective of whether the operating target works through the rate channel or quantity channel.

Fifth, the market environment has also induced many central banks to focus more on interest rates rather than bank reserves in regulating liquidity. **Sixth,** increasing evidence of market integration implies that central banks can concentrate on the very short end of the yield curve. There is growing evidence in favour of co-movements of interest rates of different maturity. This has simultaneously increased monetary policy challenges, as central banks have to keep a watch on all markets and be cautious of any cascading effect or contagion emerging in the domestic economy or originating from the rest of the world**. Seventh,** most central banks now publish the minutes of the meetings of major monetary policy decisions, which help to gain credibility and in building a reputation of the central bank in achieving the objectives of monetary policy.

Eighth, coordination between the fiscal and monetary policies has always been a burning issue. The stance of fiscal policy has important implications for the efficacy of monetary policy because; the former has a much broader spectrum of objectives than the latter. If fiscal authorities are the dominant players, monetary policy instruments are rendered less effective. As monetary policy evolves from a transitional setting of fiscal dominance, issues like direct access of government to central bank credit become important and crucial for fiscal-monetary coordination. **Ninth,** nowadays coordination between domestic and external economic policies is a vital task for countries having opened up their economies for trade and capital flows both of which lend a great degree of uncertainty to the policy making. In an increasingly synchronised

business cycle environment, international policy coordination becomes extremely essential.

In the Indian context, the preamble to the Reserve Bank of India Act 1934 outlines the basic functions of the Reserve Bank as, "to regulate the issue of Bank notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage." The objectives of monetary policy evolved from this broad guideline as maintaining of price stability and ensuring adequate flow of credit to the productive sectors of the economy. Monetary stability cannot be ensured without stabilising the purchasing power of the currency. The credit system helps promote economic growth which in turn would strengthen monetary stability. Hence, stabilisation of inflation at a low level and stabilisation of output around its potential level continue to be the typical objectives of monetary policy in most countries. In practice, monetary policy in India has been endeavouring to maintain a cautious balance between economic growth and price stability.

However, price stability does not necessarily mean a constant price level, but a low and stable inflation. This is because high rates of inflation or deflation impose costs on the economy by way of loss of output, uncertainty and misallocation of resources. Of course, it is difficult to define the precise level of low and stable inflation for an economy. In practice, inflation targets range from 2 per cent for developed countries to 3-4 per cent for developing countries which have come to be regarded as price stability (Schmitt-Grohe, 2011). The Sukhomoy Chakraborty Committee (1985) had defined an annual inflation rate of 4 per cent as the tolerable level. In this context, the notion of threshold level of inflation, which is the inflexion point in the growth-inflation trade-off, becomes important. Beyond the threshold, inflation by itself becomes inimical to growth. Recent studies on India suggest that the threshold inflation could be in the range of 4-6 per cent (Mohanty et al, 2011).

Compared to most emerging market economies and many semi-developed economies of Latin America and the Far East, Indian economy has had a moderate inflation historically. The long-run rate of inflation in India since the seventies till the end of 2000s had remained in a single digit of about 7.5 per cent. In fact, the average rate of inflation during the 2000s was even lower, around 5.5 per cent. However, near double-digit inflation since the beginning of 2010-11 has been posing a challenge for monetary policy in India. Notwithstanding this recent inflation upsurge, monetary policy continues to be implemented so as to regulate the rate of inflation in the range of 4.0-4.5 per cent. This is broadly in tune with the medium-term objective of 3.0 per cent inflation which is consistent with India's integration into the global economy.

Recent global financial crisis has, however, shown that low levels of inflation and high levels of growth do not guarantee financial stability. Accordingly, there is an increasing emphasis that financial stability should also be an explicit objective of central banks besides price stability and growth. In India financial stability was recognised as an important objective of monetary policy long before the crisis. Over the years, monetary policy in India has evolved so as to achieve the triple objectives of price stability, growth and financial stability. These objectives are not basically contradictory, but they are somewhat mutually complementary. This is so since price and financial stability are important for sustaining a high level of growth, which is the ultimate objective of public policy.

3. Structure of Monetary Policy

In order to achieve the objectives of monetary policy it is necessary to have a consistent policy structure or framework. In the theoretical realm, the evolution of monetary policy framework could be traced to the desire to reduce inflationary bias in the economy through various articulations under the broader debate on **"rules"** versus **"discretion**" in policy making, and more recently, "constrained discretion", a notion which implies that the ideas of "rules" and "discretion" are not mutually exclusive. In practice, the nature of the monetary framework depends upon two important criteria, namely: the level of development of financial markets and institutions; and the degree of openness of the economy to trade and capital flows. In India, like most other countries, the monetary policy framework has evolved in response to and in consequence of financial developments and shifts in the underlying transmission mechanism.

Central banks seek to achieve their objectives only indirectly through instruments which are under their direct control. For instance, under the monetary targeting framework, central banks, through the instruments under their direct control such as cash reserve ratio (CRR), tried to influence an intermediate target such as money supply which had a stable relationship with prices and output. The structure of monetary policy has been changing over the years contingent upon the level of development of financial markets and institutions as also the degree of global integration. In India as in other countries, monetary policy framework has undergone a significant change over time. From the mid-1980s to 1997-98 the Reserve Bank followed a monetary targeting framework with feedback in that the broad money was used as an intermediate target for monetary policy. This framework was, however, found to be increasingly inadequate by the mid-1990s due to several developments that took place with economic and financial sector reforms.

First, on account of measures undertaken during the 1990s to develop the various segments of the financial market, there was a discernible deepening of the financial sector. This significantly improved the effectiveness of monetary policy transmission through indirect instruments such as interest rates. Secondly, with the opening up of the Indian economy, increase in liquidity emanating from capital inflows raised the ratio of foreign assets to reserve money. This rendered the control of monetary variables more difficult. Third, there were also changes in the underlying transmission mechanism of monetary policy with interest rate and the exchange rate gaining importance vis-à-vis the other variables. Consequent upon these financial innovations during the 1990s, the stability of demand function for money came under question. Recognising the challenges posed by financial liberalisation and the growing complexities of monetary management, the Reserve Bank switched over to a multiple-indicator approach in 1998-99. Under this approach, while broad money continued to remain an information variable, greater emphasis was placed on rate channels for formulation of monetary policy.

A host of macroeconomic indicators including interest rates or rates of return in different segments of financial markets, along with other indicators on currency, credit by banks and financial institutions, fiscal position, trade, capital flows, inflation rate, exchange rate, refinancing and transactions in foreign exchange available on high frequency basis are juxtaposed with output data for formulation of monetary policy. As a result, monetary policy operation became more broad-based on a diverse set of information variables and provided flexibility in the conduct of monetary policy.

The multiple-indicator approach has not, however, remained unchanged; it has continued to evolve and was further strengthened by forward-looking indicators and a set of sophisticated time-series models. The forward-looking indicators are drawn from a series of Reserve Bank's surveys - industrial outlook survey, capacity utilisation survey, professional forecasters' survey and inflation expectations survey. The assessment from these indicators and models used for forecasting them help project GDP growth and inflation. Simultaneously, the Reserve Bank also gives the projection for broad money (M_3), which serves as an important information variable, so as to make the resource balance in the economy consistent with the credit needs of the government and the private sector. Thus, the current framework of monetary policy can be termed as an **augmented multiple-indicator approach** (Mohanty, 2011).

4. Implementation of Monetary Policy

For an effective implementation, monetary policy requires a supporting operating procedure. The operating procedure refers to day-to-day management of monetary conditions consistent with the overall objectives of monetary policy. Generally, it involves: (i) defining an operational target, usually an interest rate; (ii) setting a policy rate which could influence the operational target; (iii) setting a bandwidth for short-term market interest rates; (iv) conducting liquidity adjustment operations to keep the operational target interest rate stable within the band; and (v) signalling of policy intentions. As with the monetary policy framework, the corresponding operating procedure has also been an evolving process in India. Application of CRR on banks' liabilities and open market operations (OMOs) have traditionally been the instruments of monetary policy. But, with the introduction of liquidity adjustment facility (LAF) in 2004, overnight management of general liquidity at desired interest rate emerged as the most active instrument of monetary policy. The LAF was operated through overnight fixed rate repo (i.e., the central bank's liquidity injection rate) and reverse repo (i.e., the central bank's liquidity absorption rate) to provide necessary guidance to the market interest rates.

This innovative monetary policy procedure, however, had two major shortcomings. First was the lack of a single policy rate. Consequently, the operating policy rate alternated between repo and reverse repo rates depending upon the prevailing liquidity condition. Second was the lack of a firm band or corridor which often led to the implicit target rate (call rate) breaching the ceiling and bottom limits under liquidity stress conditions. Recognising these shortcomings, the Reserve Bank put in place a new operating procedure in May 2011.

4.1 Innovations in Monetary Policy Operating Mechanism

The new operating mechanism has retained the essential features of the earlier LAF framework with certain important modifications. First, the weighted average overnight call money rate has been explicitly recognised as the operating target of monetary policy. Second, the repo rate was made the only one independently varying policy rate. Third, the Reserve introduced a new facility called Marginal Standing Facility (MSF) under which scheduled commercial banks (SCBs) could borrow overnight at their discretion up to one per cent of their respective net demand and time liabilities (NDTL) at 100 basis points (i.e., 1 percent) above the repo rate. Fourth, the revised band was defined with a fixed width of 200 basis points (i.e., 2 percentage points). The repo rate was placed in the middle of the band, with the reverse repo rate 100 basis points below it and the MSF rate 100 basis points above it.

The new operating procedure, by removing some of the major shortcomings of the earlier LAF framework, has helped improve the implementation and transmission of monetary policy. First, explicit announcement of an operating target makes market participants clear about the desired policy impact. Second, a single policy rate removes the confusion arising out of policy rate alternating between the repo rate and the reverse repo rate. It also enhances the accuracy of signalling the stance of monetary policy. Third, the introduction of MSF provides a safety valve against unanticipated liquidity shocks. Fourth, by reducing uncertainty and avoiding communication difficulties associated with a variable band, a fixed interest rate band set by MSF rate and reverse repo rate would help keep the overnight average call money rate close to the repo rate.

4.2 Improvements in Monetary Policy Transmission

Since the new operating procedure was implemented just less than a year ago, it may be too early to draw conclusions regarding its effectiveness. However, the experience so far suggests that overnight interest rate has become more stable since its implementation. The new operating framework presupposes the dominance of the interest rate channel of monetary transmission, which is found to be more effective under a deficit liquidity condition. The new framework has helped maintain the overall liquidity in the deficit mode. As a result, the transmission of monetary policy in terms of movement in call money rate has shown improvement. Money market interest rates are now found to be better aligned since the implementation of new operating framework. Further, better transmission to debt market segment is also evident from closer alignment between the rates on debt market instruments on the one hand and the money call rate on the other.

The transmission of monetary policy changes to the credit market is much more complex and occurs through the cost channel. Banks respond to policy changes by altering deposit rates depending on liquidity conditions and credit demand. As the cost of deposits rises alongside money market rates, lending rates respond to policy rate changes with a time lag.

5. Policy Formulation Processes

As corollary to the changing monetary policy framework and the corresponding operating mechanism, the Reserve Bank adopts a systematic process of policy formulation. The process of monetary policy formulation in India had traditionally been largely an in-house exercise, with only the end-product of its actions being made public. But, over time the process has changed; it has become more consultative and participative with an external orientation. The process leading to monetary policy actions entails a wide range of inputs involving the in-house staff which includes economists well-trained in macro-econometric models and outsiders including market participants, academics, financial market experts and the Reserve Bank Board.

The work process within the Reserve Bank has been re-oriented to focus on technical analysis, co-ordination, horizontal management and more market orientation. The three concerned research departments – Monetary Policy Department (MPD), Department of Economic and Policy Research (DEPR) and Department of Statistics and Information Management (DSIM) – provide independent technical inputs and assessment in the monetary policy strategy meetings chaired by the Governor and attended by the top management. Given the increasing complexity of macroeconomic management, diversity of viewpoints helps avoid

drawbacks of collective wisdom. Since banks are the major counterpart of the Reserve Bank, pre-policy consultations are held with 20 large commercial banks which together account for more than three-fourths of banking business. In addition, in the financial sector consultations are held with the Indian Banks Association (IBA), urban and rural co-operative bank/credit associations and association of non-banking financial companies.

As far as the industrial sector is concerned, the Reserve Bank holds consultations with national-level business associations such as the FICCI. Consultations are also held with select economists and senior economic journalists to ascertain their reading of the economic situation and policy recommendation. In keeping with international best practice, the Reserve Bank has constituted a technical advisory committee (TAC) on monetary policy with outside experts; this body serves as think-tank although its role remains rather advisory while the final policy is shaped almost entirely the in-house experts. In order to enhance transparency, the deliberations of the TAC and policy recommendations are released to the public within four weeks of such meetings. However, the Governor of the Reserve Bank is the ultimate authority to take decisions on monetary policy matters.

The Reserve Bank has several other standing and *ad hoc* committees or groups which play a critical role with regard to policy advice. An interdepartmental Financial Markets Committee (FMC) focuses on day-to-day market operations and plans on an ongoing basis. The inputs from these bodies and technical analysis based on them would enable the Governor to make the best possible decision under the circumstances besides enhancing transparency of the policymaking process. The Governor and the top management of the Bank set out the rationale for policy decisions, through quarterly policy statements, mid-quarter reviews, press conferences and speeches. Thus, the technical process of monetary policy formulation has evolved to be a highly consultative and participative process. This not only enhances the transparency of monetary policy but policy decisions become acquainted with the analysis and viewpoints of the concerned stakeholders. As many outcomes in modern market-based economies are a result of expectations, a consultative process in policy making would also help in managing such expectations.

6. Effectiveness of Monetary Policy in the Changed Economic Setting

The transition of the monetary policy framework from a monetary targeting regime to a multiple indicator regime was conditioned by the continuously broadening and deepening of financial markets, increasing integration of the economy with the global economy and the consequent changes in the transmission of monetary policy. A pertinent question is how this transition impacts economic outcomes, the growth and inflation control performance of the economy.

From the table below, two broad trends can be discerned. First, growth of real GDP, on an average, improved over the period and became less volatile. Second, inflation control had improved significantly in the last decade coinciding with the adoption of multiple indicator approach.

However, inflation control performance deteriorated during the years 2010-11 and till the end of the third quarter of 2011-12. Of course the recent inflation surge has followed the global

financial crisis. Managing inflation while an economy is recovering from a downturn is much more complex than under normal conditions because of associated uncertainties and trade-offs. In the initial phase of the crisis in 2007, it appeared that emerging market economies (EMEs) were better positioned to withstand the storm unleashed by the global financial meltdown by virtue of their substantial foreign exchange reserve cushion, improved policy frameworks and generally robust banking sector and corporate balance sheets. However, with fall of Lehman Brothers in September 2008 which triggered global de-leveraging and heightened risk aversion, the EMEs were also adversely affected by the spill-over effects: first through contraction in world trade and then from reversal in capital flows.

India, though initially somewhat insulated from the global developments, was eventually impacted significantly by the global shocks through all the channels – trade, finance and expectations channels. In response, the Reserve Bank swiftly introduced a comprehensive range of measures to limit the impact of the adverse global developments on the domestic financial system and the economy. The Reserve Bank, like most central banks, took a number of conventional and unconventional measures to augment domestic and foreign currency liquidity, and sharply reduced the policy rates. In a span of seven months between October 2008 and April 2009, there was unprecedented policy activism. For example: (i) the repo rate was reduced by 425 basis points to 4.75 per cent, (ii) the reverse repo rate was reduced by 275 basis points to 3.25 per cent, (iii) the CRR was reduced by a cumulative 400 basis points to 5.0 per cent, and (iv) the total amount of primary liquidity potentially made available to the financial system was over Rs 5.6 trillion or over 10 per cent of GDP. The Government also came up with various fiscal stimulus measures.

As the economy started showing signs of recovery and inflationary pressures emanated from drought and spurt in global commodity prices, exit from the excessively accommodative monetary policy stance began in October 2009 in anticipation of the likely path of the inflation trajectory as also on consideration of its source and composition. The initial rounds of monetary policy response were in the nature of normalisation from an excessively stimulative posture in a non-disruptive manner. The policy response was calibrated to the domestic growth-inflation dynamics. As growth started picking up, albeit anaemically, and inflation became more generalised, monetary policy response turned stronger. Initially, monetary transmission was weak as systemic liquidity was in surplus. But once liquidity turned into deficit in July 2010, monetary transmission improved. As the liquidity in the system transited from surplus to deficit, the CRR and repo rate was were hiked rather sharply and kept high till November 2012, so that monetary policy action would have the desired impact on inflation. As result, the rate of inflation started coming down during the third quarter of 2011-12 and is now below 7 per cent.

7. Global economic chaos put established theory and policies to test

The evolution of monetary policy is influenced not only by the changing monetary and banking ethos, but also by the developments in the financial markets and macroeconomic outcomes. Adverse developments like the recent global economic turmoil and the on-going sovereign debt crisis in Euro zone put the prevailing economic theory and policies to test. Though undesirable, they seem unavoidable especially in a global setting. They do, however, provide an opportunity to test the efficacy of prevailing economic theory and policy. Dr. Deepak Mohanty, Executive Director of the Reserve Bank and one of the architects of the multiple-

indicators approach of its monetary policy framework, seeks to draw certain important monetary policy lessons from the recent crisis (Mohanty, 2011). These are the following:

First, the recent crisis has demonstrated that a monetary policy solely aimed at fine-tuning of short-term objectives can pose risks. Prior to the crisis, monetary policy focused more on short-term demand management while inflation was firmly under control, particularly in the advanced economies. It was believed that fine-tuning of monetary policy on the basis of indicators such as output gaps and measures of core inflation, led central banks towards excessive 'short-termism'. This in turn contributed to build up of risks. Thus, policies focused on short-term objectives may not deliver desired economic outcomes in medium and long terms.

Second, the experience of the recent global financial crisis has changed the notion as to how central banks should go about achieving their macroeconomic stabilisation objectives. It has become clear that the mandate of monetary policy should cover macro-financial stability and not just price stability. This has drawn attention to the impracticability of **Tinbergen's rule** of assigning one instrument for one objective. In practice, interest rate changes affect financial stability. Similarly, macro prudential tools impact credit growth and hence monetary transmission. Recognition of the interaction between interest rate and macro prudential tools becomes critical for the appropriate design of monetary policy. This underscores the importance of close monitoring and analysis of financial sector developments so that possible risks can be better integrated into the formulation and implementation of monetary policy.

Third, inadequacy of versatile tools of monetary control in the central banks' regulatory armoury was also evident during the crisis. As was evident during the initial phase of the crisis, monetary policy formulated and implemented via the traditional instrument of policy interest rate remained either ineffective or inadequate. Consequently, central banks had to resort to a number other unconventional quantity-based measures to ease financial conditions. Thus, there is a need to broaden the armoury of monetary tools.

Fourth, though financial disorders play a key role in business cycles, they were not explicit part of the models used for policy analysis by central banks (Mishkin, 2011). In most crises, including the recent one, it has been observed that shocks to the financial system accentuate information asymmetry and affect policy transmission. Therefore, financial disorders must not only be properly understood, but also be built into macro-econometric models that central banks use for forecasting and policy formulation.

Fifth, subsequent to the crisis, it has been increasingly realised that central banks could better discharge the lender-of-last-resort (LOLR) function provided they are also vested with micro-prudential regulation and supervision of banks. It could reinforce macro-prudential action by deploying regulatory and supervisory instruments to dampen cyclicality of financial disorders.

Sixth, the operating procedures of monetary policy in future would have to take into account the implications of build-up of sovereign debt during the crisis. In this context, Cecchetti (2011) cautions that central bank operating procedures in future are likely to be more

complicated with more tools and more options. Therefore, coordination of monetary and fiscal policies becomes much more imperative in the implementation of monetary policy.

8. Internationalisation of Monetary Standards and Practices

As part of the ongoing process of reforms and in order to innovate standards, codes and practices in matters relating to the financial system and bring them on par with international ones, the Reserve Bank had set up an Advisory Group with Shri M. Narasimham as Chairman and Shri S.S. Tarapore as a member. The Group assessed the extent of India's compliance with international standards and codes in the area of 'Transparency in Monetary and Financial Policies'. Endorsing that the Reserve Bank's policies and operations largely conform to the IMF Code, the Group offered a set of recommendations for making India fully compliant with the International Codes.

First, the Group recommended that the objective of monetary policy should be set out by the Government, as part of its overall economic policy package, and the Government should be obliged to seek parliamentary debate on these objectives as also any changes in these objectives thereafter. The Group further suggested that the Government should also consider adhering to the Reserve Bank's single objective at a time such as medium-term inflation control, while the Government would have for itself a clearly set out hierarchy of objectives for which it could use its other instruments of policy.

However, the Reserve Bank is of the view that at the current stage of institutional development and fiscal stance, coordination and harmony are of paramount importance though there is need for clearer demarcation of responsibilities and accountability between the Reserve Bank and the Government with appropriate degrees of transparency. Moving in this direction, the Reserve Bank is divesting all ownership functions as also term lending functions, subject to approvals by the Government.

Second, the Group recommended amendments to relevant legislation to accord greater operational flexibility to the Reserve Bank for the conduct of monetary policy and regulation of the financial system. In this regard, the Reserve Bank has made proposals for legislative changes in the Reserve Bank of India Act, which is under the consideration of the Government. These proposals if endorsed by the Parliament, would accord greater operational flexibility to the Reserve Bank for conduct of monetary policy. The operational autonomy to the central bank its relationship with the Treasury has often been a vexed issue not merely in India but elsewhere as well. How the Indian Parliament looks at this issue from the Indian perspective remains to be seen.

Third, it was suggested that the Government should set up its own independent debt management office to take over the present functions discharged by the Reserve Bank. This would help avoid conflict of interest in the conduct of monetary policy. The Reserve Bank in its annual monetary policy of 2001, had announced progress made in this regard and its intention to divest itself of the debt management function. An enabling proposal to delink the function of debt management of the Government from the Reserve Bank has been made in the RBI (Amendment) Bill 2001. The Government had also decided, in principle, to delink these functions.

Fourth, the Group recommended that the Reserve Bank should set up Monetary Policy Committee (MPC) as a committee of the Board, by regulation, requiring no specific changes in the law. However, at present, no view has been taken in the matter of either setting up such a Committee or disclosing the deliberations leading to monetary policy actions. Regardless of this, the transparency and consultative processes within the Reserve Bank have increased significantly in the recent years. The Reserve Bank's approach in this regard is to evolve the processes of monetary policy making that are appropriate to the changing conditions in Indian monetary and financial system recognising the need to be in broad harmony with best practices.

9. Summing Up

The objectives, instruments and mechanism of operation of monetary policy in India as well as elsewhere have been undergoing relentless change ***pari passu*** the changing structure of their respective economies. In India, the Reserve Bank has in fact set an example among the emerging market economies in constantly innovating the structure, techniques and transmission of monetary policy to subserve the triple objectives of inclusive growth with a fairly reasonable degree of inflation control and financial stability. Monetary policy formulation and implementation are in a continuously evolving mode both in response to and as a consequence of changes in the financial markets and the real economy. In the process, monetary policy of the Reserve Bank has become increasingly transparent with greater involvement of all the stakeholders for better policy outcome. One may for the time being think that the so-called trilemma bothering the Euro zone at present may worry India so much, but the sovereign debt in like a Sword of Damocles! The day when the monetary policy of the Reserve Bank needs to be additionally tuned to manage the sovereign debt problem may not be far off!

References

- Bernanke, Ben S, (2003); *Constrained Discretion and Monetary Policy*. Remarks before the Money Marketers of New York University, New York, February 3; http://www.federalreserve.gov/boarddocs/speeches/2003/20030203/default.htm

- Chancellor, Edward (2011); *Germany's Euro zone trilemma*, Financial Times, November 6, 2011; http://www.ft.com/intl/cms/s/0/a4cf7412-0635-11e1-a079-00144feabdc0.html#axzz1pnwkmkA6

- Friedman, B. (1990), *Targets and Instruments of Monetary Policy*. In B. Friedman and F. Hahn (eds.) *Handbook of Monetary Economics*, Amsterdam, North-Holland.

- Goodhart, C (2007); *Whatever Became of the Monetary Aggregate? LSE Financial Markets Group Special Paper* No. 172; http://www2.lse.ac.uk/fmg/documents/specialPapers/2007/sp172.pdf

- Goyal, Ashima (2011); History of Monetary Policy in India since Independence Ashima Goyal, WP-2011-018, Indira Gandhi Institute of Development Research, Mumbai , September; http://www.igidr.ac.in/pdf/publication/WP-2011-018.pdf

- Jadhav, Narendra (2005); *Dynamics of Monetary Policy in Emerging Market Economies: A Case Study of India, March 28;*

http://drnarendrajadhav.info/drnjadhav_web_files/Published%20papers/Dynamics%20of%20Monetary%20Policy%20in%20EMEs%20A%20Case%20Study%20of%20India.pdf

- Khundrakpam, J.K. and Das, Dipika (2011) Monetary Policy and Food Prices in India RBI Working Paper Series W P S (DEPR): 12; http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/WPMP0811_12.pdf

- Mohanty and Mitra (1999); *Experience with Monetary Targeting in India, Economic and Political Weekly,* January 16–23, pp 123–132; http://www.jstor.org/discover/10.2307/4407572?uid=3738256&uid=2129&uid=2&uid=70&uid=4&sid=47698788973077

- Mohanty, Deepak(2010); *Monetary policy framework in India – experience with multiple-indicators approach,* Speech by Mr Deepak Mohanty, Executive Director of the Reserve Bank of India, at the Conference of the Orissa Economic Association, Baripada, Odisha, 21 February; http://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=481

- Mohanty et al (2011), *Inflation Threshold in India: An Empirical Investigation*, RBI Working Paper Series, 18/2011; http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/18WPS071011F.pdf

- Mohanty, Deepak (2011); *Changing Contours of Monetary Policy in India*, Speech by Mr Deepak Mohanty, Executive Director of the Reserve Bank of India, at the Royal Monetary Authority of Bhutan, Thimphu, December 1; http://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=633

- Mohan, Rakesh (2006); *Monetary Policy and Exchange Rate Frameworks: The Indian Experience*, Presentation by Deputy Governor, Reserve Bank of India at the Second High Level Seminar on Asian Financial Integration organised by the International Monetary Fund and Monetary Authority of Singapore, in Singapore on May 25; http://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/70695.pdf

- Patra, Michael Debabrata and Kapur, Muneesh (2010); A *Monetary Policy Model without Money for India,* IMF Working Paper, Washington, August; http://www.imf.org/external/pubs/ft/wp/2010/wp10183.pdf

- Pattanaik and Nadhanael (2011); *Why Persistent High Inflation Impedes Growth? An Empirical Assessment of Threshold Level of Inflation in India*, RBI Working Paper Series, 17/2011; http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/17WPS071011F.pdf

- Reddy, Y.V. (2002); *Parameters of Monetary Policy in India*, Invited Lecture at the 88th Annual Conference of Indian Econometric Society at Madras School of Economics, Chennai, January 15; rbidocs.rbi.org.in/rdocs/Bulletin/DOCs/26644.doc.

- Reserve Bank of India (2011); Report of the Working group on Operating Procedure Of monetary policy, Mumbai, March; http://www.rbi.org.in/SCRIPTs/PublicationReportDetails.aspx?UrlPage=&ID=631

- Schmitt-Grohe, Stephanie and Martin Uribe (2011); *The Optimal Rate of Inflation* in Friedman, B. and Woodford, M., (eds.); *Handbook of Monetary Economics.*

- Sinha, Anand (2011); Macro prudential Policies: Indian Experience Address delivered at Eleventh Annual International Seminar on Policy Challenges for the Financial Sector on "*Seeing both the Forest and the Trees- Supervising Systemic Risk*" co-hosted by The Board of Governors of the Federal Reserve System, The International Monetary Fund, and The World Bank at Washington, D.C, June 1-3; http://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/DGSMP150611.pdf

- Subbarao, Duvvuri(2012); *Price Stability, Financial Stability and Sovereign Debt Sustainability Policy Challenges from the New Trilemma*, Inaugural speech by Governor, Reserve Bank of India, at the Second International Research Conference held by the Reserve Bank of India at Mumbai on February 1; http://www.rbi.org.in/scripts/BS_SpeechesView.aspx?id=662

- Trichet, Jean-Claude (2010); Panelist Comments on: *Fifty Years of Monetary Policy: What Have We Learned?* at the Symposium for the 50th anniversary of the Reserve Bank of Australia, Sydney, February 9; http://www.rba.gov.au/publications/confs/2010/conf-vol-2010.pdf