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Lessons from the Global Crisis: The Role of Monetary Policy

By
Binod B. Bhoi & Pankaj Kumar, Research Officers,
Department of Economic Analysis and Policy,
Reserve Bank of India, Mumbai

The world is in the midst of the most severe crisis since the Great Depression of the 1930s. The speed and the intensity with which the sub-prime crisis in the US culminated into global financial crisis and then into global economic crisis, however, made everybody wonder as to what went wrong. The question whether it all happened so suddenly or there were early warnings in the system, which was masked by the overall improvement in macroeconomic performance or rapid pace of financial innovations, and thereby could not evince required policy responses (policy of 'benign neglect') before the emergence of the crisis has invited a lot of interest among policymakers and academicians. While many facets of the crisis are still unfolding, a lot has been written about the origin, the impact and the lessons from the crisis. At the same time, the crisis has thrown up many debates which still remain unsettled. The role of a sustained period of easy monetary policy in creating pre-conditions for a crisis by inducing excessive credit growth, build-up of financial leverage and asset bubbles is one of them. Also, and more importantly, serious thoughts are being given to the desired changes in the framework of monetary policy to preempt the recurrence of such crises. This paper is an overview of the recent debates with an objective to draw some lessons for monetary policy.

While the theme of monetary policy remains the prime focus of the paper, the structure of the paper resembles many others written on the recent crisis in order not to lose sight of the bigger macroeconomic context in which monetary policy operates. Accordingly, section I of the paper discusses the causes of the crisis, drawing from the available literature and current debates in policy circles, with a special emphasis on the role of easy money for a sustained period in the advanced countries in building up of macroeconomic imbalances. Section II covers conventional and unconventional policy responses in line with the evolution of the unprecedented crisis. Section III draws some lessons for monetary policy framework emanating from the experience in dealing with the present crisis and the current debate in the policy circles. Section IV is devoted to an evaluation of the approach of monetary policy in India against the benchmark lessons drawn in the previous section. Finally, the conclusion gives the overall insights of the enquiry.

I. Causes of the Global Crisis

The available literature highlights the role of both macroeconomic and microeconomic factors and the interplay between them in causing the global financial crisis as discussed below. The macroeconomic causes highlight the role of persistence of global imbalances (Portes, 2009) combined with export-led growth or leveraged-led growth (BIS, 2009; Farhi *et al*., 2008), extended period of low interest rates supported by accommodative monetary policy pursued in major advanced economies (Taylor, 2008; ECB, 2007), and lack of recognition of asset prices in policy formulation (White, 2008; Borio and Lowe, 2004; Detken and Smets, 2004).

The persistence of global imbalances were reflected in the large current account deficits in advanced economies, especially the US, mirrored in significant current account surplus in Asia, notably China, the oil exporting countries in the Middle East and Russia. While export-led growth strategy and commodity price boom played an important role in adding to the current account surplus in EMEs, the leveraged-led growth helped made up for the deficiency in aggregate savings in industrial economies, especially the US. Fundamentally, global imbalances were a reflection of a decline in the savings rate in the advanced economies, notably the US and a much sharper increase in the same in EMEs, especially in China and the Middle-East. The inability of the underdeveloped nature of the financial systems in efficiently channelizing such savings into investments combined with the policy of large foreign exchange reserves accumulation by EMEs for managing currency appreciation and also as self insurance against sudden reversal of capital flows, compounded the problem of excess savings in the EMEs, giving rise to a global saving glut[1]. As a result, contrary to what is suggested by theory, capital flew from the capital-poor EMEs, where the

[1] Efforts by several Asian, especially China, and oil-exporting countries to build up large foreign exchange reserves have been cited by many observers as a source of the major global imbalances and subsequent excessive asset price appreciation in the West (Buiter, 2007). Self-insurance (through reserve accumulation) is also argued as collectively inefficient (Portes, 2009; Lane, 2009).

returns to capital would be higher, to the capital-rich industrial economies, especially the US, essentially to finance consumption and housing booms. These saving-investment imbalances and consequent huge cross-border financial flows began to put great stress on the financial intermediation process. Thus, the global imbalances interacted with the flaws in financial markets and instruments to generate the specific features of the crisis. Again, global dependence on the US dollar as the reserve currency exposed the global economic system to undue influence of the policies of one country, *i.e.*, the US, generating another potential source of instability.

A related macroeconomic development behind the crisis was the excessively loose monetary policy in advanced economies, especially the US, which was considered as a key factor in accentuating the global imbalances itself. The lack of adequate exchange rate flexibility in some EMEs, by giving rise to excess liquidity and getting invested in low risk investments in the US is also considered to have played a role in sustaining low interest rates[2]. The real federal funds rate in the US was consistently below 1 per cent from mid-2001 up to the end of 2005. In fact, it was negative for much of this period. This protracted period of low interest rate was made possible by improved macroeconomic performance since the early 1990s in terms of not only higher growth and low inflation, but also in their reduced volatility - termed as 'Great Moderation'. According to Ben Bernanke (2004), the phenomenon of 'Great Moderation' could be attributed to a combination of three factors - good policies (explicit focus on price stability), benign structural economic changes (institutional reforms, globalization and technological progress), and simply good luck (smaller and infrequent shocks). Moreover, relatively cheaper imports from China and other EMEs also helped keep inflation in check, which, in turn, magnified the success of the extant macroeconomic policies.

This period of low interest rates combined with ample liquidity gave rise to credit boom and drove up asset prices, leading to the build-up of domestic imbalances in many economies. Further, the search for yield in a low interest rate regime increased the incentives for risk taking by banks and created grounds for rapid financial innovations[3]. Even as financial imbalances were building up, they were masked by the outcome of 'great moderation', which resulted in under-pricing of risks. Spence (2008) argues that the asset

[2] Mohan, R. (2009) argues that the imbalances would have been there even with a more flexible Chinese exchange rate regime.
[3] See Rajan, R. (2006) and ECB (2007) for a discussion on how low interest rates lead to increase in risk taking.

price bubble was fuelled by a combination of excessive leverage and a widespread underestimation of the endogenously rising systemic risk. Monetary policy, however, did not respond adequately to the build-up of risks to the system either due to its exclusive focus on price-stability (e.g., through inflation targeting) or the belief that risks were widely dispersed through instruments and institutions, posing no major risks to the financial system as a whole. This belief, however, was not well founded in the micro foundations of the market mechanism prevalent in the financial system. This takes us into the domain of micro factors behind the crisis.

Apart from macroeconomic policies, the literature has drawn attention to the flaws in the financial system as well as weaknesses in national and international financial regulatory frameworks as another set of potential causes of the crisis. The flaws in the financial system that existed at the peak of the boom include excessive securitisation, as well as undue faith placed by both investors and regulators in the opinions of private rating agencies (Buiter, 2007). There was also a decline in lending standards during the run-up to the crisis (Brunnermeier, 2009). More specifically, the micro foundations of the crisis highlights the problems with the incentive structure facing agents (BIS, 2009; Bernanke, 2009); flaws in techniques used to measure, price and manage risk (BIS 2009) and loopholes in the regulatory system (Buiter, 2007; Bernanke, 2009; and Demirguc-Kunt and Serven, 2009).

Problems with incentives were related to all market participants – consumers, asset managers and credit rating agencies. Consumers lacked knowledge of the complex world of finance and relied on asset managers, credit rating agencies and regulatory bodies for the safety of their investments; while in reality the system was complex and opaque. Compensation structure of asset managers incentivized them to take on more risks for short-run return while ignoring long-run prospects. In their drive to satisfy shareholders, portfolio managers craved for higher returns, which led to an explosion in debt financing (i.e., private incentive to increase leverage) and created grounds for fragile institutions. Credit rating agencies were being paid by those they were ratings (i.e., bond issuers), thereby making such third party evaluation unreliable. Thus, failures in monitoring by individuals, flawed compensation schemes in the financial industry, and skewed incentives of the rating agencies supported the excessive risk-taking behaviour.

Another microeconomic cause was the flaws in techniques used to measure, price and manage risk. They were the result of lack of historical data, underestimation of infrequent tail risks, and mushrooming of new and complex financial instruments. The risk diversification through the 'originate-to-distribute' model, in fact, turned out to be 'risk concentration' when asset prices across regions moved together in tandem. Coval *et al.*, (2009) argued that the process of securitization substituted systematic risks for diversifiable risks.

Finally, there were flaws in the regulatory system – it allowed imprudent lending practices and lax supervisory oversight. It was also relatively easy to move activities outside the regulatory perimeter. The extant regulatory structure, with it's over reliance on the Basel norms of capital requirements, encouraged pro-cyclicality into lending behavior (Rose and Spiegel, 2009) and contributed to the escalation of securitization (through lower capital charges to securitized assets under Basel I), which in turn, encouraged banks to move assets into off-balance sheet vehicles (Demirguc-Kunt and Serven, 2009). Conduits and Structured Investment Vehicles (SIVs), in fact, provided banks an opportunity to increase leverage and profitability without increasing the capital requirement. The securitization was, thus, a convenient tool to avoid additional regulatory capital (Reddy, 2009, pp 345). Moreover, securitization also reduced overall transparency by reducing incentives to collect and disseminate information about counterparty risk (Buiter, 2007). Besides giving preferential treatment to securitized assets, regulatory frameworks may have encouraged risk taking indirectly by giving (implicit) credence to the awareness of larger financial institutions that they are "too big to fail." The result of all this was a highly leveraged financial sector, much of that was outside the regulatory purview, which had become extremely risky with implications for systemic stability[4]. Thus, the present crisis is viewed as a best example of regulatory failure. Several issues have been highlighted in this regard – lack of countercyclical regulation; inability to recognise systemic risks; need for prudential regulation; non-recognition of off-balance sheet items of banks; operation of non-banks beyond the regulatory purview; complex and non-transparent nature of new financial instruments; and regulatory oversight of systemically important financial institutions.

[4] See Rajan, R (2005) for a discussion on whether the enlarged financial sector – comprising of traditional banks, non-banks and off-balance sheet entities – has made the world riskier than in the past.

II. Evolution of the Crisis and Policy Responses

This section analyses how the crisis has evolved and how policy makers have responded to it. What has been the rationale behind various measures, especially monetary policy responses? And whether there has been any difference in policy priorities between the advanced economies and emerging markets to draw some lessons from the nature of policy responses? Finally, what are the implications of these measures for the future?

The sub-prime crisis that had its root in the US housing mortgage market became visible around mid-2007, soon escalated into widespread financial distress through complex linkages among credit and funding markets. The turmoil spread to the inter-bank money markets on August 9, 2007 when issuers of asset backed commercial paper encountered problems in rolling over outstanding volumes, and large investment funds froze redemptions citing inability to value their holdings. This signalled the advent of a broader financial market crisis. The mounting valuation losses in the following months put pressures on bank balance sheets, which was eventually, manifested in terms of a severe liquidity shortages at Bear Sterns in March 2008, forcing a government facilitated takeover.

In this early stage of the crisis, it was viewed that the crisis would be limited to the financial sector and therefore the main focus of policy was on funding liquidity, both at individual central bank level as well as through coordinated measures (on December 12, 2007). The measures included sharp cuts in policy rates in the US as well as special/emergency liquidity provisions for longer periods in five other advanced country central banks, including the establishment of US dollar swap lines. In order to make the market rate consistent with the policy rate, various liquidity management operations were undertaken– flexible supply of reserves, issuance of central bank bills, adjusting interest rate on standing deposit facilities and remunerating reserves - which affected the composition of central bank liabilities. Notwithstanding this, the stress in the money markets persisted.

Although an outright bank failure was avoided, this second phase between March 2008 and mid-September 2008 saw large overhang of credit exposures weighing on markets as reflected in widening credit spreads, while banks struggled to replenish their capital positions. As a result, banks became reluctant to lend to other banks with greater preference for liquidity and concerns about counterparty risk which led to spikes in inter-bank rates. Thus, with central banks efforts to substitute market-provided funding falling short, investors' attention turned increasingly from questions about funding liquidity to those about bank solvency, putting particular strains on those institutions known to be highly leveraged and exposed to troubled assets. In line with the refocus on banks' balance sheets, financial asset prices such as equity prices and credit spreads came under renewed pressures in major economies. At the same time, investors realised that the economic fallout from the financial crisis would no more be limited to the US; it could spill over to other major advanced economies, triggering the possibility of a synchronised economic downturn.

Monetary policy responses in this phase, however, confronted complicated policy choices. In the early part, the adverse impact of the financial crisis had not yet spilled over to the real economy and inflation, on account of sharp rises in energy and food prices, was a prime concern for policymakers almost everywhere (as they were above implicit or explicit targets) up to mid-2008. Even though some major advanced economies experienced a growth slowdown in the middle of 2008, the robust economic growth recorded in EMEs supported the view that they are decoupled from the advanced countries. In fact, the intensity and spread of the financial turmoil was underappreciated by most central banks and policy rates were either held constant or raised to anchor inflationary expectations, including in many advanced economies.

The collapse of Lehman Brothers on September 15, 2008 marked a turning point in the evolution of the financial crisis. The prevailing uncertainty in the financial markets led to heightened perceptions about risks which put extreme pressures on the credit, bond and equity markets, and snowballed into a global financial crisis through counter-party dealings. The strains on the balance sheets of several large financial institutions increased significantly, threatening their viability. The result was a sudden plunge in global credit market confidence and spikes in counter-party risks, which, in turn, set-off a chain of deleveraging, declining asset prices, falling income, shrinking demand and rising unemployment in the advanced economies. Despite initial resilience shown by EMEs, including India, they were eventually drawn into the crisis with the contagion spreading through trade, financial and confidence channels, regardless of their relatively strong economic fundamentals and sound financial system. This prompted many to revisit the so-called 'decoupling theory' in an increasingly globalised world on the one hand and the effectiveness of domestic policies in safeguarding the economy during a global crisis on the other.

The chain of events, thus, completely altered the global scenario and brought about a quick reversal in the monetary stance of many central banks. In an unprecedented response to deal with the crisis situation, six major central banks undertook the first ever round of coordinated rate cuts in October 2008. A series of rate cuts in anticipation of countering rapid deterioration in the economic conditions culminated in policy rates reaching close to zero in many advanced economies by May 2009. However, the limitations of conventional policy in the form of interest rate cuts became increasingly clear in a dysfunctional state of the financial system; financial market tensions and the rise in credit and liquidity risk premia impaired the monetary transmission mechanism.

Once conventional weaponry of rate cuts and normal liquidity management operations were exhausted by central banks, they increasingly resorted to unconventional policies during the peak of the crisis, which brought about substantial changes in their balance sheets. As part of the balance sheet policy, measures were aimed at alleviating strains in wholesale inter-bank markets and improving the functioning of specific credit markets and to ease broader financial conditions. The specific measures undertaken to reduce term inter-bank spreads included modification in the discount window facility, lengthening the maturity of refinancing operations, relaxing eligible collateral and counterparty coverage, and establishing inter-central bank swap lines to alleviate mostly dollar funding pressures in offshore markets. As the crisis further deepened, central banks took on the task of directly alleviating credit conditions in non-bank sector to improve liquidity and reduce risk spreads in specific markets such as commercial paper, asset-backed securities and corporate bonds as well as direct purchase of public sector securities to influence benchmark yields. The operations were mainly on the asset side of the central banks' balance sheet. In sum, central banks moved aggressively to use alternative unconventional channels, although the emphasis of operations varied across countries, which not only altered the composition of their balance sheets but also expanded their size dramatically.

Thus, as the crisis intensified in stages from being a crisis of liquidity to a crisis of solvency, and further to a crisis of confidence, so also monetary policy responses evolved from providing liquidity to restoring confidence in the financial system. More specifically, the evolution of the crisis and the nature of policy responses discussed above suggest that they were aimed at restoring normal functioning of the financial markets and thereby reviving the monetary transmission mechanism on the one hand and achieving financial stability on the other. This underscores the need to properly understand the complex nature of interrelationships between monetary policy objectives and financial stability objectives.

III. Lessons for Monetary Policy from the Crisis

Until the global financial crisis of mid-2008, there was a broad consensus amongst policy makers and intellectuals about the best monetary policy framework as the one characterized by 'a single target' (i.e., price stability) and 'a single instrument' (i.e., short-term policy interest rate). This framework relied heavily on the efficient functioning of financial markets, whereby the monetary policy signals are swiftly transmitted from the short-end of the market to the longer end. The faith on this ability of the market made central banks to assume that they can influence overall financial conditions and hence the entire economy through the short-term interest rates. The ability of the market to price risks and therefore allocate credit efficiently, in turn, made policy makers to believe that price stability can simultaneously promote financial stability and growth.

This over reliance on market mechanism, however, came to be questioned increasingly in the aftermath of the financial crisis. Despite central banks in many advanced economies cutting their policy rates to near zero, monetary policy failed to influence the spectrum of market interest rates. This necessitated unconventional measures, including aggressive use of the 'lender of last resort' functions, which in reality turned out to be 'lender of first resort' facility and directly came to be in conflict with the price stability objectives. Furthermore, these monetary measures had to be supplemented by Government support measures – deposit insurance, bank recapitalisation, debt guarantees and even nationalisation – to repair the financial system and restart the flow of credit to households and business and to maintain growth in the real economy. Thus, the crisis has raised issues about the role of public authorities, viz., central banks, supervisor/regulators and governments in safeguarding financial stability.

Furthermore, the crisis casts doubt on the efficacy of the existing institutional framework and adequacy of available policy instruments at the disposal of national and international authorities in ensuring macroeconomic and financial stability. It also raises questions on the functioning of financial markets and institutions, in particular their capacity to price, allocate and manage risk efficiently. The crisis has also exposed the weaknesses in both private sector risk management and inadequacy in the public sector's oversight of the financial system. Thus, the crisis has questioned many of our conventional beliefs and lessons are not only manifold but also for a diverse set of authorities entrusted with the task of maintaining macro financial stability. Some of the key lessons are discussed below.

First lesson from the crisis is that price stability alone cannot ensure macro financial stability. The intellectual consensus behind the framework of exclusive focus on price stability by central banks emerged out of the successes achieved in ensuring extended period of low inflation accompanied by stable growth and low unemployment during the period of Great Moderation. The theoretical underpinnings of this framework were very persuasive. It was argued that price stability lowers uncertainty (and risk premia) and encourages investment and consumption by keeping the cost of capital low and protecting the purchasing power of money. As a result, price stability was associated with steady growth and low unemployment. Implicitly, price stability was equated with financial stability.

In hindsight, the belief that financial stability can be taken for granted if one zealously pursues price stability alone has been belied. It seems that exclusive focus of central banks on the near-term outlook for consumer inflation blinded central banks to the build up of imbalances in the form of asset price and credit boom, as they pursued accommodative monetary policy preceding the crisis. There is an emerging consensus that price stability does not guarantee financial stability and is, in fact, often associated with excess credit growth and emerging asset bubbles. As a result, the narrow pursuit of price stability by central banks has been questioned. The importance of acknowledging financial stability as an explicit variable in the policy matrix of central banks has been recognised. Crisis also underscored the need for strengthening the capacity of central banks to provide liquidity and respond to systemic shocks.

The need for a rethinking about the existing inflation targeting framework is being felt. At the outset, it needs to be mentioned that inflation targeting framework alone should not be blamed for the current episode of the crisis and its fall out. Indeed, many inflation targeters achieved price stability without jeopardising financial stability (Canada, Australia, New Zealand). It is widely accepted that underestimation of the systemic risk and regulatory failure were equally important factors behind the crisis. However, the narrow pursuit of price stability in a shorter time horizon created the groundwork for the ensuing crisis by putting in place a policy of 'benign neglect' or a non-interventionist doctrine.

The crisis has taught a lesson that the pursuit of price stability should be undertaken over a sufficiently long time horizon. This is because there could be trade offs between the objectives of price stability in the short-run and financial stability in the long-run. In other words, policies that promote price stability in the short-run may breed asset bubbles and credit boom and can be counterproductive for financial stability, and, in turn, for price stability in the long-run. This means that adherence to the objective of inflation target should be made more flexible in the short-run. There should be willingness to "lean against the wind" of asset bubbles and excessive credit growth and to tolerate lower growth and employment in order to pre-empt the building up of imbalances that cause much greater damage as demonstrated by the current crisis.

Another lesson that emerged from the crisis is that domestic price stability may not be possible without international policy coordination. Domestic policies can go wrong if they are based on the belief that increases in food and energy prices are a sort of external shocks, as for the world as a whole they are clearly internal. Therefore, which measure of inflation should be the focus of monetary policy – headline or core? Similarly, asset prices also move concurrently across borders. So should the measure of inflation include asset prices or exclude it? Although no clear answers have emerged, it is increasingly being recognised at policy circles that monetary policy cannot shy away from recognising the build up of inflationary pressures whether due to food and energy prices or asset prices.

The role of monetary policy in dealing with asset bubbles has been a topic of debate. There is an influential view that holds that an activist monetary policy may do more harm that good in leaning against the wind of asset bubbles. This is because; first, asset bubbles are difficult to identify in time; second, monetary policy is too blunt an instrument to counteract such asset bubbles; and finally, financial markets are rational and efficient and policymakers should believe in their abilities to self-correct. This view holds that it is less costly to clean up the mess after the bubble bursts than to prick the bubble ex-ante. In other words, interest rates could always be cut after the bubble burst to 'mop up' the damage. The shallow recession that followed the tech-stock boom of the late 1990s seemed to vindicate this view.

The fall out of this crisis has, however, put serious question marks on the idea of benign neglect or the non-interventionist doctrine. But for the extraordinary fiscal and monetary policy, the crisis threatened systemic collapse in the advanced economies at one point of time. The expansionary fiscal and monetary policies also have reached their limits in mitigating the crisis. It is felt that credible exit policies should be framed and implemented at an appropriate time to avoid another build up of imbalances. The message is that monetary policy should aim at macro-financial stability and not just price stability. It is suggested that the new generation of macroeconomic models should explicitly include parameters such as asset price movements, credit booms, leverage and the build up of systemic risks, which are conspicuous by their absence in the existing models and decision making. The broadening of the mandate of monetary policy by including macro-financial stability needs to be tackled primarily and directly by macro-prudential tools such as countercyclical regulatory capital and provisioning norms.

The exercise of identifying asset bubbles in time will continue to be a difficult job. However, policy actions would be required on a probabilistic call about any speculative boom. There would be policy mistakes. There are bound to be discretion in the use of various macro-prudential and monetary policy tools by the central banks in preventing asset bubbles. This underscores an even greater need for effective communication by central banks explaining its stance. Central banks will need to clearly state why action is being initiated and with what immediate objective as well as its consistency with the long-term objective of price and macro-financial stability. Effective communication will be essential to maintain credibility when discretion is used in policymaking. Bernanke (2009) notes the need for improvement in supervisory practices and internal communication, particularly the need for maintaining strong risk-management practices in good times as well as bad.

IV. An Evaluation of Indian Monetary Policy

Like many other EMEs, India also felt the negative impact of the global crisis due to its increased global integration in the past decade through all the channels - trade, finance and confidence. With sudden change in the external environment following the failure of Lehman Brothers in September 2008, domestic financial markets – forex markets, money markets and credit markets – all came under pressure necessitating active management of liquidity. The emphasis of policy, which was inflation management till August 2008 (mainly on account of international commodity price pressures and large capital inflows), shifted to insulate the economy from the adverse impact of the global crisis, maintain financial stability and support economic growth. Accordingly, a number of monetary easing and expansionary fiscal policy measures were undertaken by the Reserve Bank and the Government of India.

Indian banks and financial institutions, however, exhibited resilience despite the severe stress caused by the global deleveraging process, mainly because of limited exposure to complex derivatives and prudential regulations and counter-cyclical policy measures put in place by the Reserve Bank on an ongoing basis. The prudential regulations included limiting the exposure of the banking system to sensitive sectors as well as appropriately rebalancing the risk weights of different assets. The Reserve Bank had actually increased risk weights and provisioning requirements in respect of certain asset classes during the expansionary phase of

2004-07 in conjunction with increase in reserve requirements to restrict unbridled growth of credit, with a sustained emphasis on CAMELS parameters for supervision of Indian banks and financial institutions. In fact, the Reserve Bank had placed greater emphasis on financial stability much before the occurrence of the global financial crisis (Annual Policy Statement for the Year 2007-08, April 2007).

In spite of no major disruptions in the functioning of the Indian financial markets in general and the banking system in particular, the knock-on effects of the synchronised global recession were reflected in the Indian economy in terms of a significant slowdown in growth during 2008-09 (as opposed to robust growth performance in the preceding five years), partly on account of cyclical factors. However, a growth rate of 6.7 per cent even in the midst of world's severest crisis supports the argument that India's growth story is largely domestically driven. Domestic savings (37.7 per cent in 2007-08) mostly finance domestic investment (39.1 per cent in 2007-08) and the current account deficits remain well within manageable limits since the liberalisation of the economy in the early 1990s. In this context, we attempt to undertake an evaluation of the approach of monetary policy in India against the benchmark lessons drawn in the previous section.

First, the multiple indicator approach adopted by the Reserve Bank since 1998 has served well even during the current global crisis. Under this approach, besides broad money which remains an information variable, a host of macroeconomic indicators including interest rates or rates of return in different markets along with such data as on currency, credit extended by banks and financial institutions, fiscal position, trade, capital flows, inflation rate, exchange rate, refinancing and transactions in foreign exchange available on high frequency basis are juxtaposed with output data for drawing policy perspectives.

This large panel of indicators is sometimes criticised as a 'check list' approach, which tends to dilute the concept of a nominal anchor for monetary policy. It is true that a single intermediate target is much clearer and operationally easier, but it is difficult to find a variable, which would be able to encapsulate the larger number of factors that need to go into monetary policy making at this stage of transition of the Indian economy. It is argued that no single channel of monetary policy transmission is sufficient, and therefore the central bank has to naturally operate through all the paths that transmit its policy impulses to the real economy. In fact, this approach has provided the Reserve Bank the operational flexibility in dealing with the crisis.

While price stability and growth continue to be the ultimate objectives of monetary policy in India, of late, financial stability has attracted greater attention as a monetary policy objective. However, the stance of monetary policy prioritises among these objectives keeping in view the evolving macroeconomic and monetary conditions. In response to the current crisis, there is now an emerging consensus that monetary policy formulation should use the information content available from a number of macroeconomic indicators rather than relying on a single intermediate anchor. The role of money, credit and asset prices have, in fact, received greater attention globally.

Second, the Reserve Bank has always emphasized on the flexible use of all the instruments available with it, depending on their needs and usefulness under the evolving macroeconomic and monetary conditions. In fact, the availability of a number instrument like LAF, CRR, SLR, MSS, etc., and their flexible use enabled the Reserve Bank to swiftly respond to limit the adverse impact of the global financial crisis on the domestic economy. In fact, liquidity management has all along been an integral part of the monetary policy in India.

Third, it has been recognized that domestic price stability is not possible without international coordination. In this context, it may be noted that the Reserve Bank had long back stressed on the role of global factors in domestic policy setting. For example, reckoning global factors as becoming increasingly relevant in the policy stance, the Third Quarter Review for 2007-08 (January 2008) reiterated that "it would monitor the evolving heightened global uncertainties and the domestic situation impinging on inflation expectations, financial stability and the growth momentum in order to respond swiftly with both conventional and unconventional measures, as appropriate". Finally, it may be noted that the role of counter-cyclical monetary policy and prudential supervision which has received attention in the context of the current global crisis, was appreciated by the Reserve Bank much before the crisis occurred.

V. Conclusions

To conclude, the crisis has questioned many of our established beliefs about the 'best' monetary policy framework. The crisis has highlighted the insufficiency of the narrow focus on price stability pursued over a short-horizon in fostering macro-financial stability. It has brought to the fore the need for incorporating macro-financial parameters such as money, credit and asset prices in policy formulation. With an expanded mandate, monetary policy has to have an enlarged set of instruments at command duly supported by macro-prudential regulation and supervision. The crisis has also highlighted the importance of counter-cyclical monetary and regulatory measures to deal with market excesses. Above all, the role of informed judgements and effective communication, though challenging, remains the key to the successful conduct of monetary policy making.

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