

*Cross-country experience shows the subservience of monetary policy to fiscal policy until the early 1980s, with central banks' financing of government deficits often introducing an inflationary bias. With increasing independence for monetary policy in the advanced economies in the 1980s, the move towards rule-based fiscal policies and the adoption of inflation targeting by central banks across many countries including emerging markets, the fiscal-monetary mix progressively became better, thereby enabling countries to switch towards market-based monetary and debt management practices. Some central banks like the European Central Bank (ECB) avoided any form of ex ante co-ordination between monetary and fiscal policies, recognising that it could undermine its independence and its mandate for price stability. Fiscal-monetary co-ordination entered a new phase when the global financial and euro area sovereign debt crises led central banks to adopt unconventional measures and expand their balance sheets through purchases of long-dated securities and unimpaired loans, thereby blurring the distinction between fiscal and monetary policies, while governments undertook bailouts and nationalisation of several financial institutions, leading to a blurring of fiscal-financial policies. With adverse feedback loops between the sovereign and banking sectors threatening global recovery and financial stability, scheduling a timely exit from unconventional monetary policies is the foremost challenge as sovereign debt levels are soaring and growth concerns loom large in advanced countries. With governments' inability to stabilise debt levels or even finance deficits at reasonable interest rates, monetary policy is confronting a new phase of fiscal dominance. A need, therefore, has arisen for credible fiscal consolidation plans and co-ordination strategies to ensure an optimum fiscal-monetary mix that is consistent with growth, inflation and financial stability.*

### I. Introduction

2.1 Interaction between fiscal and monetary policies to facilitate the attainment of macroeconomic objectives has been a central as also one of the more complex relationships in theory and practice across various countries. There have been significant developments beginning with the early debate of the 1960s about the relative effectiveness of monetary and fiscal policies in stabilising demand pressures, culminating in a broad consensus supporting co-ordinated effort on the part of fiscal and monetary policy authorities to deal with huge deficits and high inflation.

2.2 During the 1960s and 1970s, the Phillips curve paradigm dominated monetary economics. The basic premise was that there existed not only a short-run but even a long-run trade-off between inflation and output. This led to a viewpoint that central banks could achieve higher growth on a sustainable basis, if they permitted inflation to be a little higher.

The shortcomings of this reasoning were, however, brought out by the stagflation of the 1970s. These developments brought about a renewed focus on price stability as a key objective of monetary policy. In the subsequent decades, emerging market and developing economies (EMDEs) also showed an improvement in terms of achieving the objective of price stability, as had been the case in advanced countries. A consensus seemed to have been emerging that fiscal-monetary co-ordination needs to work towards ensuring low and stable inflation, which is conducive to growth and stability. However, with the occurrence of several episodes of crisis including the recent global financial crisis, it has become clear that monetary policy could not afford to treat asset prices and credit cycles as exogenous when they, in fact, are significantly influenced by the policy stance. Therefore, there is a lot of academic interest to understand how macroeconomic, fiscal and monetary policies put together can help to mitigate the build-up of financial imbalances.

2.3 The objective of this chapter is to trace the developments in macroeconomic theory in respect of fiscal-monetary co-ordination and examine the experience of advanced and EMDEs in this area for pursuing broad macroeconomic objectives of economic growth and inflation. The chapter also brings forth the issues of increasing importance of financial stability that have a bearing on fiscal-monetary co-ordination, particularly during the post-crisis period. This chapter is organised into four sections. Section I describes the traditional targets and instruments approach of Tinbergen and Theil and draws attention to the challenges of fiscal-monetary co-ordination, particularly in situations of multiplicity of objectives, associated trade-offs, changing relative policy efficacies and effective shortage of independent instruments to pursue the objectives. Section II covers international experiences in fiscal-monetary co-ordination to highlight both the commonality and differences in challenges experienced across the advanced economies, including the euro area and EMDEs. Section III focuses on issues emerging in the context of fiscal-monetary co-ordination after the recent global financial crisis. In particular, this section highlights the issue of contagion and negative feedback between the vulnerability of public finances and the financial sector that has been evident in advanced countries, particularly the euro area. It also sets out a way forward for possible arrangements for co-ordination between fiscal and monetary authorities spanning both face-to-face and arm's length co-ordination. Section IV concludes the chapter by analysing both theoretical developments and cross-country experiences that are relevant to the Indian perspective, as discussed in the remaining chapters of the report.

## II. Macroeconomic Theory

*Traditional Orthodoxy: Macroeconomic management through fiscal policy in the lead, backed by an accommodative monetary policy*

2.4 Historically, the need to have macroeconomic policy intervention for resolving

deficiency of aggregate demand emerged in the context of the Great Depression of the 1930s. Since governments could regulate aggregate economic activity through fiscal policy instruments of taxes and expenditure, while central banks could potentially do so indirectly through influencing interest rates, by providing additional liquidity, thereby driving investment demand, a need arose to co-ordinate the two arms of policy-making to optimise macroeconomic outcomes. The traditional Keynesian policy prescription called for a lead role for fiscal policy to address economic slackness under the Great Depression and meet post-World War II reconstruction needs. Monetary policy played a secondary role by either accommodating fiscal policy through funding of government deficits or assisting it through direct financing of developmental expenditures. Accordingly, the intermediate target of central banks like the US Federal Reserve Board (Fed) during this period was to keep interest rates at a low level over the long-run with the primary objective of “maintaining the value of government bonds”. Originally, an active fiscal-passive monetary interface was premised upon two factors. First, monetary policy effectiveness was perceived to be low in situations of high unemployment rates co-existing with a liquidity trap, when interest rates could not be lowered through monetary measures. Second, central bankers also accepted a secondary role for monetary policy as spending decisions of consumers and firms were considered to be influenced more by expectations than the rates of returns on assets.

2.5 By the 1960s, with cheap money fuelling inflation, monetary policy started regaining some importance. Pigou (1943) set out a channel, viz., wealth channel, whereby changes in the real quantity of money can influence aggregate demand even if interest rates remain unaltered. Further, the “practical and political feasibility” of fiscal policy in fine-tuning demand management began to be viewed with scepticism on the back of sluggish adjustment of government expenditures to economic activity and political inertia in tax adjustments, as experienced in

the US. Nonetheless, the policy lever remained tilted in favour of fiscal policy on two counts. First, the price stability objective of monetary policy continued to hold a low key in comparison with the fiscal policy objective of promoting full employment. Second, with limited efficacy in controlling real magnitudes (real interest rates, unemployment rates and growth rate of real national income) through nominal quantities, monetary policy was found to be most suitable for pursuing the price stability objective by keeping money supply growth moderate and bereft of large swings (Friedman, 1968). It was held that monetary policy could reduce interest rates only temporarily by increasing the money supply growth along a negatively sloped liquidity preference curve. Interest rates would not only revert to higher levels after a time lag as rising income levels increased demand for liquidity, but also rise further, reflecting the declining real quantity of money supply on account of the increasing price level. Eventually, expansionary monetary policy by building expectations of rising prices would lead to rising nominal interest rates over the long-run. Friedman argued that higher monetary growth could only temporarily reduce unemployment below its 'natural' rate as unanticipated increase in demand would lead to a faster rise in selling prices than that warranted by the cost of factors of production, including wages. With nominal wages adjusting to rising prices, real wages increase to their initial levels, with unemployment returning to its natural rate. Thus, monetary policy could reduce unemployment rate below its natural rate only temporarily at the expense of higher inflation, while the trade-off withered off in the long-run.

2.6 With a breakdown of the fixed exchange rate system and OPEC oil price shocks simultaneously generating acceleration of inflation and high unemployment in the US and other economies in the 1970s, it was recognised that the Phillips curve trade-off between these two variables does not hold in the long-run. Against the backdrop of these developments, monetary policy was assigned the task of controlling inflation through monetary targeting.

*Imperatives for Fiscal-Monetary Co-ordination under Upper Limits to Bond Financing of Fiscal Deficits, Paucity of Policy Instruments and Rule-based Policy-making*

2.7 By the early 1980s, Sargent and Wallace's 'some unpleasant monetary arithmetic theory' brought a new perspective of fiscal-monetary co-ordination in the context of financing of fiscal deficits through the creation of base money and issuance of bonds (Sargent and Wallace, 1981). Arguably, if the government independently set its inter-temporal path of fiscal deficits to be financed through a combination of base money creation and issuance of bonds, any rise in fiscal deficit would necessitate a corresponding rise in real stock of bonds held by the public in order to restrict growth in base money. If interest rate on bonds were higher than the growth rate of the economy, eventually an upper limit of real stock of bonds relative to the economy would be reached, as the real stock of bonds would increase faster than the growth rate of the economy. Given that any further increase in fiscal deficit would have to be financed through increases in base money, the ability of monetary policy to control inflation would be negated in the long-run even under a monetary targeting regime. Further, bond financing of deficits during the current period could raise interest burden, deficits and interest rates in future, fuelling further monetisation of deficit.

2.8 Extending Tinbergen and Theil's traditional target-instrument approach, Blinder (1983) argued in favour of fiscal-monetary co-ordination as, in reality, targets outnumber the independent policy instruments available to achieve them and fiscal and monetary authorities may have different objectives, operating models and forecasts of the economy. Typically, an economy's objectives (levels of output, inflation, share of investment in output, distributional/ allocative efficiency objectives and so on) were found to multiply faster than the number of independent policy instruments (taxes, government expenditure and money supply) needed to achieve them. Game theoretical studies showed that if the government (aiming at reduction in unemployment) and the central bank (aiming at reduction in inflation) pursued

different objectives and reacted to macroeconomic conditions independently without taking into account the other authority's response, a Nash equilibrium would yield both fiscal deficit and interest rates higher than those considered desirable by either authority (Blinder, 1983; Nordhaus *et al.*, 1994). Due to lack of agreement and the existence of uncertainty about the 'correct' policy-mix in practice, Blinder was in favour of the central bank being vested with greater discretionary power to ensure a check against the government's short-run considerations. To avoid the sub-optimal Nash equilibrium, Blinder favoured the independent setting up of fiscal rules based on allocative considerations. The central bank would have to accommodate expansionary fiscal deficits during recessionary phases, but reverse monetary expansions once the economy returned to its full employment norm and the government balanced its budget to avoid the inflationary consequences of money creation.

2.9 Against the backdrop of co-existence of high fiscal deficits and high real interest rates in the US ('tax cuts' of 1962-65, 'new economic policy' of 1971, the 'Carter stimulus plan' of 1977 and 'Reagan's supply-side policies') and in other countries such as Germany (after its unification), and its implications for private investment and long-term growth of potential output. Against this backdrop, Nordhaus favoured having a transparent and rule-based monetary policy that would provide a frontier within which fiscal policy could maximise its utility. It was shown that the resultant lower fiscal deficit and real interest rates improved utility for both the policy authorities and led to higher investment than the Nash solution, though not necessarily affecting inflation or unemployment. Further, as central banks started to interact with private sector wage and price setters through the announcement of firm and credible rules, a low-inflation equilibrium could be established. Under a dynamic situation, the fiscal-monetary policy mix was shown to improve if government reduced fiscal deficits in anticipation that the consequent contractionary impulse would be offset by a monetary expansion in the short-run. However, the central bank can

delay its monetary policy response till it becomes confident of the irreversibility of a modified fiscal stance. Alternatively, under a 'result-oriented' policy framework, fiscal deficit reduction would generate a monetary response through the lowering of interest rates in the next period (rather than the same period) to offset the economic slowdown occurring in response to fiscal contraction in the previous period.

#### *New Channels of Fiscal Constraints on Monetary Policy*

2.10 Emerging as an alternative view during the 1990s, the fiscal theory of price level (FTPL) postulated that the price level is primarily determined by government debt and fiscal policy, with monetary policy playing an indirect role (Leeper, 1991; Sims, 1994; Woodford, 1994). This theory clashed with the monetarist view that considered money supply as the primary determinant of price level and inflation. In terms of FTPL, even in the absence of the imposition of seigniorage targets set by the government, fiscal policy could constrain central bank in controlling the price level. With the government's inter-temporal budget constraint as an equilibrium condition, the price level would have to adjust endogenously for equating the real value of nominal stock of bonds to the present value of the given sequence of future primary balances of the government. Buiter (2000) argued that the FTPL's contention of general price level serving the role of a public debt revaluation factor leads to contradictions and anomalies. Subsequently, the FTPL proponents clarified that the theory regarded inter-temporal budget constraint as an important factor and not necessarily the only factor determining price level. For instance, Woodford (2003) indicated that under an interest rate peg, money and prices do move together. Others emphasised that in the 'conventional' FTPL theory, fiscal policy specification matters for the behaviour of both money and price level and move together in equilibrium (Gordon and Leeper, 2005). Empirical studies, however, showed mixed results with Cochrane (1998) finding FTPL theory to hold for the US since 1960, while Canzoneri *et al.*



(2001), based on post-war US data, pointed out that monetary policy rather than fiscal policy determined the price level. Nonetheless, the recognition of the impact of fiscal policy on price level under the FTPL supported the need for greater fiscal-monetary co-ordination to tackle inflation, which was hitherto regarded as a monetary problem.

2.11 Other channels of fiscal policy constraining the conduct of monetary policy include the impact of fiscal deficits on interest rates and interest spreads, particularly, for emerging markets. While the conventional theory argued that higher fiscal deficits raise intermediate and long-term interest rates, empirical studies revealed mixed results. Some studies established the impact of fiscal variables on country premiums, while other showed that the fiscal policy could constrain monetary policy through its impact on exchange rates. Under a high capital mobility and flexible exchange rate situation, deterioration in the fiscal situation could lead to a temporary appreciation of the exchange rate. In contrast, under low capital mobility, the exchange rate may depreciate, following higher imports and widening of the current account deficit on account of fiscal expansion (Zoli, 2005).

#### *Open Economy Extensions*

2.12 Extended to open economy levels, the literature on fiscal-monetary co-ordination delved into the welfare implications (in terms of aggregate utility) of the operation of policy instruments, which also provided the micro-foundations of fiscal-monetary interactions in a monetary union. The role of fiscal policy began to be re-examined after the formation of the European Monetary Union (EMU), particularly when it was felt that monetary policy could lose its flexibility as currencies of constituent member countries merged. The emphasis, therefore, shifted to assessment of the role of fiscal policy as a stabilisation tool, welfare gains from international fiscal co-operation and the interaction of such gains with the monetary policy regime. Assuming that fiscal policy operates through government expenditure and that international elasticity of substitution between goods differs from unity, studies found

that as activist fiscal policy would lead to potential welfare gains from fiscal policy co-operation across countries, provided monetary policy was set co-operatively as under a single monetary regime (Lombardo and Sutherland, 2004).

#### *Extensions of Policy Mandate from Price Stability to Financial Stability*

2.13 The lessons learnt from the spike in inflation in the 1970s brought a renewed focus on price stability as a key objective of monetary policy. With the empirical analysis showing the absence of any long-run trade-off between inflation and unemployment, the policy focus shifted to the use of monetary policy for addressing inflationary concerns. Low and stable inflation was viewed to be consistent with the objective of stabilising output around its potential level, as monetary policy affected inflation indirectly *via* its impact on aggregate demand. Accordingly, while many central banks in practice continued to attempt to stabilise output, they found it useful for their public mandate to be restricted to price stability alone, since this reduced their vulnerability to political pressures for expansionary monetary policy. Thus, monetary policy gained in importance, leading to institutional changes in some countries including the creation of independent central banks. While price stability remained a key objective of monetary policy, central banks in EMDEs have generally tended to follow multiple objectives, especially as they are usually assigned a key role in promoting economic development. Besides, exchange rates often emerge as a key policy issue in EMDEs that are relatively more open. Empirical evidence suggests that central bank interest rates in EMDEs often react more strongly to changes in the exchange rates rather than changes in the inflation rate or the output gap (Mohanty and Klau, 2004).

2.14 The usefulness of inflation targeting (IT) frameworks in both advanced and emerging economies continues to be a matter of debate. While it is true that many IT economies were able to control inflation during the 1990s, countries that did not adopt IT have also not performed badly on this front. Paradoxically, the 1990s – a decade

of price stability – witnessed several episodes of financial instability, suggesting that price stability by itself is not sufficient. Globalisation and financial integration of economies with the rest of the world have posed new challenges for monetary policy. Large movements in capital flows and exchange rates affect the conduct of monetary policy on a daily basis. Large and sudden changes in exchange rates also have implications for financial stability. Under these circumstances, the scope of monetary policy goes beyond the traditional trade-off between inflation and growth, with financial stability issues presenting a new challenge to the monetary authority. These developments have also given rise to a debate about how monetary policy could contribute to financial stability. While price stability is considered necessary for financial stability, there is no consensus on whether price stability, *per se*, would be sufficient to guarantee financial stability (Cukierman, 1992; Gameir *et al*, 2011; Issing, 2003; Mishkin, 1996; Schwartz, 1995). One view is that the central banks should focus exclusively on price stability, as it is difficult to identify potential sources of financial instability. It is held that asset price misalignments are difficult to identify *ex ante*, and even if they can be identified, it is debatable whether monetary policy could prick these bubbles (Bean, 2003; Bernanke, 2003; Bernanke and Gertler, 2001; Filardo, 2004). An alternative view supports proactive tightening of monetary policy and monitoring of various indicators such as credit and monetary aggregates by the central banks to identify incipient financial imbalances (Borio and Lowe, 2002; Cecchetti *et al.*, 2000; Crockett, 2001). More generally, given the limitations of monetary policy, effective regulation and supervision of financial institutions have assumed more importance in the context of financial stability.

### III. Fiscal-Monetary Co-ordination: International Experiences

2.15 Evolving macroeconomic theory has brought forth several dilemmas inherent in the fiscal-monetary interface spanning a continuum from absolute fiscal dominance to monetary dominance, which, to an extent, was evident across countries up to the 1990s.

Progressively in recent years, however, policy regimes have ceased to reflect either extremes of fiscal dominance or full monetary independence. As corroborated by policy responses to the economic slowdown in 2001 and the recent global financial crisis, fiscal-monetary co-ordination is considered critical when uncertainty surrounds the impact of either of the policies or when limits to conventional policy-making are reached. While the choice of policy regimes across countries reflects specific institutional histories, the effectiveness of any regime depends upon the degree of fiscal-monetary co-ordination. The extent to which fiscal and monetary policies respond to inflation and unemployment, and the degree to which the policymakers co-ordinate their policies, have important implications for the effectiveness of these policies. In the absence of co-ordination, the independent decisions of monetary and fiscal authorities may either result in duplication of efforts or, when they are setting their instruments in opposite directions, negative externalities could emerge. Thus, it is expected that fiscal-monetary co-ordination in general would improve welfare as reflected in the phase of Great Moderation since the 1990s. The co-ordination between policymakers takes place through various modes, *viz.*, (i) exchange of information, (ii) mutual acknowledgement of the existence of the probable behaviour of the other policymaker; (iii) joint decision-making between policymakers (full co-operation, *i.e.*, collusion); (iv) agreement on a sequence of moves between the two authorities identifying one of the two policymakers as the leader, and the other as the follower. This section traces fiscal-monetary co-ordination across select advanced economies and EMDEs over the years.

#### Policy Co-ordination in Advanced Economies

2.16 In advanced economies, fiscal policy dominated as a tool for macroeconomic stabilisation, while the monetary policy role was largely supportive during the immediate post-World War II period. With the emergence of increasing inflationary pressures during the 1970s, the monetary policy began to assume prominence in the advanced economies. The limitations of fiscal policy to

undertake macroeconomic stabilisation in the short-run through discretionary measures also came to the fore, as inherent inertia in legislative processes did not provide for the discretionary component of fiscal policy to adjust in line with monetary policy actions strategically at business cycle frequencies. *De facto* counter-cyclicality was, therefore, noted to be ‘accidental Keynesianism’, such as tax cuts in the US in 1982. With greater likelihood of interaction of automatic stabilisers with macroeconomic shocks at business cycle frequencies, the co-ordination of monetary policy with this component of fiscal policy was considered critical. Accordingly, fiscal-monetary co-ordination called for strategic setting of legislations in respect of tax rates, unemployment benefits and other entitlements in tune with monetary policy. For the US, the case for aggressive monetary policy got arguably strengthened as automatic stabilisers were found to be weak.

### **United States**

2.17 Economic policymaking in the US since the Great Depression of the 1930s has involved a continuing effort by the government and the Fed to find a mix of fiscal and monetary policies that would sustain economic growth and stabilise prices. During the early post-war period, the emphasis was on growth and employment, which continued up to the 1970s. However, the US government began paying more attention to inflation, with monetary policy assuming the responsibility for inflation control from the late 1970s.

#### *Greater Monetary Independence during 1979-87 (Volcker Period)*

2.18 The Fed reasserted its independence in 1979 amidst stagflation against the backdrop of greater willingness to accept higher unemployment and the use of aggressive monetary policy measures to reduce inflation. With the Fed’s successful disinflation policy during this period, a view emerged that well-timed tightening by an independent central

bank can enhance its credibility for reducing inflation permanently without supportive fiscal policy at a far lower cost in terms of loss in output and employment. Accordingly, the monetary policy became more strongly disinflationary in the US than elsewhere, with the federal funds rate rising to 19 per cent by 1980. Notwithstanding some initial fiscal restraints, fiscal policy shifted to a stimulus mode under the Economic Recovery Tax Act, 1981.

2.19 During the 1980s, the Fed also announced a switchover from the system of having the federal funds rate as the operating target to a monetary targeting framework. The Fed’s limited flexibility in determining policy rates often led these rates to rule at levels lower than those warranted for anchoring inflationary expectations, with money supply growth turning out to be higher than required. Under the monetary targeting framework, borrowed reserves were targeted directly so as to ensure better anchoring of money growth, and to make monetary policy more effective.<sup>1</sup> During the 1980s, monetary policy decisions were increasingly guided by a broader set of information on economic activity, inflation, foreign exchange developments and financial market conditions, although the monetary policy continued to be anti-inflationary and countercyclical in nature.

#### *Monetary and Fiscal Policy since 1987*

2.20 During the Greenspan period (1987-2006), the Fed sought to re-enforce its standalone role for low inflation, as it was held that monetary policy could sustain both low inflation and unemployment along with infrequent/mild recessions. With an expansionary fiscal policy and rising debt servicing costs amidst high interest rates, fiscal deficits surged by the mid-1980s. As a result, it was decided to impose fiscal rules under the Balanced Budget and Emergency Deficit Control Act of 1985 and the Balanced Budget and Emergency Deficit Reaffirmation Act of 1987, which led to a positive primary structural balance in 1988. The enactment of the Omnibus Budget Reconciliation Act of 1993

<sup>1</sup> Therefore, the FOMC began to target reserve measures based on required growth in  $M_1$  and  $M_2$ . However, in the absence of a stable relationship between money and economic activity, the FOMC had to modify the procedures for guiding reserve positions in 1983.

strengthened the fiscal consolidation process and enabled the overall budgetary balance to turn positive in 1994.

2.21 The Fed continued with its tight monetary policy stance till the onset of a brief recessionary phase during 1991-92. Accordingly, the monetary policy was relaxed by reducing the intended federal funds rate to 3 per cent by the end of 1992, and with inflation running at the same level, the implied real federal funds rate neared zero. However, the real policy rate turned positive when the federal funds rate was steadily raised to 6 per cent in early 1995, while inflation ranged between 2 and 2.5 per cent. This stance of monetary policy was largely maintained till 2000, *albeit* with modest adjustments. As budget deficits switched to a surplus mode, the government announced income tax concessions to stimulate aggregate demand in the wake of the slowdown in information technology sector and a brief recession in the US economy in 2001. The expansionary fiscal initiative was also supported by a significant reduction in the federal funds rate. An important change in the monetary policy operating procedure occurred during this phase. With financial innovations, as the link between non-borrowed reserves and monetary policy objective weakened, the Fed switched to targeting the federal funds rate indirectly through borrowed reserves. Further, as the relationship between borrowed reserves and the federal funds rate became unstable, the Fed moved towards targeting the federal funds rate directly.

2.22 During the first half of the 2000s, both monetary and fiscal policies remained expansionary. Despite concerns about fiscal unsustainability, macroeconomic conditions remained conducive without necessitating any reversals of accommodative policy stance until the inception of the crisis in August 2007. The onset of recession from December 2007, with contraction becoming pronounced after the Lehman Brothers collapse in September 2008, necessitated the use of both conventional (the federal funds target rate was brought down to zero per cent by late-2008) and non-conventional (significant purchases of longer-term Treasury securities during 2009 and

early 2010, followed by a second quantitative easing and modification of the Fed's reinvestment policy to avoid shrinking of its balance sheet as mortgage-backed securities matured/redeemed) monetary easing measures in the wake of unemployment rate doubling to 10 per cent before settling to around 9 per cent (much above the non-accelerating inflation rate of unemployment *i.e.*, NAIRU of 5.75 per cent) and falling inflation rates. Complementing the actual monetary measures, the Fed's communication policy was designed to shape investor perceptions appropriately. Such asset purchases were directed to expand aggregate demand by lowering the cost of credit, to raise household wealth with the rising prices of securities and to increase export demand through depreciation of the dollar (Yellen, 2011). In consonance with the monetary easing, the US activated fiscal stimulus measures from early 2008. To an extent, quicker and more sustained fiscal activism was facilitated by relaxing budget rules that made countercyclical fiscal interventions easier (Auerbach *et al.*, 2010).

2.23 As alluded to earlier, the US government undertook an expansionary fiscal policy in the first half of the 2000s. By the time the global financial crisis struck, fiscal deficit had already reached elevated levels on account of large tax cuts, a new entitlement programme for healthcare and heavy spending on security-related areas. Therefore, the deterioration in the fiscal deficit position reflected not only the policy response to a financial sector-driven deep recession but also the cumulative impact of expansionary fiscal measures undertaken in the pre-crisis period. The fiscal policy stimulus provided by the US government during the crisis is considered to be the largest across the major economies and was aimed at boosting aggregate demand through infrastructure investment, tax concessions and unemployment benefits. Fiscal measures contributed about 2 percentage points to GDP growth in 2009, and one percentage point in 2010 (Lipsky, 2011). In addition, with the failure of Lehman Brothers, it was realised that the liquidity provision by the Fed would not be sufficient to support the financial system and, therefore,



support from the US Treasury would be required. In particular, the lack of liquid funding, concerns about the value of the underlying loans, and the integrity of the securitisation process hampered the functioning of securitisation markets. To revive these markets, the Fed worked with the Treasury to establish the Term Asset-Backed Securities Loan Facility. Under the facility, the Fed supplied the liquid funding, while the US Treasury assumed the credit risk. Therefore, the global financial and economic crisis saw fiscal and monetary policies working in tandem to address liquidity and financial stability concerns, with the Fed assuming risks of loss on its balance sheet by lending to stabilise systemically important firms and the Treasury providing explicit support and acknowledgement of those risks. The US government has continued to maintain a supportive fiscal policy stance since 2010 recognising the limitations of near-zero policy interest rates and uncertainty about the effectiveness of monetary policy. The fiscal programme sought to ‘combine’ pro-growth policies in the near term with firm steps undertaken to reduce budget deficits over the long-term, which was regarded as ‘a valuable complement’ to monetary policy (Yellen, 2011). In September 2012, the Fed announced its plan to purchase mortgage-backed securities amounting to US\$40 billion per month guaranteed by the government-sponsored enterprises. Along with purchases under previous programs involving Treasury securities, the Fed announced to purchase US\$ 85 billion of longer-term securities per month. The objective has been to put further downward pressure on longer-term interest rates, including mortgage rates so as to foster economic recovery. Even though the Fed recognises the fiscal challenges that the US economy is facing, according to Bernanke (2012), achieving these fiscal goals would be even more difficult if monetary policy were not helping support the economic recovery.

2.24 The sharp deterioration in US fiscal position in recent years attributed partially to the the bailouts under the Troubled Asset Relief Programme (TARP), and partially to the fiscal stimulus packages of 2009 and 2010, as also to the US recession, led to the

situation referred to as the US fiscal cliff. The fiscal cliff refers to a large predicted reduction in the budget deficit and consequent slowdown of the US economy if specific laws are allowed to automatically expire or go into effect at the beginning of 2013. These laws include tax increases due to the expiration of the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 and the spending reductions (“sequestrations”) under the Budget Control Act of 2011. The US fiscal cliff was averted by signing of a deal on tax hikes on January 1, 2013, though significant policy uncertainty remains on spending cuts, known as the sequester, which have been postponed for two months. The adoption of a credible medium-term fiscal consolidation plan remains a priority in the US.

### ***United Kingdom***

2.25 The Bank of England (BoE), originally incorporated as a limited liability entity, was founded as the government’s banker and debt manager. The government’s recourse to monetary financing of its borrowings dated back to the pre-nationalisation phase of the BoE. With the nationalisation of the BoE in 1946, the government became its owner and assumed the power to issue directions to the Bank. Nonetheless, in practice, there was no major difference in terms of its functions and the Bank continued to remain as the Treasury’s banker, advisor, agent and debt manager.

### ***Active Fiscal Policy during the post-War Period***

2.26 During the post-World War II period, an abiding objective of the government was to maintain a high level of aggregate demand with a countercyclical role played by fiscal policy through discretionary stimulus or the operation of automatic stabilisers. With the use of an active fiscal strategy to prevent large negative output gaps, demand pressures started emerging, eventually leading to positive output gaps and sharp rise in inflation in the late 1960s and early 1970s (MacFarlane and Mortimer-Lee, 1994). Notwithstanding the emergence of strong inflationary pressures,

monetary policy was assigned only a marginal role in aggregate demand management in the UK till the collapse of Bretton Woods in the early 1970s. It was incomes policy rather than monetary policy that was the preferred tool to manage demand pressures spilling over to high inflation and deteriorating balance of payments. Since the incomes policy could not address inflationary pressures in 1974, monetary policy was accorded greater importance in managing aggregate demand. Against the backdrop of high inflation in the 1970s and early 1980s, monetary targeting was introduced which became an integral part of macroeconomic strategy in 1979. Nonetheless, direct controls (prices, wages and credit) and fiscal policy continued to be major policy tools to contain inflationary pressures.

*Emphasis on reduction in borrowing requirement to contain money growth under MTFs (1980)*

2.27 The practice of announcing annual targets for  $M_3$  growth and public sector borrowings under its Medium-Term Financial Strategy (MTFS) plan was started in 1980 with a view to restore policy credibility. A gradual reduction in borrowing requirements was perceived as a major factor in containing money growth. The monetary targeting framework helped restrain government spending plans, as it implied a limit on public sector money creation. Thus, monetary targeting became a means of co-ordinating fiscal and monetary policies. The tightening of monetary policy in 1980-81 helped reduce the inflation rate from 22 per cent in early 1980 to below 4 per cent in mid-1983, even though  $M_3$  targets could not be achieved (Bernanke *et al.*, 2001). The target for  $M_3$  was gradually de-emphasised, while growth in narrower monetary aggregate ( $M_1$ ) began to be considered as an appropriate indicator of the monetary policy stance, which was announced in the UK Budget for 1986.

2.28 Notwithstanding the decline in public sector imbalances during the first half of the 1980s, the fiscal policy remained by and large expansionary till the mid-1980s. During the second half of the 1980s, the government was able to tighten fiscal

policy significantly. In spite of aggressive tightening of monetary policy from 1988-Q3 to 1990-Q3, the inflation rate reached a peak level of 10.9 per cent by September 1990, while the UK economy faced a deep recession. Monetary targets, found to be inadequate for preventing the bubble-bust cycle, were then abandoned. In fact, monetary policy targets were de-emphasised in 1987, when the UK government attempted to keep the pound sterling in a narrow band at 3.0 Deutsche Mark (DM) per pound. After the formal suspension of the  $M_3$  target, the monetary policy in the UK was increasingly conducted towards stabilising exchange rate movements. The UK joined the European exchange rate mechanism (ERM) in 1990, which was supposed to provide greater stability and predictability to monetary policy.

*Inflation Targeting and Reforms in the Macroeconomic Framework during the 1990s*

2.29 With the increasing pressure for the unification of Germany, interest rates in Europe moved up in the early 1990s. Since the pound sterling was pegged to the DM under the ERM arrangement, it had become difficult for the UK to pursue a tight monetary policy due to domestic growth concerns. Therefore, the UK government left ERM membership in September 1992 and decided to adopt inflation targeting (IT). While the IT framework implied increasing accountability of monetary policy, it did not withdraw its flexibility, even in principle, to deal with uncertain macroeconomic events. Until 1997, both the monetary and fiscal policies were determined by the Chancellor of the Exchequer in consultation with HM Treasury and the Bank of England. Under the IT regime, the UK economy was able to broadly achieve stable inflation between 1992 and 1997, but inflation expectations remained high as the possibility of fiscal policy operations conflicting with the objective of price stability continued to exist.

2.30 Under the new macroeconomic framework announced in 1998, the Chancellor was assigned the ultimate responsibility for both monetary and fiscal policies, while operational control was

divided between an independent Monetary Policy Committee (MPC), with the sole responsibility for monetary policy, and the Treasury, which retained responsibility for fiscal policy. The enactment of Bank of England Act aimed at transferring full operational responsibility for monetary policy to the BoE, while the government retained operational control of monetary policy only in 'extreme economic circumstances' under the reserve powers of the Treasury (Section 19, BoE Act, 1998). The operational objective of monetary policy, *i.e.*, the inflation target, however, continued to remain under the purview of the government, and not the BoE. The policy rate decisions began to be determined by the BoE rather than the Chancellor of the Exchequer, as had been the practice before May 1997.

2.31 Subject to the primary objective of price stability, the BoE was also required to support the government's other economic policy objectives of growth and employment. This implied that price stability was not considered to be an end in itself, but was instead regarded as necessary to meet the government's other economic objectives. In 1998, the government also announced fiscal rules to facilitate high and stable levels of growth and employment. These fiscal rules were to be followed under the guidelines of the 'Code for Fiscal Stability'. Debt management on behalf of the government was transferred to HM Treasury, while the regulatory functions were entrusted to the Financial Services Authority. Recognising the limitations of fiscal policy as a short-term instrument, the focus shifted to the medium and long-term objectives. A clear distinction was also made between the roles of the government and the MPC. The essence of such an arrangement was to ensure that monetary policy decisions were not affected by short-term political considerations and were, therefore, perceived to be more credible.

2.32 One potential concern about the new framework was its efficacy in ensuring effective co-ordination between fiscal and monetary policies (Buiter and Sibert, 2001). The potential co-ordination problems were, however, addressed in three main ways. First, co-ordination was achieved because

the government was to set the objectives for both the monetary and fiscal policies. The MPC based its decisions on the government's fiscal projections, while the Chancellor could determine the policy mix, as long as the MPC's reaction function was known (Bank of England, 2010). Second, the objectives of both arms of policy were made more explicit and subject to more transparent procedures. Third, co-ordination between monetary and fiscal policies was also to be aided by the presence of a representative from HM Treasury at MPC meetings, who provided information on fiscal policy (including the Budget). One consequence of assigning the responsibility for price stability to an independent MPC was effectively to rule out the use of activist fiscal policy.

*Bursting of the Dot-Com Bubble in 2000: Expansionary Monetary and Fiscal Policies*

2.33 With the adoption of IT, the inflation rate broadly remained under control during the 1990s and growth remained above trend, averaging around 3 per cent during the IT phase of the 1990s. In general, inflationary expectations remained much more stable in the UK, reflecting public confidence in monetary policy. Under the IT framework, fiscal policy is not supposed, in principle, to be used for short-term objectives. While there was no major shift in the stance of monetary policy (except expansionary in the late 1990s), fiscal policy was significantly tightened. However, in 2001, both monetary and fiscal policies had to be relaxed to address growth concerns that emanated when the dot-com bubble bursted. Until the mid-2000s, both fiscal and monetary policies remained expansionary and there has been no evidence on monetary policy attempting to offset the impact of the expansionary fiscal stance (Committee on Economic Affairs, House of Lords, 2004). The expansionary fiscal policy pursued during this period reflected not only cyclical factors but also planned increases in spending to improve public infrastructure and other services.

*Fiscal tightening from 2005-06 to 2007-08, but*

*reversal during crisis*

2.34 To underpin the credibility of the IT regime, the government reiterated its commitment in 2003 to maintain net public debt below 40 per cent of GDP, while the sustainable investment rule appropriately constrained fiscal discretion within the limits set by long-term considerations, such as demographics and debt sustainability. Recognising the inflationary impact of rising commodity prices, the government budgets presented during 2005-06 to 2007-08 reflected firm commitment to fiscal tightening. However, during the recent global crisis, the overall fiscal stance has been to support monetary policy in the short-run and to allow the automatic stabilisers to help smooth the path of the economy.

2.35 The BoE, on its part, provided unprecedented monetary stimulus to counter disinflationary pressures and boost economic recovery. The policy rate was kept near zero, while its asset purchase of £200 billion (mostly of longer-term government bonds) also helped to reduce bond yields and boost asset prices, thereby supporting market confidence, household net wealth, and corporate credit supply. Most of the operations of the BoE, *viz.*, credit lines to financial institutions, purchase of asset-backed securities and commercial paper, and asset swaps were undertaken with treasury support (IMF, 2009a). Further, complementing the asset purchase programme, the Bank of England and HM Treasury launched the Funding for Lending Scheme (FLS) in July 2012. While the impact of quantitative easing (QE) was mainly indirect through demand and incomes, the FLS aimed to reduce borrowing costs by going directly through the banking sector, and boosting lending to households and corporate sector.

2.36 To sum up, the macroeconomic policy framework in the UK has changed significantly over the years. While fiscal policy was the principal instrument of economic policy during the 1960s and 1970s with its focus almost exclusively on demand management, monetary policy (subject to a lower bound) and the provision of public services were essentially accommodating factors as the

financing of persistent current account deficits continued to operate as a constraining factor. In the 1980s, the emphasis shifted to reducing the size of the government spending to contain inflationary pressures. The role of fiscal policy in demand management was phased out, while that of monetary policy was enhanced in inflation control and monetary management, *albeit* with limited success in the earlier phases of monetary and exchange rate targeting. The role of monetary policy was formalised with the adoption of the IT regime with an independent BoE and MPC. Since then, monetary policy actively pursued low inflation and stable growth.

2.37 During the 1990s, fiscal policy was designed strictly in combination with an active monetary policy based on IT. With the new macroeconomic framework put in place in 1998, fiscal policy became more oriented towards the medium-term objectives while monetary policy remained as an instrument of choice to respond to cyclical price pressures. However, during the global financial crisis, the UK government had to temporarily provide fiscal stimulus in 2008-09, which was also supported by the use of automatic stabilisers, and unprecedented monetary easing. Importantly, while the monetary policy stance has remained accommodative to support private and external sector-led growth, the government started phasing out fiscal accommodation in 2010, recognising the need to create fiscal space for countercyclical fiscal policies and to moderate inflationary expectations. Notwithstanding the fact that a prudent approach has been adopted to achieve a more sustainable fiscal position under the self-imposed fiscal mandates, the FLS programme undertaken by the Treasury and the BoE has continued to provide monetary stimulus with a view to help counteract the sluggish economy.

**Euro Area***Co-ordination framework in a Monetary Union*

2.38 Fiscal-monetary co-ordination in the euro area represents a special case of centralised monetary making by a unified monetary authority,



*viz.*, the European Central Bank (ECB), and decentralisation of fiscal policies with individual member states of the European Monetary Union (EMU). The ECB's Governing Council decides monetary policy actions, which are implemented by the national central banks of the euro area. The ECB pursues price stability as its primary objective, while support for the economic policies of the member states of the euro area serves as a secondary objective, as enunciated in the Maastricht Treaty. Being committed to the price stability objective, monetary policy controls aggregate output at the euro area level, while national fiscal policies determine the distribution of aggregate demand across member countries.

2.39 While individual country developments matter for the monetary policy of the EMU as they have a bearing on price stability in the euro area, individual fiscal authorities may not be commensurately sensitive to the impact of their own policies on other countries. Since the beginning of EMU, there has been apprehension that if such externalities, in terms of inflation and interest rates, turn out to be negative, the consolidated euro area's fiscal deficit may tend to be higher than the optimal level required to achieve consistency with the objective of price stability. Therefore, such a framework necessitates fiscal co-ordination at the monetary union level (Dixit and Lambertini, 2000). Studies point out that under such an institutional arrangement, national governments may engage in a purely distributional game that may result in inefficient outcomes unless policies are co-ordinated (Hagen and Mundeschenk, 2002). It is, therefore, held that the benefits of such a policy framework can be derived only if economic policies (including fiscal policy) and the economic structures of member economies are sufficiently flexible and adaptable to the unified monetary policy (Weber, 2011).

2.40 With an independent central bank and its price stability-oriented strategy, the euro area has a highly predictable monetary policy (Issing, 2005).

This sets aside any ambiguity in monetary response towards economic, including fiscal, developments having a bearing on price stability. While the monetary authority reacts to aggregate economic fluctuations in the euro area as a whole, fiscal authorities focus on country-specific needs. Nonetheless, studies indicate that if national fiscal authorities are able to accurately perceive the behaviour of the single monetary policy, they will take actions that would lead to implicitly 'co-ordinated' policy outcomes *ex post* (Issing, 2005). Notwithstanding its inherent national character, the conduct of fiscal policy for euro area members has been subject to several constraints linked to procedural guidelines stipulated under the Excessive Deficit Procedure, the Mutual Surveillance Procedures and the Stability and Growth Pact (SGP). The Maastricht Treaty and the subsequent Stability and Growth Pact (SGP) stipulated that each country's fiscal deficit in a year should not exceed 3 per cent of its GDP, unless the country is in a recession. SGP filled the void of an EU-wide fiscal authority and provided a framework for fiscal policy discipline that supported stability, growth and cohesion in the euro area.

2.41 In the absence of an exchange rate instrument in the EMU, the role of automatic stabilisers at the national level assumed significance for enabling adjustments to asymmetric shocks, thereby ensuring support from the national fiscal policies towards stability-oriented monetary policy. Notwithstanding the emphasis of various procedures on the importance of fiscal discipline for the conduct of monetary policy, they were termed 'soft enforcement', *i.e.*, persuade member countries to follow proper behaviour through monitoring, dialogue, information exchange, peer pressure and warnings. Although through the 'dissuasive element' in SGP sanctions could be imposed on member states that breached the fiscal deficit limit of 3 per cent of GDP, experience showed that no penalisation took place when this limit was breached by major EMU states (Germany and France) in the early 2000s due to lack of the required qualified majority in the voting process undertaken in November 2003.

2.42 These developments indicated lack of an adequate institutional framework for fiscal policy co-ordination in the EMU because it ignored the aggregate fiscal policy stance for the euro area as a whole (Blanchard and Giavazzi, 2004 and Wyplosz, 1999). Although the desired level of fiscal balances may be consistent with long-run macroeconomic stability, short-run stability imperatives may warrant different constellations of monetary and fiscal policies at different stages of business cycles (Hagen and Mundschenk, 2002). Further, in the absence of credible enforcement mechanisms, *ex ante* co-ordination between monetary and fiscal policies may not necessarily be a successful *ex post* outcome. It was argued that *ex ante* co-ordination tended to blur fundamental responsibilities for the respective economic actors, thereby increasing uncertainty about the general policy framework.

2.43 In the euro area, the channels for the exchange of information between the fiscal and monetary authorities are well developed. The Governing Council undertakes a constructive and open exchange of information on the economic situation and structural reforms with other bodies and institutions. Further, the outlook for fiscal policy plays a key role in the ECB's assessment of risks to price stability. However, even with these elements of co-ordination between monetary and fiscal policies, there is no pre-commitment to a particular course of monetary policy action as this may undermine the ECB's independence.

#### *Monetary and fiscal policies since inception of the ECB*

2.44 In the euro area, the ECB aims at inflation rates of below, but close to, 2 per cent over the medium-term and conducts monetary policy through the setting up of short-term interest rates, thereby seeking to influence the economy and work towards attaining the price stability objective. Although no rigid rules are set out in the monetary policy operating procedure, ECB has kept flexible checks over monetary aggregates with a clear priority accorded to price stability over full employment without exclusively focusing on the former goal.

2.45 Since its inception, the ECB has followed a two-pillar approach to determine the nature and the extent of risks to price stability in the euro area. Under this approach, while economic analysis is undertaken to assess the short to medium-term determinants of price developments, the monetary analysis focuses on a longer-term horizon. The economic analysis focuses on real activity and financial conditions in the economy, while assessing the interplay of supply and demand in the goods, services and factor markets in determination of price developments over the short to medium-term. The monetary analysis examines the long-run link between money and prices and serves as a cross-check over the longer-term of the short- to medium-term indications emerging from the economic analysis. An analysis of the ECB's monetary policy decisions since its inception does show that notwithstanding price stability remaining a major objective, the growth implications of decisions were also not overlooked.

2.46 In the early years of its inception, the ECB explicitly emphasised that the fiscal consolidation process should continue in member countries in line with the SGP and the commitment made in the context of the stability programme *albeit* the growth outlook had weakened due to geopolitical concerns in 2001. The avoidance of inflationary concerns on a permanent basis required that national governments necessarily implement structural measures in a more decisive manner. This reflected fiscal concerns emanating from some member economies, *viz.*, Germany, Italy, the Netherlands, Greece and Portugal, which undertook expansionary fiscal policy in the initial years of the ECB's inception and continued the stance till 2003. The ECB's monetary policy remained expansionary until the second quarter of 2003 due to growth concerns arising from external developments and euro appreciation. The policy rates were, however, kept unchanged from July 2003 to December 2005 as the medium-term outlook for price stability remained favourable. Most member countries, however, continued to adopt an expansionary fiscal policy, because growth remained less than anticipated. While announcing

the monetary policy stance, the ECB persistently emphasised the need to maintain the credibility of fiscal policy in member countries. In contrast, as the budget deficit breached the SGP target of 3 per cent in major member economies, the SGP was revised in March 2005, allowing for flexibility in rules across a range of areas. It was decided that no excessive deficit procedure would be launched against a member state experiencing negative growth or a prolonged period of low growth. Previously, the exception was made only for countries in a recession (negative growth of 2 per cent), which was rather unusual among EU member countries. The policy move by the government authorities was somewhat preposterous in the context of the single monetary framework of the ECB.

2.47 The ECB tightened monetary policy from December 2005 as risks to price stability began to emerge due to uncertainties arising from oil market developments, the pass-through of previous oil price increases to consumers *via* domestic production chains, the possibility of second-round effects in wage and price-setting behaviour, as well as further increases in administered prices and indirect taxes. Further, fiscal policies remained expansionary in most countries in the wake of some downside risks to growth, concerns about global imbalances and weak consumer confidence. Monetary policy tightening continued till the end of the third quarter of 2008. The government deficits in some of the member economies, *viz.*, Greece, Ireland and Spain, expanded sharply by the end of 2008, which were frequently highlighted by the ECB in its post-policy introductory Statements.

#### *Fiscal-Monetary Co-ordination during Crisis*

2.48 During the global financial crisis, a number of co-ordinated monetary and fiscal policy measures were implemented in the euro area to provide stimulus to the economy. The ECB's response to the crisis was through standard and non-standard policy measures. With the intensification and broadening of the financial market turmoil and taking into account the slack in global and euro area demand

for a protracted period of time, the ECB undertook a policy rate cut on October 8, 2008. By this period, the strong fall in commodity prices had moderated the likely pressures on prices, cost and wages. Keeping in view the deteriorating macroeconomic outlook, the ECB continued to reduce policy rates until May 2009. On a cumulative basis, the interest rate on the main refinancing operations of the Euro system was reduced by 325 basis points between October 8, 2008 and May 13, 2009.

2.49 Perceiving the gravity of the crisis, the ECB undertook various unconventional measures to facilitate declining money market term rates, to encourage banks to maintain and expand their lending to clients, to improve market liquidity in important segments of the private debt security market, and to ease funding conditions for banks and enterprises. Notwithstanding the use of various monetary easing measures to improve financial market conditions, including outright purchases of covered bonds, the ECB deliberately refrained from buying government bonds to safeguard its independence from the political authorities of different countries (Stark, 2009). For the same reason, the ECB implemented its measures without any form of government guarantees.

2.50 Fiscal policies of member countries also played an important role in containing the adverse impact of the financial and economic crisis in the euro area. The support of national governments for the banking sector was aimed at stabilising the entire financial system and preventing a further detrimental impact on the real economy. The national governments provided various types of financial assistance, including government guarantees for interbank lending, recapitalisation of financial institutions, increased coverage of retail deposit insurance and asset relief schemes. The fiscal impact was, thus, evident in terms of higher government deficit and debt-to-GDP ratios. The ECB, however, continued to emphasise the need for fiscal discipline. It was also recognised that the fiscal policies of national governments in the euro area needed to be transparent enough to

provide a clear and credible medium-term timetable for exit strategies to help maintain a predictable environment, both for economic agents and for the conduct of monetary policy (Stark, 2009).

2.51 In the post-crisis period, the ECB showed commitment to its mandate by reiterating that the level of key interest rates would be adjusted in response to changes in the outlook for price stability. Although the ECB initially refrained from monetary financing of debt during the global financial crisis unlike the central banks in the US and the UK, it had to participate in government debt-buying programmes, as many fiscally-stressed member countries subsequently faced the risk of insolvency and were unable to sell their bonds in the market. Under the programme, the purchase of government bonds was to be offset – or sterilised – by removing equal amounts of cash from the banking system, thereby avoiding the risks to price stability. Further, considering the economic and financial adjustment programme of the Greek government (negotiated with the European Commission in conjunction with the ECB and the International Monetary Fund) to be appropriate, it repeatedly adjusted its collateral requirements to ensure that Greek public debt remained eligible.

2.52 The ECB's bond-buying programme, *albeit* perceived to be temporary, continues as the debt crisis is yet to be fully resolved. In addition, as part of the new Treaty on Stability, Coordination and Governance in the EMU, Fiscal Compact was signed by most EU members in March 2012. Fostering the economic policy coordination, the Fiscal Compact was expected to strengthen EU fiscal governance framework required for effective implementation of price stability-oriented monetary policy of the ECB. The Fiscal Compact *inter alia* constitutes the mandatory introduction of a balanced budget rule at the national level as well as a strengthening of the automaticity of the excessive deficit procedure in case of breaches. According to the ECB (2012), successful implementation of reforms towards fiscal discipline would relieve the monetary policy from having to address negative externalities from other

policy areas when striving to maintain price stability. As a necessary adjunct to monetary policy and support sovereign bond market in the euro area, the ECB announced the Outright Monetary Transactions programme in September 2012 under which it was prepared to buy unlimited government bonds with a maturity of one to three years in the secondary market to lower borrowing costs for national governments, provided the respective country follows a euro-zone-approved bailout plan. The program helped reduced the bond yields in Italy and Spain having hefty public and private debt.

2.53 As stated above, the ECB's monetary policy is independently determined under the mandate of price stability. Even though there is no formal mechanism of fiscal and monetary co-ordination in the euro area, the emphasis on fiscal discipline for overall macroeconomic stability was explicitly spelt out in the SGP pact. While the ECB frequently cautioned about expansionary fiscal policy in its member countries, deficit levels continued to rise in some EMU countries, which subsequently surfaced in terms of financial crisis in countries, such as, Greece. With the worsening of confidence in the bond markets of fiscally-stressed member countries, the ECB had to co-ordinate with national governments by subscribing to their debt. The co-ordinated monetary and fiscal policy measures undertaken during the financial crisis might have been effective in alleviating the funding concerns of banks and providing stimulus to the economy, but sustaining such policy measures may lead to risks in the long-run.

2.54 To sum up, several issues have been raised regarding fiscal-monetary co-ordination in the euro area. First, there is a need for vertical co-ordination between the common monetary authority and the national fiscal authorities (the governments of different countries) taken as a group. Typically, concerns in the conduct of the European monetary policy can emanate from instability in the external value of the Euro or could reflect asymmetric effects of a common monetary policy across member countries due to different transmission mechanisms or lack of



a common business cycle. The implicit co-ordination of fiscal policies of members, which eventuates as an optimal fiscal policy stance across the euro area and is consistent with common monetary policy, has remained an important challenge since the inception of the Euro. Since 1999, one of the most problematic issues in the EMU has been the growing interactions between sovereign countries' fiscal policy and the ECB's monetary policy. The implementation of the SGP in 1997, one of the mainstays of the European fiscal framework, introduced additional conflicts.

2.55 Second, a common monetary policy, strictly speaking, is considered to be sub-optimal as it aims to reduce the deviation of the average EU inflation rate from the target and not the average of the individual deviations. It, therefore, does not take into account the variability or distribution of the deviations across countries. In an inflationary period, those with below-average inflation are penalised and forced to tighten as much as those with above-average inflation. Similarly, in a recession, countries with above-average inflation must loosen just as much as those below-average. This raises the question whether policy objectives would be better served if the differences in national circumstances (country circumstances) were also to enter into the policy calculations. A possible solution could be to allow fiscal policymakers to adjust their fiscal stance to compensate for national differences, allowing them to pursue expansionary fiscal policy when inflation is below average and *vice versa*. Nevertheless, this again requires close co-ordination between fiscal and monetary policies.

2.56 Third, the conduct of fiscal-monetary co-ordination in the euro area has remained different from the US, reflecting contrasting economic and financial structures in these two economies. Unlike in the US, small and medium-sized enterprises play a dominant role in the European economy, and are major players in the ownership structure of certain banks. Overall, the economy in the euro area is less flexible than in the US. Wages and prices are slower to adjust. While limited flexibility in the euro area might hamper the reaping of benefits from positive

supply-side shocks like technical innovations, during a crisis this sluggishness offers some protection against an overshooting of negative expectations leading to a deflationary spiral. In shaping its policy response to address the crisis, the ECB had taken into account the structural characteristics of the euro area economy. As part of non-standard measures, the ECB provided liquidity to banks at the longer term and funded the same through the standing deposit facility offered to banks. This led to absorption of liquidity mismatches of the banking system onto the balance sheet of the central bank.

2.57 Further, the Eurosystem of central banks accepted illiquid collaterals, increased the number of counterparties eligible for bidding for central bank liquidity and protected the anonymity of its counterparties. The crisis-driven extraordinary measures led the Eurosystem of central banks to supply liquidity requirements on a gross basis instead of fulfilling the net liquidity requirements of the banking system during the normal period. Consequently, the central bank balance sheets in the Eurosystem expanded substantially, off-setting the fall in money multiplier due to the freezing of money markets, and supporting the money supply and financial intermediation process. In the process, the traditional 'lender-of-last resort' function of the central bank evolved into 'intermediation-of-last resort' during the crisis, which prevented banks from undertaking the "fire-sale of marketable assets and premature liquidation of loans" (Giannone, *et al.* 2010). In the US, by contrast, the Fed bought assets outright on capital markets, given the reliance of US companies on capital markets rather than on bank loans.

### **Fiscal-Monetary Co-ordination in Emerging Market and Developing Economies**

2.58 Fiscal-monetary policy co-ordination is essential for any economy irrespective of its level of development. However, the form and nature of co-ordination varies across countries depending on country-specific characteristics, depth of financial markets, exchange rate regimes and the prevailing

institutional framework. Despite their rising economic importance, many EMDEs still have relatively underdeveloped financial markets and weak institutional framework, their per capita incomes lag far behind those of the advanced economies, and a significant fraction of their population still lives in poverty. This puts a number of constraints on the effective formulation and implementation of macroeconomic policies. For instance, the developmental needs in EMDEs may necessitate the adoption of expansionary fiscal policy, which could pose a challenge for monetary policy. Therefore, the need for fiscal-monetary co-ordination assumes significance in the EMDEs in the context of ensuring appropriate policy responses to absorb shocks emanating from within or outside these economies. In fact, there have been instances in the past when growing public sector liabilities affected both monetary policy conduct and outcomes in EMDEs (*e.g.*, Brazil in 2002).

#### *Constraints on monetary policy in EMDEs*

2.59 Central banks in EMDEs face a unique set of challenges. These are both institutional and technical, and act as severe constraints on monetary policy implementation. The key institutional constraint is the lack of central bank independence when the central bank is statutorily under the purview of the finance ministry. In countries where the central bank is 'in principle' independent, there is still the reality that it can be buffeted by various political forces (Dragutinovic, 2009). Hence, central banks have to maintain a balance between their credibility and independence, particularly during a period of macroeconomic disruptions. Further, irrespective of the degree of statutory independence, operational independence may be constrained due to the exchange rate objective thrust upon most central banks in EMDEs. Goodfriend (2004) argued that maintaining the exchange rate at a particular level or within a specific range can often limit the central bank's flexibility in terms of using policy instruments such as the interest rate to pursue an independent domestic monetary policy aimed at managing domestic activity and inflation. A number of studies

have attempted to identify such differences across advanced countries and EMDEs.

2.60 Fiscal dominance is another key problem facing central banks in EMDEs. The literature suggests that many EMDEs lack long-term fiscal discipline and their monetary policy is often subservient to fiscal policy, particularly since the latter is seen as having important redistributive functions. An unsustainable fiscal policy, reflected in high levels of government budget deficits and public debt, poses an additional constraint on monetary policy operations. In such situations, the responsibility to facilitate the government borrowing programme often comes in conflict with the price stability objective, as managing inflation expectations becomes difficult when borrowing requirements are substantially large.

2.61 Of late, there has been an evolving consensus about the relative roles of monetary and fiscal policies. While fiscal policy is expected to focus on longer-term sustainability (and be constrained by some form of fiscal rule or confined to automatic stabilisers), there is a broad agreement that monetary policy should focus on price stability, but it could play a stabilisation role within that constraint. Cecchetti (2002) argues that "the proper role for fiscal policy is to focus on building solid foundations for long term growth...Stabilization policies should be left to the central bankers." Against this backdrop, the following discussion highlights the diverse experiences of select EMDEs in the area of fiscal-monetary co-ordination.

#### *Brazil*

2.62 Unlike other economies, the history of fiscal-monetary co-ordination in Brazil has been different. With the establishment of its central bank, the currency issuing function was shifted from the Treasury, but the central bank had to act according to the needs of the Bank of Brazil, which was a banker to the government and controlled foreign trade operations on behalf of public sector enterprises. Besides, the responsibility for managing public debt was also assigned to the central bank.

This institutional arrangement continued until 1988 when the functions of the monetary authority were progressively transferred from the Bank of Brazil to the central bank and the administration of the federal public debt was transferred to the National Treasury. As highlighted by Ornellas and Portugal (2011), the conflict persisted due to the distinct obligations of each of these organisations, which had implications for the overall interest rate environment. The central bank of Brazil has the objective of price control in the economy, for which it uses the short-term interest rate as an instrument. In contrast, the National Treasury, by managing domestic and foreign debt, has to ensure that government deficit is financed through best debt deals of longer maturity.

2.63 The Brazilian economy faced hyperinflation during the mid-1980s to early 1990s. The high bouts of inflation during the second half of the 1990s were accompanied by high budget deficits. The 'Real Plan' was implemented in 1994 as a programme for economic stabilisation, which successfully contained inflation to a single digit in less than three years, while the size of the public sector was substantially reduced through privatisation of state companies. However, the stabilisation policies were largely based on some form of exchange rate anchor when external liberalisation also took place. Although the stabilisation plan was successful in controlling inflation, currency appreciation was witnessed, leading to balance of payments problems. The stabilisation process proved to be gradual and, therefore, many structural issues pertaining to fiscal policy remained unresolved, increasing the vulnerability of the Brazilian economy to a confidence crisis. This, in fact, became a reality when the international financial turmoil culminated in the Russian moratorium on external debt in August 1998.

2.64 Brazilian policymakers responded to the 1998 crisis by introducing a new macroeconomic framework based on a flexible exchange rate, inflation targeting and fiscal responsibility. While the central bank raised short-term interest rates, the government announced a strong tightening

of the fiscal regime. Recognising the implications of fiscal policy from the point of view of inflation expectations and investment decisions in future, IT was formally integrated with the monetary policy framework in July 1999, under which the inflation targets as well as the tolerance intervals were set by the National Monetary Council based on a proposal by the Finance Minister. By this time, Brazil had also adopted a floating exchange rate policy and the central bank was of the view that sustained fiscal austerity together with a compatible monetary policy would support price stability. In fact, fiscal austerity was envisaged by enacting the Fiscal Responsibility Law in 2000, which provided an encompassing framework, applicable to the federal, state and local governments. It, *inter alia*, introduced sharp constraints on the financing of the public sector, including state-controlled financial institutions.

2.65 Importantly, fiscal dominance was sought to be reduced to relieve the pressure on monetary policy and strengthen its ability to deliver the inflation targets. However, Blanchard (2004) found evidence that fiscal dominance continued during the crisis period of 2002-03 and the monetary policy remained counter-productive to tackle inflation. The Brazilian economy also had high levels of indebtedness, with a large share of the public debt denominated in foreign currency. Therefore, the perceived risk of interest rate hikes increased the likelihood of default, thereby causing depreciation of the domestic currency and leading to new inflationary pressures that restrained the use of monetary policy. In fact, it was the fiscal policy that could have controlled high inflation.

2.66 During the recent global crisis, a co-ordinated response by the central bank and the government helped faster recovery in business sentiments. Unlike in the past, the central bank was better positioned to respond to circumstances without wavering in its commitment to the floating exchange rate, while the government had fiscal room to initiate expansionary fiscal policy without adversely impacting the markets. The central bank also reinforced its vast international reserves with

contingent lines with the US Fed (US\$ 30 billion) and the IMF, which, however, were never used. Levy (2010) categorised policy response to the global slowdown into measures undertaken for (i) protection of financial markets and support to credit; (ii) full use of automatic stabilisers; and (iii) outright fiscal stimulus. The central bank in Brazil had implemented measures in the first category, while policies in category (ii) were already in place. In addition, discretionary stimulus measures including a combination of tax breaks and public-sector wage increases, and a pro-active stance by public sector banks were also initiated to counter the impact of the global financial crisis.

2.67 The central bank also facilitated liquidity injection by reducing cash reserve requirements by 40 per cent, which helped small banks to meet the credit requirements of their mid-sized corporate borrowers and to support personal credit. Even though the central bank did not play a direct role in supporting aggregate demand, its policy measures towards this end were evident when interest rates fell to a 15-year low level. In addition, a better social transfer system boosted the operation and effectiveness of the automatic stabiliser mechanism and had a countercyclical impact on growth. The co-ordinated policy response by both the government and central bank helped the Brazilian economy recover faster from the crisis.

#### *South Africa*

2.68 Prior to South Africa's transition to a democratic rule in 1994, its macroeconomic policy was dominated by the fiscal policy. The South African Reserve Bank (SARB) primarily acted as an agency responsible for market-making of government bonds. However, with the adoption of the Growth, Employment and Redistribution (GEAR) policy in 1996, fiscal discipline was introduced in South Africa. Emphasising fiscal-monetary co-ordination, the GEAR policy envisaged that fiscal policy would be conducted and financed in a non-inflationary way, while monetary policy would focus on achieving and maintaining low levels of inflation.

The government aimed to reduce the conventional budget deficit-GDP ratio to below 3 per cent per year. A medium-term expenditure framework was also introduced in terms of which a Medium Term Budget Policy Statement is published in the second half of every fiscal year.

2.69 Under the new Constitution of South Africa, operational independence was guaranteed to the SARB. The objectives and framework of monetary policy also changed significantly during the 1990s. It started with monetary targeting, while IT was put in place later.

2.70 Fiscal consolidation measures initiated during the 1990s also ensured increasing monetary policy independence. The National Treasury was set up in 1999 to manage the debt of the government. As debt management became more active, the government started maintaining a transparent relationship with the market. The structural, legal and infrastructure constraints were also addressed to develop a government bond market in close co-ordination with the SARB and other agencies.

2.71 The adoption of an IT framework in February 2000 necessitated further co-ordination between the fiscal and monetary authorities. Under this framework, monetary policy operations are conducted by the legally independent SARB to achieve the inflation target set by the government in consultation with it.

2.72 Since 1994, the focus of fiscal policy has been on consolidation and, therefore, has generally been countercyclical in intent. The government's fiscal discipline during the period of cyclical upturn helped it achieve marginal surpluses in 2006 and 2007. With a better fiscal-monetary policy mix, output and price level variability also declined. Even though there has been no *ex ante* co-ordination of policies, it has been observed that the monetary policy reacts to fiscal policy, but rarely has fiscal policy been a problem for monetary policy. There is some arrangement for co-ordination in the form of a memorandum of understanding between the Treasury and the central bank, under which there is a provision for three standing committees. Regular



bilateral meetings are held between the Governor and the Minister of Finance, where the focus of discussion is generally on overall strategic and technical issues rather than explicit fiscal-monetary policy mix.

2.73 During the post-global financial crisis, the fiscal authorities responded with a strong countercyclical policy. This entailed a large fiscal stimulus complemented by appropriate monetary policy in line with the reduced inflationary pressures. The SARB reduced policy rates sharply between December 2008 and November 2010. Subsequently in July 2012, the SARB again reduced policy rate as growth concerns emerged due to external factors *viz.*, fiscal austerity measures and bank deleveraging in the euro area. The objective has been to deal with domestic growth concerns and ensure well contained inflation expectations. Similarly, fiscal policy in recent years has aimed at striking a good balance between the needs of growth and maintaining fiscal sustainability. To sum up, the SARB has been conducting monetary policy within a flexible IT framework, which, in addition to inflation, considers the implications of monetary policy actions on growth, employment and financial stability.

#### *Russia*

2.74 The framework for fiscal-monetary policy co-ordination changed significantly in Russia with the disintegration of the Union Soviet Socialist Republic (USSR). In 1991, the State Bank of the USSR was disbanded and renamed the Bank of Russia (BoR). With the setting up of a single centralised federal treasury system in 1992, the Bank of Russia was no longer required to provide cash services for the federal budget. In July 1993, the problems of the ruble area led Russia to introduce the Russian ruble and demonetise the pre-1993 ruble. The Law “On the Central Bank of the Russian Federation (Bank of Russia)” (Article 22) provided for independent functioning of the BoR from the federal, regional and local government structures. However, the BoR is accountable to the State Duma of the Federal

Assembly of the Russian Federation. While the principal function of the BoR is to protect the Russian ruble and ensure its stability, the single-state monetary policy is formulated and implemented in collaboration with the federal government.

2.75 As an agent of the Ministry of Finance, the BoR developed the government securities market. During the initial period, the size and volatility of the government’s fiscal deficit undermined monetary control. Measures to deal with major structural constraints at times were found to be in conflict with the requirement of tight demand management policies. Higher expenditures and lower tax revenues in the second half of 1993 increased the deficit, leading to higher central bank credit to the government. The larger deficit in 1994 also required central bank financing equivalent to about two times the stock of base money as at the end of 1993. The central bank tried to control directed credits, but its net domestic assets more than quadrupled during 1994. Recognising fiscal concerns, investors began to shift from ruble-denominated assets and, consequently, a foreign exchange crisis took place in October 1994.

2.76 The crisis led to tighter fiscal and credit policies, and central bank purchases of foreign exchange became the main source of monetary growth in 1995. In 1995, the BoR stopped extending loans to finance the federal budget deficit, and discontinued centralised loans to individual sectors of the economy. These policies facilitated the adoption of an exchange rate-based monetary policy. By this time, the government securities market was reasonably well developed. With reduced monetary financing of the fiscal deficit and discontinuance of the practice of directed credits, the BoR shifted to the use of indirect instruments and, in particular, those which were market-based, in its monetary policy operations. Although direct monetisation was discontinued in 1995, the impact on base money growth of rising capital outflows and financing of government deficit was largely offset by the sale of foreign exchange reserves by the BoR. The exchange rate policy was used to minimise the

inflationary impact of persistent fiscal deficit until mid-1998. Referring to policy choices during the period, Gaider (1999) pointed out:

*Between the autumn of 1997 and August 1998, the Russian government faced a choice between two possible strategies. The first was to demonstrate that it had the political will to tighten the budget by reforming its relationship with large enterprises, such as those in the oil and gas sectors, through the imposition of hard budget constraints. The second was to give up, abandoning the attempt to promote anti-inflation policies. Unfortunately, the attempt to tighten budgetary policy received insufficient political support. The result was inevitable: the continuation of soft budget constraints, soft budget policy, and soft monetary policy.*

2.77 Notwithstanding the use of policy measures towards monetary stabilisation during 1995-97, inflation had eroded cash balances and made the financing of budget deficits more difficult in 1998. In addition to negative market sentiments prevailing towards EMDEs, the government's ability to borrow in the domestic Russian market to finance its deficit was significantly constrained due to lack of cash balances in the economy. The government had to unilaterally undertake restructuring of ruble-denominated debt, while the imposition of a 90-day moratorium on external debt payments further eroded market confidence. During the crisis, the BoR intervened heavily in the foreign exchange market but could not limit the depreciation of the ruble. Since the large-scale support by the BoR to both banks and the government intensified pressure on the ruble, the BoR abolished the exchange rate band and adopted a floating exchange rate system in 1999.

2.78 Significant depreciation of the ruble during the crisis was followed by export-led recovery; the rise in international oil prices also contributed to higher exports. Monetary policy was significantly tightened through a reduction in ruble credit to the

government and banks, and servicing of external debt payments through drawdown of foreign exchange reserves of BoR. In 2000 and 2001, there was some evidence of fiscal consolidation supported by robust tax collections, the contribution of oil sector and expenditure restraint exercised by the Russian government. The fiscal consolidation not only eased the pressure on the monetary policy, but also led to a lower inflation rate. Recognising the implication of surplus balance of payments on the value of the ruble, the BoR made large-scale purchases in the foreign exchange market, which were only partially sterilised to avoid excessive monetary tightening. In 2002, the fiscal situation again deteriorated, as expenditures increased sharply, particularly at the regional level. The BoR's intervention policy, which aimed at gradual depreciation in the ruble against the dollar, helped to avoid a large deviation from the 2002 inflation target, *albeit* with money growth remaining above the target.

2.79 In subsequent years, the BoR continued to pursue the dual target policy of seeking to reduce inflation and containing ruble appreciation, while the fiscal policy was becoming a challenge as the government decided to finance various pending reforms by partly using oil revenues. The contradictions in the fiscal-monetary policy mix were thus clearly evident. Monetary policy remained broadly accommodative in 2004 and 2005, while fiscal policy was relaxed in 2004. Recognising the impact of an increase in base money growth as the government began to spend more of its oil revenues and with inflation remaining higher than the target range, the BoR modified its intervention policy and began to allow some limited ruble appreciation. The expansionary fiscal stance continued in 2007-2008, though it was recognised that pro-cyclical fiscal relaxation at a time when demand pressures were already strong could increase pressures on prices and the ruble.

2.80 The fiscal situation deteriorated further during the global financial crisis, following the relaxation in fiscal policy and contraction in oil revenues. The sharp drop in oil prices and the

pressure on the ruble led to a massive drive to hedge exposures in expectations of ruble depreciation. The BoR initially facilitated this outflow by providing sizeable liquidity injections at low interest rates, while large international reserves were also drawn down to prevent the sharp depreciation of the ruble and avoid abrupt loss in confidence in the Russian banking system. However, as the policy of drawdown of reserves became increasingly unsustainable, the BoR was forced to tighten monetary policy in January 2009 through hikes in policy rates, alongside steep ruble devaluation. In the post-crisis period, the Russian government planned fiscal consolidation by undertaking a modest retrenchment as announced in the Budget 2011-13. While the BoR also started a tightening cycle, excess liquidity available with banks continued to render key BoR policy rates non-binding. However, as highlighted by the IMF (2011), the BoR still lacks decisive monetary tightening to rein in inflation. In short, the dominance of fiscal policy is observed in Russia, which poses significant challenges for achieving the dual objective of the central bank to contain inflation and to ensure a stable exchange rate. Going forward, Russia has targeted to achieve a balanced budget by 2015 which will facilitate effective implementation of monetary policy.

#### *China*

2.81 The fiscal-monetary co-ordination framework in China is more inter-twined than in most other EMDEs. The People's Bank of China (PBC) started functioning as a central bank in 1983, but the State Council confirmed its legal status in 1995. The PBC is entrusted with the implementation of monetary policy; it carries out business operations independently according to law and is free from intervention by local governments, government departments at various levels, public organisations or any individuals. However, the PBC has to seek the concurrence of the State Council in respect of its decisions concerning the annual money supply, interest rates, exchange rates and other important issues assigned to it. As part of the monetary policy function, the PBC is required to maintain the stability

of the value of the currency and thereby promote economic growth.

2.82 The PBC has frequently adjusted interest rates in response to inflation since 1985, but these adjustments were insufficient as other functions of PBC, especially borrowing by financially constrained State-owned enterprises (SOEs) acted as constraints to monetary policy. Interest rates were largely administered by the PBC in consonance with the State Council. Before the new law was enacted, a major portion of the PBC's loans to state banks was influenced by local governments. However, with the passage of the Central Bank Law in 1995, the role of local governments in influencing the process of monetary policy and credit allocation declined. At the same time, hard budget constraints were prescribed for SOEs to make them fiscally responsible and commercial viable, without State support.

2.83 The PBC also acts as a fiscal agent of the government and has been a major source of the government's financing requirements. Therefore, monetary and fiscal policy co-ordination becomes important, as the government bond market is one of the most important channels for the central bank to adjust the money supply. While the traditional approach of the PBC has been to use monetary base as the operational target and money supply as the intermediate target, more recently the growth rates of both money and bank lending have been used as explicit intermediate targets (Goodfriend and Prasad, 2005).

2.84 Assessing the implications of government debt on money growth, World Bank (1990) highlighted that the planning process involving the PBC, Ministry of Finance and State Planning Commission had not resulted in the past in a credit control programme capable of keeping monetary growth within the economy's potential for real growth. Therefore, the credit plan, based on the demands of the enterprises and regions, imparted an expansionary bias to monetary policy. Whenever financing outside the banking system fell short of the requirement to cover growing budget deficits, the

resultant unplanned recourse of the MoF to central bank credit led to excessive monetary expansion and inflation. The overly expansionary monetary policy often reflected the failure to control and offset the rising financing needs of the government. For instance, following the rapid expansion of credit in 1984-85 and the peaking of broad money growth at an annual rate of 50 per cent in the first quarter of 1985, the PBC adopted a restrictive monetary policy stance in response to emerging inflationary and balance of payments pressures. However, the restrictive monetary policy stance had to be reversed due to concerns pertaining to slowdown in economic growth raised by the government in mid-1986. Consequently, the higher growth rate was accompanied by inflationary pressures and the economy began to overheat. Subsequently, both authorities co-ordinated to address the overheating tendencies. While the government adopted fiscal austerity measures, the PBC was allowed to follow a tight monetary policy. As a result, both growth and inflation were stabilised by 1990. Nonetheless, monetary policy subordination continued even after the enactment of the Central Bank Law in 1995.

2.85 In 2002, the new government adopted a much stronger pro-growth strategy than pursued earlier and focused on promoting job growth through local infrastructure projects to be financed through banks. Despite the reservations of the PBC, monetary policy became substantially more expansionary in the first quarter of 2003. Further, concerns with regard to the output impact of Severe Acute Respiratory Syndrome (SARS) led the PBC to raise targets for broad money growth and credit expansion to 18 per cent and RMB 2.0 trillion, respectively. During this period, the PBC was prepared to take the risk of higher inflation, which was approved by the National People's Congress, China's legislative body. In mid-2003, the PBC and the newly created China Bank Regulatory Commission shared concerns of expansionary monetary policy. Accordingly, the PBC proposed policy guidelines in June 2003 to contain lending to the property sector, which had shown signs of overheating. However, more specific regulations announced by the State Council

in August 2003 were less restrictive than those proposed by the PBC.

2.86 In recent years, the PBC has tried to balance low inflation with continued strong growth through its monetary policy, using monetary aggregates as intermediate targets, but administrative controls and exchange rate policy have continued to impact the efficacy of monetary policy. Fiscal policy has been more proactive since the Asian crisis as special bonds were issued for on-lending to local governments to be spent on capital projects. In the 2005 budget, however, the fiscal policy stance was shifted from "proactive" to "neutral." Fiscal policy was largely guided by the government's medium-term focus on fiscal consolidation aimed at making room for likely future expenditures on contingent liabilities, such as the banking sector's large non-performing loans and a need for higher social spending as the population ages.

2.87 Even though there has been emphasis on fiscal prudence in China, an issue that has implications for the independent conduct of monetary policy pertains to financing of state-owned enterprises (SOEs) through the banking system in China, which impedes the development of banking, fiscal, and monetary policies. Therefore, operational independence is often emphasised for the PBC so that it has the authority to move its policy instruments aggressively on short notice without permission from other government agencies. In this context, Goodfriend and Prasad (2006) suggested two key prerequisites for effective instrument independence. First, the PBC must be given full control of aggregate bank reserves, and second, the Chinese banking system must be made financially robust against interest rate fluctuations, which can be achieved by the separation of fiscal policy support for SOEs from the banking sector.

2.88 Although these structural issues with regard to fiscal-monetary co-ordination continue to exist, expansionary fiscal and monetary policies were undertaken during the crisis to minimise the impact of global factors on export demand and falling private investment. IMF (2009b) highlighted that a long track



record of fiscal discipline drove down public debt, affording China the space needed to significantly expand fiscal support. The PBC's moderately relaxed monetary policy during this period also served to support growth and mobilise the resources needed to finance a surge in investment. Further, allowing exchange rate to move with greater band since April 2012 is also likely to increase the central bank's flexibility to alter monetary conditions in the economy. In short, the fiscal policy in China continues to play a more direct and active role in promoting and stimulating the domestic economy, while monetary policy is assigned the role of timely and effective actions to face the situation of cyclical swings in the economy and maintain financial stability.

#### **IV. Global Financial Crisis and Fiscal-Monetary Co-ordination**

##### ***The Great Moderation, Global Imbalances and Loss of Governance feed into the genesis of the Global Financial Crisis***

2.89 It is widely believed that the genesis of the global financial crisis lay in the build-up of global imbalances, which, in turn, resulted from excessively loose monetary policy in the advanced economies since the early 2000s. Monetary policy in the US was eased after the dot-com bubble burst, with policy rates reduced to one per cent in June 2003 and kept at that level up to June 2004, with only a gradual withdrawal from monetary accommodation thereafter. The low interest rates not only boosted demand in excess of domestic output in the US directly, but also did so indirectly through the wealth effect in the wake of rising asset prices. The excess domestic demand spilt over into the growing current account deficits of the US. This was appropriately matched by substantial current account surpluses in Asia, particularly China, and the oil-exporting countries in the Middle East and Russia, which catered to the demand in the US by supplying goods and services at cheaper rates.

2.90 The conducive macroeconomic environment in terms of stable economic growth and low inflation

encouraged the search for better yields, relaxation of lending standards and under-pricing of risks (Mohan, 2009). Bereft of any formal mandate for maintaining financial stability, public policy tended to ignore the expanding global imbalances and undue financial leveraging as long as economic growth remained steady and inflation low, as characterised by the Great Moderation which lasted over almost a decade and a half. Central banks focused excessively on inflation at the expense of financial vulnerability. By accommodating lax credit conditions and rising debt, monetary policymakers in a way increased the risks of a bust. Besides, many central banks were persuaded to be very transparent and provided forward guidance to the financial markets on their policy stance, especially on the future course of monetary policy. Such forward guidance provided excessive comfort to the financial markets and aided the under-pricing of risks.

2.91 Empirical evidence found US monetary policy to be much looser during 2002-2006 than warranted by the conventional Taylor rule, supported in many cases by government programmes during the period leading up to the housing boom (Taylor, 2009). Taylor also argues that the softening of policy rates by the ECB reflected, to an extent, the influence of US monetary policy decisions, though the monetary easing in the euro area did not venture that far while the current account position remained generally in surplus. Corroborative evidence of monetary excesses was also found in other countries in a study by the OECD, which showed that the greater the degree of monetary excess in a country, the larger was the housing boom. Sharp booms and busts in the housing markets were shown to impact the financial markets, as falling house prices led to delinquencies and foreclosures. These effects were amplified by several complicating factors including the use of sub-prime mortgages, especially adjustable rate housing loans, which led to excessive risk-taking.

2.92 In the US, this was encouraged by government programmes designed to promote home ownership. Government-sponsored agencies, viz., Fannie Mae and Freddie Mac, were

encouraged to expand and buy mortgage-backed securities, including those formed with risky sub-prime mortgages. While legislation *viz.*, Federal Housing Enterprise Regulatory Reform Act of 2005 was proposed to control these excesses, it was not passed into law. The crisis worsened when the US government (more specifically the Treasury and the Federal Reserve) decided not to intervene to prevent the bankruptcy of Lehman Brothers around mid-September 2008. According to one stream of thought, the recent financial crisis reflects a collapse of the market as well as the State, since governance in both the private and public sectors failed (Reddy, 2009).

***Policy response entailed higher degree of co-ordination across countries***

2.93 As the effects of the crisis extended from the financial to the real sector, a wide range of monetary and fiscal policy measures were undertaken in a manner that marked a distinct departure from the pre-crisis macroeconomic orthodoxy and reflected valuable lessons gained from the Great Depression. Initially, as confidence in the financial system plummeted to historic lows and liquidity in the overnight money market dried up, the central banks acted first, and some co-ordinated measures at the international level were also undertaken particularly under the Group of Twenty (G 20) to restore market confidence.

***Orthodox monetary policy, constrained by near-zero interest rates, gave way to unconventional monetary policy measures***

2.94 Contrary to previous experience, central banks in the US, euro area, Japan and other economies continued to run expansionary monetary policy even after cutting their nominal policy rates to very low levels to counteract downside risks to price stability and, in some cases, to avoid outright deflation. The need for sustaining the efficacy of monetary policy even when policy rates neared the liquidity trap or zero lower bound (ZLB) levels in major advanced economies prompted central banks

to activate non-standard or unconventional monetary policy response options by using communication policies to shape public expectations about the future course of interest rates, expanding their balance sheets (quantitative easing) and changing the composition of their balance sheets through targeted purchases of long-term bonds. By deciding to buy long-term debt, the dividing line between fiscal and monetary policy gets blurred. Thus, unlike the Great Depression phase of the 1930s, the global financial crisis of 2007-09 entailed a close co-ordination of fiscal policies with, particularly, non-conventional instruments of monetary policy. The balance sheet effect of unconventional monetary policy measures is discussed in detail in Chapter 4.

2.95 Several solutions to the ZLB have been explored in the literature, focusing on alternative ways of conducting monetary policies, such as price-level targeting instead of inflation targeting (Svensson, 2003) or exchange rate targeting (McCallum, 2000). Other strands in the literature address the ZLB with a focus on the financial environment. Examples include analysis of the balance sheet of the central bank (Auerbach and Obstfeld, 2005), fighting the ZLB through purchasing illiquid assets (Goodfriend, 2000) and countering negative short-term market interest rates by imposing a tax on cash holdings and deposits [Buiter and Panigirtzoglou (1999) and Goodfriend (2000)]. In respect of fiscal policy also, several studies examined the use of instruments as a way to overcome a ZLB situation, such as analysis of fiscal multipliers (Christiano, Eichenbaum and Rebelo, 2009; Cogan, Cwik, Taylor, and Wieland, 2009; Romer and Bernstein, 2009).

***Huge fiscal stimulus programme tantamounts to Keynesian resurrection with a difference***

2.96 Notwithstanding monetary policy becoming the first line of defence and central banks turning lenders of first resort, the credit markets were slow to respond. Accordingly, fiscal measures were deployed to avoid any erosion of the gains from the actions taken by central banks. With monetary policy rates nearing zero in most advanced economies in

the post-crisis period, and considering the scale and sweep of the global financial crisis, there was a resurrection of the Keynesian strategy of activating fiscal stimulus measures. Governments intervened with huge fiscal packages to stimulate domestic demand and to recapitalise banks. The onset of the 'great recession' from December 2007 saw fiscal policy activism in the US (temporary tax rebates in February 2008, first homebuyers tax credit in July 2008, American Recovery and Reinvestment Tax Act, which combined tax cuts, transfers to individuals and states, government purchases in February 2009 and temporary 'cash for clunkers' programme in the summer of 2009<sup>2</sup>), the UK (temporary consumption tax rebates) and China (large public works projects). Notably, the fiscal activist responses across countries were co-ordinated in an unprecedented fashion, delivering a joint fiscal stimulus of 1.7 per cent of global GDP in 2009 (Khatiwada, 2009). This reflected not only the severity of the recession but also some optimism about the potential effectiveness of activist fiscal policy.

2.97 This contrasted with modern economic views prevailing during the decades prior to the crisis that doubted the efficacy of discretionary fiscal policy in stimulating the economy from a downturn, reflecting a belief in the Ricardian equivalence perspective, recognition of fiscal policy implementation lags and apprehensions about political influences. The non-discretionary fiscal policy in terms of automatic stabilisers was considered to be more effective than discretionary stimulus in responding to changes in business cycles. It was held that the impact of automatic stabilisers rose with an increase in the size of the government. Further, a need was felt to reduce and stabilise high debt levels, which had paved the way for the introduction of fiscal rules and independent councils in economic policy-making. As a result, by early 2009, 80 countries had put in place national or supranational fiscal rules (Cottarelli, 2009).

2.98 Huge fiscal stimulus programmes, operated in tandem in the US, the UK, and many other countries, gave rise to a debate about their effectiveness, with studies indicating their effectiveness to 'stimulate' if and only if they do not generate expectations of future taxes to pay off the increased debt (Cochrane, 2011). Apprehensions also emerged about the feasibility of undertaking large fiscal expenditures rapidly. As fiscal deficits became massive, credit guarantees surged and central banks purchased risky private assets, the traditional fiscal dominance issue has re-emerged during the post-crisis phase. Thus, fiscal constraints have begun to take hold over monetary policy-making. Nonetheless, fiscal activism during the great recession phase drew empirical validity from several studies that found fiscal policy stimulus measures to be effective in reducing the duration of a ZLB episode. They also showed that fiscal multipliers were enhanced during the ZLB period, due to the inability of monetary policy to react.

2.99 Not only were the two kinds of policies co-ordinated across the globe in pursuit of common objectives, but also the scale of monetary and fiscal expansions remained unprecedented, which paradoxically rekindled familiar conflicts (Subbarao, 2009). Huge fiscal stimulus packages and climbing fiscal deficits entailed high government borrowing programmes with concomitant implications for monetary transmission and liquidity management by the central banks. The central bank's liquidity management, and especially its unconventional measures, had both fiscal and distributional consequences. For example, the United Kingdom's quantitative easing has had massive fiscal consequences. It was felt that the central bank's choice of market for its operations should not be based so much on its fiscal implications, but rather on the extent to which such intervention might distort relative prices and have a distributional effect, benefitting one set of borrowers rather than another (Goodhart, 2010).

<sup>2</sup> This was a federal scrappage programme intended to provide economic incentives to US residents to purchase new fuel-efficient vehicles. The programme was promoted as a stimulus to the US economy.

***Fiscal-financial linkages show up in Sovereign debt crisis in peripheral Europe***

2.100 The global financial crisis – in its fifth year in 2011 – manifested itself in an altogether different phase, moving from private debt into the sovereign space. The dynamics of the crisis and the policy options available changed markedly during 2009. As discussed earlier, in view of the prevailing low interest rates, central banks did not have much freedom to reduce the interest rates and had to resort to unorthodox balance sheet policies. Public expenditures to provide stability and stimulus featured prominently in the policy response by different countries. This has left very little policy space for any future crisis management. In the transformation of the global financial crisis into the sovereign debt crisis, the rescue of Bear Stearns in March 2008 clearly marked the turning point. It generally raised expectations about policymakers providing sufficient financial support to banks to enable the bailout of the banks' creditors. As the constraints on fiscal commitments became clearer with the nationalisation of the Anglo Irish Bank in January 2009, the separation between the sovereign and the financial sector got blurred.

2.101 The fiscal-financial linkages are exemplified by the fact that during 2008-09, in the euro region, each sovereign's spreads evolved largely in response to the stress experienced by its domestic financial sector. Fiscal problems, in turn, began to exert adverse feedback effects on the financial sector and growth. Higher sovereign spreads increased the borrowing costs of domestic banks and generated capital losses on the holdings of public debt, contributing to lower growth.

***Interplay of Sovereign Risk with the Banking Sector manifested particularly in the deepening of the European Crisis***

2.102 The interplay of sovereign risk with the banking sector progressively worsened in the euro area since the second half of 2011, and financial stability concerns increased considerably. The movements in credit default swap (CDS) spreads on

the sovereigns and banks showed high correlation in some of the euro area countries (Spain, Italy and France), reflecting a close connection between sovereign credit risk and banking sector weakness. Links between sovereign debt problems and the banking sector became evident through an increase in credit risks *vis-à-vis* governments, liquidity squeeze and reduced creditability of government guarantees. As highlighted in the Committee on the Global Financial System (CGFS) 'Panetta' Report (2011), a deterioration in sovereign creditworthiness can hurt the financial sector through one of three channels: (i) increased counterparty risks, increased cost of funding *via* new bond issues and reduced access to credit from repo and derivatives market due to the reduced value of government collateral; (ii) loss of value of implicit or explicit government guarantee of banks and their borrowers; and (iii) the induced fiscal consolidation might undermine credit demand and weigh on the quality of private sector debt in the short-term. Further, when the sovereign debt moves from being a 'risk free' to a 'credit risk' instrument, it might have adverse macroeconomic and financial ramifications (Caruana, 2011). In view of this, it is critical for sovereigns to gain back credibility of the instruments issued by them, *i.e.*, their gilt-edged or risk-free status as sovereign solvency is a pre-requisite for the success of central bank operations dealing with threats to monetary and financial stability.

2.103 Another issue is the availability of sufficient fiscal capacity to provide sizeable financial support to their banks. In view of the heightened risks and uncertainties, some banks, especially those heavily reliant on wholesale funding and exposed to riskier public debt, may also need more capital. For the sovereign to act as the backstop for the financial system, it is important that fiscal buffers be built during good times. Traditionally, central banks are held responsible for addressing liquidity problems of banks, while solvency problems or bank failures have to be addressed by the government. If liquidation of a failing bank cannot be allowed and the market is not prepared to provide more capital, then the only recourse is taxpayer funding.



2.104 In the case of taxpayer funding, or (partial) nationalisation of failing banks, the relevant political representative of the government would have to be entrusted with the responsibility of the resolution exercise. While leaders of the G20 discussed a range of options available on this issue, they could not reach a consensus. While some countries have adopted banking levies, others are considering how to make the financial sector responsible for sharing fairly and substantially any burden associated with government interventions to repair the banking system. The European Commission (EC) put forward a proposal for financial transaction tax (FTT) for 27 EU members on September 28, 2011. For the 11 member states<sup>3</sup> which agreed to adopt the FTT, the EC on February 14, 2013 adopted a proposal setting out the details of the tax which is expected to generate revenues worth € 30-35 billion a year.

2.105 To break the link between banks and sovereigns, Herman Van Rompuy, President of the European Council suggested three actions as necessary: (i) completion and thorough implementation of a stronger framework for fiscal governance; (ii) establishment of an effective single supervisory mechanism (SSM) for the banking sector and the entry into force of the Capital Requirements Regulation and Directive; and (iii) setting up of the operational framework for direct bank recapitalisation through the European Stability Mechanism (ESM). Substantial progress has been made in this direction.

***Risks of fiscal-monetary co-ordination ending up in fiscal dominance of monetary policy***

2.106 While the 1990s saw an increasing trend towards central bank autonomy, a view was also emerging that central bank independence and a lack of co-ordination of monetary and fiscal policies could pose a problem in addressing the conditions of a liquidity trap (Krugman, 1998). This view has gathered support in the light of the fiscal-monetary co-ordination undertaken to address the global financial

crisis, thereby further rekindling debate between the need for monetary policy to act in tandem with the fiscal policy as well as the issue of central bank autonomy. Notwithstanding the imperatives of fiscal-monetary co-ordination, care has to be taken that interactions with the government do not undermine the effectiveness of policymaking to the detriment of the public. In that context, the arrangements to ensure effective dialogue and consultation between the central bank and the executive and legislative branches, and setting limits on central bank advice to the government, in private and in public, on issues outside its mandate, become important. Further, the institutional arrangements that are being evolved after the crisis for overseeing financial stability have an inherent tendency to infringe on the mandate of the central banks.

2.107 A related issue that has been highlighted in the post-crisis period is that of the fiscal dominance of monetary policy. Before the crisis, fiscal dominance had continued to wane as fiscal discipline was taking centre-stage in most countries. However, the extraordinary fiscal expansion by the advanced economies to combat the crisis, which has been actually mutating into structural fiscal deficits, has given rise to the apprehension that monetary policy will have no choice but to accommodate continued elevated government borrowing into the medium-term. For example, the ECB has had to show unusual accommodation in resolving the sovereign debt crisis in some European countries.

2.108 Such concerns are not confined to the euro area. It is widely perceived that this is just the beginning of a trend whereby fiscal policies will once again start dictating monetary stances, particularly in advanced economies. Fiscal deficits ballooned to levels never seen in peacetime in the US, the UK and the euro area. Though the fiscal cliff deal of January 2, 2013 could avert the immediate risks of a sharp fiscal contraction in the US, concerns about long-term debt sustainability remain. Going by the current fiscal developments in various economies,

<sup>3</sup> Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia

former US President Nixon's view of the return of Keynesian orthodoxy appears to be applicable, which could lead the conduct of monetary policy to be progressively driven by fiscal compulsions in the years ahead (Box II.1).

2.109 At present, the situation is under control, as financing these fiscal deficits has not been a problem so far. The extreme risk aversion in the wake of the crisis triggered a 'flight to safety' and a 'flight to liquidity', which, in turn, ensured that there was enough appetite for treasuries. Even so, yields on treasuries have started firming up in the recent

period, suggesting the return of some risk appetite. As central banks are showing extraordinary monetary accommodation by pumping in huge amounts of liquidity to support banks and financial institutions, the surplus liquidity conditions have helped governments to raise borrowings.

2.110 In fiscal-monetary co-ordination, 'arm's length' co-ordination has become the main co-ordination mechanism in recent times, overshadowing face-to-face discussion. If fiscal authorities have a sufficient understanding of the monetary policy reaction function, and the monetary

### Box II.1 Fiscal Concerns and Challenges for Monetary Policy

The recent global financial crisis had significant fiscal implications across advanced as well as emerging market economies. Although fiscal deterioration was a common feature in some of the advanced economies even before the crisis due to unfavourable demographic profiles and other domestic obligations, it was exacerbated during the crisis. The build-up of fiscal imbalances and debt during the crisis were largely due to automatic tax and spending policy responses to slow growth and countercyclical discretionary fiscal measures. As a result, fiscal imbalances and debt levels have surged sharply since 2008, particularly in advanced economies. For instance, in the US, the general government deficit as a ratio to potential GDP rose from 2.2 per cent in 2007 to 7.0 per cent in 2010, while government debt as a ratio to GDP increased from 43.9 per cent in 2007 to 94.4 per cent in 2010. According to the IMF, the government debt-GDP ratio is likely to remain higher than 100 per cent for the US in the medium-term. The case is similar for most other advanced economies. Based on a study of 18 OECD countries, Cecchetti *et al.* (2011) found that government debt beyond the threshold of around 85 per cent of GDP is not sustainable and may act as a drag on growth. Accordingly, the current level of fiscal imbalances and debt appear to be highly unsustainable compared to the pre-crisis situation. During the pre-crisis period, fiscal and debt sustainability was not much of an issue, as prevailing interest rates were lower than growth rates. However, this is unlikely to be the case in the period ahead as interest rates might rise while growth prospects remain subdued, particularly in advanced economies. Further, negative feedback of lower growth on fiscal consolidation is likely to aggravate fiscal imbalances.

In a highly unsustainable fiscal scenario in the post-crisis period, central banks face two types of challenges that can have implications for the conduct of their monetary policy. First, the balance sheets of central banks with government debt, particularly in the advanced economies, raises not only the issue of the credibility of monetary policy but also shows that they are exposed to market risks, *viz.*, interest rate risk and credit risk. These aspects can come into conflict with monetary policy going forward. Second, the fiscal and debt sustainability issues, particularly in the advanced economies, have critical implications for monetary policy, and the credibility of central banks is likely to be largely determined by nature of their co-ordination with fiscal authorities.

Although the expansion of central bank balance sheets proved more effective than conventional measures during the crisis, it should not be encouraged for a long time due to concerns relating to market risks, the moral hazard of further future support and possible crowding out of funding markets. In fact, balance sheet expansion to support a particular asset class is considered a fiscal measure undertaken by central banks. According to Plosser (2011), "once a central bank ventures into conducting fiscal policy, it may find itself under increasing pressure from the private sector, financial markets, or the government to use its balance sheet to substitute for other fiscal decisions. This pressure can threaten the central bank's independence in conducting monetary policy and thereby undermine monetary policy's effectiveness in achieving price stability". BIS (2011) also highlighted the risk that operations undertaken during a crisis could be perceived as intended

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to fund fiscal policy initiatives, thereby undermining central bank independence. Mohanty and Turner (2011), Gagnon and Hinterschweiger (2011) and Plosser (2011) highlight the possibility of monetisation of government debt as a policy of creating higher inflation to solve fiscal failures. In the post-crisis period, it would be appropriate that central banks should calibrate exit by withdrawing unconventional measures. In fact, the US Federal Reserve and the European Central Bank had indicated their intent to undertake exit strategies in late 2009 and early 2010. However, due to the deepening debt crisis in the euro area and the slowdown in economic conditions in the US, such strategies were put on hold. Given the current economic and financial conditions, the phasing out of central banks' balance sheet measures seems to be difficult. Further, central bank balance sheet policies by their nature are targeted at specific markets and there is a risk of distortion. Consequently, central banks can face difficult trade-offs between the costs of these distortions against attainment of their policy objectives. Holding of government bonds may not augur well for central banks in advanced economies as it can complicate their future relations with fiscal authorities and debt managers (Mohanty and Turner, 2011).

In addition to the expanded balance sheets posing a challenge for central banks through various risks, the lack of a credible long-term fiscal consolidation plan may put further pressure on the conduct of monetary policy. In the absence of credible fiscal plans, public debt may continue to rise due to ageing problems in advanced economies. As a result, there is a risk of increase in the interest rate. At the same time, ageing may reduce future growth, further undermining fiscal and debt sustainability. It calls for major policy changes in terms of spending and revenue levels in many advanced economies, in case they have to avoid an increase in their debt to unsustainable levels. While there may not be much scope for reduction in spending and tax increases due to subdued economic conditions, a credible plan for fiscal consolidation in the medium-term is necessary. Monetary policy can remain accommodative so long as inflation expectations are contained. Once the process of inflation expectation builds up, the central bank's policy focus may shift to tightening the monetary policy and, there could be a conflict of interest between the central bank and government.

Quantitative easing undertaken in recent years and expected high levels of market borrowing in advanced countries pose upside risks to inflation, which may call for higher policy rates. This, in turn, may lead to a high interest rate environment that may not bode well for advanced economies, which are already facing high debts and subdued growth conditions. Thus, fiscal policy and debt management decisions will play an increasingly important

role in formulating and implementing monetary policy. In this context, Cecchetti (2011) argues "*central bank operating procedures of the future will be more complicated, with more tools and more options. In addition, the interaction of monetary policy and sovereign debt management will be a major challenge for those operating procedures in the coming years. Central banks in economies with high debt burdens and those affected by the actions taken in economies with high debt burdens will therefore need to keep abreast of the activities of debt managers when implementing monetary policy.*" To address the challenges posed by debt overhangs and fiscal concerns, particularly of the public sector, for the credibility of central banks, the Committee on International Economic Policy and Reform (2011) has emphasised that a communication strategy needs to evolve that deals with concerns about the central bank's independence from the fiscal authorities.

Going forward, advanced economies should work out credible medium-term fiscal consolidation plans that ensure a balance between short-run growth fragility with fiscal sustainability, while monetary policy can support fiscal adjustment and remain accommodative till medium-term inflation expectations are well anchored. Central banks' interaction with fiscal authorities is likely to be critical not only from the perspective of smooth conduct of monetary policy to anchor inflation expectations but also from the perspective of financial stability. In the process of co-ordination with fiscal authorities, central bank autonomy should not be compromised and, therefore, it may require a well-specified framework. In short, the future credibility of monetary policy in advanced countries is contingent upon (i) how concerns with regard to already purchased government debt during a crisis are addressed and (ii) how future fiscal plans in advanced countries are chalked out, which should specify timeframes to reduce gross debt-to-GDP ratios to sustainable levels and fiscal policy measures adding to the medium-term growth potentials. For both these aspects, central banks, fiscal and debt authorities would need to follow a close co-ordination approach.

#### **Select References**

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Plosser, Charles I. (2011), "Some Observations on Fiscal Imbalances and Monetary Policy", The Philadelphia Fed Policy Forum on "Budgets on the Brink: Perspectives on Debt and Monetary Policy", Federal Reserve Bank of Philadelphia, December 2.

[For other references, see the complete list for Chapter 2 at the end of the report]

authorities of fiscal policy rules, then there is a scope for tacit negotiations without face-to-face engagements. Under extreme circumstances (as might be characterised by Sargent's "unpleasant monetarist arithmetic"), a switch to joint decision-making could prove necessary. The co-ordination of fiscal and monetary policies during the global financial crisis across the advanced economies reflected the criticality of joint actions for both these policies to stimulate aggregate demand. The consensus emerging from a long line of research is that separating monetary policy and fiscal policy overlooks policy interactions that are important for determining equilibrium (Davig and Leeper, 2009).

***Financial stability emerging as an important objective of public policy***

2.111 In the post-crisis period, financial stability has come to occupy centre stage in the hierarchy of economic policy objectives, particularly since a major lesson from the crisis is that financial stability can be jeopardised even in an environment of price stability and macroeconomic stability. The genesis of the global financial and economic crisis showed that extended periods of price stability and macroeconomic stability could blind policymakers to financial instability brewing in the underbelly. It has become evident that apart from co-ordinating on monetary and fiscal policies, the government and the central bank need to co-ordinate on financial sector issues as well. On the contrary, in the pre-crisis period, policymakers – the monetary authority and the government – did not always respond effectively in a co-ordinated manner to events unfolding in the financial sector, because financial stability was taken more or less as a subject in the domain of the central banks.

2.112 The lessons from the crisis have triggered a vigorous debate on whether financial stability should be made an explicit mandate of central banks. Prior to August 2007, most central banks had formally or informally included financial stability in their mandate along with the explicit mandate of setting the monetary policy. In the post-World War

II period, there was a debate about whether the central bank would be in charge of systemic financial stability, and, if not, how its relationship with the systemic regulator can be defined. An argument in favour of central banks being entrusted with this responsibility was that they were best suited to handle the financial stability objective since in many economies they were the banking sector regulators and played the role of lender-of-the-last-resort (LOLR). The crisis exposed some clear deficiencies and inconsistencies in regulatory systems across countries and clear conflicts of interests in financial regulation and supervision.

2.113 It is now increasingly recognised that regardless of the regulatory architecture, preserving financial stability requires coordination among regulators, and between regulators and governments. Across most jurisdictions, the post-crisis focus has been on shifting responsibilities and mandates among regulators. The Financial Stability Oversight Council that has been created in the US brings together various elements of the regulatory and supervisory framework of the Fed, the Banking Insurance Oversight, the Securities and Exchange Commissions, etc. Such a Systemic Risk Board has also been created in the euro area. In India, a Financial Stability and Development Council (FSDC) was set up in December 2010 with a view to establishing a body that would institutionalise and strengthen the mechanism for maintaining financial stability, financial sector development and inter-regulatory co-ordination. Such councils could handle the unique combination of responsibilities for macroprudential regulation and microprudential supervision, and make recommendations for heightened prudential standards for the safety of the financial system (Box II.2).

2.114 The creation of systemic risk boards also amounts to creating institutional arrangements for the task of macroprudential surveillance, so that central banks can focus on monetary policy-making. EMDEs, including India, have experimented with the deployment of macroprudential tools to supplement the interest rate policy and to preserve financial



## Box II.2 Financial Stability Arrangements in the Post-Crisis Period

A growing trend post-crisis across various countries has been towards carrying out major reforms in the governance arrangements for financial stability. In the US, the Dodd-Frank Wall Street Reform and Consumer Protection Act was implemented in July 2010. In the European Union (EU), the European Parliament adopted legislation in September 2010 with respect to new governance arrangements in both the micro- and macro-prudential spheres. France and Ireland also re-engineered their supervision arrangements in March and October 2010, respectively, and Mexico introduced a new inter-agency framework in July 2010.

In the US, the Dodd-Frank Act created the Financial Stability Oversight Council (FSOC) to be headed by the Treasury Secretary and comprises the heads of the central bank and all the regulatory agencies. The FSOC does not have rule-writing or enforcement authority, but has the powers to recommend, and in some cases require, action by member agencies. The Act entrusts the Fed with powers of supervision of not only all banks but also non-banks if they pose a threat to financial stability and to oversee the payment, clearing and settlement system.

In the EU, the new legislation seeks to strengthen the co-ordination for microprudential supervision, while retaining its national base. It also creates a centralised structure for macroprudential policy. With respect to microprudential policy, three new European Supervisory Authorities (ESAs) replaced the existing advisory committees, and a joint committee was created to promote co-operation among them. With respect to macroprudential supervision, the European Systemic Risk Board (ESRB) was created in May 2012 to contribute to the prevention or mitigation of systemic risks to stability that may arise from developments within the financial system and the macroeconomic framework more generally. The ESRB does not have direct authority over any policy instruments, but instead has the power to issue recommendations and risk warnings concerning systemic risks to the authorities that wield the relevant instruments. Such recommendations, which carry an “act or explain” obligation, could be made public under certain circumstances. The ESRB is chaired by the President of the ECB, membership comprises of central bank governors of the 27 member states, chairpersons of the three ESAs, and a representative from the European Commission (EC). The chairperson of the Economic and Financial Committee (EFC) representing the finance ministry participates as an observer.

With a view to safeguard EU financial stability, the European Financial Stability Facility (EFSF) was created on June 7, 2010 for providing financial assistance to member states. The European stability mechanism (ESM) was launched on October 8, 2012 as permanent firewall for the euro zone

with a maximum lending capacity of € 500 billion.

Europe took its first big step towards banking union on December 13, 2012, with the EU finance ministers agreeing to make the ECB their common bank supervisor. The ECB is expected to begin direct supervision of up to 200 euro area lenders from early 2014.

In the UK, a paradigm shift is underway in terms of the institutional arrangements for microprudential as well as macroprudential regulations. The government announced plans, which should be in place in 2012, to: (i) shift the responsibility for prudential oversight from the Financial Services Authority (FSA) to a new Prudential Regulation Authority (PRA) under the Bank of England; and (ii) set up a Financial Policy Committee (FPC) within the Bank of England to “monitor macro issues that may threaten economic and financial stability”. The Committee would comprise a representative of the Treasury, other regulators and external members appointed by the Treasury. The Treasury would, however, lead the co-ordination of actions in a crisis.

Among countries like France and Australia, the co-ordination of financial supervision has been entrusted with the Governor of the central bank. In India, the new Financial Stability and Development Council (FSDC) is headed by the Finance Minister.

At this stage, there is no clear vote for any particular model, but different institutional structures are being evolved for system-level supervision depending on country-specific circumstances. Nonetheless, a common stance emerging is that while financial sector regulators and the sovereign have a joint role in maintaining financial stability, from an effectiveness and accountability perspective and for preventing and managing a crisis, the executive responsibility for financial stability would have to fall upon a single entity. The central bank is best positioned to be that single entity with responsibilities for both systemic oversight and prudential regulation. Further, there would be institutionalisation of collegial arrangements involving the central bank, other regulators and the government, which would jointly have the primary responsibility for identifying threats to financial stability.

The possibility of institutionalising a global equivalent of systemic risk boards is being examined at international forum, but uncertainty remains about how to organise it. Quite clearly, this would require careful consideration of issues, that may exert conflicting pulls. In particular, there is the issue of balancing the interests of global stability and national sovereignty, particularly on practical considerations that require flexibility in the context of country-specific adaptations.

stability over the business cycle. In the pre-crisis phase, the exercise of macroprudential regulation was vested with the central bank. Considerable efforts are underway following the crisis on developing a macroprudential policy framework – its objective and scope, its sets of power and instruments, and their governance.

***Difficult policy trade-offs in meeting the short- to medium-run challenges of fiscal consolidation, financial restructuring and reviving growth***

2.115 The recent financial crisis has revived the debate on the relative effectiveness of monetary and fiscal policies. With interest rates approaching zero and constraining traditional monetary policy, fiscal policy was found to be potentially more effective in boosting economic activity than it usually would be. While the crisis saw the application of non-conventional instruments of monetary policy, the unprecedented ways of easing financial conditions have transformed central bank balance sheets, whereby risks on the financial system have been absorbed by central banks with potentially greater-than-usual fiscal ramifications.

2.116 Monetary policy faced a challenge even before the crisis, with interest rates ruling at low levels, but now when sovereign spreads are high, the ability of monetary policy to lower the rates paid by businesses and households is getting further limited. To the extent that high public debt increases uncertainty about future interest rates, fiscal-monetary feedbacks are likely to be stronger when public debt/GDP ratios rise. In such a situation, unconventional monetary policies appear to be a more feasible option. The success of such a strategy, nevertheless, would depend on how well the monetary policy and debt management policy are co-ordinated in practice (Mohanty and Turner, 2011).

2.117 The interaction between fiscal and monetary policies became evident during the sovereign debt crisis in Europe, marked by developments in Ireland, Portugal and Greece. Despite the considerable

policy efforts undertaken at the national and EU level, the crisis threatens not only global recovery, but also the very existence of the euro. Major policy packages have been announced through a series of rounds (May 2010, February 2011, July 21, 2011, October 26, 2011, December 9, 2011 and June 28-29, 2012). The crisis highlighted the importance of institutional arrangements for the conduct of monetary and fiscal policies. In monetary unions like the euro system, member countries pursue independent fiscal policies but do not have recourse to exchange rate or monetary policy levers to make the necessary adjustments. This underscores the importance of sound and credible fiscal policies by member countries to ensure the independence and credibility of their collective monetary policy.

2.118 In the absence of fiscal discipline across member countries, there is the threat of monetary policy becoming hostage to the fiscal excesses of individual members. The European Council meeting of December 9, 2011 paved the way for a fiscal stability union with a new fiscal rule at its heart. The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union – better known as the “fiscal compact” – that was signed on March 2, 2012 by the leaders of 25 EU member states, entered into force on January 1, 2013. Government budgets shall in future be balanced or in surplus, and they must also be in line with the country-specific medium-term budgetary objective, as defined in the EU’s SGP and this requirement will also be transposed into national legislation by January 1, 2014. In the event of deviation from the balanced budget rule, an automatic correction mechanism will be triggered. Further, in future all major economic policy reforms planned by euro area members will be jointly discussed and co-ordinated for convergence and competitive issues so as to establish benchmarks for best practice in the new euro area summits, that are planned twice a year prolonging European Council meetings. It is also proposed that surveillance should be strengthened over countries that receive financial assistance *via* the EFSF and ESM and of those at serious risk of

financial instability. The role of EFSF/ESM, along with ongoing work on a single supervisory mechanism, progress with the ratification of the Fiscal Compact, and further structural reforms in euro area member states, holds the key to the future of the euro area.

## V. Concluding Observations

2.119 The evolution of macroeconomic theory and progress of fiscal-monetary co-ordination across countries as analysed above suggests that the former, to a great extent, influenced the latter in practice. The evolution of macroeconomic theory underscored the need for co-ordination between both arms of economic policy to achieve macroeconomic objectives. However, the nature of the fiscal-monetary interface has evolved since the Great Depression through various phases, switching between extremes of fiscal dominance and monetary dominance. Regardless of the policy dominance regime, the literature points towards the need for co-ordination between the fiscal and monetary authorities. Illustratively, under fiscal dominance, monetary policy loses instrument independence to tackle inflationary pressures that may emerge from fiscal profligacy. On the other hand, even when central banks are not bound to monetise government deficits, the theoretical possibility of conflict of interest between the central bank and the government cannot be ruled out if deficit levels are set autonomously. The literature provides ample evidence that macroeconomic outcomes turned out to be better when both fiscal and monetary policies are co-ordinated.

2.120 The theoretical evolution of fiscal-monetary co-ordination provided valuable guidance for both advanced and emerging market economies to develop institutional arrangements between their central banks and governments in consonance with historical imperatives and country circumstances. The policy co-ordination mechanism improved during the 1990s amid an emphasis on price stability either explicitly in the UK, Japan and some other advanced countries or implicitly like in the US. However, the policy framework remained flexible to address short-

term output loss considerations. The formation of the EMU in 1999 brought forth new challenges in the form of co-ordinating a common monetary policy with decentralised fiscal policies pursued by national authorities. Even though fiscal-monetary co-ordination was emphasised statutorily under the SGP, experience shows that procedural mandates provided flexibility to member countries to pursue fiscal policies without strictly adhering to prescribed limits. The repercussions of fiscal profligacy during the pre-crisis period got magnified during the global financial crisis and led to unsustainable debt levels in some member countries of the euro area.

2.121 The experience of EMDEs shows that fiscal policies tend to be dominant, reflecting development concerns, while central banks lack autonomy compared with advanced economies. Country experiences have been divergent across EMDEs. The overall experience shows that the trend since the mid-1990s has been for a growing number of countries to adopt fiscal rules that place limits on deficits and/or debt and also prohibit primary financing of debt by the central banks. One of the broad outcomes of this effort has been that central banks found themselves relatively free to conduct independent monetary policy, not only free of fiscal compulsions but also in a predictable fiscal framework. The environment of price stability coupled with steady growth that characterised the Great Moderation came to be seen as a vindication of the merits of freeing monetary policy from fiscal dominance.

2.122 In the aftermath of the crisis, apprehensions about the fiscal dominance of monetary policy resurfaced. There are widely shared concerns about the extraordinary fiscal expansion necessitated by the crisis, and when and how long it will take to reverse that. But, by far the larger concern is not about the crisis-related cyclical deficits but about the structural fiscal deficits looming large in most advanced economies. Present estimates show that rich countries will see a rapid increase in their social security payment obligations because of ageing populations and shrinking workforces, and

that they will need to raise a significant amount of debt year-on-year to finance these commitments. In such a case, monetary independence would remain circumscribed by fiscal compulsions into the medium-term. There is wide consensus that public debt levels would have to be reduced to sustainable limits to facilitate the smooth conduct of monetary policy, particularly in advanced economies, *albeit* EMDEs also need to further enhance the resilience of their public debt portfolios in the wake of increasing global uncertainties.

2.123 In major advanced economies, monetary policy is constrained by the zero interest rate bound. The room for fiscal policy action has been largely exhausted. In view of the high output gap, high unemployment levels, weak sovereign balance sheets and still-moribund real estate markets in advanced economies, especially in certain euro

area economies, fiscal positions need to be placed on sustainable medium-term paths by adopting fiscal consolidation plans and entitlement reforms supported by stronger fiscal rules and institutions. The sovereign debt crisis and growth also feed on each other adversely raising the *growth versus austerity* debate. Policy action must involve both short-term as well as medium-term reforms to secure growth and debt sustainability. On the one hand, the worsening outlook for the economy is making the debt situation worse. Annual GDP in 2012 is forecast to contract by 0.4 per cent in the euro area, and continue to contract in 2013 by 0.2 per cent, while growth differences continue to persist. On the other hand, fiscal consolidation pressures are expected to lower short-term growth prospects. With pressure to consolidate, new sources of growth will need to be identified with a focus on structural reforms.