4 INTERNATIONAL RESPONSES TO THE CRISIS

4.1 The recent financial crisis has been very severe in terms of both intensity and depth, as reflected in the speed of transmission of its impact across nations and the extent of the global recession. In view of its wide-ranging impact as detailed in the previous chapter, the regulatory, supervisory, central banking and fiscal policy responses have been unprecedented in scale, while they were co-ordinated globally across various jurisdictions. Within a span of a year or so, forceful and co-ordinated policy actions were successful in averting a global financial collapse and since then, aided by a range of government programmes, financial conditions have improved considerably globally. However, even though the worst financial and economic outcomes were avoided, policymakers and academics are investing in the design of appropriate policies to reduce the probability and severity of any such future crises.

4.2 The recent financial crisis was characterised by the failure of the financial system to perform its core tasks of allocating savings, financing investments, pricing assets and transferring risk. It posed difficult challenges to policy-making in terms of assessment and the calibration of responses. Furthermore, in the light of high inter-connectedness among economies, the management of the crisis was found to be difficult at the domestic level, but even more complex at the global level. It was felt that policymakers should not react superficially to the manifestations of the crisis, but should have a longer-term view on how to prevent the recurrence of such incidents. Thus, after the emergence of the crisis, a well-sequenced policy response assumed utmost importance as that only could have restored normalcy at a faster pace. In the absence of a well-orchestrated policy response, the process of recovery could have been prolonged, causing widespread economic distress.

4.3 Financial crises rarely replicate past patterns. However, the lessons from crises over the years and the wisdom from each successive crisis have given some foresight about managing an emerging crisis. The experience of the recent crisis has, to a large extent, challenged established premises of stable macroeconomic conditions under low inflation and relatively higher growth. Moreover, policy recommendations were bound to be vastly different even for seemingly related problems in different countries. There were several forces at work, both long-term and short-term, which created policy dilemmas.

4.4 In the case of the recent financial crisis, it was observed that just as with the unfolding of the crisis, its resolution has also displayed some distinguishing features *vis-à-vis* previous such episodes. The previous episodes had occurred without credit default swaps, special investment vehicles or even credit ratings. The present crisis brought to light severe problems in the financial system. It is unique in the speed at which its economic impact was transmitted across countries due to the increased interconnectedness of the world economy.

4.5 Another distinguishing feature of the recent financial crisis is that, despite being global in nature, there appears to be a clear divide between the advanced countries and the emerging market economies (EMEs) in terms of impact and policy responses. For advanced countries, the policy priority was to strengthen financial regulation and supervision. In the EMEs, dealing with the collapse of trade and the outflow of capital occupied policy attention. In this context, it may be mentioned that in the aftermath of the East Asian crisis, the policy prescription for many EMEs was to initiate measures to curb liquidity which led to decline in economic growth. In contrast, in the recent crisis, rate cuts and enhancement of liquidity were recommended to invigorate growth in the advanced economies. Moreover, for the first time, EMEs have been invited to participate in the endeavour to find

meaningful solutions to a global problem. The crisis has, thus, highlighted the prominent role of EMEs and brought them to the centre stage of the world economic forum. The increasing engagement of G20 is a case in point.

4.6 In this chapter, the measures taken by the international community during the recent financial crisis are discussed from the perspective of conventional crisis management strategies. Section I provides the policy responses to financial crisis in a historical perspective. The monetary policy responses are documented in Section II. The fiscal policy responses to support the financial sector and its active adoption as counter-cyclical measures are dealt with in Sections III and IV, respectively. Section V brings out the issues on fiscal monetary co-ordination. The responses from multilateral institutions are presented in Section VI. Section VII deals with the actions being taken relating to financial sector policies to reduce the chance of the recurrence of a financial crisis of such a magnitude. The final section provides the concluding remarks in terms of emerging policy challenges on the way forward.

I. POLICY RESPONSES DURING FINANCIAL CRISES : HISTORICAL PERSPECTIVE

4.7 As discussed in Chapter 2, there have been several banking and financial crises in the past. The frequency of such crises compelled policymakers and academics to think about the broad lessons that emerged from previous crisis resolution mechanisms to contain the crisis and prevent a recurrence.

4.8 In responding to financial crisis, the capitalist view talks of 'no management', while the pragmatic approach involves a host of miscellaneous devices. According to the capitalist view, in the formative stage the market is rational. Therefore, deflation and bankruptcy correct the mistakes of the boom on their own. These 'leave it alone liquidationists' view that the government must keep its hands off and let the slump liquidate itself (Hoover, 1952). However, in reality, financial crises are never left alone. The authorities as well as individuals try to bring about orderly conditions in the market using some instruments or the other. The theoretical position that a crisis can take care of itself is difficult to hold in practice as nobody has the patience to let the panic bottom out naturally. The authorities, in fact, act in the same direction, *i.e.*, intervene through one or more means to halt the spread of bankruptcies and falling demand.

4.9 When the first signs of crisis appear, authorities try to douse it through immediate and temporary measures. For example, in the case of a bank run, banks may try to buy time in paying their depositors in hopes that something might turn up in the intervening period. This may prove to be a more pragmatic approach than a complete shutdown of the market, which may add to the panic. In such a case, a preferred option could be to declare a legal holiday or a moratorium, which also cannot be of a long duration. Another device is designing a *circuit-breaker* (when the daily price-change limit is reached, the market is automatically closed) for the scrip of the beleaguered bank. These are, however, more in the nature of immediate and temporary measures to be taken when the first signs of a crisis have come to notice. But once the crisis becomes full blown, a more comprehensive and holistic policy is needed. Crisis resolution policies have been classified into three categories: through financial instruments such as direct transfer to banks to address the immediate problems, operational instruments, which focus on improving governance, bank efficiency and profitability, and structural instruments that address underlying problems and focus on restoring competition and stability (Dziobek, 1998).

4.10 Traditionally, the policy response to financial crisis has followed a two-step approach. In the first stage, traditional monetary policy instruments such as policy rate cuts are combined with injection of liquidity and *ad hoc* interventions or rescues of individual institutions. In the second stage, if the measures taken in the first stage fail in shoring up the confidence in the market fail, a comprehensive policy response in the form of a rescue plan is implemented (Furceri and

Mourougane, 2009a). Crisis management strategies in previous episodes have usually covered three main elements: (i) guaranteeing liabilities; (ii) recapitalising the affected institutions; and (iii) separating out the bad assets. Recapitalisation of banks usually through programmes with conditionality, blanket guarantees, regulatory forbearance, and setting up of bank restructuring agencies and asset management companies have been features of crisis management strategies (Laeven and Valencia, 2008).

4.11 The successive crises have also supported the wisdom of a lender of last resort (LOLR) rather than relying completely on the competitive forces of the market. Whether the LOLR is able to shorten the business depression that follows the financial crisis has been tested several times. During the crises of 1873, 1890, 1921 and 1929, the effective presence of an LOLR was lacking. Therefore, the depressions that followed them were much longer and deeper than the others – those of 1870s and 1930s were both known as the Great Depression. However, even in cases where the LOLR was opted for, it was extremely difficult to judge the effectiveness of the tool in reducing the severity of the depression that followed the crisis (Kindleberger, 2000). The wider claim made for the LOLR functions is that they make it possible to avoid a financial crisis altogether. This is illustrated by the experience of Britain after 1866 and in the US after 1929. The crises were less frequent and less terrifying with the institution of LOLR. A group of distinguished economists in the 1930s supported the view that the existence of an LOLR could calm anxieties when overtrading occurred (Box IV.1).

Box IV.1
Lender of Last Resort

The recent financial crisis has raised serious questions about the role of a lender of last resort (LOLR) and the appropriate role of monetary policy. Academicians and policymakers have debated the extent to which central banks should intervene in the marketplace, provide liquidity and even purchase the non-performing assets of troubled financial institutions. In fact, the recent events have provided added impetus for central banks around the world to revisit the adequacy of their LOLR facilities.

US history provides some insight into the importance of an LOLR in dealing with a financial crisis, especially the provision of liquidity by financial institutions to help cash-strapped firms in the short run. Following the panic of 1907, which was accompanied by one of the shortest but most severe financial crises in American history, the US Congress passed important pieces of legislation that established a lender of last resort: (i) the Aldrich Vreeland Act of 1908, which allowed banks to temporarily increase the money supply during a financial crisis; and (ii) the Federal Reserve Act of 1913, which replaced the Aldrich-Vreeland Act and established a public central bank in the US (Moen and Tallman, 2000).

The legislations were designed to increase the elasticity of the money supply, which was largely fixed by the supply of gold and the requirement that banks could only issue notes, if they were sufficiently backed by US government bonds. The money supply was especially inelastic during the fall harvest seasons when the financial markets tended to be illiquid as cash moved from the central banks to the interior to finance the harvesting of crops. The financial stringency made the New York financial market vulnerable to banking and financial crises in the fall season because financial institutions were often forced to call in stock market loans in response to large unexpected withdrawals of cash, if there was a better-than-expected harvest. Indeed, several of the largest financial crises of the National Banking Period (1870-1913) occurred during the fall harvest season including the 1870, 1890, 1893, and 1907 crises (Kemmerer, 1910; Miron, 1986; Sprague, 1910).

Some studies show that an LOLR reduces financial volatility. First, financial crises can have large economic effects. Second, the provision of liquidity by an LOLR can help contain the spread of a financial crisis that can have significant macroeconomic effects. Third, the reduction in uncertainty associated with an LOLR is likely to increase investment and shorten the duration of recessions. Fourth, though some studies provide insight into the importance of containing a liquidity crisis, they have nothing much to say about the role of an LOLR when the solvency of financial institutions is uncertain (Asaf *et al.,* 2008).

In line with the Bagehot tradition of a central bank acting as LOLR, central banks should readily provide liquidity access but at penal interest rates and against a good

(Contd...)

(...Concld.)

collateral. Central banks as a LOLR may choose to lend to an institution facing short-term funding problems, particularly if the institution concerned is systemically important. In this context, several issues come to the fore. The first is the assessment of the solvency of the institution, as, in practice, such assessments are often difficult, particularly during crisis conditions. The second issue is the ability of the central bank to assess the quality of collateral that is being offered. Such collateral may not be liquid and the central bank is likely to be exposed to credit risk. Third, there is the problem of the timing of the disclosure of such assistance. Fourth, a loan of last resort is likely to end up simply bridging finance, while a takeover or major restructure of the institution is being organised. Fifth, there is a need for an adequate range of tools to ensure an orderly resolution of the failing institution, *i.e.,* the ability of the authorities to take control of all or part of a failing bank, to arrange for appropriate restructuring and to provide appropriate financial support. Finally, when the need for support arises, arrangements need to be already in place, which could include the government, the central bank or the insurer provider covering depositors. It is also important to have in place the right legal and institutional structure to facilitate swift payout of depositors' claims (G-20 Study Group).

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4.12 There are several lessons that emerge from past crises:

(i) Successful policy response to crisis requires working with market participants' incentives. For instance, the establishment of the Reconstruction Finance Corporation in 1932 in the US to provide financial aid to financial institutions, business corporations, state and public works and agriculture was important in resolving the crisis. The case was similar with the Punto Final Debt Relief Programme (1998) in Mexico that targeted mortgage holders, agri-business and SMEs.

(ii) The choice of instruments depends upon the legal, regulatory, political institutions and the economic structure. In this context, any weaknesses in the regulatory, supervisory and accounting frameworks need to be addressed on a priority basis.

(iii) Identification of the causes and magnitude of the crisis and prompt action to address them need to be initiated (Calomiris *et al.*, 2005; OECD, 2002).

(iv) Well-designed policies with clarity and transparency over the restructuring programmes may speed up the resolution process and lower both the costs and future risks. The policy measures have to be comprehensive and credible, and capable of addressing the immediate financial problems of weak and insolvent financial institutions and structural weaknesses, while avoiding the problems of moral hazard.

(v) Capitalisation of banks, though an important element for successful crisis resolutions, should be limited to under-capitalised but viable institutions.

(vi) Blanket guarantees, while necessary in the case of widespread distress, should avoid moral hazard and excessive risk-taking by troubled institutions. And for them to be credible, they should only be provided when the government has the ability to pay (Furceri and Mourougane, 2009b).

(vii) The crisis resolution mechanism that Finland, Norway and Sweden used to deal with their banking crises in the late 1980s and early 1990s indicated that the nature and size of the banking problems should be recognised early. The necessary policy intervention should

follow promptly to avoid hidden deterioration in underlying asset quality, which could enhance the costs of the resolution.

(viii) Delays in adjustment to macroeconomic imbalances resulting from financial crisis could substantially increase the cost of the crisis, and hurt the poor particularly. This was exemplified by the experience of Peru in the 1980s (Lustig, 2000).

(ix) The policy intervention should be in-depth and broad-ranging. After taking the measures needed to stabilise the situation, the authorities should ensure that losses are booked, bad assets are disposed of, the system is recapitalised and any excess capacity is removed (BIS 2009).

4.13 Major lessons emerging with respect to fiscal policy responses during financial crises are:

(i) Fiscal policy aimed at resolving the financial crisis directly had been more successful than a policy aimed at stimulating growth. In other words, successful resolution of a financial crisis had been a precondition for achieving sustained growth, implying that solving the problems of financial instability should precede the solution of the macroeconomic crisis. This was evident from the responses to the Japanese and Korean financial crisis in 1997. The Japanese government initially responded to the crisis through a large fiscal stimulus package to boost the economy without much action to resolve the banking problems. The economy did not respond to the fiscal stimulus and continued to reel under recession. Later, when large funds were provided to support the troubled banks and were accompanied by further stimulus packages, economic growth rebounded. In contrast, the fiscal response of the Korean government was focused on improving the balance sheet of the financial and corporate sectors. Few efforts were made to directly support aggregate demand. The Korean economy recovered much faster than that of the Japanese economy.

(ii) When the financial crisis spills over to the corporate and household sectors, fiscal stimulus has been effective. It has been argued that the economic downturn during the Great Depression was prolonged due to lack of sufficient fiscal stimuli. Even though government expenditures were increased to boost aggregate demand during the 1930s in the US, they were accompanied by sharp increases in tax rates (Brown, 1956). By the time public spending in the US was raised substantially in the early 1940s for war-related purposes, the economy had already recovered through the operation of strong self-corrective forces (Bernanke and Parkinson, 1989).

(iii) Delays and allocating insufficient funds to resolve financial sector problems can substantially increase the fiscal cost of the crisis. This was evident from the Savings and Loan (S&L) crisis in the US of the 1980s and the 1990s. A large part of gross fiscal cost estimated at about 3.3 per cent of GDP could have been avoided with early recognition and response to the crisis.

(iv) The effect of fiscal response on aggregate demand can be increased if specific features of the crisis are properly accounted in the response. The Nordic crisis of the early 1990s warranted preventing the spillovers of weaker economic activity into financial markets. Thus, tax and transfer policies implemented in the early part of the crisis could not stimulate aggregate demand (Spilimbergo, *et al.,* 2008).

4.14 The recent global crisis matches that of the Great Depression in several respects. The US economy was at the epicentre of the worldwide financial contraction during both the crises. Liquidity and funding problems played a key role in the financial sector transmission in both episodes. However, the policy responses have not been the same. During the Great Depression, counter-cyclical policy responses were virtually absent with the exception of the sterling block. In contrast, in the recent crisis, there was a strong and swift recourse to macroeconomic and financial sector policy support (Box IV.2).

Box IV.2
Policy Response during the Great Depression and the Recent Crisis

The recent crisis led to the most serious recession since the Great Depression. There were similarities between the two crises such as the fact that both started in the financial sector and spread more broadly to the real sector. In both the cases, financial institutions either defaulted or had to be bailed out. Both crises originated with the bursting of a bubble, bank credit dried up, and policy rates became ineffective due to a lower zero bound. And both the crises started in the US and subsequently spread to other countries (Cukierman, 2009).

Today, there is consensus on three broad lessons that were learnt from the Great Depression, *viz.*, a) the collapse of the financial system could have been averted, if the central bank had realised its function as the LOLR for the short-term stabilisation of the financial system; b) deflation played an important role in deepening the crisis. Hence, setting a target of zero inflation for central banks may be dangerous; and c) the gold standard as a method for supporting the fixed exchange rate system was disastrous (Cecchetti, 1997). The lessons for the construction of financial institutions involve putting in place a system of deposit insurance and regulatory structures to assure that market participants receive adequate information about the riskiness of different financial instruments.

The Great Depression started prior to the Keynesian revolution. Since then, Keynesian policy prescriptions have been tried, criticised and synthesised into more practical models of thinking and policymaking. As a result, today's world is better informed about the potential salutary impact of expansionary monetary policies. There were substantial differences in terms of policy responses and policy-making institutions during the Great Depression and the recent crisis. First, the monetary policy response during the recent crisis was much swifter and more vigorous than that during the first three years of the Great Depression. Second, during the first three years of the Great Depression, the Fed tolerated and even reinforced a substantial shrinkage in the money supply; instead of pumping liquidity into the financial system, it often withdrew funds from problematic banks in default to shield its balance sheet from further losses (Friedman and Schwartz, 1963). Conversely, during the recent episode, there was massive injection of liquidity into the system. Third, there was no banking deposit insurance at the time of the Great Depression while, as the recent crisis intensified, the ceiling on the insured amount was raised. Had deposit insurance existed during the 1930-1933 period, many of the banking failures experienced at that time and associated monetary disruptions might have been averted. There were also no bank capital requirements during that time as is the case now (Cukierman, 2009). Fourth, during the Great Depression due to the disappearance of a large number of banks, there was destruction of banking 'informational capital' about the creditworthiness of potential borrowers, causing serious and protracted declines in the supply of credit by banks. Acknowledging the role that investment banks had played in the Great Depression, the passage of the Glass-Steagall Act in 1933 (repealed later in 1999) separated investment banking and commercial banking to insure that investment bank speculation would not again destabilise commercial banks as it had during the Great Depression, leading to the loss of America's savings. In contrast, during the recent crisis, the authorities either took over insolvent financial institutions themselves or arranged their takeover by other institutions. As a result, the associated adverse impact on the flow of credit was small. However, there was destruction of such capital due to the lack of transparency induced by the complicated structure of mortgage-backed securities and other collateralised debt obligations. Finally, the Great Depression was characterised by beggar-thy-neighbour policies; the Smoot-Hawley Tariff Act of June 1930 raised US tariffs to historically high levels and other countries retaliated by similar actions and competitive devaluations, leading to large-scale contraction in international trade. Owing to the adverse consequences of such policies, trading partners did not engage in such actions during the recent crisis, barring sporadic attempts to impose tariffs on select goods by some countries reportedly on the consideration of quality and health standards as well as for safety and security reasons. In fact, there appeared to be better co-ordination between countries in terms of various policy actions.

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4.15 It is thus evident that financial crises have never been left alone to correct on their own. Policies have responded in one way or the other to contain them. Not all the crises have been of the same type. Therefore, policy responses have not been exactly the same even if the problems appears to be similar. However, the experiences have shown the virtue of having a lender of last resort in crisis resolution. Early recognition of the problem, identification of the causes and magnitude of the

crisis, and prompt action have been crucial for the successful resolution of a crisis. Further, monetary policy has not only been at the core of policy responses but has, more often than not, been the first line of action in the strategy of crisis resolution.

4.16 In the recent crisis, reacting to funding problems and incipient runs, the first round of responses to the current financial crisis came mostly from central banks and regulatory authorities. The objective was to restore the confidence of the public in the financial system and thereby create a base for the stability of the financial system. However, as the impact of the crisis began to reflect on global growth, another round of responses – including fiscal, monetary and regulatory policies – were felt necessary to break the vicious circle of recession translating into credit losses and further impacting the banking industry. To address the twin problems of financial crisis and fall in aggregate demand – both feeding on to each other – it was increasingly viewed that the policy packages should have two components. One component aimed at bringing the financial system back to health and the other at reviving aggregate demand, keeping in view the obvious interactions and synergies between the two. International co-operation in responding to the crisis has been at an unprecedented level. Governments and central banks have been remarkably flexible in recognising that a hasty response in some countries had the risk of increasing moral hazard in others, while, on the other hand, a delay by some countries in joining the others bore dangers of diluting the impact of the response. The following sections of the chapter discuss the monetary, fiscal and regulatory responses and international co-ordination in initiating these responses.

II. MONETARY POLICY RESPONSES

4.17 As the pressure on financial markets mounted with the credit spreads widening to record levels and equity prices crashing to historic lows leading to widespread volatility across the market spectrum, the turmoil transcended from credit and money markets to other segments of the global financial markets. The contagion also spilled over to emerging markets. Amidst this global environment, the central banks in several countries embarked upon an unprecedented wave of both conventional and unconventional policy measures to contain systemic risk, shore up confidence in the banking system and arrest economic slowdown. Liquidity pressures were the primary focus of policymakers in the early stages of the crisis starting in August 2007. Central banks realised at an early stage that they needed to act, and act quickly given the sudden and rapid rise in the market's demand for liquid funds, for which they are ultimately the only source of supply.

4.18 Monetary policy responses, which began in terms of policy rate cuts by individual central banks, became more co-ordinated afterwards. This was reflected in the provision of cross-border liquidity through swap arrangements by major central banks as well as several rounds of policy rate cuts. Dealing with the solvency risks being faced by systemically important institutions together with funding liquidity pressures in interbank markets became important for policymakers. Central banks initially focused on their own markets. But given the effects on cross-border confidence as well as the need for foreign currency liquidity in many markets, they rapidly developed a number of channels of co-operation. These included co-ordinated policy announcements and foreign currency swap lines.

4.19 With the gradual unfolding of the crisis, while the advanced economies co-ordinated their efforts in the same direction, the response in many EMEs was in sharp contrast. Initially, many EMEs raised policy rates to counter threats mainly emanating from their respective domestic economies. However, following the failure of Lehman Brothers in September 2008 and the worsening of the crisis, EMEs also reduced their policy interest rates.

Monetary Policy Response during the Recent Crisis

4.20 Traditionally, under normal circumstances, central banks focus on maintaining price stability,

by smoothing output in a manner consistent with price stability. In some cases, they also intervene to reduce volatility in foreign exchange markets. During the recent financial market turmoil, however, systemic financial stress greatly impeded the monetary transmission. This led to a significant easing of the monetary policy stance with respect to the macroeconomic objectives of price stability and output, and brought financial stability to the forefront. The change in priorities has been manifested in more than one way. The choice of market for policy responses has been atypical and in some cases unprecedented, which rendered recent central bank actions "unconventional" (Disyatat, 2009). Depending upon the policy objective and the key instruments of implementation, the various responses can be segregated into conventional and unconventional measures (Table 4.1).

Advanced Economies

4.21 The monetary policy responses in the wake of the recent global financial market turmoil can be divided into three categories according to their proximate objectives. In the first category are measures that aim to ensure that the market rate is consistent with the policy rate. The second involves initiatives to alleviate strains in the wholesale

Table 4.1: Typology of Conventional and Unconventional Measures of Central Banks

	Measures	Rationale	Instruments
1	2	3	4
I	**Conventional**		
1.	Open market operations (OMOs) and standing facilities (SFs)	To achieve nominal anchor	Repos, lending and issuance of central bank bills.
2 .	Open market foreign exchange operations	To achieve nominal anchor or smooth exchange rates	Cash, swaps, derivatives.
3.	Direct instruments	To complement OMOs and SFs	Reserve requirements and credit ceilings.
4.	LOLR to institutions and markets	To ease financial conditions or market liquidity stress	Discretionary lending.
II	**Unconventional**		
A.	*Liquidity Easing Measures*		
1.	Direct instruments in money markets	To improve monetary transmission and restore market stability	Reserve requirements and regulatory liquidity ratios.
2.	Systemic domestic liquidity arrangements	To enhance monetary transmission and restore market stability	Unlimited domestic liquidity provision, broadening the list of counterparties and easing collateral requirements.
3.	Securities liquidity provision	To improve monetary transmission and restore market stability	Exchange of illiquid for liquid securities.
B.	*Credit Easing Measures*	To enhance monetary transmission and restore credit market functioning	Purchase of targeted private securities, direct credit provision, provision of liquidity to investors in targeted securities.
C.	*Quantitative Easing Measures*	To enable monetary transmission when the policy rate approaches the zero lower bound	Unsterilised outright purchase of government securities and foreign exchange.
D.	*Foreign Exchange Easing Measures*		
1.	Foreign exchange liquidity injection	To ease foreign exchange liquidity pressures	Unlimited liquidity provision, broadening of collateral and counterparties.
2.	Cross-central bank currency swap arrangements	To support national banks' foreign exchange operations	Swaps.

interbank markets. The third consists of responses aimed at supporting specific credit markets, particularly the non-bank segments, and easing financial conditions more broadly (BIS, 2009).

Policy Rate Easing

4.22 Monetary policies in response to the drying up of global liquidity were extremely responsive and co-operative. On October 8, 2008, six major central banks undertook the first-ever round of co-ordinated action in policy rate cuts. Similar swift action followed from other central banks as well. By the end of May 2009, the Federal Reserve, the Bank of Japan, the Bank of England, the Bank of Canada and the Swiss National Bank had brought policy rates close to zero. Between September 2008 and March 2009, the Federal Reserve cut its policy rates by 200 basis points, the Bank of England by 450 basis points and the ECB by 275 basis points. Thus, the softening of interest rates was broad-based and across the spectrum (Table 4.2).

4.23 Not all central banks had room to lower policy rates. A run on the currency forced the central banks of Hungary, Iceland and Russia to tighten policy in late 2008, despite declining inflation and slowing real activity. However, they also began reducing policy rates gradually over the course of the following months.

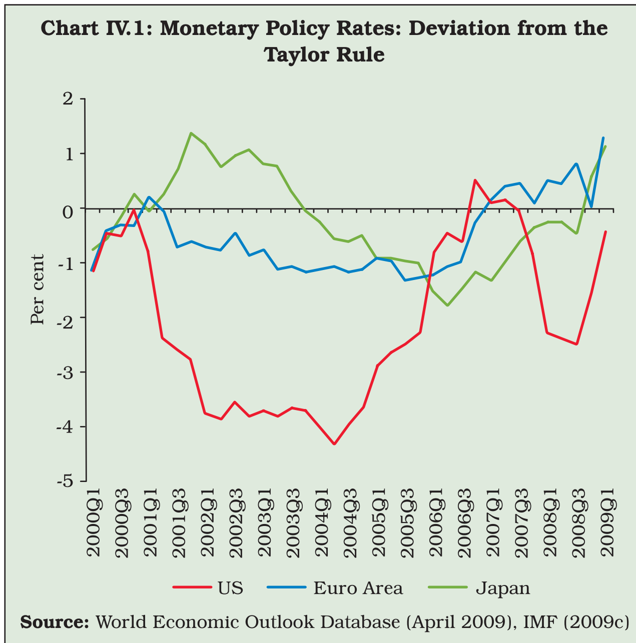
4.24 Among the first category of measures was anchoring short-term rates to the policy target. The Bank of England and the Federal Reserve reduced the width of the effective corridor on overnight rates by changing the rates applied on end-of-day standing facilities. Concomitantly, central banks were required to re-absorb excess reserves to sterilise the impact on overnight interest rates of the much-expanded operations. This was implemented in a number of ways. The Bank of England, the Swiss National Bank and Riksbank began to issue central bank bills. The ECB and the Reserve Bank of Australia relied increasingly on accepting interest-bearing deposits. The Federal Reserve accepted large amounts of deposits from the Treasury and began to pay interest on reserves.

4.25 Notwithstanding the swift and sizeable easing in policy rates, the limitations of interest rate as a policy instrument came to surface in many countries. With persisting strains in the financial markets and the rise in credit and liquidity risk premia, the transmission mechanism was greatly hampered. Illustratively, despite sharp declines in policy rates and yields on government bonds, yields on corporate bonds increased. Though banks generally passed reductions in their funding costs on to their customers, they tightened credit standards substantially, offsetting the impact of rate cuts on overall financial conditions. As policy rates reached historically low levels in many advanced economies, the zero lower bound became a binding constraint, making it impossible to follow policy rules that called for negative nominal interest rates in view of widening output gaps and falling inflation rates (BIS, 2009) (Chart IV.1).

Table 4.2: Policy Rate Cuts in Advanced Countries

Country/ Region	Key Policy Rate	Policy Rate (as on July 9, 2009)		Change in Policy Rates (basis points)		
				Sept 08- Jul 09	Apr 09- Aug 09	Sept 09- Apr 10
1	2	3	4	5		
Australia	Cash Rate	3.00	(Apr. 8, 2009)	(-) 400	(-) 25	125
Canada	Overnight Rate	0.25	(Apr. 21, 2009)	(-) 250	(-) 25	0
Euro area	Interest Rate on Main Refinancing Operations	1.00	(May 13, 2009)	(-) 275	(-) 50	0
Japan	Uncollateralised Overnight Call Rate	0.10	(Dec. 19, 2008)	(-) 40	0	0
UK	Official Bank Rate	0.50	(Mar. 5, 2009)	(-) 450	0	0
US	Federal Funds Rate	0.00 to 0.25	(Dec. 16, 2008)	(-) 200	0	0

Source: International Monetary Fund and websites of respective central banks.



Source: World Economic Outlook Database (April 2009), IMF (2009c)

Liquidity Easing Measures

4.26 Amidst this complex and challenging environment, central banks were forced to look beyond the interest rate channel and explore all possible ways to restore the functioning of the credit markets and ease financial conditions. Thus, the second group of measures was undertaken. These measures focused on reducing term interbank market spreads, seen as an indicator of tensions in the key market segment. This was circumvented in two ways. The first was by directly providing more term funding to offset some of the shortfall in market supply. The second method was by indirectly addressing impediments to the smooth distribution of reserves in the system and ensuring access to funding from the central bank (Table 4.3).

4.27 Many advanced country central banks extended conventional liquidity easing measures such as easing the terms and availability of existing central bank facilities like standing lending windows. Second, the access to central bank lending was enhanced thereafter by extending the tenor of financing and widening the range of counterparty financial institutions. Third, several central banks introduced or eased conditions for lending highly liquid securities – typically sovereign bonds – against less liquid market securities in order to improve funding conditions in the money market.

Table 4.3: Select Recent Central Bank Measures

Category	Objective	No.	Measure adopted	FED	ECB	BoE	BoJ	BoC	RBA	SNB
1	2	3	4	5	6	7	8	9	10	11
I	Achieve the official stance of Monetary Policy	A.	Exceptional fine-tuning operations.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		B.	Change in reserve requirements			Yes				
		C.	Narrower corridor on overnight rate	Yes	Yes	Yes				
		D.	Payment of interest on reserves	Yes			Yes			
		E.	Increased treasury deposit	Yes				Yes		
		F.	Short-term deposit or central bank bill		Yes	Yes	Yes		Yes	Yes
II	Influence wholesale inter-bank market conditions	A.	Modification of discount window facility.	Yes		Yes				
		B.	Exceptional long-term operations	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		C.	Broadening of eligible collateral	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		D.	Broadening of eligible counterparties	Yes		Yes	Yes	Yes	Yes	
		E.	Inter-central bank FX swap lines	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		F.	Introducing or easing conditions for securities lending	Yes		Yes	Yes	Yes		
III	Influence credit market and broader financial conditions	A.	CP funding/purchase/collateral eligibility	Yes		Yes	Yes	Yes	Yes	
		B.	ABS funding/ purchase/collateral eligibility	Yes	Yes	Yes			Yes	
		C.	Corporate bond funding/purchase/collateral eligibility			Yes	Yes	Yes		
		D.	Purchase of public sector securities	Yes		Yes	Yes			
		E.	Purchase of other non-public sector Securities				Yes			Yes

Blank Space: No

Note : FED: Federal Reserve; ECB: European Central Bank; BOE: Bank of England; BOJ: Bank of Japan; BOC: Bank of Canada; RBA: Reserve Bank of Australia; SNB: Swiss National Bank.

Source : Adapted from BIS Annual Report, 2008-09.

Fourth, stipulations on the provision of reserves were eased substantially by expanding the list of eligible collateral and counterparty coverage, and lengthening the maturity of refinancing operations. For instance, in the US, collateral normally available only at the discount window was made available for open market operations. In the UK, additional securities, including some well-rated asset-backed securities and covered bonds were accepted in the three-month repo operation. Fifth, several central banks also undertook foreign exchange swaps or loans with other central banks to alleviate severe shortages of foreign exchange.

4.28 Though these liquidity-easing measures were mostly in line with the standard central bank LOLR function, their range and magnitude were well above traditional levels. Major central banks provided enhanced term funding to a wider range of institutions and against wider collateral than in the past. In some cases, they stepped in to provide direct lending to distressed institutions and took other exceptional measures to improve funding conditions in credit markets. In the United States, the Federal Reserve lengthened the maturity of its refinancing operations. In addition, an increasing share of the latter was lent to primary dealers against a wide range of less liquid securities to help improve their balance sheets *via* the Fed's Term Securities Lending Facility. Similarly, the Bank of England (BoE) allowed banks to swap less liquid securities against more liquid ones under its Special Liquidity Scheme. The BoE, the ECB and the Swiss National Bank (SNB) substituted longer-term open market operations (OMOs) for shorter-term operations. More auctions were also conducted at a fixed rate with full allotment. The maximum amounts of dollar swap lines and related dollar liquidity-providing transactions was significantly increased and subsequently made unlimited.

Inter-Central Bank Swap Lines and Collateralised Lending

4.29 The shortage of US dollars led to the Federal Reserve using inter-central bank swap lines. With the intensification and spread of US dollar shortages in mid-September 2008, swap lines with the Federal Reserve grew in number, time zone and geographical coverage and size. The range of US dollar distribution operations on offer at partner central banks also broadened. From mainly longer-term (one- and three-month) offers, it was expanded to include one-week and, for a period, overnight offers as well and, from mainly repos and collateralised loans, FX swaps were also included (BIS, 2008).

Credit and Quantitative Easing Measures

4.30 As the crisis deepened and the interest rate channel became ineffective, the central banks in these countries were forced to go for quantitative easing. This response was focused directly on alleviating tightening credit conditions in the non-bank sector and easing broader financial conditions. There have been two approaches to this quantitative easing. In the first approach, funds were provided to non-banking institutions to improve liquidity and reduce risk spreads in specific markets, such as commercial paper, asset-backed securities and corporate bonds. Public sector securities were directly purchased in order to influence benchmark yields more generally. In the second approach, central banks purchased government or government-guaranteed securities from banks or other institutions in order to ease liquidity conditions. The relative emphasis given to private versus public sector securities and bank versus non-bank markets differed across countries. The quantitative easing involving government securities tended to be more important in bank-centred systems (Japan and the United Kingdom). Credit easing with private securities generally played a larger role in market-centred systems (the United States) (BIS, 2009).

4.31 The Federal Reserve focused heavily on non-bank credit markets as well as on operations involving private sector securities such as the Commercial Paper Funding Facility and the Term Asset-Backed Securities Loan Facility. The Bank of England, on the other hand, initially concentrated

its Asset Purchase Facility primarily on purchases of government bonds. The ECB focused on banking system liquidity by conducting fixed rate full-allotment refinancing operations with maturities of up to 12 months and by purchasing covered bonds. In the case of Bank of Japan, substantial efforts were directed at improving funding conditions for firms through various measures pertaining to commercial paper and corporate bonds. The usage levels of various unconventional central bank market operations can be seen from Table 4.4.

Table 4.4: Major Crisis Interventions Introduced by Central Banks

	Central Bank Interventions	Maximum Amount	Amount used as at end-June 2009
1	2	3	4
I.	**US Federal Reserve** (in billion US dollars)		
	1. *Short-term liquidity provision*		
	TAF	**	282
	CPFF	***	114
	2. *Long-term liquidity provision*		
	TALF	1,000	25
	3. *Outright purchases of assets*		
	Agency mortgage-backed securities	1,250	462
	Agency debt	200	97
	Treasury securities	300	184
II	**Bank of England** (in billion pounds)		
	1. *Outright purchases of assets*		
	Asset Purchase Facility#	175	105
III.	**European Central Bank** (in billion euros)		
	1. *Short-term liquidity provisions*		
	Long-term refinance operations@	Unlimited	728
	2. *Outright purchases of assets*		
	Covered Bonds	60	0
IV.	**Bank of Japan** (in billion yen)		
	1. *Short-term liquidity provisions*		
	SFSOFCF^	Unlimited	7,467
	2. *Outright purchases of assets*		
	Commercial Paper	3,000	197
	Corporate Bonds	1,000	174

Note: TAF =Term Auction Facility; CPFF = Commercial Paper Funding Facility; TALF = Term Asset-Backed Securities Loan Facility; SFSOFCF = Special Funds-Supplying Operations to Facilitate Corporate Financing.

** : The amount is determined at each auction.

*** : There is a limit per issuer.

: Purchasing commercial paper, corporate bonds, and gilts.

@ : Providing liquidity at a fixed rate, full allotment basis up to one year.

^ : Providing liquidity against collateral of private credit instruments at a fixed rate, allotment basis up to 3 months.

Source: Global Financial Stability Report, October, 2009.

4.32 In a few cases, central banks directly provided financing to corporate borrowers. Central banks generally pre-announced upper limits on credit-easing facilities rather than target levels, and these upper limits were themselves adjusted in line with changing conditions. As these measures involved an important quasi-fiscal element, they were normally carried out in close co-ordination with the government. Irrespective of the approach adopted, the quantitative easing led to manifold expansion in the balance sheets of central banks (Box IV.3).

Emerging Market Economies

4.33 Prior to September 2008, emerging market economies (EMEs) were grappling with capital inflows and inflationary pressures and were tightening liquidity conditions by actually raising policy rates. As the financial crisis engulfed the EMEs, central banks in these countries embarked on both conventional and unconventional measures in response to the sudden tightening of global liquidity conditions. EMEs undertook several liquidity-easing and foreign exchange measures, although their use of credit easing and quantitative easing has been more limited (Table 4.5).

4.34 As exchange rates in these economies came under pressure with the intensification of stress in the global dollar markets and net capital inflows began to reverse, they initiated foreign exchange liquidity easing measures. It was only at the beginning of November 2008 that policy interest rates were reduced in many EMEs, indicating that conventional domestic monetary policy easing lagged behind unconventional measures (Ishi, *et al.,* 2009). Central banks in many EMEs resorted to liquidity injections and frequent cuts in policy rates, *albeit*, from a much higher level (Chart IV.2).

Domestic Liquidity Augmenting Measures in EMEs

4.35 Central banks in several EMEs resorted to cuts in reserve requirement ratios, the introduction of reserve averaging and hikes in exemption thresholds with a view to ease domestic liquidity shortages. Most of them also eased the terms of

Box IV.3
Quantitative Easing and Central Bank Balance Sheets

Quantitative easing expands the central bank balance sheets, leading to expansion in reserve money. The assets of the Fed and the BoE more than doubled in a matter of weeks, while those of the ECB and the SNB increased by more than 30 per cent. In the Fed's case, this reflected direct lending to banks and dealers through existing and new lending facilities. It included providing indirect lending to money market funds and purchasing commercial paper through special purpose vehicles, and drawings by foreign central banks on dollar swap lines. In Europe, there was also some increase, *albeit*, moderately in the use of central banks' standing facilities. Most of the growth of central banks' balance sheets reflected higher net amounts of domestic and dollar liquidity-providing OMOs, representing mostly term funding. These aggressive unconventional measures, such as quantitative easing, resulted in expansion in the reserve money and the size of the central bank balance sheets in advanced countries (Chart A).

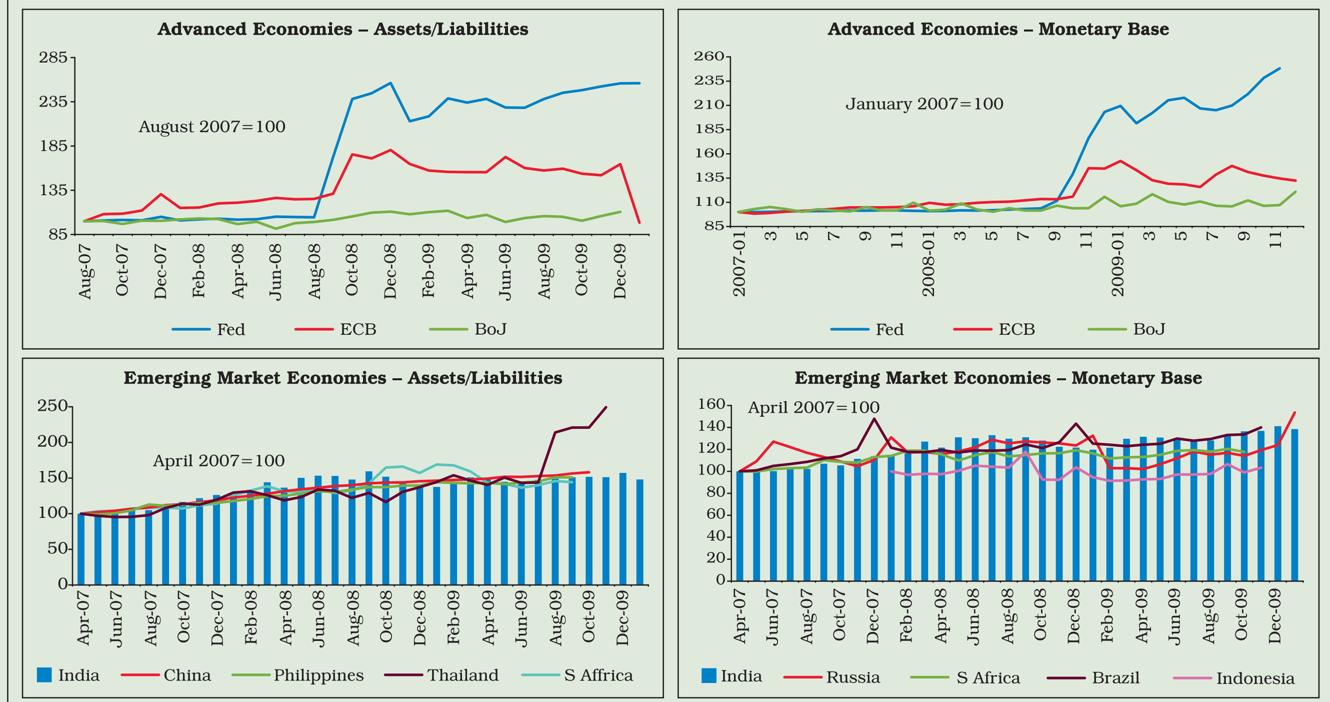
Beginning in September 2008, many emerging market countries began to take measures to ease foreign exchange and domestic currency liquidity conditions, but unconventional measures have not played as important a role for them as in advanced countries. The liquidity-easing measures reinforced in some cases by foreign exchange liquidity provided by reserve currency central banks seemed to have had some success in alleviating short-term liquidity pressures. However, the size of emerging market country central bank balance sheets did not expand by the same magnitude as those of their advanced country counterparts (GFSR October, 2009). The size of central bank balance sheets in EMEs increased by much less due to the near absence of quantitative and credit-easing measures and the rundown in international reserves in many cases (Ishi, *et al.,* 2009).

It also reflects large cuts in cash reserve ratio (CRR) in EMEs such as India and China. Reduction in CRR leads to more liquidity with banks, even as it shows up as a reduction in the size of the central banks' balance sheet and reserve money.

Implications of the Changes in Central Bank Balance Sheets

There could be several implications of the recent changes in the central bank balance sheets. First, with the change in composition, the risk profile of central bank balance sheets underwent a change. The central banks' purchase of assets such as mortgage-backed securities and commercial paper increased their credit and valuation risks. Broadening the set of eligible securities that central banks accept as collateral for extending credit through new facilities and also

Chart A: Size of Central Bank Balance Sheets



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the number of eligible counterparties raised the counterparty credit risk. Second, the income position of central banks also underwent a change. While low returns on central bank assets relating to bank notes and reserves reduced the revenue, liquidity injections increased the amount of reserves over which interest is received, thereby increasing central bank profits. Third, going forward, an exit strategy may require phased reduction in reserves as abrupt unwinding of reserves could disrupt financial markets. Concomitantly, if inflation expectations firm up, central banks may need to increase the remuneration rate they pay on excess reserves as a means to ensure the targeted policy rate. This, in turn, would entail additional cost for central banks; though to some extent this would be offset by the extra income resulting from expanded balance sheets, they face substantial income risk (GFSR, October 2009).

References

1. Ishi, Kotaro, Mark Stone, and Etienne B. Yehoue. 2009. "Unconventional Central Bank Measures for Emerging Economies". *IMF Working Paper* WP/09/226.

2. Global Financial Stability Report. October 2009.

existing standing and market-based liquidity providing facilities, *viz.,* extension of maturities, easing the collateral requirements, and increasing the frequency of auctions. Several central banks provided domestic liquidity to targeted institutions for on-lending to market entities (Table 4.6).

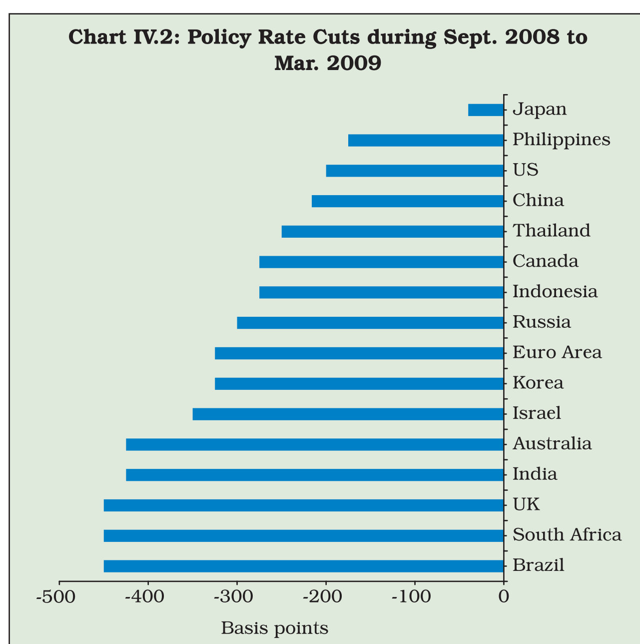
4.36 Central banks in EMEs eased the terms of existing foreign exchange facilities, *i.e.,* extending maturities and broadening the collateral. They also put in place new foreign exchange facilities, such as dollar repo and swap facilities. The list of counterparties was widened to include non-banking

Table 4.5: Select Unconventional Measures by EME Central Banks

Type	Country	Measure
1	2	3
I. Domestic Liquidity Easing		
1. Direct money market instruments	China Hungary Nigeria	Reduction in reserve requirements
2. Systemic domestic liquidity arrangements	Philippines	Expansion in the eligible collateral for standing repo facility to include foreign currency-denominated sovereign debt securities.
	Israel	Central bank's announcement to transact OMOs with government debt of different types and maturities.
	Chile	Broadening the list of eligible collateral for monetary operations to include commercial papers.
II. Foreign Exchange Easing		
1. *Foreign Exchange Liquidity Injection*	Brazil	Central bank's announcement to sell 1-month dollar liquidity lines.
	Philippines	Central bank's approval to open dollar repo facility.
	Turkey	Introduction of daily dollar selling auctions.
	Indonesia	Reduction in the foreign exchange reserve requirement for commercial banks.
	Serbia	Reduction in the required reserves against foreign assets.
2. *Cross-Central Bank Currency Swap Arrangements*	Brazil Mexico Korea Singapore	Temporary reciprocal swap lines with the Federal Reserve, Banco Central de Brazil, Banco de Mexico, Bank of Korea and the Monetary Authority of Singapore.
III. Credit and Quantitative Easing		
	Korea	Announcement of central bank financing (up to a limit) to a bond fund to purchase commercial papers.
	Israel	Central bank announcement to purchase government bonds.

Adapted from Ishi *et al.* (2009).

Chart IV.2: Policy Rate Cuts during Sept. 2008 to Mar. 2009



financial institutions and key non-financial institutions (*e.g.* exporters or energy importers). Foreign exchange liquidity limits were also relaxed, covering removal of ceilings on bank purchases of offshore foreign exchange and easing of capital inflow limits. In addition, some central banks lowered the required reserve ratio for bank foreign currency liabilities and shifted the currency structure of required reserves away from foreign exchange. In order to ease foreign exchange liquidity conditions, central banks in countries like Brazil, Korea, Mexico and Singapore had dollar swap arrangements with the Federal Reserve.

Table 4.6: Measures Implemented in Select EMEs (September 2008 - May 2009)

Country	Liquidity Easing Measures	Foreign Exchange Easing Measures	
		Foreign Exchange liquidity injections	Cross-central bank currency swap
1	2	3	4
Brazil	12	9	2
Mexico	1	1	2
China	4	1	
Hong Kong SAR	3	1	1
India	5	7	1
Indonesia	11	4	
Korea	5	4	5
Malaysia	3	–	–
Philippines	3	4	–
Singapore	–	–	2

Source: Ishi *et al.,* (2009).

4.37 Most major emerging market central banks conducted outright sales of foreign exchange reserves to help meet the local market's demand for foreign currency funding and to relieve pressure on the exchange rate. In addition, some central banks sought to offer foreign exchange reserves to counterparties under repurchase agreements (Brazil and the Philippines). Some central banks announced modifications (widening of counterparty eligibility, extension of term) to their existing FX swap facilities to make the distribution of foreign currency more efficient and flexible (Korea and Indonesia). Others set up new swap facilities (Brazil, Chile and Poland) or announced their readiness to conduct swaps with counterparties as needed (Hong Kong SAR) (BIS, 2008).

Credit and Quantitative Easing Measures

4.38 In respect of EMEs, the use of credit and quantitative easing measures has been limited. Illustratively, the Bank of Korea purchased corporate debt and commercial paper, while the Bank of Israel undertook quantitative easing during March and August 2009.

4.39 While both developed economies and EMEs resorted to unconventional monetary measures, there were differences in terms of their timing, types and magnitudes. (i) In the advanced economies, the switchover was from conventional monetary tools to unconventional measures due to policy rates reaching zero or nearing zero. In contrast, in many EMEs, unconventional foreign exchange easing measures such as currency swap preceded domestic liquidity-easing measures due to the sudden tightening of global liquidity. Thereafter, the conventional measures of loosening policy rates followed. (ii) To ease liquidity, central banks in EMEs relied mostly on direct instruments such as reserve requirements. Advanced countries, on the other hand, resorted to measures such as widening the availability of counterparties and extending the

maturity of liquidity providing operations. Central banks in advanced countries also eased liquidity through securities liquidity provision, *i.e.*, swap of illiquid private sector securities on their books for liquid government securities held by counterparties. Central banks in EMEs hardly resorted to this securities liquidity provision measure. Furthermore, the central banks in advanced countries extensively used credit and quantitative easing measures, while they were barely used in the EMEs. (iii) In view of the extensive use of credit and quantitative easing, the enlargement in the balance sheet of central banks in the advanced countries was far greater than those of the EMEs (Ishi *et al.,* 2009).

Policy Effectiveness

4.40 The list of monetary policy instruments available to central banks to stimulate the economy when official rates are close to or at zero has been fairly wide. They are: (i) "quantitative easing" policy, *i.e.*, expanding the money base beyond what is strictly needed to keep the official rates at zero. This has been aimed at reducing liquidity risks and provide incentives for financial intermediaries to expand their credit; (ii) measures to reduce longer-term interest rates through direct purchase of long-term government securities and/or carefully designed communication to influence market expectations; and (iii) the purchase of a wide range of private assets, from securities to equity.

4.41 On the whole, such interventions by central banks on a massive and unconventional scale helped ease severe liquidity strains leading to tangible improvements in a number of key markets. They not only lowered interest rates on default-free securities, but also helped lower credit spreads.

4.42 According to the IMF's Global Financial Stability Report (October, 2009):

(i) The announcement of interest rate cuts proved effective, although only on a few occasions, in terms of reduction (statistically significant) in the economic stress index (ESI). In general, low policy rates translated into low funding costs to financial institutions that required additional liquidity (Table 4.7).

Table 4.7: Effectiveness of Crisis Interventions

Index/ Indicator	Economic Stress Index		Financial Stress Index	
	Interest rate cuts	Liquidity Support	Interest rate cuts	Liquidity Support
1	2	3	4	5
Period I: Pre-Lehman (June 1, 2007 to September 14, 2008)				
US	x	√	x	x
UK	√	√	x	√
Euro Area	–	x	–	x
Japan	–	–	–	–
Sweden	–	√	–	x
Switzerland	–	x	–	x
Period II: Global Crisis 1 (September 15, 2008 to December 31, 2008)				
US	x	x	√	x
UK	x	x	x	x
Euro Area	x	x	√	√
Japan	x	x	√	√
Sweden	–	x	–	x
Switzerland	√	x	√	x
Period III: Global Crisis 2 (January 1, 2009 to June 30, 2009)				
US	x	√	x	x
UK	x	–	x	–
Euro Area	x	x	√	x
Japan	–	√	–	√
Sweden	–	x	–	x
Switzerland	√	x	√	x

√ : denotes a statistically significant intervention at the 10 per cent level.

X : denotes statistically insignificant

– : denotes that there were fewer than two policy events during the given sub-period.

The statistical significance of the short-term impact of intervention announcements is tested as follows: (1) interest rate cuts on the economic stress index; (2) liquidity support on the three-month LIBOR-overnight index swap (OIS) spread; and (3-5) financial sector interventions on credit default swap spreads of local banks, weighted by the size of total assets.

Source: Global Financial Stability Report October, 2009.

(ii) Even though most countries undertook liquidity support measures, their announcement effect was primarily effective during the initial phase of the crisis in terms of reducing the LIBOR-OIS swap spreads. The effectiveness of liquidity injections was moderated in the later stage of the crisis as credit risk rather than liquidity risk became the main concern.

(iii) The long-term effects of various interventions on the LIBOR-OIS spreads, however, showed improvement. As at end-June 2009, spread levels declined between 53 to 90 per cent from the respective peaks in various countries (Table 4.8).

(iv) In the United States, the immediate positive market response to liquidity support schemes, such as the Term Auction Facility (TAF) and Commercial Paper Funding Facility (CPFF), revealed that there was a persistent decline in LIBOR-OIS spreads from late 2008.

(v) The assessment of the impact on the financial stress index revealed that announcements of monetary easing were more effective in reducing financial stress than economic stress.

4.43 Some of the early credit easing measures helped alleviate pressures in commercial paper, mortgage, and corporate bond markets. Many market participants reported that the extended swap facilities improved term funding conditions. Indeed, actual usage peaked in late October 2008 and gradually declined thereafter, with some central banks never actually having drawn on the swap lines. Foreign exchange swap market deviations declined in particular in EUR/USD and CHF/USD, and overall LIBOR-OIS spreads narrowed. While many other policy actions were taken at the same time, some of this improvement was due to the introduction of central bank swap lines.

Table 4.8: 3-Month LIBOR-Overnight Index Swap Spread: Declines from Peak

Item	US	UK	Euro Area	Japan	Sweden	Switzer-land
1	2	3	4	5	6	7
LIBOR-OIS peak level (in basis points)*	361	244	199	80	155	159
LIBOR-OIS spread decline as on June 30, 2009 (in basis points)	-324	-166	-149	-43	-112	-127
In per cent of peak level	-90	-68	-75	-53	-72	-80
In standard deviations from peak level**	-1.5	-1.8	-2.0	-3.4	-1.8	-0.5

* : The peaks of the LIBOR-OIS are specific to each country or region: Euro area (10/13/2008), Japan (12/18/2008), Sweden (11/27/2008), Switzerland (11/12/2008), the United Kingdom (12/4/2008), and the United States (10/10/2008).

** : The decline of the LIBOR-OIS spread series relative to their peak levels is expressed in terms of standard deviations from the median change in each sub-period weighted by the number of days in that sub-period (pre-Lehman, global crisis 1, and global crisis 2). Using such a standardised measure of changes in LIBOR-OIS spreads allows better comparability across sample countries (and helps quantify relative policy effectiveness over the longer term by allowing the different sub-periods to reflect the different lengths of periods).

Source: Global Financial Stability Report October, 2009.

4.44 Gauging the effectiveness of unconventional measures is difficult as its transmission to the economy is complex and opaque. The success of most unconventional measures hinges not just on the design and magnitude of the measures, but also on the willingness and ability of creditors to lend and of borrowers to borrow. Further, unconventional measures overlap; for example, a liquidity-easing measure aimed at a particular class of financial institutions may, if unsterilised, lead to an increase in reserve money.

4.45 The effectiveness of central bank actions in attenuating the impact of the crisis and restoring the functioning of markets, however, depends on the extent to which they have a catalytic effect on private sector intermediation. Thus, the ultimate success of central bank interventions depends on the appropriate design and forceful implementation of policies that directly address the fundamental weaknesses in bank balance sheets.

Risks and Challenges

4.46 The unconventional measures of liquidity, credit and quantitative easing entail several challenges and risks (IMF, 2009).

(i) Unconventional measures may inadvertently allocate credit to inefficient markets at the expense of efficient markets, constraining financial sector restructuring in the short run, and impairing future economic growth.

(ii) The gradual replacement of high-quality and liquid assets with illiquid claims on central bank balance sheets reduces operational flexibility and thereby may constrain future monetary management.

(iii) The quasi-fiscal nature of some unconventional measures blurs the distinction between monetary and fiscal policies and, together with pressure to continue to provide financing, could potentially compromise central bank independence.

(iv) The inflation potential of expanding reserve money amidst announcements of unconventional measures by central banks may destabilise inflation expectations.

(v) Though these unconventional monetary policy instruments may be effective in boosting the economy, when price stability is at stake, they have their limits because of their broader implications.

- First, as the effects of such policies are not well-known, the conduct of monetary policy is bound to be surrounded by much more uncertainty than is normally the case. For instance, it is unclear how far long-term rates, and in particular the risk premia embedded in those rates, can be brought down by liquidity injections in a situation of widespread uncertainty about economic prospects. Thus, well-designed communication by central banks may be crucial.
- Second, liquidity injections need not be greatly effective when financial intermediaries continue to remain unhealthy.
- Third, there could be a risk of introducing distortions in financial prices without a careful design of the measures.
- Fourth, unconventional measures may have a more direct redistributive impact on specific sectors of the economy or categories in society than normal monetary policy actions. This implies a high degree of common understanding and co-operation between fiscal and monetary authorities, as part of a clear definition of respective responsibilities and fields of action.

4.47 Some of these risks could be reduced through transparency and effective communication. For the same, central banks and fiscal agents engaging in quasi-fiscal measures should publicly explain the objectives, expected effects, and potential fiscal implications of unconventional policy tools. Careful statement of central bank views on the macroeconomic outlook would also facilitate the eventual resumption of positive policy interest rates and absorption of liquidity (IMF, 2009).

4.48 To sum up, the monetary policy response to the crisis began with the conventional measure of easing policy rates in advanced countries. This was increasingly carried out in a co-ordinated manner among the major central banks as the crisis deepened. But the persistence of financial strains even after the policy rate was brought down to zero or near-zero levels led to unleashing of a number of unconventional measures on a scale hitherto unseen. In the EMEs, however, unconventional measures of providing foreign exchange preceded the conventional policy rate cuts, as the liquidity constraints first surfaced in the foreign exchange market. Other unconventional measures have been used sparingly or on a much lower scale. As a result, central bank balance sheets in the advanced economies swelled much more than in the EMEs. This could pose several policy challenges and risks in the future. Yet, central bank actions across countries managed to address the immediate funding needs of the banks and restore some normalcy. However, the monetary policy measures could not stop solvency concerns of some systemically important financial institutions. This led to severe market dislocation with adverse implications on the real sector. Thus, governments were compelled to take several actions to prevent the collapse by extending large-scale fiscal support to financial institutions.

III. FISCAL SUPPORT TO THE FINANCIAL SECTOR

4.49 The present global crisis, as in the past, has been characterised by the twin problems of financial instability and fall in aggregate demand feeding into each other. Thus, the fiscal policy response has consisted of two components with obvious

synergies between them. The first component has been the crisis management strategy directed at bringing the financial system back to health. The strategy has involved providing direct financial support and/or deposit insurance/guarantee to troubled financial institutions in order to make them solvent and stabilise the financial system. The second step has been to activate discretionary fiscal measures to support aggregate demand in order to contain economic slowdown, which is dealt with in the next section.

4.50 The need for fiscal support to financial institutions was much larger in advanced countries than in the EMEs. In the advanced countries, it was initially the financial sector crisis which led to a sharp slowdown of the real sector that, in turn, fed back into the financial sector. Given the severity of the financial crisis, it was found insufficient for the central banks alone to provide the necessary support to the financial sector. In the emerging market economies, the transmission of the crisis was primarily from the real sector to the financial sector. The economic slowdown in the advanced countries adversely impacted exports of goods and services and the aggregate demand. This fed back into the financial sector. The problem was compounded by a sharp fall in capital inflows or increase in outflows due to sell-offs in the equity markets of EMEs by foreign investors. Capital flows also reversed in search of safety or to redress the financial solvency problems faced by parent companies in the advanced countries. Thus, the focus of fiscal policy was weighed towards counter-cyclical measures to stimulate aggregate demand rather than providing financial support to the troubled financial institutions.

4.51 Fiscal support to the financial sector included a combination of up-front government support by way of capital injection and purchase of assets and lending by the treasury, and providing guarantees for bank deposits, interbank loans and bonds. Capital injections were made to directly address the solvency problem. Assets purchases were aimed at repairing impaired assets. Treasury lending to financial institutions was to ensure that these institutions were not starved of funds. Guarantees on deposit and debt were provided with the intention of providing assurance to depositors and lenders.

Direct Financial Support

4.52 The programmes initiated in the US, UK, Switzerland and other European countries to address bank illiquidity and insolvency involved a combination of sales of distressed and illiquid assets and equity injections by the government. Equity injections, mainly through the issue of preferential shares, were increasingly preferred. However, government exit plans have been defined in only a handful of the programmes. Participation in these programmes involved conditions on management compensation and profit distribution. Some countries like the UK and the Netherlands have also introduced special governance arrangements including board representation, while others like the US intended to remain passive investors. This reflected different responses to the dilemma of penalising existing shareholders and management *versus* avoiding political interference in bank operations.

4.53 Most large-scale bank restructuring programmes included two major components: asset sales/bank recapitalisation; and the resolution of problem assets. However, different countries have adopted different approaches for resolving problem assets. In some countries the government carved out the bad loans from balance sheets, but they signed a management contract with the originating banks to recover the loans. Other countries have adopted decentralised good bank/bad bank approaches, which typically entail the transfer of bad assets to bank subsidiaries. In other countries, the resolution of problem assets has been handled by a central agency. This agency typically pools all the individual loans by type of debt, borrower, and sector, and re-sells them (or the underlying collateral) to investors.

4.54 The attempt to recapitalise UK and US banks through publicly acquired preference shares could not address the problem entirely. The banks have merely used these infused funds to hold on

to their toxic assets. Thus, to restore them to health, it was considered necessary to remove the toxic assets from the balance sheets of the concerned banks. The plans proposed to deal with the toxic assets either involved partially nationalising the banks, or keeping them private but nationalising their toxic assets in a public 'bad' bank. In the US, the Obama administration's plan to rid banks of their 'toxic' assets was announced on March 23, 2009. The Obama plan envisaged the establishment of a public-private partnership to acquire loans and securities from banks through a 'Legacy Loans Program' and 'Legacy Securities Program'. In the first, pools of loans were to be auctioned to private investors who would be provided with financing from the Federal Deposit Insurance Corporation (FDIC) to acquire the loans. Both government and the private sector had to contribute to the initial capital. If and when the loans are recovered or sold off, the government would get a share of the profits. The 'Legacy Securities Program' was similar. The objective was to enable banks to dispose of their illiquid mortgage-backed securities to the new special purpose entity. The entity will be funded by the Fed under its existing Term Asset-backed Securities Loan Program.

Guarantees

4.55 The US, European and other developed country governments have provided extensive assurances to bank depositors and creditors. In a few cases, these were extended to non-bank financial institutions such as mutual funds. The move was prompted by systemic stability and, in a few cases, out of competitive concerns. Some of these arrangements include blanket guarantees on deposits and guarantees on new debt issues. The scale of these arrangements had no historic parallel and constituted a paradigm shift.

4.56 Expansion of deposit insurance beyond normal limits, or the use of a blanket guarantee in extreme conditions, could only be undertaken as a temporary and emergency measure. And they were carried out in a co-ordinated fashion across countries. This was followed by a similar announcement in several jurisdictions to guarantee bank deposits. The objective was to counteract the impact of the international market turmoil on their banking systems and remove any uncertainty on the part of counterparties and customers of the credit institutions. The announcement of government guarantees for bank deposits in a few jurisdictions set off dynamics that put pressure on other jurisdictions to respond. Otherwise, there was a risk of disadvantaging and potentially weakening their own financial institutions and financial sectors. Some developed countries announced that the guarantees on new debt issues would be extended for 18-36 months. Some emerging countries have matched these arrangements in order to prevent capital outflows or a shift of deposits to state-owned banks, which are perceived to be safer (Box IV.4).

Box IV.4
Measures Relating to Deposit Guarantee

To assuage the excessive reactions to the recent financial crisis, some countries announced guarantees for bank deposits for a short period and earmarked funds for the purpose. Even though the banking system continued to be sound and resilient, some governments decided to take precautionary action to avoid an erosion of banks' deposit base and ensure a level international playing field for banks in their jurisdiction.

The US

On October 3, 2008, the Congress temporarily increased FDIC deposit insurance from $100,000 to $250,000 per depositor up to December 31, 2009. With effect from October 14, 2008, all non-interest bearing transaction deposit accounts at an FDIC-insured institution, including all personal and business checking deposit accounts that do not earn interest, have been fully insured for the entire amount in the deposit account. This unlimited insurance coverage is temporary and will remain in effect for participating institutions until December 31, 2009.

In addition to the actions announced by the Treasury and the Fed, the FDIC announced on October 14, 2008, a new Temporary Liquidity Guarantee Program to unlock inter-bank credit markets and restore rationality to credit spread.

(Contd....)

(...Concld.)

Europe

The UK: With effect from October 7, 2008, the Financial Services Authority (FSA) of the UK increased the compensation limit on deposits with failed banks, building societies and credit unions from £35,000 to a total of £50,000 per depositor under the Financial Services Compensation Scheme (FSCS). Customers with joint accounts will be eligible to claim up to £100,000 between them.

Denmark: The Danish Financial Supervisory Authority guaranteed all bank deposits with effect from October 6, 2008, as part of a deal with banks to set up a 3.5 billion DKK Liquidation Fund. Earlier the guarantee cover was available up to 300,000 DKK per depositor, net of all loans and other liabilities to the bank.

Germany: On October 6, 2008, the German government offered a blanket guarantee for bank deposits, which would cover some Euro 568 billion (US$ 785 billion) in savings and checking accounts as well as time deposits, or CDs. Prior to this, the compensation scheme of German banks covered 90 per cent of the outstanding deposits and was limited to Euro 20,000 per depositor.

Ireland: The government of Ireland decided to put in place a guarantee arrangement to safeguard all deposits (retail, commercial, institutional and interbank), covered bonds, senior debt and dated subordinated debt (lower Tier II) with six banks and such specific subsidiaries as may be approved by the government. The guarantee was provided at a charge to the institutions concerned and will be subject to specific terms and conditions so that the taxpayers' interests can be protected. The guarantee will cover all existing aforementioned facilities with these institutions and any new such facilities issued from midnight on September 29, 2008 and will expire at midnight on September 28, 2010.

Austria: Austria's parliament approved a Euro100 billion (US$ 196.8 billion) bailout plan on September 20, 2008 to stabilise the country's banking sector. The package, *inter alia*, includes unlimited protection to individuals' bank deposits until December 31, 2009. After that, the state guarantee will be available only up to Euro 100,000 per account. Bank deposits for business account holders will be guaranteed up to Euro 50,000. Before the law was passed, Euro 20,000 per individual/ business account was protected.

Sweden: The Swedish government announced on October 6, 2008 that it will raise the limit for deposit insurance to 500,000 Kroner (US$ 71,000). Sweden previously had deposit insurance for savings of up to 250,000 Kroner.

Greece: A bill to parliament was submitted on October 6, 2008 to raise the legal limit of deposit insurance to Euro 100,000 from the existing Euro 20,000. The guarantee is proposed to be in force for the next three years.

Euro Zone: The minimum deposit insurance provided by euro area members under Euro laws was revised upward from Euro 20,000 to Euro 50,000 on October 7, 2008. Co-insurance has been abandoned and the member countries in the Euro Zone have taken/are taking action accordingly.

Asia

Indonesia: The government increased the deposit insurance cover to Indonesian Rupiah two billion.

Malaysia: On October 30, 2008, a blanket government guarantee was extended through the Philippine Deposit Insurance Corporation (PDIC) on all ringgit and foreign currency deposits with commercial, Islamic and investment banks, and deposit-taking development financial institutions regulated by Bank Negara Malaysia, until December 2010. The guarantee extends to all domestic and locally incorporated foreign banking institutions; and access to Bank Negara Malaysia's liquidity facility will be extended to insurance companies and *takaful* operators regulated and supervised by the Bank.

Singapore: The Singapore government extended guarantee to all Singapore Dollar and foreign currency deposits of individual and non-bank customers in banks, finance companies and merchant banks licensed by the Monetary Authority of Singapore (MAS) until December 31, 2010. All depositors, big and small, corporates and individuals, including those under the current Deposit Insurance Scheme administered by the Singapore Deposit Insurance Corporation would enjoy protection from the government on the full amount of their deposits for the duration of the guarantee. The government guarantee would also be extended to deposits placed with credit co-operatives registered with the Registry of Co-operative Societies. The guarantee will be backed by S$ 150 billion of the reserves of the Singapore government.

Hong Kong: The Hong Kong Monetary Authority (HKMA) on October 14, 2008 issued a blanket guarantee for customer deposits and offered to re-capitalise its banks. The guarantee would be backed by the Exchange Fund of HKMA.

Others

Australia: On October 12, 2008, the Australian government announced a blanket guarantee for all bank deposits, covering around A$ 700 billion. Following wide criticism and withdrawal of funds from cash management trusts and mortgage funds, the government has considered modifying the scheme. It considered providing a limit for the government guarantee and stipulating an "insurance" premium for large depositors to qualify for the full guarantee.

New Zealand: The government initially announced a blanket guarantee for bank deposits under the "Crown Retail Deposit Guarantee Scheme" but this was revised on October 22, 2008. A cap of A$ 1 million per depositor per guaranteed institution has been fixed, which will be extended for two years.

Source: Websites of respective central banks.

4.57 In most of the leading economies, in order to further raise the level of confidence in the financial system, the above-mentioned rescue packages were accompanied by statements that the government would not allow systematically important institutions to fail. Further, in Denmark, the Netherlands, the UK and the US, the governments either nationalised or acquired a majority stake in some of the insolvent financial institutions to protect depositors and contain any contagion (BIS, 2009).

Scale of Financial Support and Utilisation

4.58 The intended upfront government support to financial institutions in the advanced countries had been much larger than in the EMEs. As on June 2009, it ranged from 0.7 per cent of GDP in Italy to a high of 20.0 per cent in the UK, with the majority of them providing far more than 5.0 per cent of GDP. For the EMEs, the upfront government support ranged from nil in a number of them to 3.5 per cent of GDP in Hungary. The average support for the advanced G-20 countries is estimated at about 5.5 per cent of GDP. For emerging G-20 countries, the average is placed at 0.4 per cent of GDP. Guarantees were also larger in the advanced economies, barring Italy, Portugal and Switzerland. It ranged from 6.2 percent of GDP in Greece to as high as 198.1 per cent of GDP in Ireland. In the EMEs, guarantees have also been much smaller, with the highest being Poland at 3.2 per cent of GDP. In contrast to advanced economies, support to financial institutions in EMEs had been mostly through liquidity support by the central banks (Table 4.9).

4.59 The announced fiscal packages were quite large in some of the countries compared to the experience of previous major financial crises. Fiscal costs arising from cleaning up financial markets and/or protecting depositors and banks stakeholders in a sample of 42 crisis episodes in the past averaged around 13 per cent of GDP. But in some of them it was over 31 per cent of GDP (Table 4.10). The past experience also shows that accommodative policy measures such as liquidity support, blanket guarantees and forbearance from prudential regulations tended to increase the fiscal costs while not necessarily accelerating the pace of economic recovery (OECD, 2009a).

Table 4.9: Support to Financial Sector as on June, 2009 (as % of 2008 GDP)

Countries	Capital Injection	Purchase of Assets and Lending by Treasury	Support By Central Bank	Guarantees	Total	Upfront Guarantees Support
1	2	3	4	5	6	7
Advanced Countries						
Australia	0.0	0.7	0.0	8.8	9.5	0.7
Austria	5.3	0.0	0.0	30.1	35.4	8.9
Belgium	4.8	0.0	0.0	26.4	31.2	4.8
Canada	0.0	10.9	1.5	13.5	25.9	10.9
France	1.4	1.3	0.0	16.4	19.1	1.6
Germany	3.8	0.4	0.0	18.4	22.2	3.7
Greece	2.1	3.3	0.0	6.2	11.6	5.4
Ireland	5.9	0.0	0.0	198.1	204.0	5.9
Italy	0.6	0.0	0.0	0.0	0.7	0.6
Japan	2.4	11.4	1.9	7.3	33.8	0.8
Korea	2.3	5.5	6.5	14.5	26.8	0.8
Netherlands	3.4	11.2	0.0	33.6	47.3	14.6
Norway	2.0	15.8	0.0	21.0	32.5	15.8
Portugal	2.4	0.0	0.0	12.0	14.4	2.4
Spain	0.8	3.9	0.0	15.8	22.2	4.6
Sweden	1.6	4.8	13.9	47.5	68.0	5.2
Switzerland	1.1	0.0	24.9	0.0	25.5	1.1
United Kingdom	3.9	13.8	19.0	53.2	81.8	20.0
United States	5.2	1.5	8.1	10.6	25.8	6.9
Emerging Economies						
Argentina	0.0	0.9	5.4	0.0	5.1	0.9
Brazil	0.0	0.8	10.8	0.0	13.3	0.0
China	0.0	0.0	22.5	0.0	21.3	0.0
India	0.4	0.0	8.3	0.0	9.6	0.4
Indonesia	0.0	0.0	1.2	0.1	1.4	0.1
Hungary	1.1	2.4	13.6	1.1	20.3	3.5
Poland	0.0	0.0	5.4	3.2	8.7	0.0
Russia	1.2	1.2	11.6	0.5	17.2	2.3
Saudi Arabia	0.0	1.2	30.6	–	34.3	1.2
Turkey	0.0	0.3	3.7	0.0	3.4	0.0

Note : 1. IMF Staff estimates indicating announced or pledged amounts, and not the actual uptake;

2. Support by central bank indicates the actual changes in central bank balance sheets from June 2007 to April 2009. While these changes are mostly related to measures aimed at enhancing market liquidity and providing financial sector support, they may occasionally have other causes, and also may not capture other types of support, including that due to changes in regulatory policies.

Source: IMF Staff Position Note, Fiscal Affairs Department, International Monetary Fund, November 2009.

Table 4.10: Fiscal Costs of Selected Crises in the Past (as per cent of GDP)

	Gross Fiscal Cost	Net Fiscal Cost*	Output Loss
1	2	3	4
Argentina, 1980	55.1	55.1	10.8
Chile, 1981	42.9	16.8	92.4
Indonesia, 1997	56.8	52.3	67.9
Japan, 1997	24.0	13.9	17.6
Korea, 1997	31.2	23.2	50.1
Sweden, 1991	3.6	3.4	30.6
Russia, 1998	6.0	6.0	0.0
United States, 1988	3.7	–	4.1
Average 42 Episodes	13.3	–	20.0

* Defined as gross fiscal cost minus recovery proceeds.

Source: Laeven and Valencia (2008).

4.60 During the recent crisis, the actual support provided by the governments, however, has been much lower than announced. For capital injection, countries such as Switzerland and the UK have fully utilised the allocated amount. However, in some countries such as Italy and Norway they have not been utilised at all. For the advanced economies, the average utilisation of the allocated amount for capital injection worked out to two-fifths only. The utilisation of allocated amount at one-fifth was even lower for purchase of assets and treasury lending. The utilisation rates were no better in the EMEs, even though the announced quantum was much smaller than in the advanced countries. However, unlike in the advanced countries, the utilisation rates were much higher for purchase of assets and lending by treasury than for capital injection (Table 4.11).

4.61 The low level of utilisation of the allocated amount reflected a variety of factors such as the precautionary nature of initial announcements, indications of increasing stability and improved bank liquidity, and lags in implementation of programmes for recapitalisation and purchase of assets. Even the central bank credit facilities appeared to have been taken up only to a limited extent, as conditions turned out to be less serious than at the time of the announcement (Horton *et al.,* 2009).

Table 4.11: Financial Sector Support Utilised Relative to Announcement (as % of 2008 GDP)

Country	Capital Injection		Purchase of Assets and Lending by Treasury	
	Amount Used	In per cent of Announcement	Amount Used	In per cent of Announcement
1	2	3	4	5
Advanced Countries				
Australia	…	…	0.5	71.3
Austria	1.7	32.7	…	…
Belgium	4.7	97.6	…	…
Canada	…	…	5.6	51.6
France	0.8	57.0	0.4	26.5
Greece	1.7	82.0	1.8	55.0
Ireland	3.8	63.6	…	…
Italy	0.0	0.0	…	…
Japan	0.0	1.0	0.8	3.6
Korea	0.8	33.0	0.3	4.8
Netherlands	2.3	68.8	10.2	99.4
Norway	0.0	0.0	4.8	30.3
Portugal	1.5	62.5	…	…
Spain			1.8	44.6
Switzerland	1.1	100.0	…	…
United Kingdom	3.9	100.0	3.4	24.4
United States	2.2	41.9	0.7	53.8
Emerging Economies				
Brazil	…	…	0.3	43.5
India*	0.0	5.0	0.0	…
Indonesia	…	…	…	…
Hungary	0.1	9.3	2.1	87.0
Russia	0.5	40.6	0.4	31.0
Saudi Arabia	…	…	0.6	51.4

* In the fiscal measures announced by the Government of India on January 2, 2009, it was indicated that public sector banks in India will be recapitalised to the extent of Rs.20,000 crore over the next two years. As per the Budget 2009-10 and 2010-11, the Government provided an amount of Rs.595 crore in 2008-09 (revised estimates) towards recapitalisation of regional rural banks, while there was no provision made in the revised estimates for 2009-10 for bank recapitalisation. For 2010-11, the Budget makes a provision of Rs.15,000 crore for recapitalisation of public sector banks.

Source: IMF Staff Position Note, Fiscal Affairs Department, International Monetary Fund, July 2009.

4.62 In recapitalising the banks, the governments have mostly bought preferred shares which carry less risk but have no voting power. The deposit and debt guarantee by governments protected the sources of financing of the banks. The issue of government guaranteed bonds in fact remained the major sources of financing, at least up to the first quarter of 2009. However, the take-up of government debt guarantee was lower than

expected due to stringent terms and costs, and the complexities of the programmes and operation issues. Nevertheless, the rescue packages undertaken by the government in leading economies managed to stem the insolvency of key banks. However, they could not entirely dispel the negative sentiments of common shareholders in the banking sector, because the rescue package was not designed to protect the interests of shareholders. Banking stocks, after an initial rise, declined and underperformed in the market. Within banking stocks, banks receiving government support underperformed banks without government support. However, creditors responded to the rescue packages more positively as CDS spreads narrowed across countries, though they remain at an elevated level. Further, the preconditions for a sustainable recovery based on the experience of historical episodes of crisis, *viz.*, forcing the banking system to take losses, dispose of non-performing assets, eliminate excess capacity and rebuild its capital base have not been made. The steps taken so far have focussed on providing guarantees and subsidised capital. Thus, there was significant risk that the current stimulus could only lead to temporary pick-up in growth followed by protracted stagnation (BIS, 2009).

4.63 To summarise, the insolvency of systematically important financial institutions, despite unprecedented monetary policy measures, compelled governments to provide large-scale financial support. The support took the form of (i) providing direct headline support by way of capital injection, purchase of assets and lending, and (ii) extending guarantees on bank deposits, inter-bank loans and bonds. In both types of support, the scale has been much larger in the advanced economies than in the EMEs. This was for at least two reasons, *viz.*, (i) The financial crisis was more severe in the advanced economies than in the EMEs; (ii) The transmission of the crisis was from the financial to the real sector in the advanced economies while it was more from the real sector to the financial sector in the EMEs. However, many of the countries have not fully utilised the announced fiscal support. This non-utilisation reflected a number of factors including the precautionary nature of the announcements, improved stability and liquidity conditions, and an implementation lag. On the whole, these steps enabled governments to stem the insolvency of financial institutions. However, due to a large-scale fall in private sector demand, economies continued to slide. Thus, governments across the globe were prompted to simultaneously activate discretionary counter-cyclical fiscal policy measures on an unprecedented scale.

IV. COUNTER-CYCLICAL FISCAL POLICY: KEYNESIAN MEASURES

Effectiveness of Counter-Cyclical Fiscal Policy

4.64 The recent crisis has led to a resurrection of fiscal policy as a counter-cyclical instrument of macroeconomic stabilisation. In this context, before documenting the counter-cyclical measures undertaken across countries, it is pertinent to revisit the debate on the effectiveness of counter-cyclical fiscal policy.

4.65 In normal business cycles, the effectiveness of discretionary fiscal policy as a counter-cyclical measure has been debated, and by the 1980s was largely discredited for a number of reasons. With rule-based policy being the common practice, monetary policy became the prime policy tool for counter-cyclical policy. The only role of fiscal policy for counter-cyclical measures was the operation of automatic stabilisers, *i.e.*, fall in revenue collection and rise in expenditure on social safety nets during an economic slowdown, leading to a rise in fiscal deficit and *vice versa* (Box IV.5).

4.66 Given the severity and unprecedented nature of the present crisis, the relevance of discretionary fiscal policy as counter-cyclical measures, however, has once again come to the fore. It is argued that, in such situations, monetary policy could be ineffective due to a liquidity trap situation and the failure of the monetary transmission mechanism arising from general lack of confidence and dysfunctional credit markets. The

Box IV.5
Discretionary Fiscal Policy as Counter-Cyclical Measures

Due to several inter-related reasons, discretionary fiscal policy for the purpose of macroeconomic stabilisation lost its credence at the beginning of the 1980s. It was increasingly viewed that the marginal propensity to save out of temporary tax cuts would be high and, thus, fiscal policy would be ineffective in raising aggregate demand. Increase in government expenditure to raise aggregate demand would also get ultimately nullified by the induced rise in long-term interest rates. Increased globalisation of economies, by raising the import propensity of consumption, had increased the leakage to national economic stimulus provided through fiscal policy. The decline in the proportion of credit-constrained households, following deregulation in the financial markets and easing access to credit markets, has also reduced the multiplier effect of fiscal policy. It was also considered not desirable to compensate the low fiscal multiplier through a large dose of fiscal policy since deadweight losses arising from the burgeoning national debt would be large and could have a destabilising effect on aggregate demand (Feldstein, 2002). Due to the administrative and political process involved in the pursuance of fiscal policy, there are several lags involved, *viz*., recognition lags, implementation lags and lag effect on aggregate demand. These lags increase the uncertainty of the fiscal policy impact, which can have a destabilising effect on the economy.

On the other hand, monetary policy increasingly became the first policy choice for counter-cyclical purposes for a number of factors. First, in a typically short period of cyclical downturns, monetary policy is more amenable to quicker adjustments than fiscal policy. Second, monetary policy is able to judge the timing and the magnitudes of the needed stimulus better than fiscal policy. Third, policy-making underwent a substantial change towards a rule-based interest rate policy that systematically responds to changes in both inflation and output gap. Taylor (2000), while reassessing the role of discretionary fiscal policy, concludes that only automatic stabilisers should play the role of counter-cyclical fiscal policy. Discretionary fiscal policy, which can interfere with the stabilisation role that is systematically played by monetary policy, should focus only on long-run issues such as tax reform and social security reform.

There are views,which, however, support discretionary fiscal policy over monetary policy under particular economic situations. According to this view, in a sustained downturn when aggregate demand and interest rates are low and when prices are falling or may soon be falling, discretionary fiscal policy can play a constructive role. The required fiscal stimulus can also be achieved without increasing the budget deficits but by providing an incentive for increased private spending (Feldstein, 2002). Elmendorf and Furman (2008) also argue that in rapidly deteriorating economic conditions, a well-crafted discretionary fiscal stimulus has the potential advantage of boosting economic activity much faster relative to monetary stimulus. Further, during a deep downturn with loss of confidence, not only may monetary policy become ineffective due to policy rates nearing zero but there could also be a disconnect in the monetary policy transmission mechanism. Such a situation would warrant a fiscal stimulus rather than any other stimulus. Thus, combining fiscal and monetary stimuli can reduce uncertainty about the total amount of stimulus to the economy.

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size of automatic stabilisers would also be relatively smaller compared to the decline in output. On the other hand, several other factors could make discretionary fiscal policy relevant. They include: the possibility of targeted expenditure by the government; the complementary role of monetary and fiscal policy; greater appetite for government securities helping government borrowing without crowding out; and the irrelevance of implementation lags in discretionary fiscal policy in view of the prolonged nature of the downturn. These views that emphasise the increasing relevance of discretionary fiscal policy in the current context, however, have not gone uncontested (Box IV.6).

4.67 Notwithstanding the contrasting views on the need for activation of discretionary fiscal policy, experiences have shown that many countries did activate discretionary fiscal policy during previous downturns. For the G-7 countries, discretionary fiscal policy had been employed in 23 per cent of economic downturns during the past four decades, though with some lag from the beginning of the

Box IV.6
Relevance of Fiscal Policy in the Recent Crisis

The recent global recession was expected to be much deeper and last much longer than previous downturns. Being a worldwide slowdown, export-led recovery at the individual country level was not considered to be an option for growth revival. The usual monetary policy of lowering interest rates was also unlikely to succeed in reversing such a sharp fall in private consumption demand. The lack of confidence and the dysfunctional credit markets rendered the transmission mechanism of monetary policy ineffective. Furthermore, the scope for further easing of monetary policy was very limited in many countries. Thus, there was no alternative to counter-cyclical discretionary fiscal policy to counter the economic downturn (Summers, 2008).

The arguments that were advanced for the need for fiscal policy to complement monetary policy in the recent global slowdown may be summed as follows. First, fiscal policy when implemented acts faster than monetary policy. Second, fiscal policy can target the beneficiaries and directly promote job creation. Third, complete reliance on monetary policy could lower interest rates to levels that have adverse implications on exchange rate, commodity prices, future asset prices and moral hazard. Fourth, when policy impacts are uncertain, it would be prudent to rely on a diversified set of stimulus measures. Fifth, the monetary transmission mechanism has become ineffective in many countries. Sixth, the complementary role between monetary and fiscal policy during a deep downturn would be more than during a milder one. Seventh, under weak demand conditions and high underutilised capacity during a deep recession, fiscal expansion may not carry the risk of inflationary pressures. Eighth, the scope for conventional monetary policy easing is already limited in many countries. Ninth, with the current downturn expected to be a prolonged one, the risk of fiscal policy turning out to be pro-cyclical due to implementation lags is low. Tenth, as the increased risk averseness of the private sector has boosted the demand for government debt, the government can borrow more at relatively lower cost without crowding out. Eleventh, when the financial crisis spills over to the corporate and household sectors, the earlier episodes of crises have shown the necessity of fiscal stimulus. Twelfth, the operation of automatic stabilisers would not be sufficient to counter the downturn. Thirteenth, the proportion of credit-constrained households that would respond to fiscal stimulus measures has increased with rising unemployment and the sharpened risk perception of financial market participants. Fourteenth, if discretionary fiscal measures are not undertaken, the sharp and prolonged increase in the unemployment rate can lead to loss of human capital and reduce potential growth in the medium to long term (HM Treasury, 2008; Koehler-Toglhofer and Reiss, 2009; Spilimbergo *et al.*, 2008; Summers, 2008).

Contesting the above views is that policy responses to global crisis should distinguish between the objective of stabilisation and stimulation. In any crisis, adjustment through stabilisation measures to mitigate pain is inescapable. But, stimulation seeks to eliminate the adjustment period which is untenable. As expectations are important in a large-scale slowdown, the concerns for long-term sustainability should be correctly incorporated in current short-term policy actions. A large discretionary fiscal stimulus involves three medium-term risks. First, there is the risk of perpetuating or even exacerbating current global economic imbalances. Providing demand stimulus in low-saving countries would prevent correction in their current account deficits which would be inconsistent with global rebalancing through higher domestic demand in high-saving countries. Second, fiscal sustainability could be undermined and produce a fiscal crisis when the markets start questioning the sustainability of the fiscal position and credit quality. Third, there is a risk of inflation through higher inflation expectations by economic agents on account of debt sustainability concerns and inflationary financing. Excessive fiscal stimulus measures to stimulate demand also run the risk of too few resources being available for stabilising the financial system (Hannoun, 2009). Without strong measures to further stabilise and strengthen the financial system, fiscal actions are unlikely to promote lasting recovery (Bernanke, 2009).

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downturn. For the EMEs, fiscal response to downturns had been half as frequent as in advanced economies, but by larger doses when they responded due to larger downturns (IMF, 2008). Daniel *et al*. (2009) compared the timeliness and temporariness of the response between discretionary fiscal and monetary policy during downturns in the G-7 countries. They found that discretionary fiscal policy response was weaker and less quick than monetary policy. However, it was timelier than conventional wisdom suggests. Evidence based on cross-country data of 197 countries during the period 1960 to 2005 also shows that fiscal stimulus can be more effective during the rebound from a recession than at any other stage of the business cycle. This was particularly so for industrial countries in recovering from recessions associated with a banking crisis (Cerra, *et al.,* 2009).

4.68 A number of features have been proposed to make fiscal policy effective as counter-cyclical measures. The fiscal measures should be (i) timely, given the urgent need for action; (ii) large enough, since the drop in demand is large; (iii) lasting, since the recession is expected to last longer; (iv) diversified, as there is uncertainty regarding the effectiveness of particular fiscal measures; (v) contingent, to indicate that further action will be taken if needed; (vi) collective among countries, given the severity and global nature of the downturn; and (vii) sustainable, in terms of no debt explosion in the long run, so that there are no adverse effects in the short run (Spilimbergo *et al.,* 2008). While all the above features would be important, collective action among countries and sustainability concerns would have added relevance in the current downturn. Further, it is important for the monetary policy to be accommodative (Box IV.7).

Box IV.7
Some Requirements for Fiscal Policy Effectiveness

Long-term sustainability of debt is an important consideration for the effectiveness of fiscal policy. Primarily due to debt concerns, fiscal stimulus had limited impact on growth in the EMEs in the past episodes of crisis. When there are debt concerns, interest rate risk premiums would rise, making discretionary fiscal policy counterproductive (IMF, 2008). Simulations with a multi-country structural model have found that, if the enlarged fiscal deficit from fiscal stimulus leads to perception of lack of fiscal discipline, the impact of fiscal stimulus would be severely limited or even have a negative impact (Freedman *et al.,* 2009). Thus, fiscal stimulus is likely to be effective if accompanied by credible commitments to scale it back or even reverse it once recovery takes place, thereby underscoring the importance of strengthening medium-term fiscal frameworks for ensuing fiscal sustainability. This would require the announced fiscal measures to be reversible or have clear sunset clauses contingent on the economic situation; increasing the scope of automatic stabilisers; pre-commitment to future policies that help improve fiscal accounts and unwinding of measures either at a specific date or on a contingent basis and strengthen fiscal governance.

Given the global nature and magnitude of the downturn, the other important consideration for effective discretionary fiscal policy is a co-ordinated approach among countries. In open economies, there are leakages to fiscal expansion through imports and the leakage is greater with increasing openness of the economy. These leakages can be neutralised through concerted fiscal stimulus among the trading partners and substantially enhance the impact of fiscal stimulus on domestic expansion. Further, a concerted response can send a strong signal on governments' willingness to co-operatively raise the level of confidence among households and firms and counter the contractionary forces emanating from the loss of confidence.

When monetary policy is accommodative by keeping the nominal interest rate fixed, the rise in inflation due to higher demand would lead to a fall in real interest rates, thereby raising the effectiveness of fiscal policy. Freedman, *et al,* (2009) found that the multiplier for all types of fiscal instruments, except reduction in income taxes, was much higher with accommodative monetary policy than without it.

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Cross-Country Fiscal Stimulus Measures

4.69 In the cross-country context, virtually all OECD countries have taken discretionary fiscal measures during the current crisis, barring Hungary, Iceland and Ireland. In these three countries, due to very large budget deficits or crisis-related expenditure, problems were faced in placing public debt. Consequently, the governments in these three cases were forced to tighten fiscal policy drastically. These actions were taken simultaneously and for the same reason, which was unprecedented. The average size of the fiscal stimulus packages on account of direct response to the crisis for those OECD countries carrying out a stimulus package over the period 2008-10 is estimated to be 3.5 per cent of area-wide GDP in 2008. However, there has been wide variation in the size of the fiscal stimulus measures across countries, partly reflecting divergence in the severity of the crisis, the initial fiscal position and the size of automatic stabilisers. Five countries (Australia, Canada, Korea, New Zealand and the US) have announced packages larger than 4.0 per cent of GDP (Chart IV.3).

4.70 Similarly, the size of the fiscal stimulus also differs among G-20 countries – from 0.2 per cent of GDP (UK) to 2.4 per cent of GDP (Saudi Arabia).

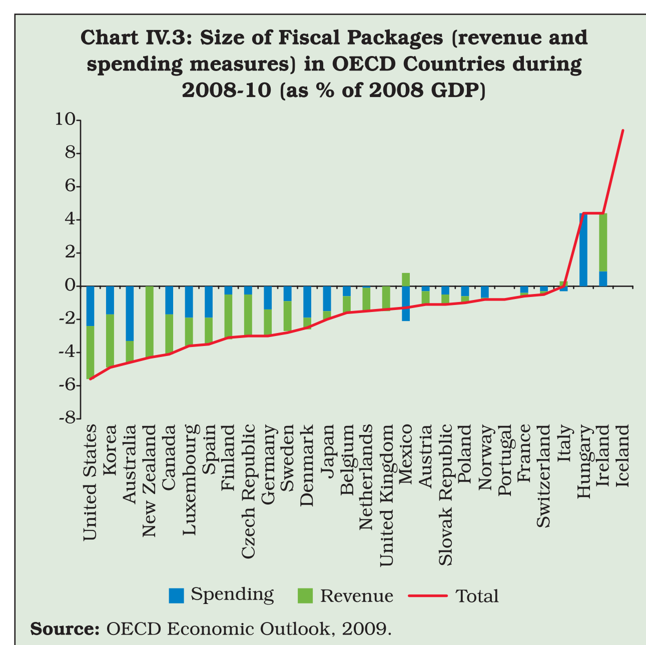


Chart IV.3: Size of Fiscal Packages (revenue and spending measures) in OECD Countries during 2008-10 (as % of 2008 GDP)

Source: OECD Economic Outlook, 2009.

During 2009, all the G-20 countries announced fiscal stimulus measures ranging from 0.2 per cent of GDP (Italy) to 4.1 per cent of GDP (Russia), and in about half of them the size was close to 2.0 per cent of GDP or more. The fiscal stimulus packages during 2009 are somewhat larger in emerging G-20 countries than in the advanced G-20 countries. The stimulus measures will be sustained in most of the countries during 2010 as well, *albeit* with some moderation. In countries such as France, Germany, Korea and Saudi Arabia, however, fiscal stimulus measures will be the largest during 2010 (Table 4.12).

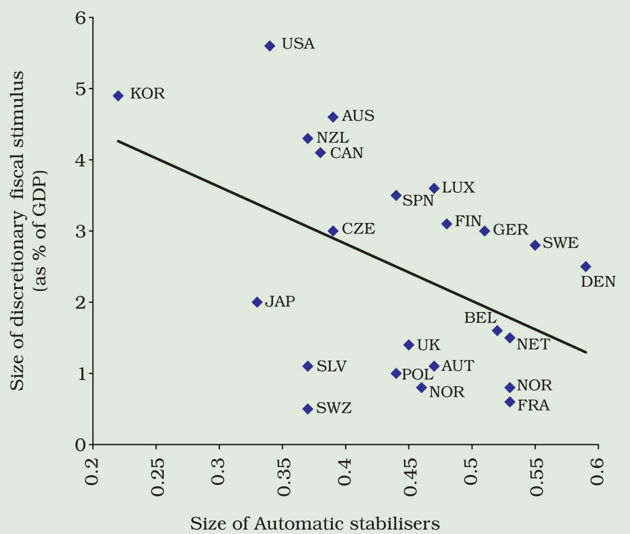
4.71 The need for discretionary fiscal policy, *inter alia*, arises when the operation of automatic stabilisers is weak. Therefore, given the negative output gap during a downturn, it is expected that the size of the discretionary fiscal stimulus will vary inversely with the size of automatic stabilisers. Among OECD countries, those with higher automatic stabilisers have in general announced lower discretionary fiscal stimulus measures (Chart IV.4).

Table 4.12: Size of Discretionary Measures in G-20 Countries, 2008-10

Country	Discretionary		
	2008	2009	2010
1	2	3	4
Argentina	0.0	1.5	0.0
Australia	0.7	2.9	2.0
Brazil	0.0	0.6	0.6
Canada	0.0	1.9	1.7
China	0.4	3.1	2.7
France	0.0	0.7	0.8
Germany	0.0	1.6	2.0
India	0.6	0.6	0.6
Indonesia	0.0	1.4	0.6
Italy	0.0	0.2	0.1
Japan	0.3	2.4	1.8
Korea	1.1	3.6	4.7
Mexico	0.0	1.5	1.0
Russia	0.0	4.1	1.3
Saudi Arabia	2.4	3.3	3.5
South Africa	1.7	3.0	2.1
Turkey	0.0	0.8	0.3
United Kingdom	0.2	1.6	0.0
United States	1.1	2.0	1.8

Source: IMF Staff Position Note, Fiscal Affairs Department, International Monetary Fund, July 2009.

Chart IV.4: Discretionary Fiscal Stimulus and Automatic Stabilisers in OECD Countries



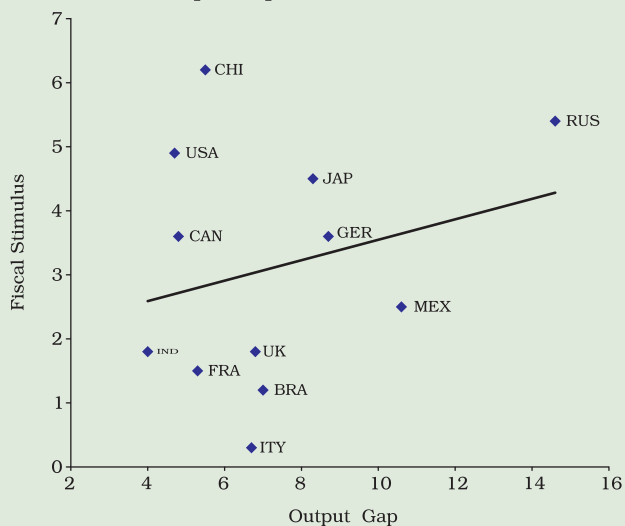
Source: OECD Economic Outlook, 2009.

4.72 It is also expected that given the size of automatic stabilisers, the size of the stimulus package would be explained by differences in the magnitude of the downturn or negative output gaps. For a select group of G-20 countries, this was the case to a certain extent (Chart IV.5).

4.73 The capability of a government to provide a particular dose of discretionary fiscal stimulus would also be determined by the fiscal space available. An important indicator of this available fiscal space is the level of initial debt. In this regard, earlier crisis experiences have shown that due to weak fiscal positions some developing countries were forced to adopt a fiscal contraction policy, making the cost of the crisis even higher (Perry, Serven and Suescun, 2007). Among G-20 countries, the size of the discretionary stimulus appears to have been constrained by the initial level of public debt, *i.e.*, the higher the level of initial public debt, the lower the size of the discretionary fiscal stimulus (Chart IV.6). However, for OECD countries, no significant relationship between the size of packages and the level of outstanding debt was found (BIS, 2009). This implies that in OECD countries debt sustainability concerns may have not been given enough consideration in making decisions to provide fiscal stimulus.

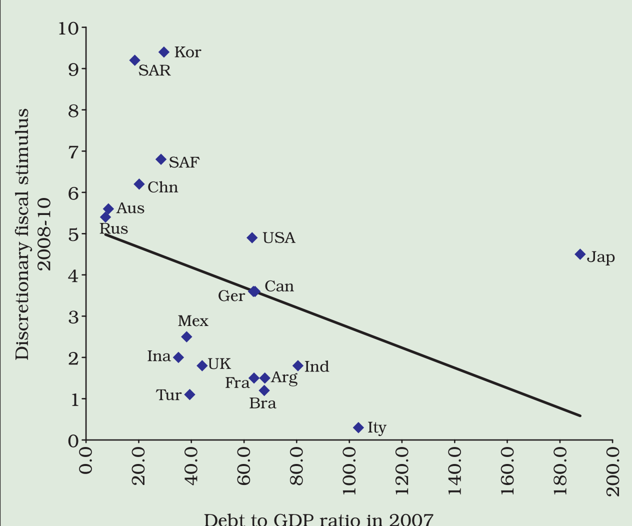
4.74 Besides the size of the stimulus measures, their compositions have also differed across countries. Among OECD countries, the majority have given priority to tax cuts over boosting of expenditure. Tax cuts have been on individuals, business, consumption and social contributions. Expenditure measures included spending on final consumption, investment, transfers to households, transfers to business and transfers to sub-national

Chart IV. 5: Discretionary Fiscal Stimulus and Output Gap in G-20 Countries



Source: IMF Staff Position Note, July 2009.

Chart IV.6: Discretionary Fiscal Stimulus and Initial Debt Position in G-20 Countries



Source: IMF Staff Position Note, July 2009.

governments. Most of the countries have concentrated their tax cuts on personal income tax and, to a lesser extent, on business tax. Among expenditure measures, a larger number of countries have increased expenditure on investment (infrastructure) and provision of safety nets through transfers (Table 4.13).

4.75 Past experience has shown that tax cuts during an economic crisis tend to be less effective as the propensity to save from these cuts increases due to uncertainties. Thus, the emphasis on tax cuts in the OECD countries could limit the impact on GDP. However, the tax cuts have been concentrated more on personal taxes, which support deleveraging of the household sector. This may speed up the recovery further down the road, despite a smaller impact on growth in the short term (BIS, 2009). Experiences from Latin American crises have shown that fiscal austerity induced by crises often led to disproportionate curtailment of expenditure on infrastructure projects, hampering long-term growth prospects (Easterly and Serven, 2003). The OECD countries have given less emphasis to increases in expenditure than to tax cuts. However, the focus of spending on infrastructure and the social safety net would

Table 4.13: Composition of Fiscal Packages in OECD Countries during 2008-10 (as % of GDP)

Countries	Tax Measures					Spending Measures					
	Individuals	Business	Consumption	Social contributions	Total	Final Consumption	Investment	Transfers to Households	Transfers to Business	Government Transfers to Sub-national	Total
1	2	3	4	5	6	7	8	9	10	11	12
Australia	-1.1	-0.2	0.0	0.0	-1.3	0.0	2.6	0.8	0.0	0.0	3.3
Austria	-0.8	-0.1	0.0	0.0	-0.8	0.0	0.1	0.1	0.0	0.1	0.3
Belgium	-0.3	-0.6	-0.1	0.0	-1.0	0.0	0.1	0.5	0.0	0.0	0.6
Canada	-0.8	-0.3	-1.1	-0.1	-2.4	0.1	1.3	0.3	0.1	-	1.7
Czech Republic	0.0	-0.4	-0.1	-2.0	-2.5	-0.1	0.2	0.0	0.4	0.0	0.5
Denmark	0.0	0.0	0.0	0.0	-0.7	0.9	0.8	0.1	0.0	0.0	1.9
Finland	-1.9	0.0	-0.3	-0.4	-2.7	0.0	0.3	0.1	0.0	0.0	0.5
France	-0.1	-0.1	0.0	0.0	-0.2	0.0	0.2	0.1	0.0	0.0	0.4
Germany	-0.6	-0.3	0.0	-0.7	-1.6	0.0	0.8	0.2	0.3	0.0	1.4
Hungary	-0.1	-1.5	1.6	0.0	0.0	-	0.0	-	-	0.0	-4.4
Ireland	2.0	-0.2	0.5	1.2	3.5	-0.7	-0.2	-0.1	0.0	0.0	-0.9
Italy	0.0	0.0	0.1	0.0	0.3	0.3	0.0	0.2	0.1	0.0	0.3
Japan	-0.1	-0.1	-0.1	-0.2	-0.5	-0.2	0.3	0.5	0.4	0.3	1.5
Korea	-1.4	-1.2	-0.2	0.0	-3.2	0.0	0.9	0.1	0.5	0.2	1.7
Luxembourg	-1.2	-0.5	0.0	0.0	-1.7	0.0	0.7	1.0	0.2	0.0	1.9
Mexico	0.0	0.0	-0.4	0.0	0.8	0.0	1.1	0.3	0.4	0.0	2.0
Netherlands	-0.2	-0.4	0.0	-0.8	-1.4	0.0	0.0	0.1	0.0	0.0	0.1
New Zealand	-4.3	0.0	0.0	0.0	-4.3	0.1	0.6	-0.6	0.0	0.0	0.0
Norway	0.0	-0.1	0.0	0.0	-0.1	0.0	0.3	0.0	0.0	0.3	0.7
Poland	0.0	-0.1	-0.2	0.0	-0.4	0.0	1.3	0.1	0.0	0.0	0.6
Slovak Republic	-0.6	-0.1	0.0	0.0	-0.6	0.0	0.0	0.0	0.5	0.0	0.5
Spain	-1.6	0.0	0.0	0.0	-1.6	0.3	0.7	0.2	0.7	0.0	1.9
Sweden	-1.5	-0.2	0.0	-0.2	-1.8	0.7	0.3	0.1	0.0	0.0	0.9
Switzerland	-0.2	0.0	0.0	0.0	-0.2	0.3	0.0	0.0	0.0	0.0	0.3
United Kingdom	-0.6	-0.1	-0.7	0.0	-1.5	0.0	0.1	0.1	0.0	0.0	0.0
United States	-2.4	-0.8	0.0	0.0	-3.2	0.7	0.3	0.5	0.0	0.9	2.4

Note : Total columns are not the sum columns shown because some components either have not been clearly specified or are not classified in this breakdown.

Source : OECD Economic Outlook, Interim Report, March 2009, Organisation of Economic Cooperation and Economic Development.

increase the impact on GDP and benefit the poor who are more vulnerable during a crisis.

4.76 With regard to G-20 countries, more than three-quarters of the announced fiscal stimulus for 2009 represents expenditure measures and around two-thirds in 2010. The expenditure measures are also mostly temporary in nature, with a focus on infrastructure spending, particularly in the emerging G-20 countries. Infrastructure spending is largely on the transportation network, either directly by the central government or through capital transfers to local governments. Many of these countries have also announced plans to protect vulnerable groups. A few others have taken steps to support small and medium enterprises. A few countries have also taken measures to address long-term policy issues of improving the quality of health and education and introducing incentives for environment-friendly technologies. On the other hand, the tax cuts announced on personal income tax have been permanent in almost all the G-20 countries. Indirect tax exemptions have been permanent in some and temporary or self-reversing in others (Table 4.14).

4.77 The temporary nature of the expenditure measures in the fiscal stimulus package in the G-20 countries indicates that the impact on growth could otherwise be larger. Being temporary, the effect on deficit would also be temporary, thereby reducing debt sustainability concerns in the medium to long-term. Consequently, it will have less effect on increasing long-term interest rates that could dampen the impact of the stimulus. Further, the focus of the spending on infrastructure would have the additional benefit of increasing long-term supply capacity and growth potential. Specific announcements to protect the poor would also lessen the adverse impact of the crisis on the poor who often faced the brunt of earlier crises. On the other hand, the permanent nature of the direct tax cuts has the potential to increase consumption by raising permanent disposable income. However, it could lead to debt sustainability concerns as they would have a permanent effect on deficit and debt.

Table 4.14: G-20 Stimulus Measures, 2008-10

Measure	Argentina	Australia	Brazil	Canada	China	France	Germany	India	Indonesia	Italy	Japan	Korea	Mexico	Russia	Saudi Arabia	Spain	UK	US
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Expenditure																		
Infrastructure investment	T	T		T	T	T	T	T	T		T	T	T		T	T	S	T
Support to SMEs and/or farmers							T				T	T						
Safety nets	T	T	T	T	T	T	T		T	T	T	T	T	T		T	T	T
Housing/construction support		T	T	T	T	T	T				T			T		T	T	
Strategic industries support				T	T		T	T						T		T		
Increase in public wage bill																		
Other		T		T	T	T	T				T	T	T			T	T	T
Revenue																		
CIT/depreciation/ incentives		P	P	P		P	P		P		P	P	P	P				P
PIT/exemptions/ deductions			P	P		T	P		P		P					P	P	P
Indirect tax reduction/ exemptions			T		P		P	T	P							S	S	
Other											P						P	

T : Temporary measures (with explicit sunset provisions or time-bound spending)
S : Self-reversing measures (measures whose costs are recouped by compensatory measures in future years)
P : Permanent measures (with recurrent fiscal costs)
Source: International Monetary Fund (2009), "The State of Public Finances: Outlook and Medium-Term Policies After the 2008 Crisis", March.

Therefore, tax reduction measures might be less effective, particularly in a situation of deep downturns where marginal propensity to consume out of tax cuts is generally believed to be low.

4.78 Fiscal stimulus packages have also been unveiled in a number of countries in the African continent. In most of these packages, infrastructure development has been emphasised. Some countries have, however, responded only through hikes in public sector pay, while in others a broad-based approach involving a public investment programme, expansion of public sector employment opportunities, increase in social spending and assistance to the private sector have been adopted. On the other hand, due to declines in the revenue of the government, some countries have exercised fiscal restraint by cutting expenditure on subsidies (UNESCECA, 2009).

Impact of Fiscal Stimulus on Growth

4.79 Assessing the impact of the discretionary fiscal stimulus on economic activity is highly complex and involves a lot of uncertainty. This is reflected in the wide range of outcomes depending upon the econometric models and specifications to estimate the fiscal multipliers. A notable problem is the difficulty of distinguishing passive changes in taxes, transfers, and spending from those that represent a true discretionary adjustment in fiscal policy. Multipliers also depend on country circumstances, including the type of instruments used, trade openness, constraints on borrowing, the response of monetary policy and long-term sustainability (Box IV.8).

4.80 Besides the problems faced in estimating the multiplier, the information on actual implementation

Box IV.8
Determinates of Fiscal Multiplier

The impact of fiscal stimulus measures on growth depends on the fiscal multipliers. The fiscal multiplier is the ratio of a change in output (ΔY) to an exogenous change in the fiscal deficit with respect to their respective baselines (Spilimbergo *et al.*, 2009). Fiscal multipliers, in turn, depend on the instrument used, the degree of monetary policy accommodation and the type of economy. The multiplier would be small for smaller and open economies, more susceptible to financial markets constraints and subject to offsetting monetary policy. On the other hand, it would be large if the composition of the package takes into account the specific features of the crisis. With loss of confidence, fiscal multipliers, particularly for tax cuts, are likely to fall due to an increase in the propensity to save. Thus, government spending measures are likely to provide the maximum short-run impact on aggregate demand rather than tax cuts or lump-sum transfers. If tax cuts are to be implemented, these should be targeted at those facing liquidity constraints. It is found that targeted transfers to poorer households have a multiplier which is two times that of lump-sum transfers. Further, due to the higher share of poorer households, multipliers are larger in emerging Asia and other emerging economies (Freedman *et al.,* 2009). The criteria for selecting individual measures should be those which raise aggregate demand in the short run and raise the aggregate supply in the long run, such as spending on infrastructure and active labour market policy and reduction of income tax particularly on low-income earners (OECD, 2009). In the case of the US, Elmendorf and Furman (2008) distinguish various options by categorising them between more effective, less effective and ineffective or counterproductive. More effective options include temporary increase in unemployment benefits, food stamps and issuing flat and refundable tax credits. The effective options are increase in infrastructure investment and temporary investment tax incentives. On the other hand, options such as tax rate cuts that are permanent could be counterproductive.

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of the announced stimulus measures are not readily available, barring a few countries such as Canada, France and the United States. The rate of utilisation in these three countries as on June 2009 ranged from 41 per cent of the announced package in the US to 81 per cent in Canada (Horton *et al.,* 2009). It is also important to note that fiscal multipliers estimated during normal business cycles could be highly misleading when applied during the period of deep and prolonged crisis characterised by loss of confidence. Given the above uncertainties, fiscal multipliers are estimated in a range. For OECD countries, it is found that spending measures have a higher multiplier than revenue measures. Among spending measures, infrastructure investment had the highest multiplier followed by direct government purchase of goods and government transfers. Among revenue measures, a cut in personal income tax has a higher multiplier than a cut in indirect tax. For each component of stimulus measures, the multiplier is higher in the second year than the first year. The multiplier also diverges among countries, with more open economies in terms of trade-to-GDP ratio having lower multipliers in general (Table 4.15).

4.81 Given the multipliers above, the growth impact of the announced stimulus package in

Table 4.15: Multipliers in OECD Countries

	Consumption		Investment		Transfers		Income Tax Cut		Indirect Tax Cut	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
1	2	3	4	5	6	7	8	9	10	11
USA	0.7	0.8-1.1	0.9	1.1-1.3	0.5	0.8-0.9	0.3-0.5	0.5-0.9	0.2-0.3	0.3-0.5
Japan	0.7	0.8-1.1	0.9	1.1-1.3	0.5	0.8-0.9	0.3-0.5	0.5-0.9	0.2-0.3	0.3-0.5
Germany	0.4	0.5-0.8	0.8	1.1-1.2	0.3	0.5-0.7	0.2-0.3	0.3-0.7	0.1-0.2	0.2-0.4
France	0.6	0.7-1.0	0.8	1.0-1.2	0.4	0.7-0.8	0.2-0.4	0.4-0.8	0.2	0.2-0.4
Italy	0.6	0.7-1.0	0.8	1.0-1.2	0.4	0.7-0.8	0.2-0.4	0.4-0.8	0.2	0.2-0.4
UK	0.5	0.6-0.9	0.8	1.0-1.2	0.4	0.6-0.8	0.2-0.4	0.4-0.8	0.2	0.2-0.4
Canada	0.5	0.6-0.9	0.8	1.0-1.2	0.4	0.6-0.7	0.2-0.4	0.4-0.7	0.1-0.2	0.2-0.4
Australia	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.3-0.6	0.1	0.2-0.3
Austria	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.3-0.6	0.1	0.2-0.3
Belgium	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
Czech Republic	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
Denmark	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.3-0.6	0.1	0.2-0.3
Finland	0.4	0.5-0.8	0.8	1.0-1.2	0.3	0.5-0.7	0.2-0.3	0.3-0.7	0.1-0.2	0.2-0.4
Greece	0.5	0.6-0.9	0.8	1.0-1.2	0.4	0.6-0.7	0.2-0.4	0.4-0.7	0.1-0.2	0.2-0.4
Hungary	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
Israel	0.4	0.5-0.8	0.7	0.9-1.1	0.3	0.5-0.6	0.2-0.3	0.3-0.6	0.1-0.2	0.2-0.3
Ireland	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
Korea	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
Luxembourg	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
Mexico	0.5	0.6-0.9	0.8	1.1-1.2	0.4	0.6-0.8	0.2-0.4	0.4-0.8	0.2	0.2-0.4
Netherlands	0.3	0.4-0.7	0.7	0.9-1.1	0.2	0.4-0.6	0.1-0.2	0.2-0.6	0.1	0.1-0.3
New Zealand	0.5	0.6-0.9	0.8	1.0-1.2	0.4	0.6-0.7	0.2-0.4	0.4-0.8	0.2	0.2-0.4
Norway	0.5	0.6-0.9	0.8	1.0-1.2	0.4	0.6-0.8	0.2-0.4	0.4-0.8	0.2	0.2-0.4
Poland	0.4	0.5-0.8	0.8	1.0-1.2	0.3	0.5-0.7	0.2-0.3	0.3-0.7	0.1-0.2	0.2-0.4
Taiwan	0.4	0.5-0.8	0.8	1.0-1.2	0.3	0.5-0.7	0.2-0.3	0.3-0.7	0.1-0.2	0.2-0.4
Spain	0.5	0.6-0.9	0.8	1.0-1.2	0.4	0.6-0.7	0.2-0.4	0.4-0.7	0.1-0.2	0.2-0.4
Sweden	0.4	0.5-0.8	0.7	0.9-1.1	0.3	0.5-0.6	0.2-0.3	0.3-0.6	0.1-0.2	0.2-0.4
Turkey	0.6	0.7-1.0	0.8	1.0-1.2	0.4	0.7-0.8	0.2-0.4	0.4-0.8	0.2	0.2-0.4

Source: OECD Economic Outlook, Interim Report, OECD, March 2009.

OECD countries is estimated to be rather small (less than 1.0 per cent of GDP) compared to the magnitude of the impending output gap. It ranged from 0.1 per cent of GDP in Slovakia to 1.6 per cent of GDP in Australia. In six countries, *viz.*, Australia, Canada, New Zealand, Poland, Spain and the United States, the impact could be more than one per cent. The average support to GDP from the fiscal stimulus in OECD during 2009 and 2010 will be of the order of 0.5 per cent only (OECD, 2009).

4.82 For G-20 countries also, the IMF estimates a range of fiscal multipliers for different components of fiscal stimulus measures. The range is from 0.3 to 0.6 for tax cuts; 0.5 to 1.8 per cent for investment in infrastructure; and 0.3 to 1.0 for other measures. These estimates take note of the simultaneous measures taken across the countries, which thereby reduces the leakage through imports. Given these multipliers, if the announced fiscal stimulus measures for 2009 and 2010 are fully implemented, the average impact on growth for G-20 countries as a whole would range from 0.7 to 2.8 per cent of GDP (Table 4.16).

Fiscal Risks

4.83 While the impact of fiscal stimulus on growth may be uncertain, the level of deficit and debt would increase substantially. On the assumption of a stronger resumption in economic growth, the overall fiscal deficit for the advanced G-20 countries in 2014 has been projected to be higher by 2.5 percentage points over the level of 2007. For emerging G-20 countries, the same will be higher by 1.5 percentage points. During the same period, the debt ratios are expected to rise by 40 percentage points in the advanced G-20 countries. For emerging G-20 countries, it is expected to decline slightly after some initial increase (Horton *et al.,* 2009). Should the downside risks materialise, the situation, however, would become even worse. It is even maintained that given the prolonged downturn, fiscal stimulus should go beyond the measures already announced provided that there is enough fiscal space (Freedman *et al.,* 2009). This has raised fiscal sustainability concerns and other related implications in the medium to long-term. The problem would be more serious in countries that are already facing the looming challenges of population ageing. The prospective cost in terms of pensions and health care together could be more than ten times the costs of the crisis. Therefore, a credible exit strategy, with necessary institutional arrangements, would be required.

Table 4.16: G-20 Countries- Impact of Fiscal Expansion on Growth

(in per cent of GDP and change in percentage points)

	2009	2010	Average
1	2	3	4
Low-high range impact G-20 total	1.2 to 4.7	0.1 to 1.0	0.7 to 2.8
Advanced G-20 countries	1.3 to 4.4	0.1 to 1.1	0.7 to 2.7
Emerging market G-20 countries	1.1 to 5.0	0.0 to 0.8	0.6 to 2.9

Source: IMF Staff Position Note, July 2009.

4.84 While the need for the exit of fiscal stimulus packages is well recognised, it is difficult to identify the right time to exit. This poses a policy dilemma. Too early a withdrawal of the fiscal stimulus could thwart any recovery. On the other hand, a delayed withdrawal, by raising debt sustainability concerns, could raise interest rates and reduce the effectiveness of the stimulus itself. Even if the stimulus measures are reversed quickly, the impact of the financial rescue packages on public debt would remain for a number of years. High public debt, by pushing up the real interest rates, could crowd out private investment (BIS, 2009). Further, in contrast to the call for providing co-ordinated stimulus measures, the timing of the exit may have to differ across countries. There are significant divergences across countries in terms of inflation, growth and unemployment. In some countries there are fears of deflation and output is still contracting; in such countries, the exit may have to be cautious and delayed. Similarly, the exit may have to be delayed in countries with very high unemployment rates. On the other hand, in countries with relatively high inflation and growth, the exit may have to be much earlier. Yet there are countries where growth is picking up but the inflationary situation remains highly comfortable.

4.85 Irrespective of the timing of the exit, the quantum of adjustment is going to be very large, particularly for high-debt advanced economies. This would be so even under a strong recovery in economic growth. For these countries, to stabilise the debt ratio to 60 per cent over the period of 15 years beginning in 2014 would require improvement in the primary balance by 5.4 percentage points over the forecasted primary balance for 2014 by the IMF. Though the adjustment required for the EMEs are projected to be limited, some of the high-debt emerging economies could face refinancing challenges (Table 4.17).

4.86 In brief, the severity and unprecedented nature of the present crisis has led to the resurrection of Keynesian fiscal policy. Countries across the globe have activated counter-cyclical fiscal policy simultaneously to overcome the economic slowdown. However, the size, composition and duration of the stimulus measures have varied among the countries. The size of the stimulus measures have partly depended on the size of the automatic stabilisers, the magnitude of the economic slowdown and the fiscal space for providing the stimulus. Some countries have relied more on expenditure measures than taxation measures. The emphasis on infrastructure or consumption expenditure and the temporary or permanent nature of the stimulus measures have also varied. While the impact of the stimulus measures on growth is expected to be positive, it, however, cannot be gauged with any degree of certainty. On the other hand, the deficit and debt of many countries, particularly the advanced economies, would substantially go up and remain at an elevated level for a long time. Thus, debt sustainability concerns in the medium to long term have emerged as an important issue. Consequently, there is the need for exit at an early date. But it is difficult to identify the right time. In any case, the quantum of fiscal adjustment would be very large, particularly in advanced countries. The large-scale fiscal expansion combined with an accommodative monetary policy has also heightened the need for active fiscal and monetary policy co-ordination.

Table 4.17: Debt Dynamics and Debt Stabilising Primary Balances

(in per cent)

	Debt		Primary Balance		Debt stabilising Primary Balance[1]
	2009	2014	2009	2014	
Advanced Economies					
High Debt	101.8	121.7	-8.5	-0.9	4.5
Low Debt	30.0	37.8	-2.8	1.1	0.4
Emerging Economies					
High debt	64.7	60.0	-1.3	1.0	1.8
Low Debt	18.7	18.6	-3.3	0.9	0.2

1. Average primary balance needed to stabilise debt at end-2014 level if the respective debt-to-GDP ratio is less than 60 per cent for advanced economies or 40 per cent for emerging economies (low-debt economies); or to bring the debt-to-GDP ratio to 60 per cent in 2029 (high-debt countries), assuming an interest rate-growth rate differential of 1 per cent beyond 2014.

Source: Horton *et al* (2009), "The State of Public Finances: A Cross-country Fiscal Monitor", *IMF Staff Position Note*, July.

V. FISCAL AND MONETARY POLICY CO-ORDINATION

4.87 Even though fiscal and monetary policies are pursued by two different authorities, they are not necessarily independent of each other. An individual policy instrument has its impact on more than one policy target. Thus, the effectiveness of one policy is influenced by changes in the other policy. In this interdependence, a conflict between the two can arise, particularly when they pursue different objectives. Thus, the need for policy co-ordination arises, without which it may not be possible to achieve the objectives of each of the policies. The nature of the co-ordination, however, would depend upon the stage of development of the financial markets. Where there is no market for government debt and fiscal deficits are financed by the central banks, co-ordination would be in the form of constraining excessive expansion of domestic credit to avoid excessive inflation rates. With some development in financial markets and an increase in the signalling role of interest rates, co-ordination would be required to avoid high interest rates which could harm growth. In well-developed financial market economies, where the central banks have established credibility in

keeping inflation under control, the lack of policy co-ordination gives rise to the risk of high fiscal deficit adversely impacting the targets on interest rates, inflation and growth (Hasan and Isgut, 2009).

4.88 To elaborate further, the effect of fiscal policy on monetary policy is largely determined by the financing pattern of government expenditure. If the monetary authority is not independent and the government follows an expansionary fiscal policy, there could be a strong temptation to monetise the fiscal deficit, leading to involuntary expansion in money supply. This can have the unintended effect of fuelling inflation, real appreciation of the exchange rate and, hence, balance of payment difficulties. When the deficit is financed through market borrowings, this could lead to a rise in interest rates, raise the borrowing cost for the private sector and crowd out private investment. Financing government expenditure by raising indirect taxes also has a direct impact on prices, which can go against the monetary policy objective of price stability. Perceptions and expectations of large and on-going deficits may trigger a lack of confidence in economic prospects and become a destabilising factor in the financial markets. Thus, under normal conditions, financial market participants would expect the monetary policy to react to fiscal expansion by raising short-term interest rates, leading to higher expected long-term interest rates. The result would be a crowding out of household spending, private sector investment and net exports to accommodate the increase in public spending, without any significant net gain in aggregate demand in the economy. Thus, expansionary fiscal policy is not considered to be an effective tool for economic stabilisation during normal business downturns. Further, the effectiveness of monetary policy depends on the financial behaviour of economic agents, which can get altered by the agents' perception of fiscal sustainability. When economic agents expect that higher deficit today will lead to higher taxation in the future (behave in a 'Ricardian Equivalence' manner), they may change their financial behaviour by saving more now.

4.89 Expansionary fiscal policy can also jeopardise the sustainability of the monetary policy regime in an open economy during normal times. Monetary policy would react to the inflationary pressure and worsening of capital account caused by expansionary fiscal policy by raising interest rates. Rising interest rates, however, would attract capital inflows, put pressure on the exchange rate and further worsen the current account. Absorption of capital inflows into reserves to reduce the pressure on the exchange rate would lead to an expansion in the monetary base and inflationary pressure. Though inflationary pressure can be avoided through sterilisation, there could be a limit to the cost of sterilisation that a central bank can bear.

4.90 The current economic slowdown, however, is characterised by a sharp fall in private sector demand, limited scope for further reduction in policy rates and dysfunctional credit markets due to loss of confidence. The downturn is also large and prolonged, which is associated with a deflationary environment. In such a situation, the conflict between the two policy objectives is likely to be smaller, at least in the short term. Thus, market participants are unlikely to expect monetary policy to be reactive to fiscal policy. In fact, monetary policy can be accommodative to the fiscal policy to make the latter a more potent policy tool to provide a sustained boost to economic activity. The fact that expansionary monetary policy may have become less effective also calls for support through expansionary fiscal policy. Accommodative monetary policy, by keeping the interest rate fixed at an already low level, would lead to a decline in real short-term interest rates if inflation expectations rise due to a fiscal stimulus. Thus, accommodative monetary policy can significantly increase the effectiveness of fiscal actions to boost economic activity in the short to medium term. In other words, the two policy instruments can reinforce each other in containing the downturn without concerns about inflationary pressure, at least in the short-term. Empirical estimates have found that the impact of fiscal stimulus measures is much larger (more than twice) with monetary policy accommodation than without.

4.91 On the other hand, in countries where the central banks have resorted to unconventional monetary policy measures of quantitative/credit easing, the fiscal implications of monetary policy have increased substantially. This development has underscored the need for greater co-ordination between the two policies. The purchase of long-term government securities and a wide array of non-traditional assets, such as agency debt and mortgaged-backed securities, by the central banks had been aimed at holding down the intermediate and long-term interest rates to boost the real economy. This led to massive expansion of central banks' balance sheets. In other words, central banks have assumed many responsibilities involving using of public money to affect allocation of resources, which the fiscal authority should take. This has not only led to confusion about the respective roles of the central bank and the fiscal authority, but also exposed the balance sheet of central banks to credit risk. Thus, the ability of the monetary authority to pursue price stability, financial stability and economic growth can potentially get undermined. In this regard, it has been suggested that the non-treasury assets and other loans in the balance sheet of the central banks be transferred to the government's balance sheet by way of issuing government securities to the central bank through a co-ordinated approach (Plosser, 2009). However, it is maintained that the change in the overall profile of public sector debt following from large purchases of government securities by the central banks also heightens the need for closer co-operation between the two authorities Further, when central banks take greater credit and market risk by accepting more private sector securities as collateral, closer co-operation between the monetary and fiscal authority is necessary to ensure that potential losses do not impair the operational independence of central banks (BIS, 2009).

4.92 In addition, large government support to financial institutions and stimulus packages announced have led to the ballooning of fiscal deficit and debt across countries. This has severely reduced the fiscal space, while entailing a large borrowing programme for the government. Large government borrowing that leads to a rise in interest rates can severely constrain the use of monetary policy instruments. This would be particularly so with the revival of growth and in countries where the domestic financial markets are not well developed. Central banks trying to ease the cost of credit to support growth also run the risk of inflationary pressure. This traditional tension between the two policies appears to have already resurfaced in many countries because of the large fiscal deficit following the stimulus measures and support to the financial sector. Though the fiscal stimulus was necessary in the circumstances, to avoid any conflict with monetary policy objectives, there is a need to return to the path of credible fiscal consolidation. But, due to demographic factors and the sustained spurt in pension liabilities in many advanced countries, fiscal deficits and government borrowings are likely to remain at elevated levels. Thus, the need for conduct of monetary policy in co-ordination with fiscal policy is likely to continue even after the crisis gets over (Subbarao, 2009).

4.93 From the perspective of financial stability also, the co-ordination between the two policies is essential. Expansionary fiscal policy accompanied by monetary policy accommodation has the potential to raise inflation expectations and the interest rates on government securities. When that happens, financial institutions, particularly the banks, can incur substantial losses due to the mark-to-market requirement, which can threaten financial stability. Though both policies are required to revive the growth slowdown, they will have to be tightened at some point of time. However, if the exit of the expansionary measures is not carried out in a co-ordinated manner, there is the risk of perpetuating financial instability.

4.94 For the EMEs, prolonged and sizable liquidity easing could be counterproductive as they are prone to large and potentially destabilising capital inflows. As the tradeoffs between prices, fiscal and financial stability objectives are sharper in EMEs, the case for credit easing by central banks is also weaker. Fiscal policy can handle the

objectives of credit policy better. Quantitative easing is also less appropriate for EMEs than advanced countries. First, while the financial crisis is less severe and inflation is higher, policy rates are far from being zero. Secondly, the vulnerability of EMEs to volatile capital flows would require keeping the policy rate higher to compensate currency holders for exchange risk. Otherwise, quantitative easing could lead to capital outflows in these countries (Ishi *et al*., 2009).

4.95 Summing up, the present crisis has highlighted the need for a co-ordinated response by monetary and fiscal policy. The large-scale economic downturn and impairment of the monetary transmission mechanism have warranted the monetary policy to be accommodative to fiscal policy. The massive expansion of central bank balance sheets through some of the quasi-fiscal functions of credit/quantitative easing undertaken by them has also increased the need for closer co-operation between the two authorities. Furthermore, as a large fiscal deficit can potentially conflict with the objectives of monetary policy and financial stability in the near future, the need for co-ordination would continue to remain. Besides the co-ordination between the two policies in a country, the present crisis has demonstrated the need for international co-ordination. And for many of the developing countries and EMEs, national policy supports have not been enough, warranting support from multilateral institutions.

VI. RESPONSE OF MULTILATERAL INSTITUTIONS

4.96 Multilateral institutions played a very active role during this crisis. Even though a broad consensus was reached on the need for expansionary counter-cyclical macroeconomic policies, a number of developing and emerging market economies (DEEs) faced resource constraints. Pursuing expansionary macroeconomic policies in the resource-constrained developing and emerging market economies depended crucially on the provision of adequate external financing (Akyuz, 2009). The reform of international financial institutions (IFIs) covering their mandates, scope and governance to reflect changes in the world economy and the new challenges of globalization is also in progress.

G-20 and the IMF

4.97 Recognising the severe resource constraints faced by low income countries, a number of initiatives have been taken by the G-20 and Bretton Woods institutions. These initiatives are: i) increased funding for multilateral financial institutions; ii) widening the access for developing and emerging economies to multilateral funding; and iii) improvements in the terms and conditions of multilateral lending.

4.98 In the London Summit of the G-20 in April 2009, an additional international support of US$ 1.1 trillion was secured to increase the funding from multilateral financial institutions to strengthen the global financial safety net. This included: i) trebling the resources available to the IMF to US$ 750 billion; ii) mobilisation of an additional US$ 100 billion for multilateral development banks (MDBs); and iii) US$ 250 billion of trade financing from various public and private institutions, including credit agencies.

4.99 With regard to widening the access of DEEs to multilateral lending, the initiatives taken included: (i) doubling the normal access limits in the enhanced fund of the IMF; (ii) doubling the borrowing limits for the low income countries eligible for Poverty Reduction and Growth Facility (PRGF) and Exogenous Shock Facility (ESF); (iii) a new Flexible Credit Line (FCL) was established for crisis prevention in the EMEs facing contagion from the global crisis. The FCL has no cap, but would be available to countries with strong fundamentals, policies and track records of policy implementation on which the IMF would make the assessment; and (iv) under the umbrella of new Poverty Reduction and Growth Trust, a new architecture of concessional financing facilities has been introduced. These are: Extended Credit Facility for flexible medium-term support; Standby Credit Facility to address short-term and precautionary needs; and Rapid Credit Facility for emergency support with limited conditionality.

4.100 The IMF has also taken steps to modernise the conditionality to borrowers under its lending framework to make it more flexible with fewer conditions and to suit the specific conditions of a given country. First, access to the FCL facility will be based on *ex ante* conditionality rather than *ex post* as in the past. Second, in all fund arrangements including those with low-income countries, the conditionality on structural performance criteria will be discontinued. Third, under the IMF's concessional lending, low-income countries (LICs) will receive exceptional relief on all interest payments through 2011.

4.101 While reaffirming the central role of the IMF as a critical forum for multilateral consultation and cooperation on monetary and financial issues as well as in promoting international financial and monetary stability, the G-20 members recognise that the global financial crisis has highlighted the urgency of accelerating changes to the IMF so that it can more effectively fulfil its mandate (Box IV.9).

Box IV.9
G-20 Working Group 3: Reform of the IMF

Recognising the need to reform the International Financial Institutions (IFIs), the Working Group 3 was entrusted with advancing the actions covered in the November 2008 Leaders' Declaration in the context of the reform of the IMF. It noted that G-20 members reaffirm the central role of the IMF as a critical forum for multilateral consultation and co-operation on monetary and financial issues as well as in promoting international financial and monetary stability. It emphasised that the global financial crisis has highlighted the urgency of accelerating changes to the IMF so that it can more effectively fulfil its mandate. Such changes should address any underlying deficits in resources, lending instruments, and governance structures, with a view to enhancing legitimacy, ownership and efficiency, and clarifying the roles and responsibilities of the Fund. The Action Plan put forth as immediate and medium-term measures in reforming the Fund is as follows:

Immediate Measures

1) IMF to take a leading role in drawing lessons from the crisis

The IMF, given its universal membership and core macro-financial expertise, should, in close co-ordination with the FSF and others, take a leading role in drawing lessons from the current crisis, consistent with its mandate.

2) Review of the adequacy of IMF resources

Emphasising the need for reviewing the adequacy of the resources of the IMF, the World Bank Group and other multilateral development banks, the Group recommended that we should stand ready to increase their resources where necessary.

3) Review of IMF lending instruments and lending role

IFIs should also continue to review and adapt their lending instruments to adequately meet their members' needs and revise their lending role in light of the ongoing financial crisis. These include a substantial increase in members' access limits to Fund financing as a proportion of their quotas as well as to review and streamline conditionality, so that it is focused on areas directly related to a program's objectives while safeguarding IMF resources. This review should also examine the need for an increase in the Fund's ability to provide concessional financing to low-income countries including a widening of donor support for its concessional lending instruments. It also supports the IMF working with the World Bank in restoring emerging and developing countries' access to credit and private capital flows, and supporting the provision of finance for counter-cyclical fiscal responses.

4) IMF/FSF collaboration

The IMF, with its focus on surveillance, and the expanded FSF, with its focus on standard setting, should strengthen their collaboration, enhancing efforts to better integrate regulatory and supervisory responses into the macro-prudential policy framework and conduct early-warning exercises.

Medium-term Measures

1) Strengthening Fund surveillance

The IMF should conduct vigorous and even-handed surveillance reviews of all countries, as well as giving greater attention to their financial sectors and better integrating the reviews with the joint IMF/World Bank financial sector assessment programs. On this basis, the role of the IMF in providing macro-financial policy advice would be strengthened.

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2) *Greater voice and representation in the IMF for emerging markets and developing economies*

   It is underscored that the Bretton Woods institutions must be comprehensively reformed so that they can more adequately reflect changing economic weights in the world economy and be more responsive to future challenges. Emerging and developing economies should have greater voice and representation in these institutions.

3) *IMF involvement in capacity building*

   Advanced economies, the IFIs, and other international organisations should provide capacity-building programs for EMEs and developing countries on the formulation and implementation of new major regulations, consistent with international standards.

Additional Recommendations

1) With regard to reviewing the mandate and governance of the IMF, the Group requested the G-20 Finance Ministers to formulate additional recommendations, including in the area of reviewing the mandates, governance, and resource requirements of the IFIs. The Group, however, points out that G-20 members recognised the importance of the IMF ceasing to rely primarily on the income of its lending activities to cover its administrative expenses. In this regard, the Group called for a swift activation of the IMF's new income model, including the speeding up of the process required for the agreed sale of a limited amount of the IMF's gold, and taking the legislative steps required to expand the IMF's investment authority.

The World Bank

4.102 Reflecting the various policy initiatives, the World Bank Group stepped up its financial assistance to developing countries with a commitment of US$ 60 billion in fiscal year 2009, showing an increase of 54 per cent over the previous year. International Development Association (IDA) commitment increased by 25 per cent to touch US$ 14 billion in the same year and would deliver US$ 28 billion over the next two years. Under the IDA Financial Crisis Response Fast-Track Facility, procedures have been streamlined and project restructuring and disbursement have been facilitated. IDA will also be adjusting the implementation of its Non-Concessional Borrowing Policy (NCBP). In addition to funds mobilised for crisis initiatives, the International Finance Corporation (IFC) provided US$ 12.9 billion for private sector development in 2009 and launched a number of new crisis-response facilities in both investment and advisory services. The Multilateral Investment Guarantee Agency (MIGA) issued guarantees of US$ 1.4 billion in 2009 and has stepped up its support to important financial institutions.

4.103 To mitigate the impact of the crisis on developing countries, especially LICs, the World Bank Group started with crisis-response initiatives focusing on three themes: (i) protecting the most vulnerable from the fallout of the crisis; (ii) maintaining long-term infrastructure investment programmes; and (iii) sustaining the potential for private sector-led economic growth and employment creation, particularly through SMEs and microfinance. These themes are being addressed through three operational platforms, *viz*., Vulnerability Financing Facility, the Infrastructure Recovery and Assets (INFRA) platform and the IFC-led private sector platform mentioned above. The Vulnerability Financing Facility is aimed at streamlining crisis support to the poor and vulnerable through the Global Food Crisis Response Programme (GPRF) and the Rapid Social Response Programme (RSR). On GPRF, which focuses on social protection and priority food policy interventions, the total Bank-funded projects amounted to US$ 1.2 billion in April 2009. The RSR is designed to help build institutional capacities to address urgent social needs stemming from the crisis.

The Asian Development Bank (ADB)

4.104 The ADB responded to the crisis by substantially enhancing the volume of lending under various windows and guarantees. The commitments under non-concessional ordinary capital resources (OCR) for lending to middle-income countries, which include a counter-cyclical support facility, were enhanced to US$ 26.1 billion

during 2009-10 from US$ 17 billion during 2007-08. During the same period, the concessional resources of the Asian Development Fund (ADF) for providing concessional loans and grants to low-income countries was raised to US$ 6.2 billion from US$ 4.9 billion. Similarly, co-financing was raised from US$ 2.5 billion to US$ 4.5 billion and technical assistance from US$ 524 million to US$ 567 million.

4.105 Lending and assistance are extended at three levels, *viz*., sub-regional, public sector and private sector. The sub-regional initiatives are aimed at: building institutional capacity and support policy to help cope with the crisis; knowledge support to produce appropriate responses to the crisis; and strengthening of economic surveillance and crisis monitoring. Support to the public sector included: demand-based support for fiscal expansion, social protection, maintaining development momentum and strengthening national monitoring and surveillance; counter-cyclical support facility; and expanding infrastructure development. For the private sector, the approach has been: demand-based support for easing liquidity constraints and building business confidence; supporting trade under the Trade Finance Facilitation Programme (TFFP); and financing infrastructure development.

4.106 The current crisis has also led to a rethinking on the future role and reforms of Bretton Woods institutions. Multilateral financial institutions have not only scaled up their financing to developing countries and EMEs, but also substantially eased the financing conditions. This has been enabled by substantial enhancing of the funds provided by member countries to these institutions. The process is also on to reform these institutions so as to increase their participation and benefits to poorer countries. Meanwhile, steps have been undertaken as an ongoing process to scale up co-ordination among central banks, multilateral institutions and supervisors in ensuring global financial and economic stability and supporting growth and development.

VII. FINANCIAL SECTOR POLICIES

4.107 Major regulatory and supervisory failures, along with excessive risk-taking by banks and other financial institutions, were among the fundamental causes of the crisis. Banks are systemically important because their deposits are a key part of the payment mechanism for households and non-financial corporations. Banks also play an important role in the clearing and settlement of large-value transactions. Globalisation and greater consolidation of the banking system the world over have substantially enhanced the contagion and domino effect of a financial crisis. Consequently, the collapse of some large global financial institutions had severe repercussions on the world economy.

4.108 The present crisis has, thus, demonstrated the urgent need for effective financial regulation and supervision. The imminent requirement to restore confidence and rebuild trust in the financial system gave way to a broad-based initiative towards financial reforms. A reassessment of crisis management arrangements has been undertaken, apart from potential medium-term changes in the conduct of financial sector policy. The medium-term changes are mainly in the area of minimal capital requirements, liquidity requirements, other prudential constraints on permissible liabilities and assets, reporting requirements and governance requirements. Certain other areas of the regulatory framework, such as the treatment of certain aspects of liquidity risk and the securitisation framework, have also been revisited. In developing financial sector initiatives, there is a broad underlying consensus among authorities regarding the goal to create a financial system that is less leveraged, better capitalised and more transparent, and features stronger incentives for all participants in the system. The focus of the financial sector reforms has been on building a stronger, globally more consistent supervisory and regulatory framework for the financial sector in future, which will support sustainable global growth[1]. It has been emphasised that regulation and supervision of financial

[1] The official communiqué issued at the close of the G-20 London Summit, 'Global Plan for Recovery and Reform' April 2, 2009.

institutions should take into account the increasing inter-linkages in the financial sector, as also the, greater need to contain systemic risks. The focus is on better and effective regulation rather than on tighter regulation.

4.109 Supervisors the world over have been actively reviewing prudential standards and supervisory approaches to incorporate the lessons from the crisis. This has produced the most comprehensive financial sector review in modern times, which is documented in numerous official reports. Prominent among these are: the G-30 (January 2009); the Geneva Report (Brunnermeier *et al.,* January 2009); the de Larosière Group (EU, February 2009); the Turner Review (FSA, March 2009); Communiqué of the G-20; the UN Commission of Experts on Reforms of International Monetary and Financial System (2009), the Obama administration's "Financial Reform Plan" of July 2009, and others. The series of reports/reviews provided an important analysis of the unfolding events during the crisis and useful insight in charting the roadmap for finding solutions to the crisis.

4.110 In July 2008, a steering committee of the Group of Thirty (G-30) led by chairman Paul Volcker examined the global financial crisis and suggested 18 specific recommendations highlighting the need for legislation, regulation and supervision. Rather than dealing with questions about the appropriate focus and nature of national administrative arrangements, the Report focuses on how the financial system might reasonably be organised once the present crisis has passed, to better assure a reasonable degree of stability (Box IV.10).

Box IV.10
G-30 Report on Financial Reform: A Framework for Financial Stability

In July 2008, the Group of Thirty (G-30) launched a project on financial reform under the leadership of a Steering Committee chaired by Paul A. Volcker, with Tommaso Padoa-Schioppa and Arminio Fraga Neto as its Vice Chairmen. The report of the G-30 Group, released in January 2009, focused on how the financial system might reasonably be organised once the present crisis has passed, to better assure a reasonable degree of stability. The core recommendations of the report are briefly set out below:

- **Core Recommendation I: Gaps and weaknesses in the coverage of prudential regulation and supervision must be eliminated**. All systemically significant financial institutions, regardless of type, must be subject to an appropriate degree of prudential oversight. The largest and most complex banking organisations should be subject to particularly close regulation and supervision, meeting high and common international standards. Large, systemically important banking institutions should be restricted in undertaking proprietary activities that present particularly high risks and serious conflicts of interest. A framework for national-level consolidated prudential regulation and supervision over large internationally active insurance companies should be established. Managers of private pools of capital that employ substantial borrowed funds should be required to register with an appropriate national prudential regulator.
- **Core Recommendation II: The quality and effectiveness of prudential regulation and supervision must be improved.** This will require better-resourced prudential regulators and central banks operating within structures that afford much higher levels of national and international policy co-ordination. In all cases, countries should explicitly reaffirm the insulation of national regulatory authorities from political and market pressures and reassess the need for improving the quality and adequacy of resources available to such authorities. National regulatory authorities and finance ministers are strongly encouraged to adapt and enhance existing mechanisms for international regulatory and supervisory co-ordination. The focus of needed enhancements should be to: (i) better co-ordinate oversight of the largest international banking organisations, with more timely and open information sharing, and greater clarity on home and host responsibilities, including in crisis management; (ii) move beyond co-ordinated rule making and standard setting to the identification and modification of material national differences in the application and enforcement of such standards; (iii) close regulatory gaps and raise standards, where needed, with respect to offshore banking centres; and (iv) develop the means for joint consideration of systemic risk concerns and the cyclicality implications of regulatory and supervisory policies. The appropriate agencies should strengthen their actions in member countries to promote implementation and enforcement of international

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standards. Furthermore, in respect of role of central banks, it was recommended that:

a. Central banks should accept a role in promoting and maintaining financial stability. The expectation should be that concerns for financial stability are relevant not just in times of financial crisis, but also in times of rapid credit expansion and increased use of leverage that may lead to crises.

b. In countries where the central bank is not the prudential regulator, the central bank should have (i) a strong role on the governing body of the prudential and markets regulator(s); (ii) a formal review role with respect to proposed changes in key prudential policies, especially capital and liquidity policies and margin arrangements; and (iii) a supervisory role in regard to the largest systemically significant firms, and critical payment and clearing systems.

c. A sharp distinction should be maintained between those regulated banking organisations with normal access to central bank liquidity facilities and other types of financial institutions whose access, if any, should be limited to extreme emergency situations of critical systemic importance.

d. Central bank emergency lending authority for highly unusual and exigent circumstances should be preserved, but should include, by law or practice, support by appropriate political authorities for the use of such authority in extending such credit to non-bank institutions.

e. Central bank liquidity support operations should be limited to forms that do not entail lending against or the outright purchase of high-risk assets, or other forms of long-term direct or indirect capital support. In principle, those forms of support are more appropriately provided by directly accountable government entities. In practice, to the extent the central bank is the only entity with the resources and authority to act quickly to provide this form of systemic support, there should be subsequent approval of an appropriate governmental entity with the consequent risk transfer to that entity.

- **Core Recommendation III: Institutional policies and standards must be strengthened, with particular emphasis on standards for governance, risk management, capital, and liquidity.** Regulatory policies and accounting standards must also guard against pro-cyclical effects and be consistent with maintaining prudent business practices. Regulatory standards for governance and risk management should be raised, with particular emphasis on: (i) strengthening boards of directors with greater engagement of independent members having financial industry and risk management expertise; (ii) co-ordinating board oversight of compensation and risk management policies; (iii) ensuring systematic board-level reviews and exercises aimed at establishing the most important parameters for setting the firm's risk tolerance and evaluating its risk profile relative to those parameters; (iv) ensuring the risk management and auditing functions are fully independent; (v) conducting periodic reviews of a firm's potential vulnerability to risk arising from credit concentrations, excessive maturity mismatches, excessive leverage, or undue reliance on asset market liquidity; and (vi) ensuring that all large firms have the capacity to continuously monitor, within a matter of hours, their largest counterparty credit exposures on an enterprise-wide basis and to make that information available, as appropriate, to its senior management, its board, and its prudential regulator and central bank. Other areas of reform are:(i) regulatory Capital Standards to address tendencies toward procyclicality; (ii) standards for Liquidity Risk Management for maintaining a sizable diversified mix of long-term funding and an available cushion of highly liquid unencumbered assets; and (iii) re-evaluation of fair value accounting with a view to developing more realistic guidelines for dealing with less liquid instruments and distressed markets.

- **Core Recommendation IV: Financial markets and products must be made more transparent, with better aligned risk and prudential incentives**. The infrastructure supporting markets must be made much more robust and resistant to potential failures of even large financial institutions. In particular, emphasis should be on (i) restoring confidence in securitised credit markets, (ii) rating agency reforms, (iii) the oversight of credit default swaps (CDS) and Over-the-Counter (OTC) Markets, (iv) a resolution mechanism for financial institutions, (v) improving transparency of structured product markets, and (vi) sharing market activity and valuation information.

4.111 While reviewing the work underway, the G-20 in March 2009 made recommendations to strengthen international regulatory standards, enhance transparency in global financial markets and ensure all financial markets, products and participants are appropriately regulated or subject to oversight, depending on their circumstances (Box IV.11).

Box IV.11
Report of G-20 Working Group 1 on Enhancing Sound Regulation and Strengthening Transparency: Major Recommendations

During the Washington Summit (November 15, 2008) on the international response to the global financial and economic crisis, G-20 Finance Ministers were entrusted to take forward work in the following five areas: (i) strengthening transparency and accountability, (ii) enhancing sound regulation, (iii) promoting integrity in financial markets, (iv) reinforcing international co-operation and (v) reforming international financial institutions. Accordingly, it was decided to set up four working groups to examine these issues. The G-20 Working Group I (Co-Chairs: Tiff Macklem and Rakesh Mohan) on enhancing sound regulation and strengthening transparency focused on strengthening microprudential policy while supplementing it with a greater emphasis on a system-wide approach to regulation, so as to better mitigate the build-up of systemic risks. The Final Report (March 25, 2009) set out 25 recommendations that will support the vital role of the financial system in promoting economic growth while, at the same time, reducing the likelihood of a similar crisis in the future and mitigating the consequences of future periods of financial stress. The key recommendations are summarised below:

(i) System-wide Approach to Regulation

- It was recommended that as a supplement to their core mandate, the mandates of all national financial regulators, central banks, and oversight authorities, and of all international financial bodies and standard setters (IASB, BCBS, IAIS and IOSCO) should take account of financial system stability.
- Within each country, there should be an effective mechanism for appropriate domestic financial sector authorities to jointly assess systemic risks across the financial system and to co-ordinate the domestic policy response to limit the build-up in systemic risk. The structure of this co-ordinating mechanism should be transparent, with clear assignments of roles, responsibilities and accountability for each authority.
- Financial sector authorities should have suitable macroprudential tools to address systemic vulnerabilities.
- The expanded FSF, together with the IMF, should create an effective mechanism for key financial authorities in each country to regularly come together around an international table to jointly assess the systemic risks across the global financial system and to co-ordinate policy responses.

(ii) Scope of Regulation

- All systemically important financial institutions, markets and instruments should be subject to an appropriate degree of regulation and oversight, applied consistently and proportionate to their local and global systemic importance.
- The IMF, in consultation with the BIS and the expanded FSF and other bodies, should jointly develop a common international framework and guidelines to help national authorities assess whether a financial institution, market or an instrument is systemically important as consistently as possible across jurisdictions. This framework should strive to treat similar activities more similarly for regulatory or oversight purposes regardless of the legal form of the institution, so as to avoid regulatory arbitrage.
- The boundaries of the regulatory framework should be reviewed periodically within national jurisdictions, in light of financial innovation and broader trends in the financial system. International bodies will promote good practice and consistent approaches in this area.
- All credit rating agencies whose ratings are used for regulatory purposes should be subject to a regulatory oversight regime that includes registration and that requires compliance with the substance of the IOSCO Code of Conduct Fundamentals. National authorities should obtain the authority to enforce compliance and required changes to a rating agency's practices and procedures. Given the global scope of some credit rating agencies, the oversight framework should be consistent across jurisdictions with appropriate sharing of information between national authorities responsible for the oversight of credit rating agencies.
- Given the interconnectedness of private pools of capital, including hedge funds, with other parts of the financial system, they or their managers should be required to register with financial authorities and disclose appropriate information to assess the risks they pose.

(iii) Transparent Assessment of Regulatory Regimes

- All G20 members should commit to undertake a Financial Sector Assessment Program (FSAP) report and to publish its conclusions. National authorities may also periodically undertake a self-assessment of their regulatory frameworks based on internationally agreed methodologies and tools. The FSAP process, the basis upon which countries are assessed, should be expanded to encompass macroprudential oversight, the scope of regulation, and supervisory oversight of the influence

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of the structure of compensation schemes at financial institutions on risk taking.

- The FSF and other bodies, particularly the BCBS, should develop and implement supervisory and regulatory approaches to mitigate pro-cyclicality in the financial system by promoting the build-up of capital buffers during the economic expansion and by dampening the adverse interaction between fair valuation, leverage and maturity mismatches in times of stress.
- Accounting standard setters should strengthen accounting recognition of loan loss provisions by considering alternative approaches for recognising and measuring loan losses that incorporate a broader range of available credit information.
- Once conditions in the financial system have recovered, international standards for capital and liquidity buffers will have to be enhanced, and the build-up of capital buffers and provisions in good times should be encouraged so that capital can absorb losses and be drawn down in difficult times such as the current period. In this context, the BCBS should develop standards to promote the build-up of capital buffers in good times that can be drawn down in periods of stress.

(iv) Liquidity

- Prudential supervisors and central banks should deliver a global framework for promoting stronger liquidity buffers at banks, including cross-border institutions, to ensure that they can withstand prolonged periods of market and funding liquidity stress.

(v) Infrastructure for OTC Derivatives

- Financial institutions should continue to strengthen the infrastructure supporting OTC derivatives markets.
- Central counterparties should be subject to transparent and effective oversight by prudential supervisors and other relevant authorities, including central banks, and meet high standards in terms of risk management, operational arrangements, default procedures, fair access and transparency. The CPSS and IOSCO should review their experiences in applying their recommendations for central counterparties to derivatives.

(vi) Compensation Schemes and Risk Management

- Large financial institutions should ensure that their compensation frameworks are consistent with their long-term goals and with prudent risk-taking.
- In order to promote incentives for prudent risk taking, each financial institution must review its compensation framework to ensure it follows sound practice principles developed by the FSF.

(vii) Accounting Standards

- Accounting standard setters should accelerate efforts to reduce the complexity of accounting standards for financial instruments and enhance presentation standards to allow the users of financial statements to better assess the uncertainty surrounding the valuation of financial instruments.
- The IASB should enhance its efforts to facilitate the global convergence towards a single set of high-quality accounting standards by sharing the experience of countries that have completed this process and by providing technical assistance.

(viii) Enforcement

- The effective enforcement of regulation should be a priority of all financial regulators.
- Recognising that the degree of development of financial systems varies considerably across the G-20, national authorities should commit to assist each other in enhancing their capacity to strengthen regulatory frameworks. In addition, IOSCO, the IAIS and the BCBS should have the appropriate capacity to provide technical assistance. The needs of EMEs deserve particular consideration.

4.112 In the UK, the Chairman of the Financial Services Authority (FSA), Lord Turner, was entrusted by the Chancellor of the Exchequer to review the events that led to the financial crisis and to recommend reforms. The Turner Review of global banking regulation identifies three underlying causes of the crisis – macro-economic imbalances, financial innovation of little social value and important deficiencies in key bank capital and liquidity regulations. These were underpinned by an exaggerated faith in rational and self-correcting markets. It stresses the importance of regulation and supervision being based on a system-wide "macro-prudential" approach rather than focussing solely on specific firms (Box IV.12).

Box IV.12
Turner Review: Major Recommendations

The Turner Review was submitted in March 2009. Focusing on banking and bank-like institutions, the Turner Review made the following recommendations on the changes in regulation and supervisory approach which are needed to create a more robust banking system for the future:

- **A systemic approach:** Many of the most important challenges in banking regulation are systemic rather than idiosyncratic. There was inadequate focus on the analysis of systemic risk and of the sustainability of whole business models and a failure to design regulatory tools to respond to emerging systemic risks. The future approach to banking regulation and supervision needs to be rooted in the fact that the risks involved in performing bank or bank-like functions are different not only from those involved in non-financial activities, but also from those which arise in performing non-bank financial activities, such as life insurance.

- **Fundamental changes in regulatory approach - capital, accounting and liquidity:** Seven key measures on capital adequacy, accounting, and liquidity policies are: (i) increasing the quantity and quality of bank capital, (ii) significant increases in trading book capital: and the need for fundamental review, (iii) avoiding pro-cyclicality in Basel II implementation, (iv) creating counter-cyclical capital buffers, (v) offsetting pro-cyclicality in published accounts, (vi) a gross leverage ratio backstop and (vii) containing liquidity risks in individual banks as well as at the systemic level.

- **Institutional and geographic coverage - economic substance, not legal form:** One crucial factor in the origin of the crisis was the development of major institutions and financial devices – sometimes labelled near-banks or shadow banks – which performed bank-like functions, but which were not regulated as banks. The essential principle which needs therefore to be agreed on and implemented internationally is that regulation should focus on economic substance and not legal form. Prudential oversight of financial institutions should ideally be co-ordinated in integrated regulators (covering banks, investment banks and insurance companies), reducing the dangers of inconsistency and arbitrage between different authorities within one country. Global agreement on regulatory priorities should include the principle that offshore centres must be brought within the ambit of internationally agreed financial regulation (whether relating to banking, insurance or any other financial sector).

- **Deposit insurance and bank resolution:** The system of bank regulation and supervision needs to be buttressed by arrangements for retail deposit insurance (to protect depositors in the event of default) and for bank resolution (to ensure orderly wind up and avoid knock-on effects to the rest of the banking system).

- **Other important changes - C*redit Ratings*:** There should be a fundamental review of the use of structured finance ratings in the Basel II framework. Regulation can and should address issues relating to the proper governance and conduct of rating agencies and the management of conflict of interest. ***Remuneration:*** Remuneration policies should be designed to avoid incentives for undue risk-taking; risk management considerations should be closely integrated with remuneration decisions. This should be achieved through the development and enforcement of UK and global codes. Achieving international agreement on mechanisms to ensure application of the principles by all major supervisory authorities will be a crucial subsequent step. ***Counterparty Risks***: Clearing and central counterparty systems should be developed to cover the standardised contracts which account for the majority of CDS trading.

- **Macro-prudential analysis and intellectual challenge:** Macro-prudential analysis needs to identify the trends in the economy and in the financial system which have implications for financial stability and, as a result, for macroeconomic stability, and to identify the measures which could be taken to address the resulting risks.

- **A new approach to supervision - more intrusive and more systemic:** In the context of the UK, since the launch of the Supervisory Enhancement Programme (SEP) programme in April 2008, a new approach termed 'intensive supervision' is being followed. However, the crisis illustrated the need for changes that go beyond those initially outlined in the SEP. Two issues are particularly important, *viz*., (i) macro-prudential as well as sectoral analysis and (ii) a major shift in the role which the FSA plays in relation to published accounts and accounting judgements, with far more intense contact with bank management and auditors on these issues. Furthermore, the crucial changes needed in the approach are : (i) changes in supervisory approach already planned and being implemented, significantly increasing the intensity of supervision but without progressing to a bank-examiner model; (ii) further steps to intensify supervision in particular high impact areas, *e.g.,* oversight of accounting judgements; (iii) more macro-prudential analysis, and more analysis of and willingness to make judgements on business models;

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and (iv) the more effective design and use of a small number of high-impact prudential levers, in particular those relating to capital, liquidity and accounting policies.

- **Risk management and governance - firm skills, responsibilities and structures:** An analysis of the causes of the crisis suggests that there is a limit to the extent to which risks can be identified and offset at the level of the individual firm. But improvements in the effectiveness of internal risk management and firm governance are essential. The key dimensions of required improvement are likely to be: i) improved professionalism and independence of risk management functions; ii) risk management considerations embedded in remuneration policy; iii) improvements in the skill level and time commitment of non-executive directors, and iv) shareholder discipline over corporate strategies.
- **The regulation of large complex banks - 'utility banking' versus 'investment banking':** Although the narrow banking versus investment bank debate raises important issues requiring a regulatory response, it does not seem practical to work on the assumption that we can or should achieve the complete institutional separation of 'utility banks' from 'investment banks'.
- **The regulation and supervision of cross-border banks:** The appropriate response needs to combine both greater international co-ordination and actions focused on specifically national concerns. The effective supervision of large cross-border institutions can be improved by maximising the flow of information between home and host country supervisors, sharing insights into the risks which firms are running. In fact, the FSF has defined the objective that all major cross-border financial institutions should be covered by a 'college of supervisors'. Alongside enhanced international co-operation, it is inevitable and appropriate that supervisory authorities throughout the world will increase their focus on the resilience of local legal entities.

The Turner Review also sets out a wider set of policy changes which might be appropriate, but where debate on principles is required with regard to the role of regulators of banks and markets regarding: i) product regulation, in either retail or wholesale markets, ii) using other tools in addition to the variation of capital and liquidity requirements to achieve counter-cyclical effects or at least offset pro-cyclicality and iii) whether approaches to the regulation of markets need more overtly to recognise tradeoffs between the benefits of technical efficiency and liquidity and the potential for harmful irrational momentum effects.

4.113 While in the UK the Turner Report set the road map for wide-ranging reforms, the High-Level Group on Financial Supervision in the EU (Chairman: Jacques de Larosière) was appointed by the European Commission to advise on the future of European financial regulation and supervision. The Report observed that it was not appropriate to blame the Basel II rules *per se* for being a major cause of the crisis. However, the report emphasised a fundamental review of the Basel II framework (Box IV.13).

Box IV.13
Recommendations of the High-Level Group on Financial Supervision in the European Union

The European Commission constituted a High-Level Group on Financial Supervision (Chairman: Jacques de Larosière) to give advice on the future of European financial regulation and supervision. The report of the Group released on February 25, 2009 laid out a framework to take the European Union forward towards a new regulatory agenda, stronger co-ordinated supervision and an effective crisis management procedure. The major recommendations of the report are set out below:

Correcting Regulatory Weaknesses

- Basel II rules need a fundamental review with a view to gradually increase minimum capital requirements; reduce pro-cyclicality by, for example, encouraging dynamic provisioning or capital buffers; introduce stricter rules for off-balance sheet items; tighten norms on liquidity management; and strengthen the rules for banks' internal control and risk management, notably by reinforcing the "fit and proper" criteria for management and board members.
- A common definition of regulatory capital should be adopted in the EU, clarifying whether and, if so, which hybrid instruments should be considered as Tier 1 capital with the confirmation by the Basel Committee.
- A strengthened Committee of European Securities Regulators (CESR) should be in charge of registering and supervising credit rating agencies. The report also emphasised (i) a fundamental review of their business model, financing and the scope for separating rating and advisory activities; (ii) lower dependence on ratings in

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financial regulations over time; and (iii) transformed ratings for structured products introducing distinct codes.

- With respect to accounting rules, a wider reflection on the mark-to-market principle is needed. It was recommended that (i) expeditious solutions should be found for the remaining accounting issues concerning complex products, (ii) accounting standards should not bias business models, promote pro-cyclical behaviour or discourage long-term investment; and (iii) the IASB and other accounting standard setters should clarify and agree on a common, transparent methodology for the valuation of assets in illiquid markets where mark-to-market cannot be applied.
- The Solvency 2 directive – setting out new, strengthened EU-wide requirements on capital adequacy and risk management for insurers with a view to reducing the likelihood of an insurer failing – must be adopted for setting-up harmonised insurance guarantee schemes.
- Competent authorities in all Member States must have sufficient supervisory powers, including sanctions, to ensure the compliance of financial institutions with the applicable rules and should also be equipped with strong, equivalent and deterrent sanction regimes to counter all types of financial crimes.
- Concerning the 'parallel' banking system, it is recommended to (i) extend appropriate regulation to all firms or entities conducting financial activities of a potentially systemic nature, even if they have no direct dealings with the public at large; (ii) improve transparency in all financial markets by imposing registration and information requirements on hedge fund managers, concerning their strategies, methods and leverage, including their worldwide activities; and introduce appropriate capital requirements on banks owning or operating a hedge fund or being otherwise engaged in significant proprietary trading and to closely monitor them.
- There is a need to simplify and standardise over-the-counter derivatives, and introduce and require the use of at least one well-capitalised central clearing house for credit default swaps.
- Common rules for investment funds concerning definitions, codification of assets and rules for delegation need to be further developed and accompanied by tighter supervisory control over the independent role of depositories and custodians.

Equipping Europe with a Consistent Set of Rules

- Member States and the European Parliament should avoid in the future legislation that permits inconsistent transposition and application. This would improve the functioning of the single financial market; reduce distortions of competition and regulatory arbitrage; or improve the efficiency of cross-border financial activity in the EU.

Corporate Governance

- Compensation incentives must be better aligned with shareholder interests and long-term firm-wide profitability based on the recommended principles. Supervisors should oversee suitability of financial institutions' compensation policies, require changes where compensation policies encourage excessive risk-taking and, where necessary, impose additional capital requirements under Pillar 2 of Basel II.
- Internal risk management must be made independent and responsible for effective, independent stress testing. Internal risk assessment and proper due diligence must not be neglected by over-reliance on external ratings. Supervisors should be called upon to frequently inspect financial institutions' internal risk management systems.

Crisis Management and Resolution

- A transparent and clear framework for managing crises should be developed by equipping all relevant authorities in the EU with appropriate and equivalent crisis prevention and intervention tools, and removing legal obstacles for using the tools.
- Deposit Guarantee Schemes in the EU should be harmonised and preferably be pre-funded by the private sector and provide high, equal protection to all bank customers.

Supervisory Repair

- A European Systemic Risk Council (ESRC) should be set up under the auspices of the ECB in order to pool and analyse all information relevant for financial stability that pertains to macroeconomic conditions and to macro-prudential developments in all the financial sectors.
- An effective risk-warning system should be put in place under the auspices of the ESRC and the Economic and Financial Committee (EFC).The ESRC should prioritise and issue macro-prudential risk warnings with mandatory follow-up and, where appropriate, action shall be taken by the relevant competent authorities in the EU.
- The European System of Financial Supervisors (ESFS) should be set up on a decentralised network. Three new European Authorities would be set up, replacing CEBS, CEIOPS and CESR, to co-ordinate the application of supervisory standards and guarantee strong co-operation between the national supervisors; colleges of supervisors would be set up for all major cross-border institutions. The ESFS will need to be independent of the political authorities, but be accountable to them.

Global Repair

- The Financial Stability Forum (FSF), in conjunction with international standard-setters like the Basel Committee

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of Banking Supervisors, should be put in charge of promoting the convergence of international financial regulation to the highest level benchmarks as it is important that the FSF is enlarged to include all systemically important countries and the European Commission. It should receive more resources and its accountability and governance should be reformed by more closely linking it to the IMF. The FSF should regularly report to the IMF's International Monetary and Financial Committee (IMFC) about the progress made in regulatory reform in implementing the lessons from the current financial crisis. The IMFC should be transformed into a decision-making Council, in line with the Articles of the IMF Agreement.

Enhancing Co-operation among Supervisors

- The colleges of supervisors for large complex cross-border financial groups currently being set up at the international level should carry out robust comprehensive risk assessments and pay greater attention to banks' internal risk management practices and should agree on a common approach to promoting incentive alignment in private sector remuneration schemes *via* Pillar 2 of Basel II. The FSF should ensure coherent global supervisory practice between the various colleges and promote best practices.

Macroeconomic Surveillance and Crisis Prevention

- The IMF, in close co-operation with the FSF, the BIS, central banks and the European Systemic Risk Council (ESRC), should be put in charge of developing and operating a financial stability early warning system, accompanied by an international risk map and credit register. All IMF member countries should commit themselves to support the IMF in undertaking its independent analysis (including the FSAP).
- The IMF and the FSF, in co-operation with other relevant international bodies, should assess the existing regulatory standards in financial centres, monitor the effectiveness of existing mechanisms of enforcing international standards and recommend more restrictive measures where standards are considered to be insufficient.

Crisis Management and Resolution

- EU Member States should show their support for strengthening the role of the IMF in macroeconomic surveillance and contribute towards increasing the IMF's resources in order to strengthen its capacity to support member countries facing acute financial or balance of payment distress.

European Governance at the International Level and Deepening the EU's Bilateral Financial Relations

- A coherent EU representation in the new global economic and financial architecture should be organised. This could imply a consolidation of the EU's representation in the IMF and other multilateral fora. In its bilateral relations, the EU should intensify its financial regulatory dialogue with key partners.

4.114 The European Commission on September 23, 2009 unveiled the final version of its ambitious reforms for the region's regulatory and supervisory framework based on the proposals made by the de Larosière report of February 2009. The European Commission is currently reviewing the Lamfalussy Process and the banking supervisory arrangements. The European Parliament is closely monitoring all ongoing developments in different fora and a number of legislative proposals are already lined up.

4.115 The report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System (September 2009) identified that much of the effort to co-ordinate international economic policy has focused on putting constraints on countries whose behaviour is not systemically significant, while doing little about countries whose policies can have systemically significant consequences (Box IV.14). Furthermore, it was emphasised that international liquidity has to become gradually less dependent on the monetary policies of a few countries that issue reserve currencies. Developed countries, in particular, need to become aware of the consequences of their negative externalities, and developing countries need frameworks to help protect them from regulatory and macroeconomic failures in the major industrialised countries.

4.116 The global financial crisis demonstrated that the collective response must occur in a coordinated and timely fashion that will not harm market or confidence. In this context, the G-20 Working

Box IV.14
Report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System (Chairman: Joseph E. Stiglitz)

Following the outbreak of the financial crisis in 2008, the President of the United Nations General Assembly established a Commission of Experts whose mandate was to reflect on the causes of the crisis, assess impacts on all countries and suggest adequate responses so as to avoid its recurrence and restore global economic stability. The Report released in September 2009 provides an outline of some of the reforms that will help to move in the right direction for global economic governance. In the context of reforms in international institutions, the salient points emerging from the Report are as follows:

- Attention needs to be paid to the policies and philosophies underlying the operations of international institutions. Without substantial reform of international institutions, it will be difficult to ensure financial stability.
- In addition to the need for substantial reforms in existing institutions, there is also a need to create a new institution in the longer term, *viz.*, the Global Economic Co-ordination Council (GECC), to be supported by an International Panel of Experts. The Council could be at a level equivalent with the UN General Assembly and the Security Council. Its mandate would be to assess developments and provide leadership in addressing economic issues that require global action, while taking into account social and ecological factors. Based on this mandate it would promote development, seek consistency of policy goals and policies of major international organisations, and support consensus building among governments on efficient and effective solutions for global economic, social, and environmental issues. Its work would go beyond simply the co-ordination of existing institutions. With the support of the Panel of Experts, the GECC could also promote accountability of all international economic organisations, identify gaps that need to be filled to ensure the efficient operation of the global economic and financial system, and make proposals to the international community for remedying deficiencies in the current system.
- As an immediate step, the International Panel of Experts should be tasked with the assessment and monitoring of both short-term and long-term systemic risks in the global economy. The panel could serve as an internationally recognised source of expertise in support of better coherence and effectiveness in the global governance system, fostering dialogue between policymakers, the academic world, international organisations, and recognised social movements. The Panel should establish criteria for the identification of systemic risks and issue recommendations as to preventive measures and sound economic policymaking. The panel could thereby also play an important "early-warning function", the need for which has been noted by the G-20 and others.
- The current crisis reflects problems that go beyond the conduct of monetary policy and regulation of the financial sector. It has been made clear that globalisation of trade and finance need enhanced global co-operation and global regulation.
- Given the greater scope of externalities due to greater economic globalisation, there is a need for global collective action to address not only the issues of global 'externalities' but also the provision of global public goods. Among the global public goods are the stability of the global economic system and fair trading rules.
- While the financial crisis has brought to the fore severe structural lacunae in the existing global economic governance structure, in particular the lack of incentives for global collective action and the failure of the institutional framework to ensure consistency in global policy making, many of the problems have long been apparent. There is a pressing need for a substantial improvement in the co-ordination of global economic policy.
- The IMF and the Multilateral and Regional Development Banks continue to have a very important role in the international economic financial architecture. For the IMF to be fully effective, both in addressing the crisis in the short run and in promoting growth and stability in the long run, there have to be substantial reforms, not only in governance but also in the policies that it has traditionally espoused.
- There is a need for independent and even-handed macroeconomic surveillance. The IMF has not implemented its mandate consistently and even-handedly. Surveillance should pay special attention to those countries and sectors that are systemically important, including the financial sectors in the U.S. and Europe. It should also address the adequacy of the "circuit breakers" that might prevent the contagion of a problem in one country from spreading to another.
- The governance reforms have to be based on a joint understanding of the respective mandates and a common understanding of the strategic directions of the respective institutions. Better voice and representation of developing countries in IFIs must, therefore, be high on the agenda. Governance reform must strengthen, in particular, the weight of low-income countries.
- In order to address the issue of voting imbalance in the IMF, double majority voting (*e.g.*, shares and chairs) should be extended to the selection of the Managing Director and the chair of the IMF Committee, as well as for key policy decisions and approval of access to lending

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operations. At the same time, the reform must consider eliminating effective veto powers over decisions to amend the Articles of Agreement. Consideration should be given to alternative forms of double majority (*e.g.*, developed and developing countries).

- As regards the governance reforms in the World Bank, the first stage of voice reform should be implemented rapidly. The doubling of basic votes and a third African seat on the Board will increase the influence of developing countries. The second stage, focusing on a reform of quotas, should be accelerated and completed by the Spring Meetings in 2010.
- In April 2009, the Financial Stability Forum (FSF) was re-established as the Financial Stability Board (FSB) and needs a marked departure from the stance of the FSF. Making marginal changes to the regulatory structure would neither ameliorate the current situation nor be effective in preventing future crises. Deeper reforms in the FSB must, accordingly, address deficiencies in its governance, mandate, and economic perspectives.
- The task of ensuring coherence in regulatory principles among national authorities must be undertaken by international standard-setting bodies. International financial regulation will require co-ordination beyond central banks (the major constituency of the BIS) and must include securities and corporate regulators as well as accounting standards among its key priorities.
- The lack of accountability of important, private standard-setting bodies is an additional area of concern. Private entities such as the International Accounting Standards Board (IASB) and the International Organization of Securities Commissions (IOSCO) develop, for instance, standards for cross-border regulation that have systemic impacts on the international financial system, yet they are exempt from any political accountability. .
- Taking cognisance of protectionist measures undertaken by many countries in the wake of the crisis, it is necessary that the WTO should systematically assess the policies conducted by member States in the framework of their stimulus and recovery packages, giving adequate attention to the consistency of the letter and spirit of WTO agreements, the exigencies of the situation, and adverse effects, especially on developing countries. We need to avoid at all costs a return to the beggar-thy-neighbour policies that the creation of the WTO was intended to prevent.

Group 2 submitted its report on March 10, 2009 highlighting various areas of international policy co-ordination which need to be addressed in a short- to medium-term perspective (Box IV.15).

4.117 While the epicentre of the crisis was continuously making efforts to come to grips with the emerging situation, the gaps and weaknesses in the supervision and regulation of financial firms presented challenges to the US government's ability to monitor, prevent, or address risks as they built up in the system. Though measures were being announced continuously, a comprehensive financial sector plan was unveiled by the US as late as June 2009 (Box IV. 16).

Box IV.15
G-20 Working Group 2: Reinforcing International Cooperation and Promoting Integrity in Financial Markets

The Working Group 2 was tasked by the G-20 troika to develop proposals to enhance international cooperation and co-ordination in the regulation and oversight of international financial markets, improve the management and resolution of cross-border financial crises and protect the global financial system from illicit activities and non-cooperative jurisdictions. Working Group 2 was asked to undertake work on: i) regulatory and supervisory cooperation, ii) IMF/FSF collaboration and iii) promoting market integrity.

Regulatory and supervisory cooperation

Immediate actions:

Supervisory colleges: Supervisors should collaborate to establish supervisory colleges for all major cross-border financial institutions, as part of efforts to strengthen the surveillance of cross-border firms. Major global banks should meet regularly with their supervisory college for comprehensive discussions of the firm's activities and assessment of the risks it faces.

Information sharing arrangements: National and regional authorities should work to promote information sharing about domestic and cross-border threats to market stability and ensure that national (or regional, where applicable) legal provisions are adequate to address these threats.

Cross-border crisis management: Regulators should take all steps necessary to strengthen cross-border crisis management arrangements, including on co-operation and communication with each other and with appropriate

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authorities, and develop comprehensive contact lists and conduct simulation exercises, as appropriate. In accordance with the action plan item, the Financial Stability Forum (FSF) has agreed on a set of principles for cross-border co-operation on crisis management.

Medium-term actions:

Resolution regimes and bankruptcy laws: National and regional authorities should review resolution regimes and bankruptcy laws in light of recent experience to ensure that they permit an orderly wind-down of large complex cross-border financial institutions. It is underscored to develop an international framework for cross-border bank resolutions, and to address the issue of ring-fencing and financial burden-sharing. It is also recommended that the FSF and the BCBS explore the feasibility of common standards and principles as guidance for acceptable practices for cross-border resolution schemes, thereby helping reduce the negative effects of uncoordinated national responses, including ring-fencing.

Convergence in regulatory practices: Authorities, drawing especially on the work of regulators, should collect information on areas where convergence in regulatory practices such as accounting standards, auditing, and deposit insurance is making progress, is in need of accelerated progress, or where there may be potential for progress.

Exit strategies: Authorities should ensure that temporary measures to restore stability and confidence have minimal distortions and are unwound in a timely, well-sequenced and co-ordinated manner.

The Role of International Bodies: IMF/FSF collaboration:

Immediate actions:

FSF membership: The FSF should expand to a broader membership of emerging economies. It is important that the FSF continues to be effective in promoting international financial stability. Thus, the mandate of the expanded FSF should be enhanced, in particular, to monitoring the implementation of the FSF and G-20 recommendations in close cooperation with the IMF.

IASB governance: With a view to promoting financial stability, the governance of the international accounting standard-setting body should be further enhanced, including by undertaking a review of its membership, in particular in order to ensure transparency, accountability, and an appropriate relationship between this independent body and the relevant authorities.

IMF-FSF collaboration: The IMF, with its focus on surveillance, and the expanded FSF, with its focus on standard setting, should strengthen their collaboration, enhancing efforts to better integrate regulatory and supervisory responses into the macro-prudential policy framework and conduct early warning exercises.

Drawing lessons: The IMF, given its universal membership and core macro-financial expertise, should, in close co-ordination with the FSF and others, take a leading role in drawing lessons from the current crisis, consistent with its mandate.

Medium-term actions:

Regulatory responsiveness to financial innovation: International standard-setting bodies, working with a broad range of economies and other appropriate bodies, should ensure that regulatory policy makers are aware and able to respond rapidly to the evolution and innovation in financial markets and products.

Asset prices: Authorities should monitor substantial changes in asset prices and their implications for the macro-economy and the financial system.

Promoting market integrity

Immediate actions:

Protection against market manipulation and fraud: National and regional authorities should also review business conduct rules to protect markets and investors, especially against market manipulation and fraud and strengthen their cross-border cooperation to protect the international financial system from illicit actors. In case of misconduct, there should be an appropriate sanctions regime. It is encouraged that the IOSCO continue its work on cross-border enforcement-related co-operation through its Multilateral Memorandum of Understanding Concerning Consultation and Cooperation and the Exchange of Information (IOSCO MMoU) and also urge all firms to uphold high standards of business conduct.

Medium-term actions:

Uncooperative and non-transparent jurisdictions that pose risks of illicit financial activity: National and regional authorities should implement national and international measures that protect the global financial system from uncooperative and non-transparent jurisdictions that pose risks of illicit financial activity.

Financial Action Task Force: The Financial Action Task Force should continue its important work against money laundering and terrorist financing, and it is by supported the efforts of the World Bank – UN Stolen Asset Recovery (StAR) Initiative.

Tax information exchange: Tax authorities, drawing upon the work of relevant bodies such as the Organisation for Economic Cooperation and Development (OECD), should continue efforts to promote tax information exchange. Lack of transparency and a failure to exchange tax information should be vigorously addressed.

Box IV.16
US Administration's Financial Sector Plan

On June 17, 2009, the Obama administration outlined its much-anticipated framework for financial regulatory reform (the "Financial Reform Plan" or "Plan") in its release "Financial Regulatory Reform, A New Foundation: Rebuilding Financial Supervision and Regulation" and the accompanying fact sheets. Introducing the Plan, President Obama emphasised on creating a framework in which markets can function freely and fairly, without the fragility in which normal business cycles suddenly bring the risk of financial collapse. The major highlights of the plan include greater focus on systemic risks, higher capital and liquidity requirements for financial institutions, tougher regulation of systemically important financial institutions, expanded "resolution authority" for regulators to take over troubled financial institutions, modest consolidation of regulatory functions, new regulations for securitisations and derivatives, stronger consumer protections led by a new Consumer Financial Protection Agency and greater international co-ordination.

Systemic regulation: In order to address perceived gaps in the consolidated oversight of the financial industry, the first part of the Financial Reform Plan focuses on reforming the current oversight structure by, *inter alia*, (i) creating a new Financial Services Oversight Council, (ii) providing new authority to the Board of Governors of the Fed to regulate systemically important financial institutions, regardless of whether those institutions own banks or other insured depository institutions, (iii) consolidating the Office of the Comptroller of the Currency (OCC) and the Office of Thrift Supervision (OTS) into a single National Bank Supervisor (NBS), (iv) requiring advisers to hedge funds and other private pools of capital to register with the Securities and Exchange Commission (SEC), (v) revising the regulation of money market mutual funds to avoid circumstances that can create runs on such funds and (vi) creating a new Office of National Insurance (ONI) to work toward international co-operation in the regulation of the insurance industry.

Higher capital and other prudential requirements: With respect to capital requirements, the Plan proposed to review issues including reducing pro-cyclicality, increases on capital requirements for high-level investments and exposures, with simpler leverage measures with respect to supervision of banks and BHCs.

Tougher regulation of systemically important financial institutions: A newly designated group of Tier 1 Financial Holding Companies (Tier 1 FHCs) as 'any firm whose combination of size, leverage and interconnectedness could pose a threat to financial stability if it failed' would be established by the Fed, in consultation with the FSOC. These entities would be required to hold more capital and bear additional restrictions not applicable to other financial institutions.

New regulations for securitisations and derivatives: The Financial Reform Plan recommends a number of significant changes relating to the asset-backed securities market. The federal banking agencies would be required to mandate that loan originators or sponsors retain 5 per cent of the credit risk of securitised exposures. The administration proposes that the compensation of brokers, originators, sponsors, underwriters and others involved in the securitisation process should be linked to the longer-term performance of the securitised assets, rather than only to the production, creation or inception of those products. The issuers of asset-backed securities would also be required to disclose loan-level data as well as the nature and extent of broker, originator and sponsor compensation for each securitisation.

Stronger consumer protections: The administration has proposed creating a new federal agency – Consumer Financial Protection Agency (CFPA) – responsible for all aspects of regulation of mortgages, credit cards, and other consumer-focused financial products, with a few exceptions, such as mutual funds, which are left with the SEC. Agencies that currently have rule-making power, other than the Federal Trade Commission (FTC), would be stripped of that authority.

Expanded resolution authority: Federal regulators have much less authority to deal with troubled financial institutions other than bank-holding companies, with the level of authority falling to zero for insurers or hedge funds. While the Financial Reform Plan indicates that the regime should be modelled on the FDIA scheme for the resolution of insured depository institutions, it does not provide any details beyond that.

Greater international co-ordination: Finally, the Plan also highlighted the need for greater international regulatory co-operation.

The proposals are comprehensive, though in certain areas they stop short of a full solution. Nonetheless, these proposals could prove vital for reviving the financial system of the US which has been attributed with the genesis of the financial crisis.

References:

1. Financial Reform Plan available at http://www.financialstability.gov/docs/regs/FinalReport_web.pdf

2. President Obama's speech on 21st Century Financial Regulatory Reform on June 17, 2009 available at: www.whitehouse.gov/the_press_office/Remarks-ofthe-President-on-Regulatory-Reform/

3. Eckland, William S., Denis C. Hensley and Norman D. Slonaker. 2009. "The Administration's Financial Regulatory Reform Proposals". Financial Fraud Law Report. September.

4.118 The crisis has had an impact on the formulation of financial sector policies and the design of regulatory frameworks, not only in advanced countries, but also in EMEs. This was mainly due to the direct knock-on effects of the crisis on EMEs, changes to the 'rules of the game' introduced by standard-setting bodies (FSF, BCBS, IAIS, IASB, IOSCO, *etc.*) and demonstration effects related to the policy measures being implemented by developed countries (World Bank, 2008). The progress so far in revisiting the financial sector policies is discussed in separate sub-sections below.

Capital Adequacy and Risk Management

4.119 The recent crisis has reinforced the importance of maintaining strong capital positions at banks and other key financial institutions, and improving their risk management practices. The capital levels of banks took a beating in the post-crisis period, especially in advanced countries. The bail-out packages, however, helped in restoring their capital and, by October 2009, banks in almost all regions have achieved a degree of stability in their capital positions (GFSR, October 2009). Following the stress test conducted by US authorities, capital markets were re-opened to US banks. Around US$ 104 billion of capital was raised during the first half of 2009, taking their Tier 1 capital to around 11.5 per cent of risk-weighted assets (RWA).

4.120 The review of the current regulatory capital framework has been carried forward to ensure that banking organisations have a level of capital sufficient to facilitate lending, while also ensuring safe and sound operations throughout the economic cycle. As far as capital adequacy is concerned, the key issues being examined in various international fora are: (i) increasing the quantity and quality of bank capital; ii) significant increases in trading book capital; iii) avoiding pro-cyclicality in Basel II implementation; iv) creating counter-cyclical capital buffers; v) offsetting pro-cyclicality in published accounts; vi) a gross leverage ratio backstop; and vii) containing liquidity risks in individual banks and at the systemic level. While the future design of prudential norms for banks and financial institutions is being contemplated, the progress in adopting Basel II into national regulatory frameworks continues at a reasonable pace. The Basel Committee on Banking Supervision (BCBS) remains on schedule to issue a fully calibrated, comprehensive set of proposals by the end of 2010. In July 2009, the BCBS proposed enhancements under Pillar 1, Pillar 2 and Pillar 3 with a view to improving resilience to future episodes of stress (Box IV.17). Following the release of the July 2009 trading book reforms, the BCBS has also initiated a fundamental review of the trading book, with a view to issuing concrete proposals for public consultation in the first half of 2011. The BCBS is developing concrete proposals to substantially strengthen the quality, consistency and transparency of capital, which will be finalised by end-2010.

4.121 As regards the pro-cyclicality of capital standards, work is underway to develop an approach that would allow banks to retain more capital in good economic times and to allow this excess or buffer to be reduced as the economic cycle worsens. The goal is to have a level of capital that is sufficient to support lending, while maintaining safety and soundness. The FSB has initiated different work streams directed at reducing pro-cyclicality in the financial system. An agreement was also reached by the BCBS in September 2009 to introduce a framework for counter-cyclical capital buffers over and above the minimum requirement. The framework will include capital conservation measures, such as constraints on capital distributions, and review of an appropriate set of indicators, such as earnings and credit-based variables, as a way to condition the build-up and release of capital buffers.

4.122 The BCBS has strengthened guidance for use in the Pillar 2 supervisory review process of the Basel II framework to address key lessons of the crisis. The BCBS issued principles for sound stress-testing practices and supervision in May 2009. National authorities have also strengthened their guidelines for risk management practices following the shift to Basel II. They are also taking steps to encourage firms to improve and develop risk management and stress-testing.

Box IV.17
Enhancements to the Basel II Framework

The Basel Committee on Banking Supervision (BCBS) announced proposals for enhancing the Basel II framework on July 13, 2009. The Committee announced strengthening the treatment for certain securitisations in Pillar 1 (minimum capital requirements). It also introduced higher risk weights for resecuritisation exposures to better reflect the risk inherent in these products and has proposed that banks conduct more rigorous credit analyses of externally-rated securitisation exposures.

The supplemental Pillar 2 (supervisory review process) guidance addresses several notable weaknesses that have been revealed in banks' risk management processes during the financial turmoil that began in 2007. These include: firm-wide governance and risk management; capturing the risk of off-balance sheet exposures and securitisation activities; managing risk concentrations; providing incentives for banks to better manage risk and returns over the long term; and sound compensation practices.

The Pillar 3 (market discipline) requirements have been strengthened in several key areas, including securitisation exposures in the trading book; sponsorship of off-balance sheet vehicles; resecuritisation exposures; and pipeline and warehousing risks with regard to securitisation exposures.

Banks and supervisors are expected to begin implementing the Pillar 2 guidance immediately. The new Pillar 1 capital requirements and Pillar 3 disclosures should be implemented no later than December 31, 2010.

The Group of Central Bank Governors and Heads of Supervision (GHOS), the oversight body of the BCBS, met on September 6, 2009 to review a comprehensive set of measures to strengthen the regulation, supervision and risk management of the banking sector with a view to substantially reduce the probability and severity of economic and financial stress. The GHOS reached agreement on a number of key measures to strengthen the regulation of the banking sector, such as raising the quality, consistency and transparency of the Tier 1 capital base, introducing a leverage ratio as a supplementary measure to the Basel II risk-based framework with a view to migrating to a Pillar 1 treatment based on appropriate review and calibration, ensuring comparability fully adjusting for differences in accounting, introducing a minimum global standard for funding liquidity that includes a stressed liquidity coverage ratio requirement underpinned by a longer-term structural liquidity ratio, and introducing a framework for counter-cyclical capital buffers above the minimum requirement.

The GHOS endorsed the following principles to guide supervisors in the transition to a higher level and quality of capital in the banking system:

- Building on the framework for counter-cyclical capital buffers, supervisors should require banks to strengthen their capital base through a combination of capital conservation measures, including actions to limit excessive dividend payments, share buybacks and compensation.
- Compensation should be aligned with prudent risk-taking and long-term, sustainable performance, building on the Financial Stability Board (FSB) sound compensation principles.
- Banks will be required to move expeditiously to raise the level and quality of capital to the new standards, but in a manner that promotes stability of national banking systems and the broader economy.

The framework would include capital conservation measures such as constraints on capital distributions. BCBS would review an appropriate set of indicators, such as earnings and credit-based variables, as a way to condition the build-up and release of capital buffers. In addition, the Committee would promote more forward-looking provisions based on expected losses. The Committee would also assess the need for a capital surcharge to mitigate the risk of systemic banks.

Supervisors would require to ensure that the capital plans for the banks in their jurisdiction are consistent with these principles.

References:

1. BIS. 2009. "Comprehensive Response to the Global Banking Crisis". Press Release dated September 7.

2. BIS. 2009. "Basel II Capital Framework Enhancements Announced by the Basel Committee". Press Release dated July 13.

4.123 The Basel Committee's revised principles for sound liquidity risk management (2008), are being incorporated into new inter-agency guidance in the US that re-emphasises the importance of rigorous stress testing to determine adequate liquidity buffers. Two major consultation papers were published in December 2009 on *International Framework for Liquidity Risk Measurement, Standards and Monitoring* and *Strengthening the Resilience of the Banking Sector*. Alongside the consultation, the BCBS is undertaking a comprehensive "bottom-up" quantitative impact assessment (QIS) of how much

minimum capital requirements will increase due to the reform proposals, as well as a detailed "top-down" assessment, which will determine the overall calibration of the new regulatory standards for capital and liquidity. Reports on the bottom-up QIS and the top-down calibration assessments will be reviewed by the BCBS in mid-July 2010. In addition, a joint FSB-BCBS Macroeconomic Assessment Group has been established under the chairmanship of BIS to assess the macroeconomic implications of the implementation of the reform proposals, in close collaboration with the IMF. The macroeconomic impact study will inform the development of the phase-in period of the new standards such that it does not impede the recovery of the real economy.

4.124 Internationally, the Financial Stability Board has called for significantly stronger capital standards, and the G-20 has committed to developing rules to improve both the quantity and quality of bank capital. Reforming the accounting standards and making it consistent across nations emerged as another priority task.

Accounting Standards

4.125 The role that accounting played during the crisis has been widely analysed and recommendations to strengthen accounting standards and the standard-setting process have been put forward. Although accounting conventions were not the cause of the financial crisis, certain accounting measures, such as the use of fair value accounting for illiquid financial instruments and the impairment model for loans and debt securities, have been viewed as weak areas. Standard setters responded by providing guidance on the determination of fair values in the stressed market environment and the determination of financial instrument impairment (Box IV.18). On the issue of

Box IV.18
FASB and IASB Approaches

Standard setters are now actively engaged in a discussion of the appropriate accounting principles for measuring financial instruments. The Generally Accepted Accounting Principles (GAAP) includes the US Financial Accounting Standards Board (FASB), and the International Accounting Standards Board (IASB), which issues International Financial Reporting Standards (IFRS). Many other countries have instituted local standards resulting in a local country GAAP. Currently, FASB and IASB are pursuing measurement approaches that diverge in important ways.

As regards *fair value measurement,* the IASB and FASB have initiated work to arrive at a convergence. In November 2009, the IASB issued IFRS 9, *Financial Instruments*, on classification and measurement of financial assets that establishes a mixed amortised cost and fair value accounting model. In response to comments from stakeholders, the IASB made changes to the approach set forth in its July 2009 exposure draft (ED). IASB has also issued an Exposure Draft on Classification and Measurement of Financial Liabilities in May 2010. Although the two standard setters are developing separate proposals for their revised financial instruments standards, they have expressed the intention of collaborating in their work. FASB and the IASB will consider together the comments received on the financial instruments EDs issued by the two Boards.

As regards expected loss provisioning for financial assets, the IASB also issued for public comment an ED. The FASB will explain its credit loss impairment approach in its comprehensive ED in the second quarter of 2010. However, the approach towards expected loss provisioning by both the Boards are also not similar in nature. In view of the above, the two bodies have established an Expert Advisory Panel (EAP) on impairment to assist the Boards in addressing a number of practical issues associated with their respective credit impairment (provisioning) approaches.

The BCBS has been discussing with the IASB and EAP ways to further enhance the IASB's proposed expected loss approach in a manner that seeks to better integrate expected loss estimation processes with bank risk management systems, draw from information used for Basel II purposes, improve the quality of the expected loss estimates and mitigate risks of procyclicality while reducing undue burden on banks.

Thus, the evolution of a single set of global accounting standards is not an easy task though efforts towards this direction have been initiated by both IASB and FASB

References

1. Duke, Elizabeth A. 2009. "Regulatory Perspectives on the Changing Accounting Landscape". AICPA National Conference on Banks and Savings Institutions. Washington D.C. September 14.
2. Financial Stability Board. 2010. "Progress since the St Andrews meeting in Implementing the G20 Recommendations for Strengthening Financial Stability". April.

financial accounting, a broad consensus is emerging that it should be simplified and made to converge globally.

4.126 In 2006, the IASB and the US Financial Accounting Standards Board (FASB) agreed a Memorandum of Understanding (MoU) that described a programme to achieve improvements in accounting standards, and substantial convergence between IFRSs and US generally accepted accounting principles (GAAP). The MoU was updated in 2008, and in November 2009 the two boards issued a further statement outlining steps for completing their convergence work by *June 2011*.

Compensation Reforms

4.127 Compensation practices, especially of large financial institutions, were one of the factors which contributed to the recent global financial crisis. The FSB brought out the *Principles for Sound Compensation Practices* (April 2009) and their *Implementation Standards* (September 2009) and launched in December 2009 a review of the steps taken by FSB member jurisdictions to implement the *Principles* and *Standards.* The review also covered progress to date in implementation by significant financial institutions. The review was concluded and published in March 2010. To maintain momentum, the FSB will conduct a further and more detailed review of implementation in the second quarter of 2011.

4.128 The BCBS issued *Compensation Principles and Standards Assessment Methodology* on January 22, 2010. The Methodology seeks to foster supervisory approaches that are effective in promoting sound compensation practices at banks and help support a level playing field.

The Securitisation Framework

4.129 The modern financial system has become dependent upon securitisation as an important intermediation tool. During the sub-prime crisis, most of the off-balance sheet vehicles (OBSVs) were motivated primarily by regulatory arbitrage, while others were created for tax avoidance reasons or to address the needs of governments and other public authorities for off-budget and off-balance sheet finance, generally to get around public deficit or debt limits (Buiter, 2008). The crisis highlighted the imperative of reforming the securitisation framework with a view to ensure: i) rigorous due diligence at the credit appraisal stage so as to rightly assess the amount of credit risks on low-quality/sub-prime counterparties; ii) the need to consider market disruption scenarios as well as institution-specific scenarios in liquidity planning; iii) the importance of reliable valuations and transparency of risk exposures; iv) sufficient recognition of residual risks in the structured products; and v) sufficient transparency and disclosure.

4.130 In July 2009, the BCBS issued final standards to raise capital requirements for re-securitisations, and enhanced risk management requirements around structured products and off-balance sheet activities. The BCBS is working to ensure that capital requirements for OTC derivatives adequately reflect the risks of derivatives, taking into account the benefits of central clearing and the impact of collateralisation and other counterparty credit risks. The new standards are expected to be issued by end of 2010.

4.131 The International Organisation of Securities Commissions (IOSCO) published a report on regulatory issues in September 2009 related to securitised products and credit default swaps (CDS). The report recommended regulatory approaches to be implemented in the securitisation markets. IOSCO also finalised in June 2009 its report on Good Practices in relation to Investment Managers Due Diligence when investing in Structured Finance Instruments. The recent G-20 agreement proposed retention of risk, or “skin-in-the-game” approach for asset securitisations. National and regional initiatives are also underway in some jurisdictions to introduce quantitative retention requirements for originators/sponsors of securitisations.

4.132 As for CDS standardisation, some of the major issues have already been addressed by the industry. The International Swaps and Derivatives

Association published two supplements to its 2003 Credit Derivatives Definitions (the “Big Bang” and “Small Bang” protocols) in April and in July 2009. Initiatives to promote the establishment of central clearing counterparties for CDS contracts is gathering pace, with an initial focus on CDS indices. A number of CDS clearinghouses have already begun operations.

4.133 The OTC Derivatives Regulators’ Forum was established in September 2009, thus putting on a more formal basis the arrangements already underway for cooperation and information sharing on OTC derivatives, central counterparties and trade repositories, including promoting globally consistent oversight. With a view to better address risks associated with the central clearing of OTC derivatives, the Committee on Payment and Settlement Systems (CPSS) of BIS and IOSCO have created a joint working group that is revising the standards set out under the *Recommendations for Central Counterparties* which was jointly published in March 2004. Centralised reporting platforms such as Trade Information Warehouse (TIW) of the Depository Trust and Clearing Corporation (DTCC) have been set up to collect the information relating to OTC derivatives to enable higher transparency. The New York Fed has long spearheaded efforts to create a global central counterparty for the industry. The European Union is also pushing for a separate OTC derivatives counterparty for the region.

4.134 Apart from the securitisation framework, the role of credit rating agencies in understating the risk of many financial products and papers, and misleading investors came under severe criticism during the crisis.

Reforming the Credit Rating Agencies

4.135 The complexity of financial instruments and their pace of issue – specially asset-backed securities and structured finance products – over the past decade made the rating business more profitable, but also more difficult. In the end, the rating agencies inadvertently contributed to the build-up of systemic risk by issuing unrealistically high ratings (BIS, Annual Report, 2009).

4.136 National and regional initiatives are ongoing to strengthen oversight of credit rating agencies (CRAs). The European Commission (EC) has taken steps to supervise CRAs in Europe. The EC proposals constitute a first and necessary step towards global supervision of credit rating agencies in the years to come. The updated provisions of the IOSCO Code of Conduct Fundamentals for CRAs published in March 2009 have been adopted by several CRAs into their codes of conduct. Regulators are working, including through IOSCO, to evaluate whether national and regional regulatory initiatives are consistent with the IOSCO Principles and Code of Conduct Fundamentals. They are also identifying whether divergences between initiatives might cause conflicting compliance obligations for credit rating agencies working together towards appropriate and globally compatible solutions by 2010.

4.137 In response to the FSB and G20 recommendations to review the use of ratings in the regulatory and supervisory framework, the BCBS is working to address a number of inappropriate incentives arising from the use of external ratings in the regulatory capital framework.

4.138 The G-30 has proposed revision in regulatory policies with regard to Nationally Recognised Securities Rating Organisations (NRSROs) and the use of ratings, with a view to achieving the following: (i) users of risk ratings, most importantly regulated users, should be encouraged to restore or acquire the capacity for independent evaluations of the risk of the credit products in which they are investing; (ii) risk ratings issued by the NRSROs should be made more robust to reflect the risk of potential valuation losses arising not just from default probabilities and loss in the event of default, but also from the full range of potential risk factors (including liquidity and price volatility); and (iii) regulators should encourage the development of payment models that improve the alignment of incentives among the providers of risk ratings and their clients and users, and permit users to hold NRSROs accountable for the quality of their work product.

4.139 Apart from the insufficient regulation and supervision of the structured products and credit rating agencies, the build-up of excessive systemic risk has been identified as a prominent cause of the crisis. The focus has been on institution-wide risk at the expense of systemic risk.

Addressing Systemic Risk

4.140 The starting point for building a comprehensive framework that safeguards financial stability is to identify the sources of systemic risk in each of the three elements of the financial system, *viz*., instruments, markets and institutions. In order to deal with the problem of a porous regulatory perimeter, no part of the financial system should be allowed to escape appropriate regulation. From a supervisory perspective, the unregulated segments were huge 'black holes', including what has been called a 'shadow banking system' where most of the excesses of securitisation took place (Dewatripont *et al*., 2009). The regulatory gaps in which the unregulated entities operate are being identified so that the systemically-important regulated entities are not put to undue risk by the activities of the unregulated entities (Box IV.19).

4.141 Two important themes have emerged from these efforts. First, the importance of effective consolidated supervision, particularly at large, complex organisations, has been reaffirmed so that supervisors can properly understand risks and exposures that cross legal entities and business lines. Second, the significance of a system-wide, or macro-prudential, perspective with firm-specific risk analysis to better anticipate problems that may arise from the interactions of firms and markets has been recognised. To support these approaches, the supervisory processes are being restructured to include analyses that draw on multiple disciplines, updated surveillance tools and more timely information, so that supervisors can identify emerging risks sooner and respond more effectively.

Systemically Important Financial Institutions (SIFIs)

4.142 The FSB has been working with its members to develop in a comprehensive and consistent framework to address the moral hazard

Box IV.19
Expanding the Scope of Financial Regulation

The Joint Forum, composed of the BCBS, IAIS and IOSCO, is analysing regulatory gaps in order to help ensure that the scope and the nature of financial regulation are appropriate. In January 2010, the Joint Forum, composed of the BCBS, IAIS and IOSCO, published its report on the Differentiated Nature and Scope of Financial Regulation. While the report covers a broad waterfront, the recommendations are focused on five key areas: (i) Key regulatory differences across the banking, insurance and securities sectors; (ii) Strengthening supervision and regulation of financial groups; (iii) Promoting consistent and effective underwriting standards for mortgage origination; (iv) Broadening the scope of regulation to hedge fund activities; and (v) Strengthening regulatory oversight of credit transfer products.

For the insurance sector, the International Association of Insurance Supervisors (IAIS) published on April 12, 2010, a guidance paper on treatment of non-regulated entities in group-wide supervision sector. The IAIS is also researching the design and practicality of a common assessment framework for insurance group supervision. Finally, the IAIS is currently preparing a new *Roadmap for standard setting within the framework for insurance supervision* which aims at setting out the policy direction and priorities for all IAIS standard-setting activities within the Framework for Insurance Supervision over the two-year period commencing January 1, 2010. The IAIS has launched a consultation process among its members in order to raise the issue of what standard-setting initiatives should be undertaken in respect of supervisory review, reporting and assessment within the timeframe of this Roadmap.

IOSCO, which is a member body of the FSB, published in June 2009 a set of high-level principles for hedge fund regulation. The six principles include requirements on mandatory registration, regulation and provision of information for systemic risk assessment purposes. They also state that regulators should co-operate and share information to facilitate efficient and effective oversight of globally active hedge fund managers/hedge funds. IOSCO will continue its work in this area. National and regional initiatives are also underway in key jurisdictions.

A number of initiatives are also underway at the national level to review the adequacy of domestic regulation and fill identified regulatory gaps, including as part of broader financial sector reform proposals.

arising from SIFIs. The IMF/BIS/FSB joint paper issued in October 2009 set out a framework for assessing the systemic importance of a firm. The FSB will provide an interim report on this project including likely policy options in June 2010 and final recommendations in November 2010. Three main work streams identified in this regard relate to: (i) reducing the probability and impact of failure; (ii) improving the capacity to resolve firms in crisis; and (iii) reducing interconnectedness and contagion risks by strengthening the core financial infrastructures and markets. A private sector task force will release a report with recommendation on how to mitigate risks related to tri-party repo transactions in the first half of 2010.

Macro-prudential Regulation

4.143 The need for a wider range of macro-prudential tools, particularly those that will tend to limit *ex ante* the scope of systemic risk in time-series and cross-sectional terms, has come into prominence following the recent financial crisis. Since its origin in the late 1970s, the term 'macroprudential' has always denoted concerns over the financial system's stability and its link with the macroeconomy. In a narrow sense, macroprudential regulation refers to the use of *prudential* tools with the explicit objective of promoting the stability of the *financial system as a whole*, not necessarily of the individual institutions within it. It is, however, important to ensure an adequate balance between macro-prudential and micro-prudential regulation to control risks, and to develop the tools necessary to monitor and assess the build-up of macro-prudential risks in the financial system. Central banks and supervisors have responded to the crisis by strengthening micro-prudential regulation, in particular the Basel II framework, and work is ongoing towards the introduction of a macro-prudential overlay which includes a counter-cyclical capital buffer, as well as practical steps to address the risks arising from systemic, interconnected banks. Efforts to establish system-wide oversight and macro-prudential policy arrangements are ongoing at the national level, for example, through changes to institutional arrangements and reviewing the powers of relevant authorities. The BCBS has established a working group on macro-prudential supervision that will cover, *inter alia*, supervisory tools to address the externalities of systemically important banks.

4.144 The FSB and its members are developing quantitative tools to monitor and assess the build-up of macro-prudential risks in the financial system. These tools aim to improve the identification and assessment of systemically important components of the financial sector and the assessment of how risks evolve over time. The use of macro-prudential tools will require that authorities expand data collection on the financial system. The IMF and FSB have launched a joint initiative to identify and address data gaps and submitted a report outlining priorities and work plans to G-20 Finance Ministers and Central Bank Governors in November 2009.

Single versus Multiple Regulators

4.145 In light of the crisis, it is argued that there has been a downplaying of the importance of financial regulation in many advanced countries by divesting the central bank of the powers of regulation and supervision and bestowing those powers on a separate entity such as the Financial Services Authority (FSA) as in the UK. While the debate on the merits of single versus multiple regulators is still not settled, it needs to be recognised that market participants can sometimes arbitrage by providing different sets of information to different regulators, thus exploiting the information asymmetry problem among regulators. In the aftermath of the sub-prime crisis, there is an emerging view that if central banks have to discharge LOLR responsibilities in bailing out errant institutions that have shown 'irrational exuberance' in extending credit, they ought to have supervisory and regulatory powers over the balance sheets of these institutions. Even if the central bank does not have regulatory and supervisory responsibilities, it needs to have access to different sources of information across regulators such that the quality and accuracy of information can be monitored

regularly, even if it entails some duplication in terms of reporting to different regulators. As monetary stability and financial stability are mutually reinforcing, a single super-regulator can have an inherent advantage over multiple regulators working at cross-purposes.

4.146 In view of the above, Germany announced on October 9, 2009 that it would appoint the Bundesbank as the sole banking regulator, divesting the existing regulator BaFin of its responsibility for banking supervision. The National Bank of Georgia also regained supervision in December 2009 – 20 months after the establishment of the Georgian Financial Supervisory Agency in April 2008. On June 16, 2010 a major overhaul of the financial regulatory apparatus in the UK was announced which would be completed by 2012. Accordingly, the prudential oversight wing of the FSA will move inside the Bank of England, and a new Consumer Protection and Market Authority will be created.

4.147 The reforms in Europe's supervisory framework, which is outlined in the European Commission's communication of May 27, 2009, will see the creation of two new authorities: a European Systemic Risk Council (ESRC) and a European System of Financial Supervisors (ESFS). The ESRC, which will comprise the heads of each of the European Union's central banks and financial regulators, will conduct macro-prudential supervision to monitor and assess risks to the stability of the financial system as a whole, addressing the exposure of the financial system to interconnected, complex, sectoral and cross-sectoral systemic risks as highlighted by the crisis. The ESFS will be charged with firm-level or micro prudential supervision. According to the plan, the new framework would comprise a network of national financial supervisors working together with the new European supervisory authorities. The reforms will scrap the Committee of European Banking Supervisors, the Committee of European Insurance and Occupational Pensions Committee and the Committee of European Securities Regulators, with the new agencies performing their existing functions. The ESFS shall be responsible for linking national supervisors to form an operational European network.

Co-ordination in Strengthening the Global Financial Architecture

4.148 The recent turmoil in financial markets underscored the need for a higher degree of co-ordination among central banks and supervisors. From the start of the current crisis, it was clear that short-term measures to address liquidity and solvency have had to be complemented by actions to strengthen the system in the longer term. There are critical externalities in both the short-term and long-term response measures that call for international co-ordination. These longer-term actions have needed to address the cross-border effects of regulatory policies in order to assure the maintenance of a level playing field. The work to strengthen global systemic resilience has been proceeding with a degree of international co-operation and at a speed that would have been unthinkable only a year ago.

4.149 The FSF and the Bank for International Settlement (BIS) also made a series of recommendations for mitigating the impact of the crisis and improving the global financial system. In early April 2008, the G-7 countries ratified a comprehensive proposal made by FSF to be implemented over the next 100 days. The proposal covered steps to be taken on accounting and disclosure standards for off-balance sheet entities; and strengthening of risk management practices, supported by supervisors' oversight, including rigorous stress testing; and strengthening of capital positions as needed. In addition, the FSF made certain proposals for implementation by end-2008 which were supported by the International Monetary and Financial Committee (IMFC). Furthermore, the Economic and Financial Affairs Council (Ecofin) endorsed a programme of work on the recent market turbulence, focusing on broadly the same issues as the FSF. In addition, in May 2008, the Committee of European Securities Regulators (CESR) proposed the establishment of an international Standard Setting and Monitoring Body

(SSMB) at IOSCO to set standards of agencies together with the regulators. Compliance with these standards was to be monitored by the SSMB, *albeit* without the involvement of the agencies. This approach is claimed to be virtually a midway solution between self-regulation and sovereign regulation. A considerable degree of international consensus seems to be emerging on the key issues raised by the recent events.

4.150 The Financial Stability Board (FSB)[2] held its inaugural meeting on June 26-27, 2009, and has set up the internal structures needed to address its mandate. These new structures include a Steering Committee and three Standing Committees – for Assessment of Vulnerabilities; Supervisory and Regulatory Cooperation; and Standards Implementation. The FSB also established a Cross-border Crisis Management Working Group, and an Expert Group on non-cooperative jurisdictions. These groupings have all begun their work on the development of a mechanism for peer reviews, drawing on the experiences of other organisations and bodies, as well as the identification of priority themes and countries.

4.151 It has been realised that systemic risk associated with the operations of cross-border banks could be reduced only through international co-operation. Thus, work is in progress to implement the FSF Principles for Cross-border Cooperation on Crisis Management. Firm-specific cross-border contingency planning discussions took place in 2009 and are scheduled in the first half of 2010. The FSB Cross-border Crisis Management Working Group is preparing a list of the main elements to be included in contingency planning discussions, including a template for 'de-risking' plans to be prepared by the firms. De-risking plans will cover options the firms would need to consider to exit risky positions and scale back their activities in an orderly fashion and without government intervention.

4.152 The IMF, BIS and FSB have been working jointly on this aspect of response to the crisis. The objective has been ensuring that all systemically-important institutions, markets and instruments are subject to an appropriate degree of oversight and regulation. The FSB has developed a work program to propose by the end of October 2010 on possible approaches to address the "too big to fail" problems associated with systemically important financial institutions. It provided an interim report on this project, including likely policy options, to the June 2010 Summit of the G 20.

4.153 Two major international initiatives on bank resolution frameworks are also underway. The first is the Cross-Border Bank Resolution Group (CBRG) of the BCBS, and the second is the initiative by the IMF and the World Bank on the legal, institutional and regulatory framework for national bank insolvency regimes. The CBRG of the BCBS released its recommendations on cross-border bank resolution in March 2010. In parallel, the IMF is currently examining the principal legal and policy issues that arise in the insolvency of cross-border financial groups, and the approaches that could be taken in addressing them, and plans to lay out proposals for the design of an international framework guiding the insolvency of a cross-border financial group in early July 2010.

4.154 Supervisors have agreed to co-operate more closely in overseeing internationally active banks through such vehicles as supervisory colleges. So far, supervisory colleges have been established for more than 30 large complex financial institutions identified by the FSB as needing college arrangements. In March 2010, the BCBS released a consultative document on good practices on supervisory colleges to help both home and host supervisors by outlining expectations in relation to college objectives, governance, communication and information sharing. The FSB

[2] G-20 Leaders at the London Summit in April 2009 transformed the FSF into the Financial Stability Board (FSB), with an expanded membership and a broadened mandate to promote financial stability.

is reviewing the merits of developing overarching cross-sectoral principles to guide and improve the operation of supervisory colleges.

4.155 The financial sector reforms under progress in various countries is thus being worked on a very wide canvas encompassing not only a revamp of the prudential standards, accounting practices and transparency norms, but also challenging the present philosophy as well as the existing structure of the regulatory and supervisory framework.

Co-ordinated Response to the Greek Crisis

4.156 More recently, in the wake of the financial stress triggered by Greece, comprehensive support measures have been announced focusing on preserving economic and financial stability within the euro area. Measures announced since early May 2010 include: a joint euro area - IMF package of Euro 110 billion for Greece based on strong conditionality; accelerated fiscal consolidation by a number of Member States; and the creation of a European Stabilisation Mechanism (ESM) and a European Financial Stability Facility (EFSF) with a total value of up to Euro 500 billion. The ESM incorporates strong conditionality and has two components. The first permits the European Commission to provide up to Euro 60 billion of emergency assistance to an EU Member State facing a severe deterioration in borrowing conditions due to factors beyond its control. The second is a voluntary inter-governmental agreement of Member States to complement the European Commission's mechanism through a temporary Special Purpose Vehicle (SPV) worth up to Euro 440 billion over a period of three years. The EU has made clear that in both cases financial assistance will be provided in partnership with the IMF. Under these arrangements, the IMF has indicated that it is prepared to contribute on a country-by-country basis and broadly in proportion of the IMF's recent European arrangements.

4.157 In parallel with the announcement of the ESM, the ECB took action to ensure the effective functioning of the monetary policy transmission mechanism. This involved actions to address strains in some segments of the euro area debt securities markets, through sterilised purchases of sovereign debt of certain countries, without amending the monetary policy stance. The Federal Reserve, ECB, Bank of England, Bank of Canada, Swiss National Bank and Bank of Japan also decided to reactivate bilateral dollar swap lines.

VIII. CONCLUDING OBSERVATIONS

4.158 The severity of the financial crisis called for responses which included varying combinations of deposit guarantees, debt guarantees, capital injections, asset purchases, and monetary and fiscal measures to stimulate the economy and which were co-ordinated globally on an unprecedented scale. Despite the interlinkages between markets getting more intricate and complex with feedback into the real economy that was capable of spilling wide-spread disaster, the timely and co-ordinated responses were forceful enough to extinguish the initial damage and stop the crisis from spreading further. However, policymakers face the challenge of continuing or withdrawing the stimulus measures at the appropriate time, as well as carrying forward the task of restructuring the financial systems in a manner that fosters financial stability and growth. The global crisis has offered the opportunity to revisit the conventional wisdom in many areas, and the future approach to financial sector reforms as well as supervision must be guided by the primary objective of making the financial sector serve the needs of the real economy (Chakravarty, 2009).

4.159 Monetary authorities in much of the industrial world were forced to cut policy interest rates to record lows. These measures proved insufficient to contain the crisis of confidence. Thus, central banks moved to ease financial conditions even further by using their balance sheets in unconventional ways. The unconventional measures, while helping to stabilise the financial system, have posed several challenges and risks. The mitigation of these challenges and risks would,

inter alia, require transparency and effective communication from the authorities. In emerging economies, the tasks are complicated by the need to sustain external stability in the face of highly fragile financing flows and mismatches in the balance sheet due to domestic borrowing in foreign currencies.

4.160 The present financial crisis has tested the ability of central banks to act as the LOLR. A key issue that emerged was the need for an adequate array of policy tools to contain the stresses in the financial markets. Another challenge that central banks faced was the need to provide sufficient liquidity to the market without undermining the monetary policy setting.

4.161 Governments across countries responded to the present crisis through large-scale fiscal support to the financial system. These actions have largely helped to contain the problem of insolvency of financial institutions and to stabilise the financial system. The unprecedented scale of economic slowdown accompanying the financial crisis also led to the activation of counter-cyclical fiscal policy of magnitudes unobserved *hitherto*. The stimulus measures are expected to have a positive impact on growth, as they have been undertaken simultaneously across countries and, therefore, reduce leakages. Furthermore, the monetary policies have been accommodative. However, their precise impact is uncertain, while the deficit and debt across the countries, particularly in the advanced economies, have increased substantially. These countries are already facing the fiscal stress that would arise from population ageing in the near future and beyond. Loan losses and credit defaults may rise further as the crisis prolongs. This could entail further government support to financial institutions and thus higher government deficits.

4.162 The high deficit and debt has thus raised concerns about fiscal sustainability, financial stability and other longer-term issues. Concern about unsustainable fiscal policy could lead to a rise in long-term interest rates and crowd out the private sector, thereby thwarting a sustained revival of growth. High fiscal deficit leading to higher inflation and interest rates can induce substantial losses to the banks due to mark-to-market requirements, thereby threatening financial stability (Subbarao, 2009). Government support to banks also raises several long-term concerns. First, short-term actions that delay adjustment and the stimulation of aggregate demand may not be compatible with the deleveraging of banks' balance sheets in the medium-term. Second, rescue packages for 'too large to fail' banks or too interconnected banks raise moral hazard problems. Third, the rescue packages and government-assisted sale of failed banks can unintentionally create larger financial institutions, which can increase systemic risk. Fourth, an uncoordinated response in terms of difference in coverage and cost, by distorting competition risks can create an uneven playing field for global banks (BIS, 2009).

4.163 Ensuring fiscal solvency would thus be paramount in the near future. This would require: i) firm commitment and a clear strategy to contain ageing-related expenditure; ii) structural reforms to enhance growth; and iii) medium-term fiscal frameworks with identified policies and supportive institutional arrangements that envisage commitment to fiscal correction once economic conditions improve (IMF, 2009a).

4.164 The lack of well-articulated exit strategies for the monetary, fiscal and financial repair programmes could hinder rather than support the necessary macroeconomic adjustments. A comprehensive exit strategy is crucial. The strategy should encompass the resuscitation of financial markets displaced by unconventional measures, as well as the resumption of fully market-based monetary operations. More importantly, a plan for the gradual winding down of liquidity and credit-easing measures, which can include a tightening of funding conditions, traditional mopping-up operations, and adjustment of the reserve requirement framework, needs to be put in place. In addition, it would be helpful to develop tools to facilitate a smooth unwinding of the significantly expanded central bank balance sheets. In some

cases, amendments to central bank legislative frameworks may be needed to provide the necessary instruments.

4.165 As the work towards securing a sustained economic recovery progresses, the need to re-orient the supervisory approach and to strengthen our regulatory and legal framework to help prevent a recurrence of the events of the past two years cannot be ignored. Post-crisis, there was a natural effort to understand and assess the nature of various inexactitudes which had earlier been missed and incorporate these in the policy frameworks. Supervisors and standard-setting bodies have been actively engaged in strengthening the standards that govern bank capital, liquidity, risk management, incentive compensation, and consumer protection, among other areas. The work on improving supervision and giving it a greater macro-prudential focus through enhanced consolidated supervision and the development of new supervisory tools – including comprehensive horizontal reviews, off-site quantitative evaluations, and more extensive information gathering – is also gaining momentum. Regulators and supervisors can do a great deal, but comprehensive financial reform requires action by the government through the introduction of an appropriate legal framework.

4.166 During the past two years, a co-ordinated effort by industrialised and emerging countries alike has brought most important financial actors under the umbrella of supervision. Principles and rules have been enacted for rating agencies to deal with their conflicts of interest, enhance their rating process, and increase transparency and their oversight through compulsory registration. Hedge funds would go through a process of licensing and oversight and would have to meet transparency requirements towards both investors and regulators. Furthermore, off-balance sheet activities would be consolidated and disciplined through changes in the accounting and prudential frameworks. Goodhart and Persaud (2008) recommend establishing a list of systemically important instruments and requiring them to be registered and, where appropriate, exchange-traded and centrally cleared.

4.167 The need for balancing innovation and safety in financial instruments requires some form of product registration that limits investor access to instruments according to their degree of safety. There must be a mechanism for holding securities issuers accountable for the quality of what they sell. This will mean that issuers bear increased responsibility for the risk assessment of their products. As policymakers work to create a new framework for securitisation, the impact of the new accounting rules and the new regulatory capital regime on securitisation activities needs to be taken into account as banking organisations implement the new standards. Rather than being too stringent on this particular tool, it is crucial to focus on providing the appropriate incentives, oversight, and accountability.

4.168 Strengthening consolidated supervision, setting up a mechanism (such as a systemic oversight council) to identify and monitor risks to financial stability, and creating a framework that allows the safe unwinding of failing, systemically critical firms are among the essential ingredients of a new system that will reduce the probability of future crises and greatly mitigate the severity of any that occur (Bernanke, 2009).

4.169 It is critical that policymakers work to build a system that is as efficient as possible for the maximum tolerable level of risk they choose. Broadly, two kinds of policy responses are being debated: (i) reducing the probability and impact of failure of a systemically important institution and (ii) making the financial system better able to deal with such a failure (Gopinath, 2009). The onus on the authorities is also to be vigilant so as to be able to constantly scan the horizon and recognise that a problem is brewing, and take pre-emptive action before the problem becomes disruptive (Thorat, 2009).