*Global Financial Crisis and the Indian Economy**

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I thank the Bank of America for providing me this opportunity to speak before you. As you might know, despite strong domestic growth drivers, India was also impacted by the global crisis. This raised the issue whether India is more globalised than what is generally perceived. In the post-crisis period, India's growth has rebounded strongly while growth remains sluggish in many advanced economies. In fact, concern in India has now shifted from recovery management to inflation management as growth reverts to its pre-crisis trend. Against this background, I propose to briefly touch upon the impact of global financial crisis on the Indian economy and highlight the policy response, particularly monetary policy response. I will conclude giving you an outlook on the Indian economy.

Impact of Global Financial Crisis

The global economy experienced a sustained period of growth with moderate fluctuations coupled with low inflation, a phenomenon popularly termed as the 'great moderation' till the onset of the recent global crisis. This prolonged period of macro-economic stability was essentially attributed to efficiently functioning markets and the benefits of globalisation. However, what remained hidden within these overall signs of prosperity were the immensely complex financial systems and the systemic risks they entailed. In addition, some structural imbalances had also developed in the world economy in terms of mismatches between savings and investments and production and consumption across nations that manifested in the widening current account deficits in some part mirrored by

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surpluses in others, misalignment of exchange rates and booming asset prices. These developments had to unwind at some point of time and when the process began, they manifested themselves in the form of the worst ever global financial crisis since the 'Great Depression' of the 1930s.

The crisis showed that while increasing globalisation and trade integration have brought enormous economic and financial benefits to the Emerging Market Economies (EMEs), they have also widened the channels through which a slowdown in economic activity in advanced economies could spread to the EMEs. In the initial phase of the crisis, it appeared that EMEs were better positioned to weather the storm created by the global financial meltdown on the back of substantial foreign exchange reserve cushion, improved policy frameworks and generally robust banking sector and corporate balance sheets. However, any hope about EMEs escaping unscathed could not sustain after the failure of Lehman Brothers in September 2008 which triggered global deleveraging and heightened risk aversion. Eventually, EMEs were also adversely affected by the spillover effects of the macroeconomic turbulences created by the global financial meltdown. The EMEs were affected through contraction in world trade especially during the second half of 2008 and reversal in capital flows which led to tightening of external financing conditions. Finally, with the impact of the financial crisis spreading to the real economy, growth in EMEs was also adversely affected.

Until the emergence of global crisis, the Indian economy was going through a phase of high growth driven by domestic demand – growing domestic investment financed mostly by domestic savings and sustained consumption demand. In fact, consumption and saving were well-balanced. Services sector, led by domestic demand, contributed to the stability in growth. Concomitantly, inflation was also generally low and stable. This overall improvement in macroeconomic performance in India was attributed to calibrated financial sector reforms that resulted in an efficient system of financial intermediation, *albeit* bank-based; the rule-based fiscal policy that reduced the drag on private savings; and forward-looking monetary policy that balanced the short-term trade-off between growth and inflation on a continuous basis. Additionally, the phased liberalisation of the economy to trade and capital flows along with a broadly market-driven exchange rate regime enhanced the role of external demand in supporting the growth process, simultaneously exposing the economy to the forces of globalisation. In the process, India became increasingly integrated with the world economy and maintaining financial stability assumed importance in the hierarchy of public policy. In fact, it emerged as an important objective of monetary policy in India even before the current crisis. This is evident from the counter-cyclical monetary policy and macro-prudential financial regulations that were in force during the high-growth phase just before the crisis.

India, though initially somewhat insulated to the global developments, eventually was impacted significantly by the global shocks through all the channels – trade, finance and expectations channels. This raised the issue that whether India is more globalised than what is perceived in terms of conventional trade openness indicators. At the same time, India was also among the first to exhibit strong rebound from the global downturn as compared to many advanced economies. I will allude to some of the emerging structural characteristics of the Indian economy.

First, despite the dominance of domestic demand, the role of trade in conditioning the growth process in India has become important over time. A significant boost to global integration came through rapid growth in India's international trade in services in the 2000s enabled by expansion in information technology which facilitated cross-border delivery of services. Progressive liberalisation of capital account initiated in the 1990s and continued through the 2000s gave further fillip to the process of financial integration. Thus, the financial channel emerged as dominant factor with gross capital flows (inflows plus outflows) rising to about 48 per cent of GDP in 2009-10 from an average of about 5 per cent in the 1980s. Gross current and capital account flows in the balance of payments have increased to over 100 per cent of GDP in 2009-10 from about 22 per cent in the 1980s. Given the significant degree of openness achieved since the 1990s, it is natural that the global shocks – real as well as financial – have greater impact.

Second, with increased global integration, the Indian economy has been subjected to greater influence of global business cycles. This is reflected in the high degree of co-movement between the Indian business cycle with the global business cycles. The correlation between the cyclical component of the index of industrial production (IIP) of the advanced economies and India has risen to 0.50 during the period 1993-2010 from 0.12 in the earlier period 1970-1992.

Third, the transmission of global shocks through the traditional channel of trade cycles has also strengthened over the years. With rising exports along with a transition from primary article exports to manufacturing exports, the co-movement between India's exports and world imports has increased significantly in recent years.

Fourth, besides the synchronisation of the trade cycles, the financial channel to integration has also become prominent during the recent period. There has been strong causal effect from the global stock prices to domestic stock prices with the US stock prices having significant causal impact on the Indian stock prices.

These shifts in the degree of synchronisation of the Indian trade and business cycles with the global cycles and increased financial integration in the recent period suggests that India cannot remain immune to global trends. Thus, global economic developments now have a greater influence on the domestic economy, as was evident during the recent global financial and economic crisis. Having said that, it is important to recognise that the drivers of growth remain predominantly domestic. During the recent high growth phase of 2003-2008, domestic demand accounted for more than 100 per cent of aggregate demand which, in turn, was driven by private consumption and investment (Tables 1 and 2).

Table 1: Growth Rate of Components of Aggregate Expenditure

(Per cent)

Items/Year	Average		Crisis Period	
	2000-01 to 2009-10	2003-04 to 2007-08	2008-09	2009-10
Private Final Consumption Expenditure	6.2	7.6	6.8	4.3
Government Final Consumption Expenditure	5.8	5.6	16.7	10.5
Gross Capital Formation	9.8	16.8	-1.7	7.1
Exports	14.6	17.9	19.3	-6.7
Imports	13.6	20.1	23.0	-7.3
GDP at market prices	7.1	9.0	5.1	7.7

Source: Central Statistics Office, Government of India.

When the economy slowed in 2008-09, the GDP growth decelerated to 6.7 per cent from an average of 8.9 per cent during 2003-08. The GDP growth started recovering from a low of around 6.0 per cent in the second half of 2008-09 to 7.3 per cent in the first half of 2009-10 and the recovery process consolidated in the second half of 2009-10. The Reserve Bank's projection is that GDP will increase by 8.5 per cent in 2010-11 which is close to the trend seen in the recent years. Thus, the global financial crisis interrupted India's growth momentum for a year between mid 2008-09 to mid 2009-10. Even during this period the lowest quarterly growth achieved was 5.8 per cent. The milder impact of the global crisis on the Indian economy suggests that the drivers of growth are predominantly domestic.

Policy Response

As elsewhere, both fiscal and monetary policy responded to the crisis. Fiscal policy response meant a deviation from the rule-based fiscal consolidation process in force

Table 2: Expenditure Composition of GDP

(Percentage shares of GDP at constant market prices)

Items/Year	Average		Crisis Period	
	2000-01 to 2009-10	2003-04 to 2007-08	2008-09	2009-10
I. Domestic (i+ii+iii)	**103.1**	**103.7**	**106.5**	**104.8**
of which:				
(i) Private Final Consumption Expenditure	60.7	59.5	59.5	57.6
(ii) Government Final Consumption Expenditure	11.3	10.7	11.5	11.8
(iii) Gross Capital Formation	31.1	33.5	35.6	35.4
II. External (iv-v)	-2.4	-2.6	-6.1	-5.1
(iv) Exports	18.5	19.5	24.5	21.3
(v) Imports	20.9	22.1	30.7	26.4
Discrepancies	-0.7	-1.2	-0.4	0.3

Source: Central Statistics Office, Government of India.

since 2004-05. Consequently, the gross fiscal deficit of the Central Government expanded from 2.6 per cent of GDP in 2007-08 to 6.0 per cent of GDP in 2008-09 and further to 6.7 per cent of GDP in 2009-10. The fiscal deficit of the state governments also expanded. The combined fiscal deficit of the States and the Centre expanded from about 4 per cent in 2007-08 to above 8 per cent in 2008-09 and 10 per cent in 2009-10 (Table 3).

The fiscal stimulus measures included both tax cuts and increase in expenditure. It is, however, important to recognise that, unlike in many countries, the entire fiscal stimulus in India was aimed at addressing the deficiency in aggregate demand rather than extending support to the financial sector. I will focus more in detail on monetary policy response.

Monetary Policy

Following the global financial crisis, the domestic macroeconomic and policy environment passed through three distinct phases starting from the second half of 2008-09. Each phase posed different but significant challenges for the conduct of monetary policy by the Reserve Bank.

First Phase: Crisis Management (October 2008 to April 2009)

During the first phase, the Reserve Bank swiftly introduced a comprehensive range of measures to limit the impact of the adverse global developments on the domestic financial system and the economy. The Reserve Bank, like most central banks, took a number of conventional and unconventional measures to augment domestic and foreign exchange liquidity, and sharply reduced the policy rates. In a span of seven months between October 2008 and April 2009, there was unprecedented policy activism. For example: (i) the repo rate was reduced by 425 basis points to 4.75 per cent, (ii) the reverse repo rate was reduced by 275 basis points to 3.25 per cent, (iii) the cash reserve ratio (CRR) was reduced by a cumulative 400 basis points to 5.0 per cent, and (iv) cumulative amount of primary liquidity potentially made available to the financial system was over ₹5.6 trillion or over 10 per cent of GDP.

By synchronising the liquidity management operations with those of exchange rate management and non-disruptive internal debt management

Table 3: Fiscal Deficit

(Per cent of GDP)

	Average		2007-08	2008-09	2009-10	2010-11 (Projected)
	2000-01 to 2009-10	2003-04 to 2007-08				
	Gross Fiscal Deficit					
Central Government	4.9	3.6	2.6	6.0	6.7	5.5
State Governments	3.2	2.7	1.5	2.4	3.4	2.9
Combined (Centre plus States)*	7.9	6.3	4.1	8.5	10.0	8.3

*: Deficits of Centre and States may not add up to combined deficit because of netting out of inter-governmental transfers between the Centre and States.

operations, the Reserve Bank ensured that appropriate liquidity was maintained in the system, consistent with the objective of price and financial stability. The policy stance clearly reflected the forward-looking undertone, particularly the expectations of more prolonged adverse external conditions in the face of no visible risks to inflation. While the magnitude of the crisis was global in nature, the policy responses were adapted to domestic growth, inflationary and financial sector conditions.

There were, however, some key differences between the actions taken by the Reserve Bank and the central banks in many advanced countries. First, in the process of liquidity injection the counter-parties were banks; even liquidity measures for mutual funds, Non-Banking Financial Companies (NBFCs) and housing finance companies were largely channelled through the banks. Second, there was no dilution of collateral standards which were largely government securities, unlike the mortgage securities and commercial papers in the advanced economies. Third, despite large liquidity injection the Reserve Bank's balance sheet did not show unusual increase because of release of earlier sterilised liquidity. Fourth, availability and deployment of multiple instruments facilitated better sequencing of monetary and liquidity measures. Finally, the experience in the use of procyclical provisioning norms and counter-cyclical regulations ahead of the global crisis helped enhance financial stability.

Second Phase: Recovery Management (May 2009 to December 2009)

The tentative signs of recovery visible in the first half of 2009-10 turned increasingly significant in the second half of 2009-10. In the first half of 2009-10, weakness in the economic activity along with a low inflation environment created conditions for continuation of the monetary policy stimulus. The concern about recovery in growth was evident in GDP growth remaining below the capacity growth rate. In the second half of 2009-10, though there was a strong rebound in investment demand, growth in private consumption expenditure remained dampened. On account of the persistent uncertainties about the nature of the global recovery and subdued domestic private demand, the overall policy stance had to remain sensitive to the growth objective.

On the inflation front, global commodity prices rebounded ahead of global recovery. The headline WPI inflation after remaining negative during June-August 2009 not only turned positive beginning September 2009 but accelerated thereafter, reflecting increase in prices of food articles on account of weak monsoon. Consumer price (CPI) inflation remained persistently in double digits. Further, even if credit demand remained subdued, the large overhang of liquidity in the system had the potential to engender inflationary expectations and fuel asset price build-up. Thus, in light of the domestic inflationary pressure and risks of it getting generalised, along with the definitive indications of the economy reverting to the trend growth path, the debate on the strategy for an appropriate exit from the accommodative monetary policy came to the forefront of policy deliberations in India.

In this phase, the challenge for monetary policy was to support the recovery process without compromising price stability. The Reserve Bank began the first phase of exit from monetary accommodation starting October 2009. As part of this process, the unconventional measures undertaken in response to the crisis were withdrawn. The statutory liquidity ratio (SLR) for banks, which was reduced from 25 per cent of their demand and time liabilities to 24 per cent, was restored to 25 per cent. The limit for export credit refinance facility, which was raised to 50 per cent of eligible outstanding export credit, was returned to the pre-crisis level of 15 per cent. The provisioning requirements for advances to commercial real estate were increased (from 0.4 per cent to 1.0 per cent) to address potential financial stability concerns.

Third Phase: Inflation Management (Since the beginning of 2010)

By January 2010, the domestic growth signals were pointing towards a consolidation of the recovery process. However, sustained increase in food prices was beginning to spill over to manufactured products (Chart 1). Inflation in primary commodities moved up from single digit in August 2009 to 22.2 per cent by March 2010.

An important concern from the point of view of inflation management is the downward rigidity in the primary food articles prices even after a good monsoon. Moreover, the consumption basket is getting diversified more in favour of non-cereal items such as milk, meat, poultry, fish, vegetables and fruits, which are important from the nutritional angle. The decomposition of food inflation indicates that during the recent period the key drivers of food inflation are non-cereals (Chart 2).

With the headline inflation remaining in double digits for consecutive five months from March to July 2010 and the inflation process becoming more generalised, the balance of policy changed from 'managing the recovery' to containing inflation and anchoring inflationary expectations. Accordingly, the second phase of exit commenced in February 2010. The CRR was raised by 100 basis points to absorb a part of the excess liquidity from the system. The

Chart 1: Drivers of Headline Inflation in India

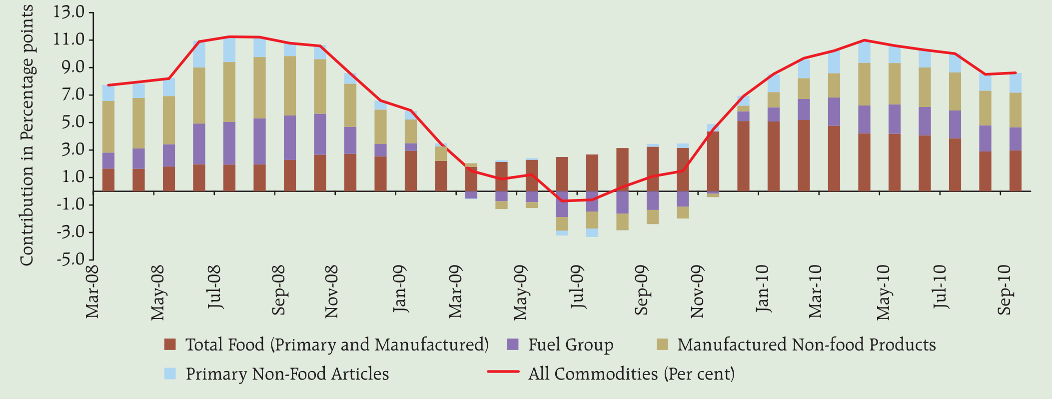
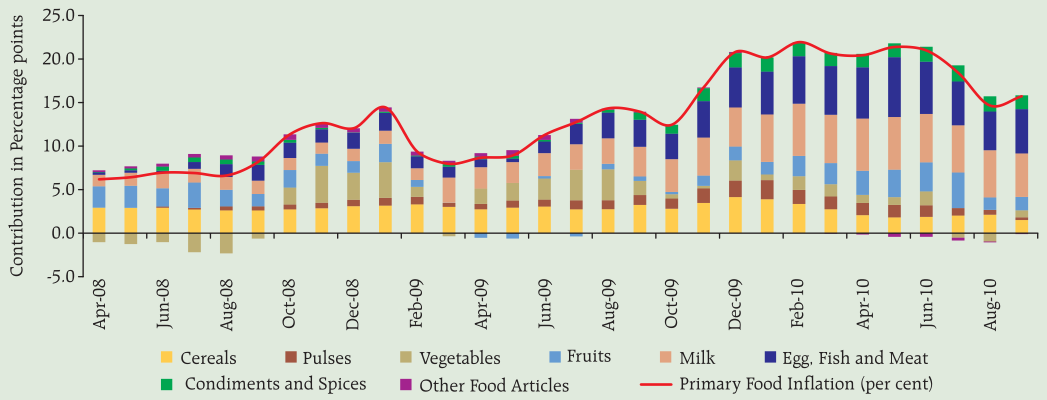


Chart 2: New Drivers of Food Inflation in India



policy repo rate was increased by 125 basis points and the reverse repo rate was increased by 175 basis points in phases (Table 4).

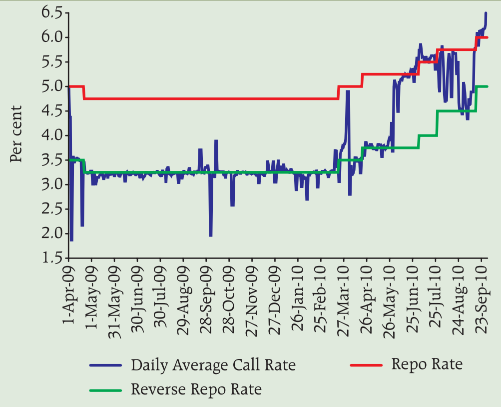
Table 4: Key Monetary Policy Measures in India since the Global Financial Crisis

(Per cent)

Effective since	Reverse Repo Rate	Repo Rate	CRR	SLR
1	2	3	4	5
October 11, 2008	6.00	9.00	6.50 (-2.50)	25.0
October 20, 2008	6.00	8.00 (-1.00)	6.50	25.0
October 25, 2008	6.00	8.00	6.00 (-0.50)	25.0
November 3, 2008	6.00	7.50 (-0.50)	6.00	25.0
November 8, 2008	6.00	7.50	5.50 (-0.50)	24.0
December 8, 2008	5.00 (-1.00)	6.50 (-1.00)	5.50	24.0
January 5, 2009	4.00 (-1.00)	5.50 (-1.00)	5.50	24.0
January 17, 2009	4.00	5.50	5.00 (-0.50)	24.0
March 4, 2009	3.50 (-0.50)	5.00 (-0.50)	5.00	24.0
April 21, 2009	3.25 (-0.25)	4.75 (-0.25)	5.00	24.0
November 7, 2009	3.25	4.75	5.00	25.0
February 13, 2010	3.25	4.75	5.50 (+0.50)	25.0
February 27, 2010	3.25	4.75	5.75 (+0.25)	25.0
March 19, 2010	3.50 (+0.25)	5.00 (+0.25)	5.75	25.0
April 20, 2010	3.75 (+0.25)	5.25 (+0.25)	5.75	25.0
April 24, 2010	3.75	5.25	6.00 (+0.25)	25.0
July 2, 2010	4.00 (+0.25)	5.50 (+0.25)	6.00	25.0
July 27, 2010	4.50 (+0.50)	5.75 (+0.25)	6.00	25.0
September 16, 2010	5.00(+0.50)	6.00(+0.25)	6.00	25.0

Note: 1. Reverse repo rate indicates rate for absorption of liquidity and repo rate indicates rate for injection of liquidity. Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) are per cent of net demand and time liabilities of banks.
2. Figures in parentheses indicate change in policy rates in per cent.

Chart 3: Policy Rates and the Overnight Money Market Rate



At the same time there was a need for modulating liquidity in the system for effective transmission of short-term policy rates. The key monetary operating mechanism, the Liquidity Adjustment Facility (LAF), operates in such a manner that as systemic liquidity alternates from surplus to deficit, even at the margin, the overnight call money rates alternate between the reverse repo rate and the repo rate. This imparted volatility to call rates to the extent of the width of the LAF corridor (i.e., gap between the repo and the reverse repo rate). Therefore, for the effectiveness of monetary transmission the LAF corridor was narrowed to 100 basis points from 150 basis points (Chart 3).

Conclusion

The outlook for GDP growth in 2010-11 has improved significantly, given the broad-based, robust recovery seen in the last quarter of 2009-10. Although concern about a possible weakening of global recovery persist, domestic risks to growth have receded significantly. As a result, the Reserve Bank revised upwards its GDP growth projection for 2010-11 to 8.5 per cent in July 2010, from 8 per cent with an upward bias in April 2010.

Inflation now remains the dominant concern in macroeconomic management though there has been moderation in the provisional WPI inflation to 8.6 per cent in September from 10.0 per cent in July 2010 reflecting improved supply conditions and lagged impact of policy actions. What is worrying, however, is that food inflation remains elevated in double digits reflecting a shift in consumption demand. If supply response is not commensurate, there is a risk that food price inflation could acquire a structural character. Nevertheless, the overall inflation rate seems to have peaked. The Reserve Bank projects the headline inflation rate to moderate to 6 per cent by end-March 2011. The Reserve Bank's projections of growth and inflation will be revised in the second quarter review of monetary policy on November 2, 2010.

To sum up, despite sound fundamentals and no direct exposure to the sub-prime assets, India was affected by global financial crisis through all the channels – trade, financial and confidence channels – reflecting increasing globalisation of the Indian economy than what is apparent in terms of traditional indicators. The policy responses to the global crisis were swift and timely and have transited through three distinct phases since the second half of 2008-09. During the first phase, crisis management assumed policy priorities and, hence, the Reserve Bank introduced a comprehensive range of conventional and unconventional measures to limit the impact of the adverse global developments on the domestic financial system and the economy. Monetary policy focussed on augmenting liquidity – both domestic rupee and foreign exchange liquidity – and making them available at lower rates. This was supported by the fiscal stimulus measures aimed at cushioning the deficiency in demand. In the second phase, monetary policy was confronted with the tasks of supporting the recovery process without compromising on price stability. Accordingly, while policy rates were left unchanged signifying accommodative policy stance, most unconventional measures undertaken in response to the crisis were terminated signifying return to normal pace of activity. During the current phase, with strengthening of domestic growth prospects, inflation management assumed prime importance and, accordingly, the normalisation process of monetary policy gathered momentum. Going forward, the outlook for growth remains favourable and inflation is expected to moderate. There are, however, risks from sluggish global economy, rebound in global commodity prices, volatile capital flows and high domestic food prices.