II ECONOMIC REVIEW

The domestic macroeconomic conditions changed significantly during the course of the year reflecting sharp deterioration in global economic conditions. In the first half, the policy challenge was to deal with high inflation and emerging signs of cyclical slowdown; in the second half, however, containing the adverse effects of the contagion from global economic crises necessitated coordinated monetary and fiscal policy actions with a view to moderating the pace of slowdown in growth, preserving the soundness of domestic banks and financial institutions, and maintaining orderly and well functioning markets. The growth supportive fiscal stance led to deviations from the fiscal consolidation path and the fiscal deficit rose accordingly. The monetary policy stance remained accommodative; the Reserve Bank ensured ample liquidity in the system while reducing the cost of liquidity significantly by appropriate reduction in policy interest rates. The sharp decline in WPI inflation in the second half of the year created some space for pursuing accommodative monetary policy. Indian banks and financial institutions largely escaped the heat of the global contagion because of strong fundamentals and no direct exposure to the troubled assets and stressed institutions in the advanced countries. The Reserve Bank's swift and necessary responses ensured orderly functioning of the markets. Thus, the conditions in the financial system did not operate as a constraint to growth in India, unlike in the advanced countries. Deceleration in demand, however, emerged as a major concern in the second half of the year, because of its dampening effects on growth.

I. MACROECONOMIC POLICY ENVIRONMENT

II.1.1 The environment for policy making remained exceptionally challenging during 2008-09, as global recession and unsettling conditions in the global financial markets warranted institution of swift and appropriate policy measures to contain the adverse ramifications for the Indian economy. The domestic macroeconomic conditions also changed dramatically during the year; from the first half concerns relating to building inflationary pressures and some evidence of cyclical slowdown to the second half apprehensions arising from reversal of capital inflows and pressure on financial markets on account of further deepening of the global economic crisis and the consequent moderation in growth. Notwithstanding the benefits of globalisation experienced by the world economy in terms of a four-year phase of high growth and low inflation, the crisis in 2008-09 brought to the fore the associated risks of globalisation for national economies, not only in terms of the speed and magnitude of the contagion, but also in terms of the limitations on the national policies to deal with the challenges in the face of a persistent adverse external environment. For most of the countries around the world, high international food and commodity prices created challenges for the conduct of anti-inflationary policies in the first half of the year. In the second half of the year, global credit squeeze, stressed financial institutions, dysfunctional markets, and above all, falling global output, investment, employment and trade, posed testing conditions for the use of national policies to counter growth moderation and to preserve financial stability.

II.1.2 India, in the midst of a severe global recession, could still contain the moderation in growth, preserve financial stability and ensure normal functioning of the markets. The macroeconomic policy framework of India and the

approach to regulation and supervision of financial institutions and markets clearly contributed to soften the impact of the global financial crisis on the domestic economy. In a globalised world, however, the natural process of transmission of contagion operating through the trade, capital flows and confidence channels have affected the domestic economic and financial conditions. Real GDP growth, which had averaged at 8.8 per cent during 2003-08, decelerated to 6.7 per cent in 2008-09. Trade and capital flows channels exerted pressures on the balance of payments. These developments along with the confidence channel of contagion affected the financial markets. Despite resilience of the banking system, the demand for liquidity, both domestic and in foreign currency magnified. In consultation and coordination with the Government of India, the Reserve Bank had to take a range of comprehensive policy measures covering the economy, the markets and the financial institutions. A detailed analysis of the developments in each critical sector of the economy is presented separately in various sections of Part I, while the context against/rationale for which specific policy measures were introduced are outlined in the respective chapters in Part II. This section offers an outline of all the major policy measures taken in India in the real, fiscal, monetary, financial and external sectors of the economy during 2008-09.

REAL SECTOR POLICIES

Agriculture and Allied Activities

II.1.3 Given the importance of the agriculture sector in the Indian economy in terms of its contribution to the GDP, employment, food security and the need for ensuring inclusive growth, the Union Government has been supplementing and complementing the efforts of the State Governments through several policy measures to enhance agricultural income and productivity. Several significant schemes have been initiated by the Government in recent years, particularly in 2007-08, to enhance the agriculture growth and to find sustainable solutions for strengthening the farmers' livelihood and income. The notable schemes such as the National Food Security Mission (NFSM), the *Rashtriya Krishi Vikas Yojana* (RKVY) and National Rural Employment Guarantee Scheme (NREGS) were further strengthened in 2008-09.

II.1.4 The NFSM, launched in 2007 with an objective to increase the production of rice, wheat and pulses by 10, 8 and 2 million tonnes, respectively, by the end of the Eleventh Five-Year Plan period, is being implemented in 312 identified districts across 17 States. The Mission aims at increasing production of the above crops through area expansion and yield improvement in the targeted districts having high potential but relatively low level of productivity performance at present. During 2008-09, an amount of Rs.883 crore was released under the Programme. As an important step towards inclusive development, the Union Budget 2009-10 has proposed to put forth the draft National Food Security Bill on the website of the Department of Food and Public Distribution for comments.

II.1.5 The RKVY launched in August 2007 with an allocation of Rs.25,000 crore for the Eleventh Five-Year Plan is a participatory programme with the State Governments to boost investment in agriculture. The access to resources under RKVY depended, *inter alia,* on formulation of district agricultural plans (DAP)/State agricultural plans (SAP) by the State Governments. During 2008-09, an amount of Rs.2,887 crore was released to the eligible States. The allocation under the RKVY has been increased by around 30 per cent in the Union Budget 2009-10.

II.1.6 In the backdrop of launching NFSM and RKVY in 2007, the Macro Management of Agriculture (MMA) Scheme, launched in 2000-01 by integrating 27 centrally sponsored schemes, was revised in July 2008. Accordingly, the role of the scheme has been redefined to avoid overlapping and duplication of efforts and to make it more relevant to the present agriculture scenario in the

States in order to achieve the basic objective of food security and to improve the livelihood of rural masses. The allocation criteria for making funds available to the States has also been revised to facilitate higher resource allocation to the States having larger cropped area and also larger concentration of small and marginal farmers.

II.1.7 *Bharat Nirman* launched in 2005-06 for building rural infrastructure, has six components namely, rural roads, rural telephony, irrigation, drinking water supply, rural housing and electrification. Specific targets have been set under each of these goals. There has been all round progress in the implementation of this programme. Almost the entire budgetary provision of Rs.7,300 crore for 2008-09 was utilised during the year. The Union Budget 2009-10 has allocated Rs.12,000 crore for this programme.

II.1.8 Under the ongoing National Rural Employment Guarantee Scheme (NREGS) a sum of Rs. 16,000 crore was allocated for 2008-09. Subsequent allocations in the supplementary demands for grants raised the total allocation for the programme during 2008-09 to Rs.30,000 crore. During 2008-09, over 44.7 million households were provided employment as compared with 33.9 million households in 2007-08. Since its inception the programme has generated around 3,718 million person-days of employment, of which around 2,156 million person days were during 2008-09. The implementation of this programme has resulted in increased wage employment, enhanced wage earnings and improved equity with significant benefits flowing to Scheduled Caste/Scheduled Tribe (SC/ST) and women. This has also led to increased demand for and consumption of wage goods. The Union Budget for 2009-10 proposed an allocation of Rs.39,100 crore for this scheme during the year.

II.1.9 The Union Budget for 2008-09 had set a target of Rs.2,80,000 crore for total agricultural credit; the actual disbursement of agricultural credit by the banking system exceeded the target and amounted to Rs. 2,87,000 crore. The Union Budget for 2009-10 has set a target of Rs.3,25,000 crore for total agricultural credit during the year and has proposed to continue providing interest subvention of 2 per cent per annum for short-term crop loans up to Rs.3 lakh to farmers at the interest rate of 7 per cent per annum. The Government has also proposed to pay an additional subvention of 1 per cent as an incentive to those farmers who repay their short term crop loans on schedule.

II.1.10 To strengthen the short-term co-operative credit structure, the Government is implementing a revival package in 25 States involving a financial assistance of Rs.13,596 crore. The Central Government and State Governments have also reached an agreement on the content of the package for reviving the long-term co-operative credit structure. The cost of the package is estimated at Rs.3,074 crore, of which the Central Government's share will be Rs.2,642 crore or 86 per cent of the total burden.

II.1.11 In order to restore access to institutional credit for indebted farmers, the Government introduced a scheme of debt waiver and relief to farmers, the modalities of which were finalised by the Government in consultation with the Reserve Bank and the National Bank for Agriculture and Rural Development (NABARD). The scheme provides for waiver of the entire amount of direct agricultural loans (fulfilling certain eligibility criteria) extended to small and marginal farmers by scheduled commercial banks (SCBs), regional rural banks (RRBs), co-operative credit institutions and local area banks. Farmers having more than two hectares of land were offered a one-time settlement (OTS) scheme under which they will be given a rebate of 25 per cent of 'eligible amount' provided that they pay 75 per cent of their overdues in three installments by June 30, 2009. Due to the delay in the South-West monsoon, the Union Budget 2009-10 has proposed to extend this period by six months up to December 31, 2009. The Budget also proposed to set up a Taskforce to look into the issue of farmers not covered under the loan waiver scheme and had taken loans from money lenders, particularly in some regions of Maharashtra, in order to help the distressed farmers.

II.1.12 One major factor contributing to the decline in marginal productivity of soil in relation to application of fertilisers is the skewed NPK (Nitrogen, Phosphorous, Potassium) application ratio *i.e.*, comparatively higher application of straight fertilisers like urea, DAP (Di-ammonium phosphate) and MOP (Murate of Potash) as against the complex fertilisers (NPKs) which are considered to be agronomically better and more balanced fertiliser products. The Union Budget 2009-10 has proposed to move towards a nutrient based subsidy regime instead of the current product pricing regime. Besides enhancing productivity, it will lead to availability of innovative fertiliser products in the market at reasonable prices. This unshackling of the fertiliser manufacturing sector is expected to attract fresh investments in this sector. In due course the Government intends to move to a system of direct transfer of subsidy to the farmers.

II.1.13 The National Rain Fed Area Authority (NRAA) has been functioning since 2006 to provide knowledge inputs towards systematic upgradation and enhancing productivity of the dry, non-irrigated rainfed areas. NRAA has published the common guidelines for watershed development projects that would provide an enabling framework for the planning, design, management and implementation of all watershed development projects in the country. Under these common guidelines, the Budget 2009-10 proposes to implement the Integrated Watershed Management Programme (IWMP) in the current financial year.

Industry

II.1.14 During 2008-09, the Government of India continued to undertake sector-specific measures and other programmes on an on-going basis. In order to minimise the adverse impact of the global recession on the domestic industry and also to activate domestic demand, the Government of India also undertook a series of measures in the form of indirect tax cuts and infrastructure spending, with commensurate support from the Reserve Bank through easing of liquidity and interest rates, besides encouraging banks to extend credit to industries, particularly small industries.

II.1.15 The phased de-reservation of items from the list of reserved items for the Micro, Small and Medium Enterprises (MSMEs) continued in 2008 with the Government deleting 14 items from this list during the year. The Credit Guarantee scheme for MSMEs has been modified. The revisions include reduction in one time guarantee fee and annual service fee to 1.0 per cent and 0.5 per cent, respectively, for loans up to Rs. 5 lakh; increase in loan limit from Rs.50 lakh to Rs.1 crore with a guarantee cover of 50 per cent; increase in guarantee cover from 80 per cent to 85 per cent for loans up to Rs. 5 lakh; and reduction in lock-in period for preferring claims from 24 to 18 months. In order to provide some relief to the MSMEs reeling under the global economic crisis, the Union Budget 2009-10 exempted small businesses with an annual turnover of Rs.40 lakh from advance tax. In order to facilitate the flow of credit at reasonable rates to MSEs, the Union Budget has proposed a special fund out of Rural Infrastructure Development Fund (RIDF) to Small Industries Development Bank of India (SIDBI). This fund of Rs.4,000 crore will incentivise Banks and State Finance Corporations (SFCs) to lend to MSEs by refinancing 50 per cent of incremental lending to MSEs during the current financial year.

II.1.16 In the pharmaceutical sector, the Government of India, along with central public sector undertakings, has launched the *Jan Aushadhi* Campaign with the aim of providing quality medicines at affordable prices to the masses. The Government has proposed to set up *Jan Aushadhi* stores in every district for the sale of generic unbranded drugs which are equivalent in quality to branded drugs. The first such store was opened in Amritsar in November 2008.

II.1.17 Major tax concessions given in 2008-09 to boost aggregate demand and revive industrial growth include reductions in CENVAT rate and service tax rate. Countervailing duty and additional customs duty at the rate of 4 per cent was imposed

on imported cement. Government of India removed the export duty on pig iron, iron and steel ingots, bars and rods, reintroduced import duty of 5 per cent on steel, restored DEPB benefits partially, reduced excise duty to 8 per cent, placed hot rod (HR) imports on the restricted list and withdrew the exemption from countervailing duty on import of TMT bars and structurals.

II.1.18 The textiles and garments industry which contributes substantially to exports received impetus through reduction in duties on cotton textile and textile articles, interest subvention to pre-shipment and post-shipment export credit and expansion of Focus Market Scheme through inclusion of 10 more countries. An additional allocation of Rs.1,400 crore has been made to clear the entire backlog in Technology Upgradation Fund Scheme (TUFS) during 2008-09. Under Scheme for Integrated Textile Parks (SITP), 40 integrated textiles parks of international standards, covering weaving, knitting, processing and garmenting sectors with project proposals worth Rs. 4,199 crore (of which assistance from the Government is Rs.1,438 crore) have been sanctioned. Four textile parks were inaugurated during 2008-09.Government also announced accelerated depreciation of 50 per cent for commercial vehicles.

II.1.19 The Union Budget 2009-10 acknowledged the problems faced by individual industries and proposed various industry specific measures. In order to support the construction industry, the Budget announced full excise duty exemption for goods manufactured at the construction site. To arrest the deteriorating growth in commercial vehicles industry, the Budget has reduced excise duty on petrol driven trucks to 8 per cent from 20 per cent to equate the duty with similar vehicles run on diesel. *Ad valorem* duty on large cars and utility vehicles with engines capacity of above 2000 cubic capacity (CC) has been reduced to Rs.15,000 from the Rs.20,000. As a boost to the handlooms industry, the Union Budget for 2009-10 proposed one handloom mega cluster each in West Bengal and Tamil Nadu and one powerloom mega cluster in Rajasthan. Further, new mega clusters for 'carpets' have been added in Srinagar (Jammu and Kashmir) and Mirzapur (Uttar Pradesh). With a view to support the information technology industry which has been hit hard by the slowdown in advanced economies, the Union Budget 2009-10 has extended the 10-year tax holiday by one more year and exempted the value attributable to the transfer of the right to use packaged software from excise and countervailing duties. Among the long-term reform measures for the industry, the Budget proposed to create an alternative dispute resolution mechanism within the Income Tax Department for the resolution of transfer pricing disputes. The Government has also envisaged establishment of a National Knowledge Network, which will connect all universities, research institutions, libraries, laboratories, hospitals and agricultural institutions across the country. The initial phase of the network was inaugurated in April 2009.

II.1.20 In view of the uncertain prospects for industrial production in the face of the global economic crisis, and the critical role of industrial growth in shaping the growth and inflation outcome in India, the Reserve Bank has set up an Industry Monitoring Group, drawing members from external agencies as well as from concerned departments of the Bank in April 2009 to periodically assess the developments in Indian industry in relation to changes taking place in the global economy and the financial sector. The terms of reference of the Monitoring Group, *inter alia*, focused on analysing emerging scenario in the industrial sector, monitoring the trends in industrial sector growth at a disaggregated level and suggest policy measures. The Group had its first meeting on April 15, 2009, to discuss the pressure points faced by the industry and the likely course of revival of the same from the stand point of requirements for formulation of monetary policy. The Group, in its second meeting on July 16, 2009 had reassessed the current state of the industries as well as prospects.

Infrastructure

II.1.21 Infrastructure sector received an impetus in the Government's policy package, which includes measures such as permission to India Infrastructure Financing Company (IIFCL) for raising tax free bonds, removal of interest ceiling on external commercial borrowings (ECB), enhancing of cap on FII investment in corporate debt market, easy refinancing from the Reserve Bank and creation of Special Purpose Vehicle (SPV) to lend to non-bank finance companies.

II.1.22 With a view to enhancing the competitiveness of the domestic industry by providing quality infrastructure through public-private partnership (PPP) in select functional clusters/locations which have the potential to become globally competitive, the Government of India has recast the Industrial Infrastructure Upgradation Scheme (IIUS). The salient features of this scheme include creation of quality infrastructure in existing industrial clusters/ locations with high growth potential requiring strategic interventions in providing common facilities for transport, road, power supply, effluent treatment and solid waste disposal, information and communication technology (ICT) and such other physical infrastructures. Under the recast scheme, 10-15 clusters/locations will be taken up for development during the Eleventh Five-Year Plan period. The scheme will be implemented through special purpose vehicles (SPVs) so as to ensure a focused, time-bound and sustainable pattern of industrial infrastructure development in the PPP mode.

II.1.23 In view of the difficulties faced in arranging long-term financing for a large number of infrastructure projects under the PPP mode, the IIFCL was authorised to raise Rs.10,000 crore through Government guaranteed tax free bonds by the end of 2008-09 and additional Rs.30,000 crore on the same basis as per the requirement in 2009-10. The capital so raised will be used by IIFCL to refinance bank lending of longer maturity to eligible infrastructure projects. This initiative is expected to result in leveraging bank financing to PPP programmes of about Rs.100 thousand crore over a period of 15-18 months.

II.1.24 In the power sector, the Central Electricity Regulatory Commission has issued new Inter-State Trading Regulations in February 2009. The regulations aim to tighten the terms and conditions for grant of trading licenses so as to encourage only serious players. In pursuance of this, the definition of inter-state trading has been revised to include electricity imported for sale, number of categories of licenses reduced from 6 to 3 and the net worth requirement increased to the range of Rs.5-50 crore. Among the initiatives to promote alternative energy sources, under the National Gas Hydrate Programme, a Memorandum of Understanding (MoU) was signed between the Directorate General of Hydrocarbons and the US Geological Survey for exchange of scientific knowledge and technical personnel to exploit the potential of gas hydrate in India. The Union Budget for 2009-10 extended the tax holiday to natural gas to facilitate the energy security.

II.1.25 The Airport Economic Regulatory Act, 2008 (AERA) has been notified with effect from January 01, 2009. AERA calls for fixing, reviewing and approving tariff structure for the aeronautical services and users fees which may be levied by the service providers for airport development and monitoring prescribed performance standards.

FISCAL POLICY

II.1.26 The Union Budget for 2008-09 was presented in the backdrop of five consecutive years of impressive growth, which translated into high revenue buoyancy, facilitating the fiscal consolidation process under the Fiscal Responsibility and Budget Management (FRBM) Act, 2003. The Budget had envisaged the continuance of the revenue led process of fiscal consolidation while focusing on the outcomes and improving the allocative efficiency of public expenditure. The focus of the tax policy during 2008-09 was to follow an appropriate policy intervention coupled with improvement in the quality, efficiency and effectiveness of tax administration to raise revenue. The policy strategy

was to move towards moderate and fewer tax rates, removal of exemptions and broadening of the tax base. In the case of tax administration, emphasis was placed on recovery of tax arrears, improvement in service delivery to the tax payers and enhancement of deterrence levels. Conforming with this strategy, the corporate tax rates were kept unchanged, while the threshold limit of exemption for Personal Income Tax (PIT) was raised and the four slabs of tax were revised upwards. With regard to indirect taxes, the Budget announced reduction in general CENVAT on all goods from 16 per cent to 14 per cent with a view to providing stimulus to the manufacturing sector.

II.1.27 The finances of the Central Government, however, came under severe pressure due to several unanticipated post-budget developments, particularly the significant slowdown of the economy as a fall out of the unprecedented global financial crisis. The Government undertook fiscal measures by way of indirect tax cuts and increase in subsidies during the first half of 2008-09 to contain inflation pressures emanating from sharp rise in international prices of commodity and petroleum products. While implementing these measures to contain inflation, there was, however, no conscious move at that point of time to deviate from the path of fiscal consolidation. In the second half of 2008-09, however, the fiscal stance completely altered with the activation of discretionary fiscal policy measures to contain the economic slowdown. This shift in the fiscal policy stance was part of an international trend in terms of general response to the real effects of the global crisis and also consistent with the mainstream views at the international level that in situations of deep and prolonged economic downturn, as in the present context, fiscal policy could play a leading role in stabilisation. To contain the economic slowdown, discretionary fiscal policy has been activated in a large number of countries, both developed and developing, notwithstanding the known challenges for timely unwinding and, hence, the need for an appropriate exit strategy. While designing the fiscal stimulus package, however, it is important to ensure that it is timely, well targeted and temporary so that the impact is felt at the right time, has the maximum and does not lead to concern over debt sustainability in the medium-term (Box II.1).

II.1.28 In the Indian context, the role of fiscal policy in stimulating aggregate demand in the current downturn may have to be distinguished from the earlier episodes of economic slowdown. The moderation in growth in 2008-09 was largely conditioned and continues to be influenced by the global recession and the resultant loss of confidence which has led to substantial fall in private sector demand. Therefore, the role of fiscal policy in the current context may be different from the previous episodes of normal business downturns. In the case of India, the fiscal stimulus provided so far has been a mixture of cut in indirect taxes and increase in both investment and consumption expenditure, with the latter accounting for a major share. The general CENVAT rate was further reduced by 4.0 percentage points and 2.0 percentage points in December 2008 and February 2009, respectively, to 8 per cent, leading to an estimated revenue loss of 0.2 per cent of GDP in 2008-09. Additional expenditure amounting to 3.0 per cent of GDP was provided through three supplementary demands for grants during October-December 2008 and February 2009. Of the expenditure measures, revenue expenditure constituted around 84 per cent and the capital component accounted for the rest. On the whole, the fiscal stimulus measures appear to have given more emphasis to supporting consumption demand rather than investment demand. The fiscal deficit increased to 6.2 per cent of GDP in 2008-09 (Provisional Accounts) from 2.7 per cent of GDP in 2007-08.

Union Budget 2009-10

II.1.29 The Union Budget for 2009-10 was presented in the backdrop of moderation of growth in the economy and signs of stabilisation in global economy. The Budget has proposed to address three important challenges in the short and medium term, *viz.*, revive the economy to attain a growth of 9 per

Box II.1
Counter-Cyclical Fiscal Policy in the Current Economic Scenario

For several decades since the Great Depression, discretionary fiscal policy involving either increase in public expenditure including transfers or cuts in tax rates or both was actively used for the purpose of macroeconomic stabilisation. By the 1980s, however, it got discredited due to a number of political and administrative challenges and substantial changes in the method of policy making. It was increasingly accepted that fiscal policy is ineffective or the fiscal multiplier is low, as the marginal propensity to save (consume) out of temporary tax cuts is high (low), while raising aggregate demand through increased government expenditure could get nullified due to induced rise in long term interest rates. Besides, fiscal policy involves a number of lags *viz.,* recognition lags, implementation lags and lags in the effect on aggregate demand, which lead to uncertainty in the magnitude of the impact and thereby increase the risk of destabilising the economy. Concomitantly, monetary policy gained ascendancy as the prime policy option for economic stabilisation due to its amenability to quicker adjustments; better ability to judge the timing and the magnitudes of the needed stimulus; and increasing use of rule based policy that limited the scope for discretion (Taylor, 2000). Thus, the stabilisation role of fiscal policy was confined to the operation of automatic stabilisers only (see Box II.24 of Section IV of this chapter).

Discretionary fiscal policy, however, has been advocated in situations of sustained economic downturn with low aggregate demand and interest rates, and falling prices (Feldstein, 2002). 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. Furthermore, during a deep recession, monetary policy may also become ineffective not only due to policy rate nearing zero at some stage but also due to higher levels of disconnect in the monetary policy transmission mechanism (Elmendorf and Furman, 2008). During the global economic crisis, it was realised that the sudden increase in risk premium may more than offset the impact of falling policy rates, weakening thereby the transmission process significantly. The problem of decision lags involved in effecting discretionary fiscal policy also becomes less binding when the economic downturn is deep and prolonged. The design of the policy, however, is crucial. At least three criteria have been suggested. First, it should be timely, given the urgent need for action. Second, it should be well targeted to ensure that the impact is the maximum. Third, it should be temporary so that the condition of debt sustainability in the medium to long-term is not violated. In the context of current global slowdown discretionary policy should also be: i) large enough since the drop in demand is large; ii) lasting since the recession is expected to last longer; iii) diversified as there is uncertainty regarding the effectiveness of particular fiscal measures; iv) contingent on actual progress to indicate that further action will be taken if needed; and v) collective among countries given the severity and global nature of the downturn (Freedman *et al*, 2009).

The impact of the policy or the magnitude of the multiplier, however, would depend on the channels through which the stimulus is provided, the degree of monetary policy accommodation and the structure of the economy. The multiplier would normally be smaller for small and open economies, and in countries which are more susceptible to financial markets constraints and subject to offsetting monetary policy. When there is loss of confidence during a crisis, government spending measures are likely to provide the maximum short-run impact on aggregate demand than tax cuts or lump-sum transfers due to increased propensity to save. If tax cuts are to be implemented, it should be targeted to those facing liquidity constraints. It has been observed that targeted transfers to poorer households have higher multipliers than lump-sum transfers and multipliers are larger in emerging Asia and other developing countries due to higher share of poorer households (Freedman, *et al,* 2009).

The long term sustainability of debt is an important consideration for the success of fiscal policy measures in short-term stabilisation (see Box II.25 in Section II.IV of this Chapter). When the debt related concerns of the market participants are significant – particularly in terms of servicing challenges for the future, discretionary fiscal stimulus could lead to rise in interest rates and resultant fall in aggregate demand, thereby making the fiscal multiplier potentially negative and hence counterproductive. The magnitude of the fiscal stimulus and the concerns on debt sustainability may largely depend on the initial fiscal situations or the available fiscal space. On account of limited fiscal space and debt concerns in EMEs, fiscal stimulus had limited impact on growth in the past crises, and hence, they pursued less aggressive countercyclical fiscal policy (IMF, 2008). Thus, fiscal stimulus should be accompanied by credible commitments to scale it back or even reverse it once recovery takes place by laying out a medium-term fiscal framework. In view of the possibility that unwinding of fiscal stimulus in itself may slowdown the pace of recovery, there could be challenges in crafting an appropriate exit strategy.

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cent per annum at the earliest, deepen and broaden the agenda for inclusive development and re-energise government and improve delivery mechanisms. The Budget proposed to enhance allocation for the crucial sectors such as infrastructure, education and health, rural employment and empowerment of disadvantaged sections of the population. The Government has reiterated the importance of reverting back to the path of fiscal consolidation at the earliest and as soon as the negative effects of the global crisis on Indian economy have been overcome. In order to attain the medium-term sustainability, the Government has recognised the importance of institutional reforms encompassing all aspects of the Budget such as subsidies, taxes, expenditure and disinvestment.

II.1.30 The thrust of the reforms over the last few years has been to improve the efficiency and equity of the tax system by eliminating distortions in the tax structure, introducing moderate levels of tax rates and expanding the base. The Government has proposed to pursue structural changes in the direct taxes by releasing the "Direct Taxes Code" for public discussion on August 12, 2009 and accelerate the process for the smooth introduction of the goods and services tax (GST) with effect from April 1, 2010. In order to improve the efficiency in tax administration, it has been proposed to merge the two Authorities for advanced rulings on direct and indirect taxes by amending the relevant Acts. The direct tax measures in the Union Budget 2009-10 are expected to be revenue neutral while indirect taxes are estimated to make a gain of Rs.2,000 crore.

II.1.31 On direct taxes front, corporate tax rates and surcharge on them were kept unchanged. On the PIT front, the threshold limit of exemption was raised by Rs.15,000 to Rs.2,40,000 for senior citizens while it was raised by Rs.10,000 each for women and all other categories of individual tax payers to Rs.1,90,000 and Rs.1,60,000, respectively. An additional deduction of Rs.25,000 was allowed under Section 80 D from the present limit of Rs.75,000 to an individual who pays for maintenance including medical treatment of a dependant with severe disability. The surcharge on personal income tax was eliminated. In order to tide over the slowdown in exports, the Government extended the sunset clauses for one more year, *i.e.*, 2010-11. The income of the New Pension System (NPS) Trust was proposed to be exempted from income tax and any dividend paid to this Trust has been exempted from dividend distribution tax. All purchase and sale of equity shares and derivatives by the NPS Trust were also exempted from the securities transaction tax.

II.1.32 The imposition of fringe benefit tax (FBT) was considered as compliance burden, and therefore, it was abolished. In order to incentivise the corporate sector to undertake research and development, it was proposed to extend the scope of the current provision of weighted deduction of 150 per cent on expenditure incurred on in-house research and development (R&D) to all manufacturing businesses except for a small negative list. To incentivise businesses, it was proposed to extend investment-linked tax incentives to the businesses of setting up and operating 'cold chain', warehousing facilities for storing agricultural produce and the business of laying and operating cross country natural gas or crude or petroleum oil pipeline network for distribution on common carrier principle. With a view to address the issue of inequity in taxation of corporates, the rate of minimum alternate tax (MAT) was increased from 10 per cent of book profits to 15 per cent. As a measure of relief, however, it was proposed to extend the period allowed to carry forward the tax credit under MAT from seven years to ten years.

II.1.33 In the case of indirect taxes, rationalisation measures were taken in both customs and central excise in respect of some sectors. In order to encourage domestic value addition, a nominal basic customs duty of 5 per cent on set top boxes was imposed. Similarly, the basic customs duty on liquid crystal display (LCD) panels was reduced from 10 per cent to 5 per cent to support indigenous production. The accessories, parts and components imported for the manufacture of mobile phones

were exempted from countervailing duty (CVD) of 4 per cent for another year. For encouraging value-addition and exports, full exemption was provided to rough corals from basic customs duty. The customs duty was reduced from 10 per cent to 5 per cent on influenza vaccine and nine specified life saving drugs used for the treatment of breast cancer, hepatitis-B, rheumatic arthritis and on bulk drugs used for the manufacture of such drugs. Customs duty was increased from Rs. 100 to Rs.200 per ten grams for gold bars and from Rs. 250 to Rs. 500 per ten grams for other forms of gold (excluding jewellery), and on silver (excluding jewellery), duty was increased from Rs.500 per kg to Rs.1,000 per kg due to manifold rise in the prices of these metals in international market.

II.1.34 The proposed measures relating to excise rates include: differential rates between the cotton textile sector and the manmade fibre sector; restoration of the erstwhile optional rate of 4 per cent for cotton textiles beyond the fibre stage; restoration of 8 per cent duty on manmade fibre and yarn on a mandatory basis and on stages beyond fibre and yarn at that rate on optional basis; full exemption of petro-diesel blended with bio-diesel from excise duty; and reduction of basic customs duty on bio-diesel from 7.5 per cent to 2.5 per cent - at par with petro-diesel in order to encourage the use of this environment friendly fuel and augment its availability. In the case of construction industry, full exemption to goods manufactured at site was restored, including pre-fabricated concrete slabs or blocks. Excise duty on petrol driven trucks was reduced from 20 per cent to 8 per cent.

II.1.35 Services received by exporters from goods transport agents and commission agents, where the liability to pay service tax is *ab initio* on the exporter, was exempted from service tax. For other services received by exporters, the exemption would be operated through the existing refund mechanism based on self-certification of the documents where such refund is below 0.25 per cent of *fob* value, and certification of documents by a chartered accountant for value of refund exceeding the above limit. In order to provide a level playing field in the goods transport sector, the levy of service tax was extended to goods carried by Indian railways or those carried as coastal cargo or through inland waterways. The advice, consultancy or technical assistance provided in the field of law was brought into the gamut of services tax. However, this tax would not be applicable in case the service provider or the service receiver is an individual.

II.1.36 To facilitate the objective of introducing goods and services tax (GST), both at the national and State level, through convergence of central excise duty rates to a mean rate of 8 per cent, the excise rate was increased to 8 per cent on many items barring food items, drugs, pharmaceuticals and other articles. With regard to the introduction of GST, the Government has indicated that there has been an agreement on the basic structure in keeping with the principles of fiscal federalism enshrined in the Constitution. The GST Model would be a dual model comprising of a Central GST and a State GST. The Centre and the States would each legislate, levy and administer the Central GST and State GST, respectively.

II.1.37 The Government had taken a conscious decision to increase the public expenditure in select sectors in order to continue the momentum of growth, with a focus on intended outcomes. The major focus in expenditure management would be reform of governance for effective delivery of public services. The initiatives that are being taken by the Government to achieve the above objective include: establishing mechanisms for performance monitoring and performance evaluation in government on a regular basis; strengthening the public accountability of flagship programmes by the creation of an Independent Evaluation Office at an arm's distance from the Government which will concurrently evaluate the impact of these programmes and place it in the public domain; and putting up a public data policy to place all information covering non-strategic areas in the public domain which will help citizens to challenge the data and engage directly in governance reform.

II.1.38 The allocation of expenditure to infrastructure, health and education, rural employment and other flagship programmes of the Government has been enhanced. Keeping in view the critical role of infrastructure in the growth of the economy, the allocation to national highway development programme and urban infrastructure has been increased considerably during 2009-10. In order to make the development process more inclusive, the government has undertaken initiatives on several areas while strengthening the existing programmes. The *Swarna Jayanti Gram Swarozgar Yojna* is proposed to be restructured as National Rural Livelihood Mission to make it universal in its application, focussed in approach and time bound for poverty alleviation by 2014-15. The Budget has stated that enrolment of at least 50 per cent of all rural women as members of the Self Help Groups (SHGs) over the next five years and linking these SHGs to banks would be an important objective. The corpus of *Rashtriya Mahila Kosh* was proposed to be raised to Rs.500 crore for credit support to poor women. In order to provide access to higher education for weaker sections, provision of student loans was proposed with total interest subsidy during the period of moratorium and an estimated 5 lakh students are estimated to benefit from this scheme. The allocation for the welfare of minorities was enhanced. A new project for modernisation of employment exchanges in public-private partnership was visualised so that a job seeker can register on-line from anywhere and approach any employment exchange. The allocation for health and education was increased considerably in the Budget 2009-10. Keeping in view the demographic advantage, the provision for the scheme 'Mission in Education through ICT' was increased substantially. The Government also made an allocation to establish central university in each uncovered State. In order to improve the delivery of public services, the Government allocated an amount of Rs.120 crore to the Unique Identification Authority of India.

State Governments[1]

II.1.39 The State Governments' efforts at fiscal correction and consolidation in terms of the path of fiscal restructuring prescribed by the Twelfth Finance Commission (TFC) and targets fixed under their respective Fiscal Responsibility Legislation (FRL) suffered some setback during 2008-09. This was on account of the change in fiscal priority that became necessary to accommodate additional expenditures to support fiscal stimulus in the face of shortfalls in revenue on account of the overall economic slowdown. In order to accommodate additional expenditures having direct impact on the deficit targets, three states, *viz.*, Karnataka, Kerala and Rajasthan proposed to amend their FRLs.

II.1.40 The States, while presenting their budgets for 2009-10, announced a number of policy initiatives aimed at directing expenditure towards economic revival. Kerala announced a Rs.10,000 crore stimulus package to be implemented over two years for undertaking infrastructure development. As a reform measure, it proposed formation of a special cell to monitor non-tax revenue mobilisation measures and another cell for undertaking preparatory work on GST. Haryana launched an economic stimulus package for undertaking specific projects in various infrastructure sectors during the next two years, with an emphasis on upgradation of hospitals, sewerage and water supply systems, and construction of houses for industrial workers. Some other policy initiatives like upgradation of bus stands are being taken on PPP basis. Utilisations under NREGS were proposed to be stepped up by the States (Karnataka and Haryana). Karnataka announced reductions in several taxes, including luxury tax, profession tax, entertainment tax, and stamp duty on all immovable properties, including agricultural land, in order to provide a boost to the economy. It also proposed to constitute an Expenditure Review Commission to review the expenditure incurred on government programmes and to reduce expenditure on less productive programmes.

[1] Based on the budget documents of twenty-seven State Governments, of which two are Vote on Account.

II.1.41 Allocations for housing for weaker sections were proposed to be raised by Andhra Pradesh. It has proposed to expand the coverage of social security pensions, besides a one-time write-off of loans sanctioned to the weavers' co-operative societies and individual weavers. Allocations for education and upgradation of technical institutions are proposed to be raised by Karnataka, Haryana and Gujarat. States have also proposed higher allocations for the various infrastructure sectors, including transport, power and development of major cities. Agriculture and irrigation would be the priority areas for States like Karnataka, Himachal Pradesh and Andhra Pradesh. Karnataka proposed to provide crop loans to farmers up to Rs.50,000 at the concessional rate of 3 per cent.

II.1.42 The Sixth Pay Commission constituted by the Government of India for Central Government employees submitted its Report on March 24, 2008. A number of States including Bihar, Chhattisgarh, Gujarat, Haryana, Arunachal Pradesh, Himachal Pradesh, Jharkhand, Maharashtra, Rajasthan, Uttar Pradesh, Uttarakhand and Orissa have announced their decision to follow the recommendations of the Sixth Pay Commission. Andhra Pradesh, West Bengal, and Assam decided to constitute separate Pay Commissions for reviewing the salaries and other benefits for their employees. Karnataka and Kerala have already revised pay scales for their employees based on pay commissions constituted by them while Punjab Government has accepted the recommendations of their Fifth State Pay Commission.

II.1.43 The Committee on Financial Sector Assessment constituted by the Reserve Bank, which submitted its Report in March 2009, had carried out an assessment of fiscal transparency at the level of State Governments (Box II.2).

External Sector Policies

II.1.44 India's export sector was directly affected by the contagion in global output and trade, with negative growth since October 2008. In response, the export sector was extended a plethora of incentives such as interest subvention of 2 per cent for pre-shipment and post-shipment credit; Government back-up guarantee for export credit guarantee corporation (ECGC); credit line of Rs.5,000 crore for the EXIM Bank; and duty drawback benefits on certain items such as knitted fabrics, bicycles, agricultural hand tools and specified categories of yarn. A Committee of Secretaries has also been constituted to address procedural problems faced by exporters and to speed up various clearances.

II.1.45 The Annual Supplement to India's Foreign Trade Policy (2004-09), which was announced by the Government of India on February 26, 2009 against the backdrop of the ongoing global economic crisis and its impact on India's trade performance, contained several measures. Export obligation period against advance authorisations was extended up to 36 months. Under the EPCG scheme, in case the decline in exports of a product(s) is more than 5 per cent, export obligation for all exporters of that product(s) is reduced proportionately. This provision has been extended for the year 2009-10, for exports undertaken during 2008-09. Threshold limit for obtaining recognition as premier trading house was reduced to Rs. 7,500 crore from the existing Rs. 10,000 crore. Duty credit scrips under duty entitlement passbook (DEPB) scheme were permitted to be issued without waiting for realisation of export proceeds. For advance licences issued prior to April 1, 2002, the requirement of MODVAT/CENVAT certificate was dispensed with in certain cases. Duty entitlement pass book (DEPB)/Duty Credit Scrip utilisation was extended for payment of duty for import of restricted items also. Value cap applicable under DEPB was revised upwards for two products. Sector-specific schemes to strengthen exports included special package for leather and textiles sector; extended coverage of Focus Product Scheme (FPS); removal of import restrictions on worked corals; and allowing the personal carriage of gold up to 10 kilograms in a financial year to gems and jewellery units in Export Oriented Units (EOU) for the gems and jewellery sector.

Box II.2
Fiscal Transparency at the State Level

Fiscal transparency involves providing ready access to reliable, comprehensive, timely, understandable, and internationally comparable information on Government activities, so that the electorate and financial markets could accurately and easily assess the Government's financial position as well as the true costs and benefits of its activities (Kopits and Craig 1998). Fiscal transparency fosters better-informed public debate, as well as greater government accountability and credibility. The IMF brought out "Code of Good Practices" and "Manual on Fiscal Transparency" to encourage greater fiscal transparency, which were updated in 2007. This comprehensive framework for fiscal transparency focuses on clear roles and responsibilities, transparent budget processes, public availability of information, and assurances of integrity. Despite the efforts of international financial institutions to strengthen fiscal transparency, about one third of the world's population does not have full access to information on the fiscal operations of public bodies (Chand, 2008).

In the case of India, fiscal transparency was first assessed by an Advisory Group Report and the Report on Observance of Standards and Codes (ROSC) in 2001 and a Review Report in 2004. These assessments mainly covered the Central Government finances. Fiscal transparency at the aggregated State level has been assessed explicitly for the first time in a Report by the Committee on Financial Sector Assessment (CFSA) (Chairman: Dr. Rakesh Mohan) released in March 2009. The Report found that the fiscal transparency at the State level in India generally lags behind the standards achieved at the Central Government level. Although there is no mandatory requirement for the States to adhere to such transparency standards, adoption of such practices could help State Governments in explaining the rationale of various policy decisions to the public. Furthermore, as several States have been increasingly accessing the market for meeting their borrowing programmes, enhancement of such transparency practices will be beneficial to them. The enactment of Fiscal Responsibility Legislations (FRLs) by all States (excepting West Bengal and Sikkim) has brought about some improvement in fiscal transparency at the State level.

The compliance to the IMF Code by the State Governments was observed to be relatively lower as compared to the Central Government, but still a significant number of 28 out of 45 practices were either 'Fully' or 'Broadly Observed'. The 'Partly Observed' practices numbered 15 and non-observance was assessed against two practices in respect of Pillar III (Public Availability of Information). Overall, the current status of compliance leaves scope for substantial improvement that is needed for greater transparency (Table A).

The state of fiscal transparency at the State Government level is reflected in lack of availability of information, consistency in the available information and uniformity in data reporting. Beside these, State budgets also lack clarity and uniformity in terms of methodology to define certain variables which leads to mismatch of data provided by the State Governments, Union Government, Comptroller and Auditor General of India, and Controller General of Accounts. Data dissemination is particularly poor with regard to outstanding guarantees, off-budget borrowings, financing pattern of gross fiscal deficit, revenue arrears, subsidies, interest rates and maturity profile of negotiated loans. A few State Governments do not provide detailed information on 'Discharge of Internal Debt' in their respective budgets. Likewise, disaggregated fiscal data for the accounts year are not available for some States. In this context, the CFSA observed that while it would be difficult to resolve completely such differences, the actual accounting figures cannot, in principle, differ. The CFSA endorsed the Advisory Panel recommendation that a Working Group needs to be set up to sort out such discrepancies in fiscal data reported. It also recommended that all States set up State Finance Commissions (SFCs), ensure timely submission of Reports and report compliance with the rationale for rejecting any of the recommendations. The Report pointed out that the State Governments' relationship with publicly-owned corporations is not always governed by MoUs. In most of the cases, cover for losses of State PSUs is extended through equity contributions from the capital account, instead of subsidies through the revenue account. Such non-transparent transactions need to be curbed. Transfers of funds for the performance of functions devolved to local level should be reported in a transparent manner, separately for rural and urban local bodies. The CFSA highlighted the need to reconcile discrepancies in the fiscal data reported by various data disseminating agencies and also to restructure and rationalise the structure for reporting expenditures. In short, States need to improve transparency levels with regard to their finances so that credibility and integrity of information provided in public domain is enhanced.

Table A: Fiscal Transparency: Assessment of States

	O	BO	PO	NO
I. Clarity of Roles and Responsibilities	6	1	3	-
II. Open Budget Processes	4	4	1	-
III. Public Availability of Information	4	-	7	2
IV. Assurances of Integrity	8	1	4	-

O – Observed; BO – Broadly Observed;
PO – Partly Observed; NO – Not Observed.
Source : Report of Committee on Financial Sector Assessment, March 2009.

References:

1. Chand, Prem (2008), "Fiscal Transparency", *Encyclopedia of Public Administration and Public Policy*, Second Edition.
2. Kopits, G. and J. Craig (1998), "Transparency in Government Operations", *IMF Occasional Paper* No. 158.
3. Reserve Bank of India (2009), *Report of the Committee on Financial Sector Assessment*, March 2009.

II.1.46 Bhilwada and Surat were recognised as towns of export excellence, for textiles and diamonds, respectively. Several other facilitation measures were taken such as establishment of electronic message transfer facility for advance authorisation and EPCG scheme; allowing re-credit of 4 per cent Single Administrative Document (SAD) for *Vishesh Krishi Gram Udyog Yojana* (VKGUY); simplification of procedure for claiming duty drawback refund and refund of terminal excise duty and admissibility of reimbursement of additional excise duty levied on fuel, in respect of EOUs.

II.1.47 As a relief to exporters, the Union Budget 2009-10 has announced extension of interest subvention scheme for select industries till March 2010, extension of the benefits of the adjustment assistance scheme to provide enhanced Export Credit and Guarantee Corporation cover for badly hit sectors till March 2010, increased allocation for the 'Market Development Assistance Scheme' in order to enable exporters to identify and develop new markets and simplified service tax refund proposals.

II.1.48 The Reserve Bank also introduced several measures to support the export sector, which include extension of the period of entitlement of the first slab of pre-shipment and post-shipment rupee export credit; raising of the aggregate limit of export credit refinance (ECR) facility for scheduled commercial banks (excluding RRBs); extension of prescribed interest rate as applicable to post-shipment rupee export credit to overdue bills up to 180 days; raising of the ceiling rate on export credit in foreign currency and raising the limit of the standing liquidity facility to banks in terms of export credit refinance.

Foreign Exchange Transactions[2]

II.1.49 During 2008-09, despite the severity of the external shock associated with the global economic crisis, the Reserve Bank continued to undertake measures to simplify and liberalise the external payments regime. The momentum of capital account liberalisation, however, remained consistent with the cautious, gradual and need-based approach that has been adopted by India. The Reserve Bank even advanced the phased liberalisation measures suggested by the Committee on Fuller Capital Account Convertibility. The regulations governing capital flows have been liberalised substantially in the past three years taking into account the macroeconomic conditions, state of the financial sector developments, risk management capabilities of financial institutions and depth of financial markets.

II.1.50 In keeping with the preferred hierarchical approach to liberalisation of inflows in favour of equity flows rather than debt flows, measures undertaken during 2008-09 to strengthen inflows under the equity route include expansion of coverage of foreign direct investment (FDI) to credit information companies and commodity exchanges; and widening the access of foreign firms to local equity markets. In order to accord flexibility to allocate their investments, restriction on the ratio of equity to debt in the investment portfolio of FIIs was removed. The specific measures taken during 2008-09 to liberalise outbound investment include raising the investment limits of Indian corporates and mutual funds registered with the SEBI and permitting registered trusts and societies engaged in manufacturing/educational/hospital sector to make investment in the same sector(s) in a joint venture or wholly owned subsidiary outside India.

II.1.51 The ECB policy, which was tightened in 2007 in view of the then prevailing macroeconomic conditions, was relaxed in 2008-09 following the slowdown in capital inflows, drying up of resources in domestic capital market and the continuing pressure on credit spreads in the international markets. Measures taken in this direction include expanding the coverage of ECB to the services

[2] A detailed discussion of policies relating to foreign exchange transactions is presented in Chapter V (Development and Regulation of Financial Markets) of the Report.

sectors, *viz.,* hotels, hospitals and software companies; permitting non-banking finance companies (NBFCs) involved exclusively in infrastructure financing to access ECB; broadening the definition of infrastructure sector for the purpose of accessing ECB to include mining, exploration and refinery sector in the country; increasing the ECB limits for infrastructure sector; removal of restrictions on rupee expenditure for permissible end-use; and dispensing with the all–in-cost interest rate ceilings for ECBs under the approval route. Furthermore, taking into account the depressed asset prices internationally, buyback of foreign currency convertible bonds (FCCBs) by Indian companies was allowed both under the approval and automatic routes, subject to certain conditions.

II.1.52 Specific measures were taken to improve foreign exchange liquidity in the domestic market in response to uncertainty in the global financial markets that has affected capital flows. These include, raising the interest rate ceilings on FCNR(B) and NR(E)RA deposits and on lines of credit with overseas banks; allowing Indian banks to borrow more funds from their overseas branches and correspondent banks; and permitting systemically important non-deposit taking non-banking financial companies (NBFCs-ND-SI) and Housing Finance Companies (HFCs) to raise short-term foreign currency borrowings.

II.1.53 In view of the slowdown in exports as a fall out of the synchronised global recession, the period of realisation and repatriation to India of proceeds from goods or software exports was enhanced from six months to twelve months from the date of export, subject to review after one year. Similarly, as a measure of relief to importers, the limit for direct receipt of import bills/documents from their overseas suppliers was enhanced from US$ 100,000 to US$ 300,000 in the case of import of rough diamonds, rough precious and semi-precious stones by non-status holder exporters enabling them to reduce transaction costs. Accordingly, authorised dealers (AD) Category-I banks have been permitted to make remittances for imports, where the import bills/documents have been received directly by the importer from the overseas supplier and the value of import bill does not exceed US$ 300,000 subject to certain conditions.

MONETARY POLICY MEASURES[3]

II.1.54 The fast changing conditions relating to inflation, growth and financial markets posed significant challenges for the conduct of monetary policy during 2008-09. The monetary policy during 2008-09 witnessed two distinct phases. The first phase during April-September 2008 witnessed a period of monetary tightening reflecting the response to rising inflation expectations. The second phase since mid-September 2008 witnessed a period of monetary policy easing in response to the knock-on effects of the global financial crisis on the Indian economy and significant moderation in inflation pressures.

II.1.55 The Annual Policy Statement for 2008-09 noted that there had been significant shifts in both global and domestic developments in relation to initial assessments for 2007-08 and the dangers of global recession had increased. Against this backdrop, the Annual Policy Statement for 2008-09 emphasised the overreaching policy challenges to mitigate inflationary pressure and global uncertainties while maintaining the growth momentum of the economy.

II.1.56 The intensity of global financial crisis since September 2008, however, reinforced the importance of placing special emphasis on preserving financial stability and stimulating growth. The Mid-Term Review highlighted that while prudent regulatory surveillance and effective supervision ensured that India's financial sector remains stable and continues to be robust, the global financial turmoil warranted special emphasis on preserving financial stability. The monetary policy challenge,

[3] A detailed discussion of monetary management is presented in Chapter III (Monetary Policy Operations) of the Report.

accordingly, was to strike an optimal balance between preserving financial stability, maintaining price stability, anchoring inflation expectations, and sustaining the growth momentum, with the use of both conventional and unconventional tools.

II.1.57 The Third Quarter Review of Monetary Policy 2008-09 was set in the context of further deterioration in global economic outlook and heightened uncertainty about the global financial sector. The Indian economy, which had experienced a cyclical moderation in growth accompanied by high inflation in the first half of 2008-09, exhibited a distinct evidence of further slowdown as a consequence of the global downturn. The knock-on effects of the global financial crisis affected the Indian economy in several ways: capital flows declined; capital market valuations remained low; industrial production growth slackened; export growth turned negative; and overall business sentiment deteriorated. On the positive side, the headline inflation decelerated, though consumer price inflation did not show any moderation. The domestic financial markets also continued to function normally, except for a short phase of high volatility. Although bank credit growth was higher than in the previous year, the flow of overall financial resources to the commercial sector between April 2008 and January 2009 declined marginally as compared with the previous year. This was on account of decline in other sources of funding such as resource mobilisation from the capital market and external commercial borrowings (ECBs). Based on the assessment of the global scenario and domestic economy, particularly the outlook on growth and inflation, the Reserve Bank maintained its monetary policy stance of provision of comfortable liquidity to meet the required credit growth consistent with the overall projection of economic growth. The Reserve Bank expressed its resolve to respond swiftly and effectively with all possible measures as warranted by the evolving global and domestic situation impinging on growth and financial stability. Furthermore, it committed to ensure a monetary and interest rate environment consistent with price stability, well-anchored inflation expectations and orderly conditions in financial markets.

II.1.58 The Annual Policy Statement for 2009-10 observed that there was scope for the overall interest rate structure to move down within the policy rate easing already effected by the Reserve Bank. Based on the overall assessment of the macroeconomic situation, the stance of monetary policy emphasised the need to ensure a policy regime that will enable credit expansion at viable rates while preserving credit quality so as to support the return of the economy to a high growth path.

II.1.59 The Annual Policy Statement for 2009-10 highlighted several immediate challenges that the Indian economy was facing, which needed to be addressed. These were: supporting the drivers of aggregate demand to enable the economy to return to its high growth path; restoring credit flow to all the productive sectors; unwinding fiscal stimulus over time in an orderly manner and return to a path of credible fiscal consolidation; preserving financial stability in the face of a severe global economic crisis; and withdrawal of the large liquidity injections in an orderly manner in order to avoid possible risks of upward inflationary pressures and asset price bubbles; and finally addressing the key challenge of ensuring an interest rate environment that supports revival of investment demand. The First Quarter Review of the Monetary Policy 2009-10 reiterated that the Reserve Bank would maintain the accommodative monetary stance until there are definite and robust signs of recovery. Recognising that the Reserve Bank would have to reverse the expansionary measures over time so as to anchor inflationary expectations and subdue inflationary pressures while preserving the growth momentum, the Review stated that "the exit strategy will be modulated in accordance with the evolving macroeconomic developments."

II.1.60 Reflecting the overall policy stance announced in the quarterly policy statements, the Reserve Bank shifted its policy stance from monetary tightening in response to the elevated

inflationary pressures in the first half of 2008-09 to monetary easing in the background of moderation of growth engendered by the crisis and easing inflationary pressures. The changing stance of policy needs to be viewed in the context of the previous period of graduated withdrawal of accommodation from September 2004 till August 2008 during which repo/reverse repo rates were increased by 300/150 basis points and the cash reserve ratio (CRR) for commercial banks was raised by 450 basis points. General provisioning requirements for standard advances and risk weights were raised in the case of specific sectors. In the second half of 2008-09, reflecting the emerging needs of the economy, the Reserve Bank reduced the CRR by 400 basis points during September-March 2008-09. During the same period, the repo rate was reduced by 400 basis points and the reverse repo rate was reduced by 250 basis points. The repo and reverse repo rates were further brought down by 25 basis points each, to 4.75 per cent and 3.25 per cent, respectively, on April 21, 2009. Use of macro-prudential measures along with monetary policy measures remained a unique feature of the Reserve Bank's policy approach of ensuring financial stability while balancing the objectives of growth and inflation during 2008-09.

CREDIT DELIVERY[4]

II.1.61 During a period when the advanced economies encountered an intense credit freeze, in India, the credit market functioned normally, notwithstanding the decline in demand for credit on account of the economic slowdown. The Reserve Bank continued to place emphasis on improving credit delivery mechanisms and took various measures for enhancing the flow of credit to those sectors of the economy, which were relatively more severely affected due to the synchronised global recession and also to the employment-intensive sectors. Wide ranging initiatives were also taken in the areas of financial inclusion, employment generation in rural and unorganised sectors, financial literacy and credit counselling. These include strengthening of rural co-operatives and regional rural banks which cater predominantly to the rural areas; liberalisation of branch licensing policies of RRBs; encouraging multiple channels of lending such as the self-help groups (SHGs), micro-finance institutions (MFIs) and adoption of banking facilitator/banking correspondent (BC) model; simplification of the procedures and processes for lending to agriculture and micro, small and medium enterprises (MSME) sectors and encouraging the adoption of ICT solutions to not only increase the outreach but also to reduce transaction costs.

FINANCIAL SECTOR POLICIES[5]

II.1.62 The resilience of the Indian financial sector in the face of the unprecedented global financial crisis to a large extent reflected the soundness of the Reserve Bank's regulatory and supervisory policies and the country's approach to financial reforms to support economic growth and development. The Reserve Bank's regulatory and supervisory initiatives during 2008-09 include changes in prudential regulations and measures to improve customer service, promote financial inclusion and strengthen anti-money laundering in the banking sector. Prudential regulations, which were earlier stepped up during the economic boom phase through counter-cyclical use of risk weights and provisioning on standard assets were brought down to the normal levels to create enabling conditions for preventing sharp moderation in credit growth during the economic slowdown. Initiatives were also taken for meeting country-specific requirements in the convergence with international best practices; strengthening the supervisory framework in terms of cross-border supervision;

[4] A detailed discussion of policies relating to credit delivery is presented in Chapter IV (Credit Delivery) of the Report.

[5] A detailed discussion of financial sector policies is presented in Chapter V (Development and Regulation of Financial Markets) and Chapter VI (Financial Regulation and Supervision) of the Report.

risk-based supervision and bank-led conglomerates; and strengthening the off-site monitoring system further for surveillance over bank's credit portfolios.

II.1.63 The Reserve Bank continued to take measures in 2008-09 to strengthen the urban co-operative banks (UCBs) in line with the Vision Document. Some of the important measures taken during the year include liberalisation of branch licensing norms for UCBs; permission to issue preference shares and long-term deposits; financial restructuring; and dynamic provisioning and restructuring of assets to address the stress created by economic slowdown. The process of consolidation of the sector through merger with stronger UCBs was further strengthened by laying down the guidelines for such mergers, including payment to depositors, financial contribution by the transferee bank and sacrifice by large depositors.

II.1.64 The Reserve Bank, on a review of the experience with the regulatory framework for non-banking financial companies in place since April 2007, enhanced the capital adequacy requirement for systemically important non-banking financial companies (NBFCs-ND-SI) and put in place guidelines for liquidity management and reporting, with specified norms for disclosures in October 2008. The implementation of capital to risk weighted asset ratio (CRAR) of 12 per cent by March 31, 2009 and 15 per cent by March 31, 2010 for these NBFCs was, however, deferred by one year, respectively, in view of the difficulty in raising equity capital in a market, which was depressed in the second half of the year in line with the sharp downward correction in asset prices globally. Taking into consideration the need for adequate access to funds for meeting business and regulatory requirements, NBFCs-ND-SI were permitted to issue perpetual debt instruments. To address problems of liquidity and ALM mismatch in the current economic scenario, the Reserve Bank permitted NBFCs-ND-SI to raise short term foreign currency borrowings under the approval route as a temporary measure, subject to certain conditions and also provided liquidity support to eligible NBFCs-ND-SI through a special purpose vehicle (SPV).

Policies for Financial Markets

II.1.65 The contagion from the global crisis operating through the trade, capital flows and confidence channels created pressures and enhanced volatility in the financial markets of India, in particular the foreign exchange market, the capital market and the money market. The Reserve Bank's timely measures restored orderly conditions in the money and foreign exchange markets over a short period. All markets, more importantly, functioned normally throughout the year. Besides the specific measures to address the stress levels in the markets, several measures were taken to sustain the process of ensuring deeper and competitive markets.

II.1.66 Important measures to improve activity in the Government securities market during 2008-09 include: (i) new issuance structure for issue of floating rate bonds (FRBs); (ii) operational readiness for introduction of separate trading for registered interest and principal of securities (STRIPS); (iii) revision of repo accounting guidelines; (iv) clearing and settlement of over the counter (OTC) derivatives; and (v) new settlement mechanism in government securities market for the non-current account holders.

II.1.67 During 2008-09, the Securities Exchange Board of India (SEBI) as the regulator for capital market, continued to take measures to further develop the market. Specific measures were also taken in the wake of the global financial crisis, to strengthen the Indian capital market, ensure market safety and safeguard the interest of investors.

II.1.68 SEBI operationalised the securities lending and borrowing (SLB) with effect from April 21, 2008. Pursuant to feedback received from market participants, National Stock Exchange (NSE) and Bombay Stock Exchange (BSE), SEBI has made certain changes in the SLB mechanism such as increase in the tenure of SLB to 30 days from 7

days, extending the time for SLB session from one hour (10 am to 11 am) to the normal trade timings of 9.55 am to 3.30 pm and advising the stock exchanges to follow the common risk management practices.

II.1.69 In order to improve the efficiency of the use of the margin capital by market participants, SEBI in December 2008 revised the existing facility of cross margining and extended it across cash and derivatives segments to all categories of market participants. The extent to which positions of clients in both the cash and derivatives segments offset each other shall be considered for the purpose of cross margining.

II.1.70 Effective August 6, 2008, trading in currency futures was permitted at recognised exchanges for Indian entities, including banks. With a view to rationalising the eligibility criteria for introduction of derivatives, SEBI in October 2008 advised stock exchanges to introduce derivatives on shares fulfilling the prescribed criteria, irrespective of their date of listing and/or size of issue.

II.1.71 SEBI revised the position limit applicable for client and trading member for exchange traded currency derivatives as per the recommendations of the RBI-SEBI Standing Technical Committee. The position limits shall be specific to an exchange and not to the exchange traded currency derivatives market as a whole. On June 17, 2009, RBI and SEBI jointly brought out norms enabling exchange-traded interest rate futures (IRFs).

II.1.72 The cumulative debt investment limit for FIIs' investments in corporate debt was enhanced from US$ 6 billion to US$ 15 billion. Following this, US$ 8 billion has been allocated to the market participants in an open bidding platform. All biddings for the limits would be through the stock exchanges and the window for bidding would remain open for two hours. The existing trading members would have access to the bidding platform. FIIs or the sub-accounts have to route through the existing trading members, who in turn shall bid for the limits.

II.1.73 On review of certain restrictions imposed on issuance of participatory notes/offshore derivative instruments (ODIs) by FIIs/sub-accounts in 2007 in October 2008, SEBI decided to relax restrictions imposed on issue of participatory notes by FIIs against securities, including derivatives as underlying. Furthermore, the foreign investment promotion board (FIPB) decided that foreign investment could flow into private equity funds registered as trusts, thus opening up another window of funds for private equity players and venture capital funds registered as trusts. Applicants seeking registration as Foreign Venture Capital Investors (FVCIs) with SEBI, have to obtain firm commitment from their investors in the form of a minimum contribution of US $ 1 million at the time of submission of application. FIIs and NRIs have been permitted in July 2009 to invest in Indian Depository Receipts (IDRs) subject to specified conditions.

II.1.74 SEBI amended the SEBI (DIP) Guidelines, 2000 with respect to reduction in timelines for rights issue; definition of qualified institutional buyers (QIBs) and eligibility and pricing norms of qualified institutions placement (QIP). With a view to encourage participation of institutional buyers in the capital market, QIBs were allowed to subscribe to the combined offering of non-convertible debentures (NCDs) with warrants or to individual instruments issued by a listed company. With the amendment of SEBI (DIP) guidelines and the Listing Agreement, the time duration for a rights issue was reduced, which meant a reduction in the market risk faced by an issuer besides faster turnaround of money for investors.

II.1.75 Considering the importance of systems audit in a highly technology-driven securities market, all exchanges were advised in July 2008 to conduct, on an annual basis, comprehensive audit of their systems and processes by a reputed independent auditor. In order to boost investor confidence in the wake of concerns relating to corporate governance in certain companies, SEBI has set up a panel of audit firms to begin peer review of audit reports for firms listed in the stock market for

2008-09 and for the first three quarters of 2009-10. SEBI guidelines were amended to align the accounting standards of employee stock option scheme with the accounting norms prescribed by the Institute of Chartered Accountants of India (ICAI).

II.1.76 In order to enhance disclosures regarding shareholding pattern in a listed company and also to bring more transparency and efficiency in the governance of a listed company, SEBI amended certain clauses in the Equity Listing Agreement in April 2009. These amendments included, *inter alia*, providing a uniform procedure for dealing with unclaimed shares; reducing the notice period; uniformity in dividend declaration by listed companies on 'per share' basis; and disclosure of shareholding pattern for each class of shares and voting rights pattern.

II.1.77 With a view to bringing about uniformity in disclosure by the mutual funds, SEBI in consultation with Association of Mutual Funds in India (AMFI), prescribed a new format of abridged scheme-wise annual report in July 2008. In order to further strengthen the framework for close-ended schemes, all close-ended schemes (except Equity Linked Savings Schemes) launched on or after December 12, 2008 were required to be mandatorily listed and net asset value (NAV) computed and published on a daily basis.

II.1.78 In order to bring about greater transparency to the market, SEBI decided that the position of the securities lent by foreign institutional investors (FIIs) and their sub-accounts abroad shall be disseminated on a consolidated basis twice a week i.e., on Tuesday and Friday of every week.

Legislative Measures

II.1.79 The Payment and Settlement Systems Act, 2007, which was notified on December 20, 2007 came into effect from August 12, 2008. The Reserve Bank has, in exercise of the powers conferred under the Act, framed two regulations, *i.e.*, Board for Regulation and Supervision of Payment and Settlement Systems Regulations, 2008 and the Payment and Settlement Systems Regulations, 2008. The Act has designated the Reserve Bank as the authority to regulate and supervise the payment systems in the country, including those operated by non-banks such as the CCIL, card companies, other payment system providers and all prospective organisations for payments. The netting procedure and settlement finality, earlier governed by contractual agreement(s), have been accorded legal recognition under the Act. Entities that want to/ continue to operate a payment system are required to apply to the Reserve Bank for authorisation. The other powers vested with the Reserve Bank under the Act include laying down operational and technical standards for the various payment systems; calling for information and returns/documents from the service providers and imposing fines on failure to do so or on providing false information. The Reserve Bank is also empowered to issue directions and guidelines to the system providers, prescribe the duties to be performed by them and audit and inspect their systems/premises. The Payment and Settlement Systems Regulations, 2008 cover: (a) authorisation of payment systems including the form and manner of submission of application for authorisation of commencement/continuation of a payment system and grant of authorisation certificate; (b) payment instructions and determination of standards; (c) furnishing of returns, documents and other information; and (d) furnishing of accounts and balance sheets.

II.1.80 The macroeconomic policies taken during 2008-09 by the Government and the Reserve Bank kept pace with the dynamically changing global environment and its repercussions on the domestic economy. The policies that were formulated in response to the evolving developments aimed at cushioning the economy from the adverse impact of high global commodity and fuel prices on domestic inflation during the first half of the year and from the knock-on effect of the global financial crisis on economic growth during the second half. The overall policy thrust, however, continued to focus on non-inflationary high growth that is inclusive and is based on efficient use of resources in a liberalised policy environment.

II. REAL ECONOMY

II.2.1 As the global economy entered a phase of synchronised recession, the Indian economy experienced distinct moderation in real GDP growth reflecting creeping contagion from the global crisis as well as slackness in cyclical growth impulses. In relation to the record average growth of 8.8 per cent achieved during 2003-08, 6.7 per cent growth in 2008-09 represents a notable deceleration, though in terms of growth performance of major countries around the world Indian growth remained one of the highest. What emerged as a concern, however, is that the growth in industry and services decelerated during the four successive quarters of 2008-09.

II.2.2 During 2008-09, the GDP growth moderated mainly on account deceleration in growth, both industry and services. The moderation in industrial growth was largely an outcome of some cyclical downturn and weak domestic and external demand. The services sector, which has powered India's strong growth performance in the recent past, also came to witness some moderation, reflecting weakness in demand, both at home and abroad. A large set of services sub-sectors such as trade, transportation, hotel, tourism, finance and construction witnessed subdued growth on account of global slowdown. The sub-sector 'community, social and personal services', however, provided some support as its growth accelerated, mainly reflecting the impact of the Sixth Pay Commission Awards. The agriculture sector also witnessed deceleration in growth during 2008-09. As regards sectoral composition of GDP, while the shares of agriculture and industry in India's total GDP registered marginal decline, the share of services increased correspondingly in 2008-09 (Table 2.1).

Table 2.1: Growth Rates of Real GDP
(at 1999-2000 prices)

(Per cent)

Sector	2000-01 to 2008-09 (Average)	2005-06 to 2007-08 (Average)	2006-07	2007-08*	2008-09#	2008-09			
						Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8	9	10
1. Agriculture and Allied Activities	**2.8**	**4.9**	**4.0 (18.5)**	**4.9 (17.8)**	**1.6 (17.0)**	**3.0**	**2.7**	**-0.8**	**2.7**
1.1 Agriculture	3.0	5.0	4.1	5.0	n.a	n.a	n.a	n.a	n.a
2. Industry	**6.5**	**8.7**	**10.7 (19.5)**	**7.4 (19.2)**	**2.6 (18.5)**	**5.1**	**4.8**	**1.6**	**-0.5**
2.1 Mining and Quarrying	5.0	5.7	8.8	3.3	3.6	4.6	3.7	4.9	1.6
2.2 Manufacturing	7.1	9.7	11.8	8.2	2.4	5.5	5.1	0.9	-1.4
2.3 Electricity, Gas and Water Supply	4.5	5.2	5.3	5.3	3.4	2.7	3.8	3.5	3.6
3. Services	**9.0**	**11.1**	**11.3 (62.0)**	**10.8 (63.0)**	**9.4 (64.5)**	**10.0**	**9.8**	**9.5**	**8.4**
3.1 Trade, Hotels, Transportation, Storage and Communication	10.6	12.4	13.4	12.4	9.0	13.0	12.1	5.9	6.3
3.2 Financing, Insurance, Real Estate and Business Services	8.7	12.3	13.8	11.7	7.8	6.9	6.4	8.3	9.5
3.3 Community, Social and Personal Services	6.4	6.5	5.7	6.8	13.1	8.2	9.0	22.5	12.5
3.4 Construction	10.2	12.7	11.8	10.1	7.2	8.4	9.6	4.2	6.8
4 Real GDP at Factor Cost	**7.2**	**9.4**	**9.7 (100)**	**9.0 (100)**	**6.7 (100)**	**7.8**	**7.7**	**5.8**	**5.8**

* : Quick Estimates. #: Revised Estimates. n.a.: Not Available.

Note : 1. Figures in parentheses denote percentage shares in real GDP.

2. Q1: First Quarter (April-June); Q2: Second Quarter (July-September); Q3: Third Quarter (October- December); and Q4: Fourth Quarter (January- March).

Source : Central Statistical Organisation.

II.2.3 Despite the moderation in growth, India continues to be one of the fastest growing economies in the world, demonstrating the strength of its inherent growth impulses and strong macroeconomic fundamentals. Another significant aspect of the India's growth experience during the current economic slowdown, as also during the past episodes of global emerging market crises, is the absence of any permanent loss of output (Box II.3).

II.2.4 A revealing feature of the growth process in India is the visible role of cyclical factors in conditioning the variation in output, notwithstanding the overall shift in the growth trajectory, reflecting the impacts of structural reforms and globalisation. The emerging evidence on the role of the cyclical factors suggests that in the absence of the global crisis, India's growth might have still experienced some moderation, though of a much lesser intensity, than what is actually being observed because of the global crisis (Box II.4).

AGGREGATE SUPPLY

Agriculture

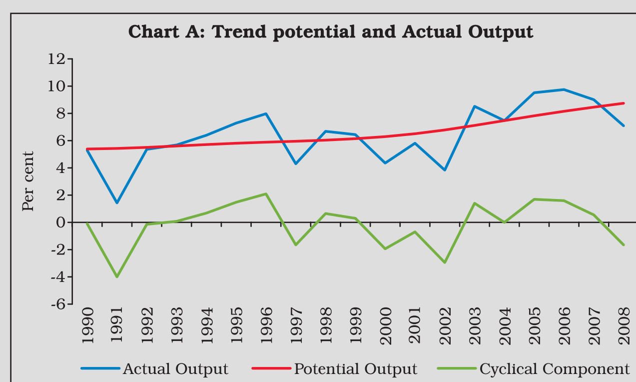
II.2.5 The performance of the Indian agriculture is conditioned largely by the monsoon coupled with its spatial and temporal distribution, besides other factors such as Government's price support policy, investment in agriculture, access to irrigation, credit and other inputs like fertiliser and pesticides and development of markets for hedging risks. Management of food stocks in India and developments in the world agriculture market, in terms of production, trade and prices also assume significance because of their implications for prices of agriculture products in the domestic market.

Box II.3
Permanent and Transitory Output Loss

In the event of a crisis, an economy may face permanent or transitory output loss depending on the nature and the severity of the crisis. According to the literature, permanent loss of output becomes evident when there is a decline in potential output of the economy. In the context of a global crises, this could happen on account of shrinking aggregate demand or severe investment contraction, driven by weak business confidence over a long period. Econometrically, it could be shown that any output growth series exhibiting the property of trend stationarity is unlikely to have a permanent output loss, as variations in output growth would be mean reverting.

Economic crises and other adverse shocks, whether external or domestic, may impose only a temporary or transitory restraint on output growth, and strong future growth may more than offset the initial decline. Corrective policies could often spur an economic recovery that, at times may shift the growth trajectory above the original trend line, particularly if the crises induced policy responses reduce inefficiencies and enhance productivity.

Evidence gathered from the Indian data, using re-sampling techniques to obtain the distributions of unit root test statistics [Augmented Dicky Fuller (ADF)] under the null hypotheses of Difference Stationary (DS) process as well as Trend Stationary (TS) process shows that India's GDP growth is trend stationary, which implies that any variations in the output around the trend remain transient and have a tendency to revert back to their original trend. Moreover, trend in potential output generated through Hodrick-Prescott filter reveal that there has never been any permanent fall in India's potential output over longer duration in the event of any economic crisis since the 1990s, whether domestic or external (Chart A). The potential output, has increased in recent years on account of the spurt in investment rates and reform related productivity gains, which is evident from the average 8.8 per cent growth experienced during 2003-08.



Reference

1. Campbell, J. and Mankiw, N.G. (1987), "Are output fluctuations transitory?", *Quarterly Journal of Economics,* 102:857.

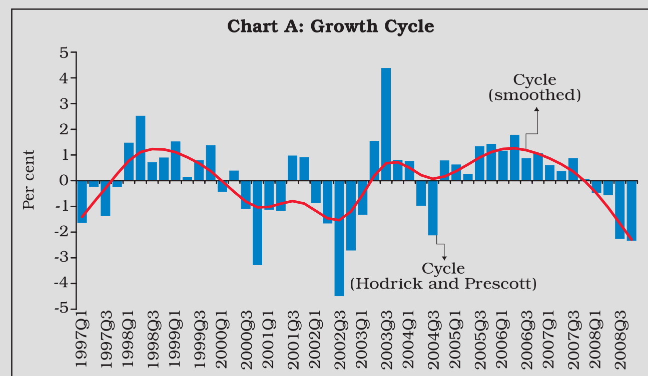
Box II.4
Growth Cycles in India: Recent Evidence of Cyclical Slowdown

The Annual Policy Statement on April 21, 2009 had noted that after recording high average growth over 2003-08, India was headed for a cyclical downturn in 2008-09. Global crisis coincided with the cyclical downturn to amplify the magnitude of deceleration in India's growth.

For an analysis of the shifts in the pattern of business cycles in the post- reform period, the growth experience could be divided into three broad phases, *i.e.,* 1992-93 to 1996-97, 1997-98 to 2002-03, and 2003-04 to 2008-09. In the immediate post-reform phase, the average real GDP growth rate improved to 6.2 per cent during 1992-93 to 1996-97 (with a peak of 7.9 per cent in 1996-97). On account of various adverse external developments such as the Asian crisis in 1997-98, the September 11, 2001 developments in the US coupled with recession in the world economy during 2000-01 to 2001-02 and domestic developments such as the Kargil war in 1999-2000 and the deficient monsoon in 2002-03, the real GDP registered an average growth of 5.2 per cent during the second phase. Though lower than the growth seen in both the preceding five years and even the average growth of the 1980s, it was considered remarkable in terms of the resilience of the Indian economy. The economy did not slip into negative growth territory, unlike the earlier episodes of supply shocks, such as the severe drought condition in the 1965-66 and 1979-80 and the oil shock in the early 1970s. The growth performance of the economy during these two post-reform phases, however, exhibited a modest improvement in the economy's capacity or growth potential despite the plethora of reform measures. On an average, real GDP grew at 6.3 per cent in the 1990s (excluding 1990-91), a modest increase over 5.8 per cent growth recorded during the 1980s.

The third major cyclical phase (2003-04 to 2007-08) however, clearly moved the growth trajectory to a higher level, with an annual average of 8.8 per cent – a jump by about 5 percentage points over the so called 'Hindu growth rate' that marked the first three decades of planning era, 3 percentage points over the demand-led growth of the 1980s, and 2.5 percentage points over the post-reform period of the 1990s. This was a phase when the economic structure of India had undergone significant changes in terms of saving and investment rates, composition of GDP, structural reforms, globalisation and sound macroeconomic and financial conditions. There was a clear upward shift in the level of the entire cycle, with the peak (representing overheating) reaching the 10 per cent mark.

In terms of the quarterly real GDP growth, since the late 1990s after the Asian crisis, the economy has witnessed three or four growth cycles; a medium term cycle of about 15 quarters from 1997(Q1) to 2000(Q4), in line with the revival from the Asian crisis, two shorter cycles from 2000(Q4) to 2002(Q3) relating to the period of world recession and deficient monsoon, and then 2002(Q4) to 2004(Q3), followed by a reasonably longer cycle of four to five years from 2004(Q4) to 2008(Q3) around the high growth trajectory. During this cycle, the expansionary phase lasted for about 8 to 9 quarters beginning in 2004(Q4) and reached its peak closer to 10 per cent in the second and third quarters of 2006. Thereafter, the momentum of underlying growth showed some moderation until 2008-09(Q4). Thus, by the beginning of 2008-09, the cyclical moderation had already started (Chart A). In the fourth quarter of 2008, the growth decelerated to 5.8 per cent, reflecting the combined effects of global crisis and domestic cyclical impulses. Thus, even in the absence of the global recession, India's high growth phase might have still encountered a cyclical slowdown, *albeit,* at much lesser scale and magnitude.



II.2.6 The agriculture sector, after recording a robust growth well above its trend during 2003-08, came to witness a marked deceleration during 2008-09, primarily due to the high base effect. The total foodgrains production during 2008-09, however, reached a record level of 233.9 million tonnes, representing an increase of about 3 million tonnes over the previous year (Table 2.2).

II.2.7 Despite higher overall foodgrains production estimate for 2008-09, *kharif* foodgrains production remained lower than the previous year due to the crop losses resulting from floods in some states like Bihar, Eastern UP, Orissa and Assam during the *kharif* season 2008. Total *kharif* foodgrains production during 2008-09 is estimated to remain marginally lower than in 2007-08, but

Table 2.2: Agricultural Production

(Million tonnes)

Crop	2005-06	2006-07	2007-08	2008-09#
1	2	3	4	5
a. Foodgrains	**208.6**	**217.3**	**230.8**	**233.9**
i. Rice	91.8	93.4	96.7	99.2
ii. Wheat	69.4	75.8	78.6	80.6
iii. Coarse Cereals	34.1	33.9	40.8	39.5
iv. Pulses	13.4	14.2	14.8	14.7
b. Non-foodgrains				
i. Oilseeds++	28.0	24.3	29.8	28.2
ii. Sugarcane	281.2	355.5	348.2	271.3
iii. Cotton@	18.5	22.6	25.9	23.2
iv. Jute and Mesta+	10.8	11.3	11.2	10.4
v. Tea*	946.0	981.8	944.7	980.8
vi. Coffee*	274.0	280.0	262.0	277.0

: Fourth Advance Estimates as on July 21, 2009
++ : For nine oilseeds out of eleven in all.
+ : Million bales of 180 kg. each.
@ : Million bales of 170 kg. each.
* : Million kilograms and data for tea on a calendar year basis.
Source: Ministry of Agriculture, Government of India.

significantly higher than in 2006-07 (Table 2.3). The *rabi* production, however, was higher than that recorded in the previous year and compensated for the loss in *kharif* output. Overall, the total rice and wheat production increased, while the production of coarse cereals, pulses, oilseeds, showed some slippage and the output of sugarcane and cotton exhibited a marked decline over the previous year. Growth in the allied sector is expected to remain strong during 2008-09.

Behaviour of Monsoon

II.2.8 The performance of South West monsoon during 2008 (June 1 to September 30) was satisfactory with cumulative rainfall being two percentage points below normal. The South-West monsoon arrived over Kerala on May 31, a day ahead of the normal date. The monsoon covered the entire country by July 10, nearly 5 days ahead of the normal schedule. The progress of South-West monsoon was, however, uneven with rainfall being deficient in most of the weeks during sowing months of July and August 2008. The temporal distribution shows that precipitation was above normal in June, while it was below normal during July, August and September (Chart II.1). Nonetheless, the spatial distribution of rainfall was satisfactory with majority of meteorological sub-divisions recording excess/ normal[6] rainfall and only few sub-divisions registering deficient/scanty/no rains (Chart II.2).

Table 2.3: Season-wise Agricultural Production

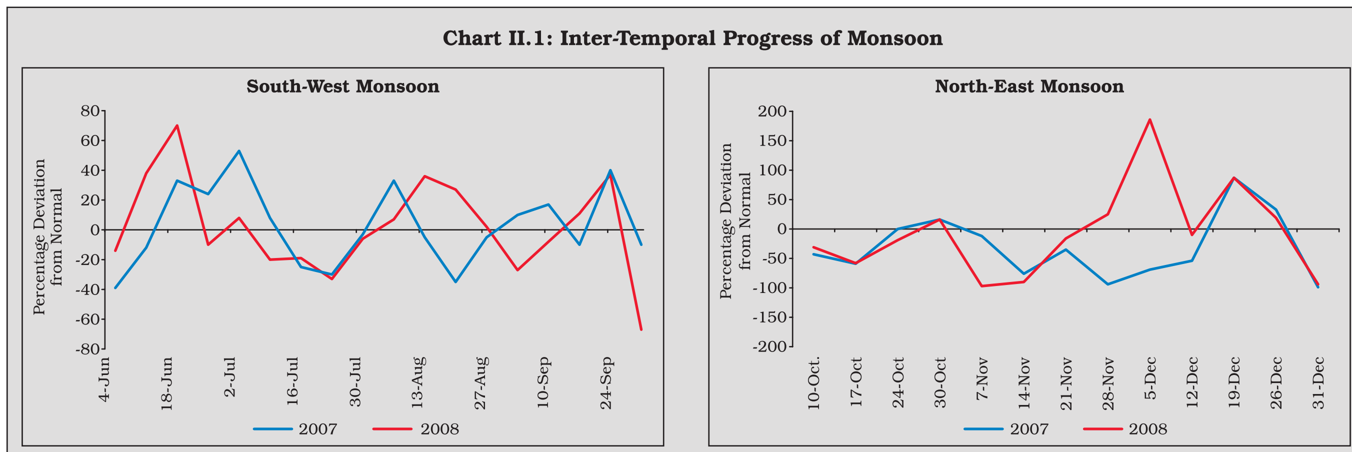
(Million tonnes)

	Kharif			*Rabi*		
Crop	2006-07	2007-08	2008-09 AE	2006-07	2007-08	2008-09 AE
1	2	3	4	5	6	7
Rice	80.2	82.7	84.6	13.2	14.0	14.6
Wheat	-	-	-	75.8	78.6	80.6
Coarse Cereals	25.6	31.9	28.3	8.3	8.9	11.1
Pulses	4.8	6.4	4.8	9.4	8.4	9.9
Total Foodgrains	110.6	121.0	117.7	106.7	109.8	116.2
Oilseeds	14.0	20.7	17.9	10.3	9.0	10.3
Sugarcane	355.5	348.2	271.3	-	-	-
Cotton*	22.6	25.9	23.2	-	-	-
Jute & Mesta**	11.3	11.2	10.4	-	-	-

- : Not Applicable. AE: Fourth Advance Estimates as on July 21, 2009.
* : In million bales of 170 kilograms each. ** : In million bales of 180 kilograms each
Source: Ministry of Agriculture, Government of India.

[6] Excess: + 20 per cent or more; Normal: + 19 per cent to -19 per cent; Deficient: -20 per cent to - 59 per cent; Scanty: -60 per cent to -99 per cent; No Rain: -100 per cent (All with respect to the Long Period Average).

Chart II.1: Inter-Temporal Progress of Monsoon



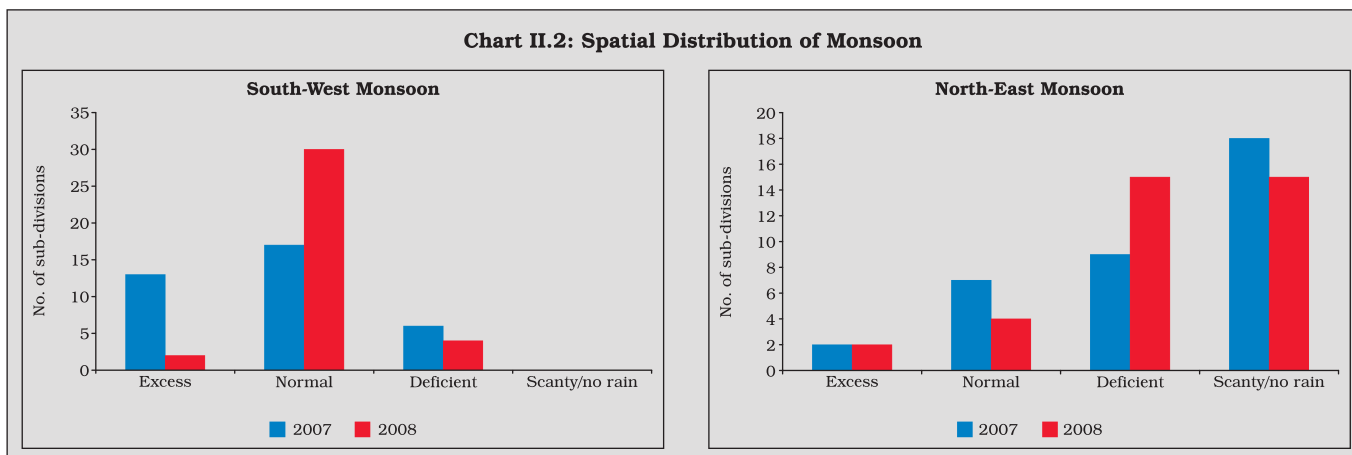
II.2.9 Among the four broad homogeneous regions, while the South-West monsoon seasonal rainfall was above normal in the North-West India, it was below normal in the South Peninsula, Central India and North-East India. The uneven temporal rainfall distribution caused flood situation in many states. The water storage in the major reservoirs in the country was 74 per cent of the Full Reservoir Level (FRL) at the end of the South-West monsoon season (October, 2008), which although was lower than the previous year (79 per cent) but remained higher than the average of last 10 years (66 per cent).

II.2.10 The North-East monsoon (October 1 to December 31, 2008) rains commenced over the Peninsular India on October 15, 2008. The cumulative position of North-East monsoon was deficient with rainfall being 31 per cent below normal, almost the same as recorded in the previous year. The cumulative rainfall was excess/ normal only in few sub-divisions, while most of them recorded deficient/scanty/no rains.

Progress of South West Monsoon during 2009-10 (so far)

II.2.11 According to the latest monsoon forecast released by the IMD in August 2009, the rainfall during the South-West monsoon season 2009, for the country as a whole is likely to be below normal, *viz.,* 87 per cent of the LPA with a model error of +/- 4 per cent. The cumulative rainfall during the South West monsoon season for 2009-10 so far (up to August 12) has been less than satisfactory, with rainfall over the entire country being 29 per cent below normal as against 2 per cent above normal during the corresponding period of the previous year. The foodgrains production weighted

Chart II.2: Spatial Distribution of Monsoon



rainfall index[7] stood at 64 as on August 12, 2009 as against 114 during the corresponding period of the previous year. As on August 18, 2009, 10 states *viz.,* Assam, Bihar, Himachal Pradesh, Jharkhand, Madhya Pradesh, Manipur, Nagaland, Karnataka, Maharashtra and Uttar Pradesh have declared drought, partly or wholly, in the state.

Agricultural Price policy

II.2.12 The fundamental objective of agriculture price policy in India has been to evolve a balanced and integrated price structure to meet the overall needs of the economy while protecting, in particular, the interests of the producers and the consumers. Keeping in view the interests of the farmers as also the need for self reliance, the Government has been fixing the Minimum Support Prices (MSP) for 24 major crops. Recently, based on the recommendations of the Expert Committee to examine methodological issues in fixing MSP (Chairman: Prof. Y.K. Alagh), the Government approved the inclusion of three more variables in the calculations done by the Commission on Agricultural Costs and Prices (CACP) to arrive at the minimum support price. The Government has further raised the MSP for *rabi* crops of 2008-09 season with a view to incentivise crop production and to ensure remunerative prices to the farmers (Box II.5).

Investment in Agriculture

II.2.13 Investment in agriculture as a proportion of overall GDP has remained stagnant in recent years. Gross capital formation in agriculture relative to GDP in this sector, however, has been improving continuously from 11.1 per cent in 2003-04 to 14.2 per cent in 2007-08 (Table 2.4). This needs to be raised to 16 per cent during the Eleventh Plan period to achieve the target growth rate of 4 per cent for agriculture.

II.2.14 The private sector in India has taken the lead in investment on agricultural research and made significant contribution to Bt cotton and other hybrid varieties of rice, maize and sunflower. Significant step up in investments is critical to ensure the much needed structural break that could lift the Indian agriculture to a higher level of sustainable growth. Nevertheless, the composition of investments, the quality of facilities created by them and the efficacy with which these facilities are managed will also hold a key for agricultural performance and the growth of rural incomes.

Allied sector

II.2.15 In recent years, rising incomes, urbanisation and globalisation have opened up new opportunities for diversification of agriculture. Crop diversification is increasingly perceived as a risk management strategy in the farm sector to shield the farmers from generally volatile agricultural prices. Greater diversification of agriculture towards highly lucrative horticultural crops coupled with other allied activities like livestock, bio-tech, food processing and others have contributed to higher agricultural growth in last few years. The growth in allied sector, *viz.,* horticulture, livestock and fisheries is expected to have remained strong in the range of 5 to 6 per cent during 2008-09.

II.2.16 Horticulture provides ample opportunities for sustaining large number of agro-based industries, which could generate substantial employment opportunities. Although the horticulture sector accounts for only 10 per cent of agricultural acreage, it contributes around 28 per cent to agricultural GDP. Horticulture production has grown at an average rate of 5 per cent during 2002-2008. India produced 207 million tonnes of horticultural crops during 2007-08. India is the second largest producer of fruits and vegetables in the world after China.

[7] The foodgrains production weighted index (PRN) is constructed based on the weighted average of actual rainfall received by the states where weights are taken as the average share of food grains production by the particular states in overall foodgrains production. A PRN of 100 indicates normal rainfall, where normal represents average of last 10 years' weighted rainfall.

Box II.5
Rationalisation of MSP Computation

The minimum support prices (MSP) are announced by the Government with a view to ensuring remunerative prices to the farmers for their produce on the basis of recommendations made by the Commission for Agricultural Costs and Prices (CACP). Support prices for all major crops, which are announced before the sowing, indirectly affect farmers' decisions regarding land allocation to crops. The MSPs have usually been remunerative and higher than the cost of production, providing a benchmark for the market prices of foodgrains. Price support policy has been successful in encouraging technology adoption, particularly in the irrigated areas and also in enhancing the production. In less than 15 years, following 1965, wheat production trebled while rice production increased by more than 50 per cent, which enabled the country to overcome the situation of shortages. With the easing supply situation, the policy emphasis was shifted from maximizing the production to encouraging a production pattern based on balanced allocation of resources that is consistent with the overall needs of the economy. Subsequently, since 1985, the emphasis was placed on taking full account of cost of production while determining the MSPs for various crops. The Government has periodically hiked the MSP in response to India's rising need for food security as also to meet the rising cost of cultivation on account of increasing input costs (Table A).

An Expert Committee was set up (Chairman: Prof. Y.K. Alagh) on May 7, 2003 by the Ministry of Agriculture with an objective to examine methodological issues in fixing MSP in view of the changing policy paradigm in terms of trade liberalisation, privatisation and globalisation. The Committee submitted its Report to the Government on May 31, 2005. The Report, in its recommendations, included certain observations on various aspects of costs and prices of the agricultural commodities, non-cost and non-price measures like trade and tariff policy, market reforms, re-vamping of procurement agencies and strengthening of rural credit measures. Following some of its recommendations, the Cabinet Committee on Economic Affairs (January 15, 2009) gave approval to CACP for incorporating three more variables in its computations done for arriving at MSP. The three items are: premium actually paid by farmers for crop insurance, as a cost item, marketing, and transport charges incurred by farmers. This move is expected to improve and rationalise the calculation of MSP.

Table A: Minimum Support Price of Wheat and Paddy

(Rs. per quintal)

Crop Year	Wheat		Paddy Common@	
	MSP	% change	MSP	% change
1	2	3	4	5
1990-91	225	4.7	205	10.8
1995-96	380	5.6	360	5.9
2000-01	610	5.2	510	4.1
2004-05	640	1.6	560	1.8
2005-06	650 *	1.6	570	1.8
2006-07	750 #	15.4	580 **	1.8
2007-08	1,000	33.3	645 #	11.2
2008-09	1,080	8.0	850 ##	31.8

@ : From 1997-98, Minimum Support Price (MSP) is announced for two varieties of paddy – common and Grade 'A', as against the earlier three categories of common, fine and super fine.

* : An additional incentive bonus of Rs.50 per quintal payable over the MSP.

: An additional incentive bonus of Rs.100 per quintal is payable over the MSP.

** : An additional incentive bonus of Rs. 40 per quintal on procurement between October 1, 2006 to March 31, 2007.

: Bonus of Rs. 50 per quintal is payable over the MSP.

Note : For other Rabi Crops of 2008-09, the MSP for Barley has been fixed at Rs.680 per quintal (increase by Rs.30), Gram at Rs.1,730 per quintal (increase by Rs.130), Masur (Lentil) at Rs.1,870 per quintal (increase by Rs.170), and Rapeseed/ Mustard at Rs.1,830 per quintal (increase by Rs.30).

Source : Ministry of Agriculture, Government of India.

II.2.17 Horticulture exports, accounting for 35 per cent of India's agricultural exports, have registered an average growth of 22 per cent during 2004-08 and hold a promising potential for agricultural growth. The pickup in this sector has been prominent since the setting up of the National Horticulture Mission in 2005-06 with an objective to enhance yields and improve infrastructure, processing and marketing of horticulture crops. Going forward, there is a need to address the challenges faced by this sector, including the provision of adequate physical infrastructure to reduce post-harvest losses.

II.2.18 The livestock sector provides an important source of supplementary income to the small and marginal farmers and women in the rural areas, besides being a source of nutrition to millions in the country. India has one of the largest livestock population in the world. The livestock sector contributes to over 5 per cent of the total GDP and more than a quarter of the GDP originating from

Table 2.4: Gross Capital Formation in Agriculture
(At 1999-2000 prices)

Year	Investment in Agriculture and Allied Activities (Rupees crore)			Share in Agricultural and Allied Activities Gross Investment (per cent)		Gross Capital formation/ Agricultural GDP (Per cent at constant prices)	Investment in Agriculture (per cent of GDP at constant prices)
	Total	Public	Private	Public	Private		
1	2	3	4	5	6	7	8
1999-00	50,151	8,670	41,481	17.3	82.7	11.2	2.8
2003-04	53,542	10,805	42,737	20.2	79.8	11.1	2.4
2004-05	57,849	13,019	44,830	22.5	77.5	12.0	2.4
2005-06	66,065	15,947	50,118	24.1	75.9	12.9	2.5
2006-07	73,285	18,755	54,530	25.6	74.4	13.8	2.6
2007-08	79,328	22,107	57,221	27.9	72.1	14.2	2.5

Source: Central Statistical Organisation.

agriculture and allied activities. The Eleventh Five-year Plan envisages an overall growth of 6-7 per cent per annum for the sector. India ranks first in the world in milk production, which has increased from 17 million tonnes in 1950-51 to about 105 million tonnes by 2007-08.

II.2.19 Fisheries and aquaculture contribute about 1.1 per cent to the overall GDP and about 5.3 per cent to the GDP originating from agriculture and allied activities. The sector provides employment to over 14 million people. The annual export earnings from this sector amounted to Rs.7,620 crore in 2007-08 and is projected to increase to Rs.15,000 crore by the end of the Eleventh Plan. During 2008-09, this sector is expected to grow at a rate of 6.0 per cent, providing some support to the overall growth.

II.2.20 India is the world's second largest producer of food. The food processing industry ranks fifth in size in the country and contributes over 9.0 per cent to the GDP and has also emerged as a significant contributor to the country's exports. The Indian food processing sector, which mainly depends on agriculture for its raw materials, has been growing at an average rate of 13.5 per cent per year and remains a potential driver of future agricultural growth.

II.2.21 India made its entry into the biotechnology sector in 2002 with the Government approval of commercial cultivation of Bt cotton. Since then, agri-biotechnology continues to be the fastest growing segment among all biotechnology industries in the country. Besides, various efforts are being made in the direction of agro innovations that include the imported technique of hydrophonics- a soilless system of growing plants- which is being practised in Gujarat for cultivating different varieties of exotic hybrid tea, roses and strawberry. Research is also in progress on the production of transgenic rice and several genetically engineered vegetables. India being a major cashew producing country, use of cashew apple as an alternative to food crops used for ethanol production is also being explored in coordination with United Nations Industrial Development Organisation (UNIDO).

Indian Agriculture amidst Global Crisis

II.2.22 As the global crisis deepened, it appeared to have impacted the world agriculture through the demand channel, impinging on both consumption as well as trade. Food prices, which remained at elevated levels from 2007 till mid-2008, moderated subsequently on account of the economic slowdown and the consequent subdued demand for agricultural commodities, food, feed and fuel. Depressed global economic growth prospects may also have negative second round effects on investment and productivity in farm output. The

financial crunch could lower availability of capital at a time when accelerated investment in agriculture is urgently needed. While policy attention amidst the financial crisis has generally shifted to other sectors, focused attention on agriculture and rural development has been part of the stimulus packages designed in many countries, which aim at stepping up rural infrastructure expenditure in many emerging economies such as China, Malaysia and Indonesia and providing subsidised loans to farmers in countries like Thailand and Vietnam.

II.2.23 In the Indian context, the crisis does not seem to have impacted the agricultural sector. The overall satisfactory precipitation during South-West monsoon season in 2008 and availability of adequate food stocks have provided key cushion for the farm sector. Besides, the agricultural allied sector in India is also growing at a robust pace and could be expected to impart some resilience and stability to overall growth. Furthermore, because of India's mandated priority sector lending, institutional credit for agriculture remains unaffected by the global credit squeeze. The farm loan waiver package implemented by the Government also worked like a forward looking stimulus, as a matter of coincidence, to insulate the farm sector from the financial crisis. The social sector programmes such as National Rural Employment Guarantee Scheme (NREGS) could be expected to support the livelihood of the rural poor and the returning migrant workers under the impact of the global crisis.

II.2.24 Through the trade channel, the global economic slowdown may have some adverse impact on the agriculture sector. India's exports from labour intensive sectors, including agricultural and allied products, have registered decelerated growth under the impact of global demand recession, mainly in the developed regions, *viz.,* the US and the EU. However, the overall impact seems to be muted in the case of agriculture sector as India's exports of agriculture commodities account for only about 1.5 per cent of GDP.

II.2.25 The policy initiatives of the Government such as the Agricultural Debt Waiver scheme, together with enhanced outlays under various rural development schemes such as NREGS, Bharat Nirman Programme, National Food Security Mission, Integrated Watershed Management Programme of the National Rainfed Area Authority, Rural Infrastructure Development Fund (RIDF) and large increase in fertiliser and food subsidies imply a larger transfer of purchasing power to the farmers and the rural sector, which could help in stimulating rural demand and compensating for any fall in rural incomes on account of deficit monsoons. Rural spending in sectors like fast moving consumer goods (FMCG), telecom, education, health care and life insurance are generally expected to remain strong in coming years and the Indian corporate sector is gradually recognising the potential for growth in demand in rural areas[8]. Given the rising backward and forward linkages between farm and non-farm sectors, farm sector could be expected to support the rest of the economy during the current crisis.

Food Management

II.2.26 The procurement of foodgrains (rice and wheat) during 2008-09 was higher than that in the corresponding period of the previous year largely due to more than two-fold increase in wheat procurement (Table 2.5). The off-take of foodgrains (rice and wheat) during 2008-09 was higher as compared to corresponding period of the previous year. With procurement remaining higher than off-take during 2008-09, the total stocks of foodgrains with the Food Corporation of India (FCI) and other Government agencies at end-March 2009 registered an increase of nearly 80 per cent over the previous year. Total foodgrain stock was placed at 51.0 million tonnes as on August 1, 2009. The stocks of both rice and wheat are now higher than their buffer stock norms.

II.2.27 Despite effective food management, prices of primary articles remained highly volatile during

[8] Rural Marketing Association of India, McKinsey Global Institute.

Table 2.5: Management of Food Stocks

(Million tonnes)

Year/ Month	Opening Stock of Foodgrains			Procurement of Foodgrains			Foodgrains off-take				Closing Stock	Norms
	Rice	Wheat	Total	Rice	Wheat	Total	PDS	OWS	OMS – Domestic	Exports		
1	2	3	4	5	6	7	8	9	10	11	12	13
2008												
January	11.5	7.7	19.2	4.5	0.0	4.5	2.9	0.3	0.0	0.0	21.4	20.0
February	14.0	7.2	21.4	3.0	0.0	3.0	2.9	0.4	0.0	0.0	21.4	
March	14.7	6.5	21.4	1.6	0.0	1.6	3.0	0.5	0.0	0.0	19.8	
April	13.8	5.8	19.8	1.1	12.6	13.7	2.7	0.0	0.0	0.0	30.7	16.2
May	12.9	17.7	30.7	2.1	8.8	10.9	3.0	0.1	0.0	0.0	36.4	
June	12.1	24.1	36.4	1.2	0.9	2.2	2.8	0.4	0.0	0.0	36.3	
July	11.2	24.9	36.3	0.1	0.2	0.3	3.0	0.3	0.0	0.0	34.3	26.9
August	9.8	24.4	34.3	0.8	0.0	0.8	2.8	0.3	0.0	0.0	31.8	
September	8.5	23.3	31.8	1.4	0.0	1.4	3.0	0.4	0.0	0.0	30.0	
October	7.9	22.0	30.0	8.1	0.0	8.1	2.8	0.1	0.0	0.0	35.3	16.2
November	14.1	21.0	35.3	3.1	0.0	3.1	2.9	0.3	0.0	0.0	35.5	
December	15.6	19.6	35.5	4.2	0.0	4.2	3.0	0.5	0.1	0.0	36.2	
2009												
January	17.6	18.2	36.2	4.8	0.0	4.8	3.0	0.2	0.2	0.0	37.4	20.0
February	20.2	16.8	37.4	3.7	0.1	3.8	3.0	0.3	0.2	0.0	37.1	
March	21.3	15.3	37.1	2.3	0.0	2.3	2.9.	0.4	0.5	0.0	35.6	
April	21.6	13.4	35.6	1.4	19.4	20.8	3.3	0.1	0.0	0.0	51.8	16.2
May	21.4	29.8	51.8	1.9	4.4	6.4	3.6	0.2	0.0	0.0	54.8	
June	20.4	33.1	54.8	1.3	1.1	2.4	n.a.	n.a.	n.a.	n.a.	53.2	
July	19.6	32.9	53.2	1.4	0.4	1.8	n.a.	n.a.	n.a.	n.a.	51.0	26.9
August*	18.8	31.6	51.0	0.5	0.0	0.5	n.a.	n.a.	n.a.	n.a.	n.a.	

n.a.: not available. *: Procurement up to August 17.

Note : Closing stock figures may differ from those arrived at by adding the opening stocks and procurement and deducting off-take, as stocks include coarse grains also.

Source : Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

2008-09 in line with international trends. It is important to note, however, that volatility in prices of food articles have been much lower domestically in relation to international food prices, which may partly be attributed to various domestic intervention policies of the Government that aim at containing the price pressure on certain commodities. While world food prices have fallen since July 2008, the outlook for 2009 remains mixed on account of lower projected world cereal output (Box II.6).

Commodity Futures

II.2.28 The commodity futures markets could facilitate efficient price discovery and provide options for risk management. Government of India permitted futures trading in a wide range of agricultural commodities in 2003. The total volume of trade in the commodity futures market rose from Rs.5.72 lakh crore in 2004-05 to Rs.52.5 lakh crore in 2008-09.

II.2.29 In the wake of considerable rise in inflation during the first quarter of the calendar year 2007, concerns were raised that excessive speculation in the commodity futures market could be a contributory factor behind the increase in the prices of many agricultural commodities. In response, a temporary ban on futures trading in four commodities such as wheat, rice, urad and tur in 2007 was imposed. Furthermore, in May 2009, keeping in view the demand-supply situation and recent surge in sugar prices, futures trading in sugar

Box II.6
Global Agricultural Outlook

The Food and Agriculture Organization (FAO) expects decline in world cereal production in 2009 by 3.4 per cent from the record levels of 2,286 million tonnes in 2008. The FAO expects a reduction in the global wheat harvest by 4.2 per cent in 2009. The bulk of the decrease is expected in the world's top producing countries, in particular those in the eastern parts of Europe, and in the United States. In Asia, however, larger winter wheat plantings are expected in countries, such as in China, India and Pakistan, where government support measures have been introduced to boost production. Prospects for winter wheat crop has also improved, following the arrival of rains in many of the drought affected areas of China. Preliminary estimates indicate an increase of 0.2 per cent in world paddy production in 2009 as compared to 2008 levels. The reduction in world cereal production in 2009 is expected to put pressure on the international cereal prices. The impact on supply and prices, however, is expected to be somewhat offset by the satisfactory level of global cereal stocks, particularly for rice and wheat.

The FAO Report also highlights that food crisis persists in 30 countries around the world. The situation is of particular concern in the Gaza Strip as a result of recent conflict. In Eastern Africa, more than 18 million people face serious food insecurity due to conflict, unrest, adverse weather or a combined effect, while in Southern Africa, the total number of food insecure people is estimated at 8.7 million. In Kenya, Somalia and Zimbabwe, the food security problem is very serious following drought, civil insecurity and economic crises.

According to the Rabobank Report, demand for the '4 Fs' - food, fuel, feed and fibre - is set to continue to increase worldwide. This will further boost investment in agriculture and increase the value of inputs, particularly in South America, Eastern Europe and Southeast Asia. The Report also estimates that global wheat output is likely to decline to 640 million tonnes during 2009-10 from 683 million tonnes in 2008-09. With regard to cotton, the International Cotton Advisory Committee (ICAC) has projected that the world cotton production is expected to decline for the third consecutive season during 2009-10 and prices are projected to increase by 5 per cent.

A Report drafted for the Ministers of the G8 nations has recently expressed concern over the global food situation. The Report warns that global food production needs to double by 2050 to be able to feed a surging population, which has to happen while dealing with "pronounced climate changes" and higher input costs. Without immediate interventions in agriculture and agri-marketing systems, the food crisis experienced in 2007-08 could become structural in only a few decades. The World Bank (2008) also highlighted that cereal production will have to increase by nearly 50 per cent and meat production by 85 per cent from 2000 to 2030 in order to meet the rising demand for food and for bio fuel. Managing the supply response of agriculture to rising demand will require appropriate policy measures and sustained investments.

According to the OECD-FAO Agricultural Outlook for 2009-2018, though the high prices observed in 2007 and 2008 will gradually come down, food prices will remain at elevated levels over the medium term (2009-2018) than the historic average of the decade prior to 2007-08. On the supply side, the Report expects continued yield growth for crops to be more important than new areas brought into cultivation in determining crop supply. On the demand side, changing diets, urbanisation, economic growth, expanding populations and of late biofuel demand are driving food and feed demand in developing countries. Further, the Report states that the epicentre of global agriculture will shift from the OECD towards developing countries. Both consumption and production are growing faster in developing countries for all products except wheat. In future, these countries are expected to dominate production and consumption of most commodities, with the exception of coarse grains, cheese, and skim-milk powder.

The expected developments in the world agricultural markets in terms of demand/supply and trade/prices have many implications for the future domestic agriculture. In the recent past, world agricultural markets witnessed dramatic upsurge in the prices of agricultural commodities and the domestic prices closely followed the international trends, *albeit,* at a lower pace. Given the fact that the future international prices of agricultural products are anticipated to rule above the historic averages, on the back of uncertain outlook for world cereal output, there is a need to propel the domestic supply response to contain any excessive demand pressures impinging on the price situation. It is in this context, it becomes a national priority that the domestic production of foodgrains such as wheat, rice, pulses and non-foodgrains such as edible oils is augmented to the comfortable levels and adequate buffer stocks are built by way of procurement and MSP, so as to ensure the food security in the event of any sharp weather aberrations and crop failures. The global outlook clearly signals the need for preserving India's food security while also enhancing agricultural production as a means to rural development and higher growth in the economy.

Reference

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2. OECD-FAO (2009), *Agricultural Outlook 2009-2018*.
3. World Bank (2008), Agriculture for Development, *World Development Report*,
4. Rabobank (2008), *The Boom Beyond Commodities: A New Era Shaping Global Food and Agribusiness*.

was suspended till December 31, 2009. Earlier, the Government had also appointed a Committee (Chairman: Prof. Abhijit Sen) to study the impact, if any, of futures trading on agricultural commodity prices. The Report of the Committee, noted that there was no clear evidence of futures trading having either reduced or increased volatility of spot prices. Furthermore, the Committee gave wide ranging recommendations such as enabling wider participation of farmers in the futures market; expediting reforms in agricultural marketing; and designing appropriate contracts to serve the objective of risk management. The Committee also noted that for many commodities, the acceleration of domestic prices post introduction of commodity futures has been from a depressed base and hence, cannot be attributed directly or solely to futures trading.

II.2.30 The prices of agricultural commodities in India, after the introduction of futures, need to be seen in relation to a range of factors that affect such prices, *viz.*, domestic production, buffer stock levels, Government intervention in food markets through procurement policies and minimum support prices, agricultural commodities exports, international food prices scenario and domestic supply and demand dynamics. The market regulator, *i.e.,* the Forward Markets Commission, has also been monitoring the futures prices of sensitive commodities. In order to curb volatility and speculation in prices in the futures market, margin requirements were imposed on sensitive commodities, as in the case of sugar, potato and soyabean during 2009.

Weather Insurance

II.2.31 The global climate change entails the risk of Indian agriculture being affected adversely in the long-run due to heat, erratic weather, and reduced availability of irrigation facilities. Imparting resilience to agriculture in the face of climate change is a challenge which requires adopting climate-resilient crop varieties and animal breeds as well as more prudent management of crops, animals and natural resources. One important option for managing risk involves innovative weather insurance schemes linked to climate data, together with better models for predicting weather. Recent initiatives in this direction need to be carried forward (Box II.7).

Industrial Performance

II.2.32 The industrial production, which was on a robust growth trajectory during 2003-08, with an average growth of 8.7 per cent, witnessed a significant moderation thereafter to 2.7 per cent in 2008-09, on the back of heightened uncertainty and weak domestic and external demand (Table 2.6). The moderation in growth (year-on-year) that began in the first quarter of 2007-08, turned out to be one of the longest spell in the recent past. The growth experience of Indian industry since the mid-1990s reveals that there were three distinct phases of slowdown, all coinciding with adverse global developments of one form or the other, although the slowdown might not necessarily have been caused entirely by global factors (Table 2.7).

II.2.33 The industrial slowdown during 1996-97 and 2000-01 coincided with global economic downturn, but domestic factors such as excess capacity in some sectors, infrastructural bottlenecks in power, transport and communication, low levels of productivity in the industry due to inability to reap economies of scale, outdated technology, restrictive labour laws and demand fluctuations in some cyclical industries such as cement, steel and automobiles largely contributed to the slippage in industrial growth. With the growing share of exports in India's GDP (from 13.0 per cent in 2000-01 to 23.4 per cent in 2008-09 based on national income statistics published by CSO) and liberalisation of the capital account, the impact of global developments on Indian industry has become somewhat more pronounced over time. Owing to the unprecedented scale of global uncertainty surrounding the current crisis, the intensity of the current growth slowdown in industrial production seems to be higher. Growth in industrial output lost its momentum by the second half of 2008-09 in conjunction with a sharp fall in external demand.

Box II.7

Global Climate Change: Emerging Challenges for Indian Agriculture

The risks associated with global climatic change are widely believed to pose an unprecedented and formidable threat for sustenance of human, plant and animal fraternity. According to a Report of the United Nations Inter-Governmental Panel on Climate Change (IPCC), the average temperature of the earth's surface, having already risen by 0.74 degrees Centigrade in the last 100 years, is expected to increase by an average of about 3 degrees over the next century. Even the minimum predicted temperature increase by 1.4 degrees could represent a profound change, unprecedented in the last 10,000 years. One of the perils of this climatic change includes rising sea levels, caused by the expansion of ocean volumes and melting of glaciers and ice caps, as a consequence of which coastal areas around the world, including major urban areas, could be inundated. An associated serious concern relates to the forward looking adverse effects on agriculture, given its vulnerability to extreme weather events, and the grave consequences that it signals for the world's poor and hungry. Based on the simulation models, scientists predict that these catastrophes will occur with even greater frequency, especially in the tropics. In addition, fundamental changes in rainfall patterns, together with rising temperatures, will shorten growing seasons, reduce crop productivity and thereby affect the food security. Climate change will have adverse effects on the existing water related infrastructure, including hydropower, structural flood control, drainage and irrigation systems as well as water management practices, thereby magnifying the effects of other stress factors, such as population growth, changing economic activities, change in land-use pattern and urbanisation. Agricultural irrigation demand in arid and semi-arid regions of Asia is estimated to increase by at least 10 per cent for an increase in temperature of 1°C (Fischer *et al.,* 2002; Liu, 2002).

Management of climatic concerns in India has become critical for meeting challenges such as frequent localised droughts (as 2/3rds of arable land continues to be rainfed); frequent floods, especially in Eastern India; frost, particularly in North-Western India; and frequent episodes of heat waves and cyclones in the Eastern coast. These climatic changes are likely to significantly increase volatility in agricultural production. Projected impact of climate change on Indian agriculture indicates that while in the short-term it may not be very significant, the long run impact could increase with crop productivity projected to decline by 10-40 per cent by 2100. Of particular relevance to India is the fact that global warming will lead to increased variability in summer monsoon precipitation. Given the fact that a large part of the rural population of the Indian subcontinent depends on rain-fed agriculture for its livelihood, erratic monsoon precipitation would adversely affect the lives of majority of the population. It is estimated that the loss in net revenue at the farm level in India could range between 9 to 25 per cent for a temperature rise of 2° C to 3.5° C (Kumar and Parikh, 1998). It is anticipated that India will reach a state of water stress before 2025, when the availability is projected to fall below 1,000 m^3 per capita (CWC, 2001). The projected decrease in winter precipitation over the Indian subcontinent would imply less storage and greater water stress during the lean monsoon period.

Traditionally, farmers have been responding to the challenges through strategies such as drought proofing by mixed cropping; changing varieties/crops/planting time; matching crop cycles with weather/water availability; and diversifying income sources, including livestock raising. However, these are not sufficient and there is a need for other strategies such as (i) instituting early warning systems for climatic risks/disasters; (ii) strengthening pest surveillance and forecasting mechanisms; (iii) bridging yield gaps across crops and regions by ensuring timely availability of adaptable varieties of quality seeds, adaptation and demonstrations of new technologies along with farmers' training, providing financial incentives for resource conservation and technological adaptation; (iv) strengthening research on adaptation; (v) assessing regional impact on crops, livestock, fisheries, pests and microbes; (vi) evolving 'adverse climate tolerant' genotypes and land use systems; and (vii) re-examining water and fertilizer management practices for adaptation. Even though Indian agriculture has been resilient during the current slowdown supporting the growth cycle, the risks associated with global climatic change may erode future resilience, unless timely policies are introduced to address these concerns.

Reference

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5. United Nations Inter-Governmental Panel on Climate Change (2008): "Climate Change and Water", *Technical Paper of Working Group II ,* June.

Table 2.6: Growth Performance of Industrial Sector based on Index of Industrial Production (IIP)

(Per cent)

Month/year	Mining & Quarrying		Manufacturing		Electricity		General	
	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
1	2	3	4	5	6	7	8	9
April	2.6	6.1	12.4	6.7	8.7	1.4	11.3	6.2
May	3.8	5.5	11.3	4.5	9.4	2.0	10.6	4.4
June	1.5	0.1	9.7	6.1	6.8	2.6	8.9	5.4
July	3.2	2.8	8.8	6.9	7.5	4.5	8.3	6.4
August	14.7	2.8	10.7	1.7	9.2	0.8	10.9	1.7
September	4.9	5.8	7.4	6.2	4.5	4.4	7.0	6.0
October	5.1	3.2	13.8	-0.6	4.2	4.4	12.2	0.1
November	6.3	0.7	4.7	2.7	5.8	2.6	4.9	2.5
December	5.0	2.2	8.6	-0.6	3.8	1.6	8.0	-0.2
January	2.9	0.7	6.7	1.0	3.7	1.8	6.2	1.0
February	7.9	-0.2	9.6	0.2	9.8	0.7	9.5	0.2
March	4.9	1.9	5.7	-0.3	3.7	6.3	5.5	0.3
April-March	**5.1**	**2.6**	**9.0**	**2.7**	**6.3**	**2.8**	**8.5**	**2.7**

Source: Central Statistical Organisation, Government of India.

The growth in Index of Industrial Production (IIP), which was at a monthly average rate of 5.0 per cent in the first half 2008-09, decelerated sharply to 0.6 per cent in the second half, with negative growth rates in December 2008. It has generally been observed that the onset of industrial slowdown in India coincides with the weakening of domestic demand – investment demand in particular, while depressed external demand operating through weak export and dampened business confidence has amplified the industrial growth deceleration during the current global crisis. Empirical relationships provide some evidence that the IIP exhibits significant positive correlation with domestic consumption demand, exports and domestic capital formation, and inverse relationship with imports (signifying the fact that imports partly compete with domestic substitutes).

Table 2.7: Phases of Slowdown in Indian Industry

	Beginning	End	Length
1	2	3	4
1996-97	1996-97: Q2	1997-98: Q1	4 quarters
2000-01	2000-01: Q2	2001-02: Q3	7 quarters
2007-08	2007-08: Q1	2008-09: Q4	8 quarters

II.2.34 A notable aspect of the deceleration in IIP growth during 2008-09 is that it was broad based, affecting all the three sectors, *viz.*, mining, manufacturing and electricity. The deceleration was relatively sharp in the manufacturing sector (Appendix Table 6). The growth in mining sector also decelerated, mirroring the downtrend in the growth of crude petroleum and products, despite a sizeable growth in coal production. Electricity generation remained subdued throughout the year due to slowdown in power generation in both thermal and hydro-power plants, with nuclear power plants showing the sharpest decline during the year.

II.2.35 The manufacturing sector, which had powered the industrial growth beginning in 2002-03, turned sluggish since 2007-08. Apart from the trend in the headline industrial growth based on IIP, the behavioural pattern of the disaggregated 17 two-digit manufacturing industries provide some information based on past trends about the groups, which exhibit early recovery, late recovery and recovery with significant lag during the current downturn phase (Chart II.3).

II.2.36 The current slowdown is more broad-based as fifteen out of 17 two-digit manufacturing industry

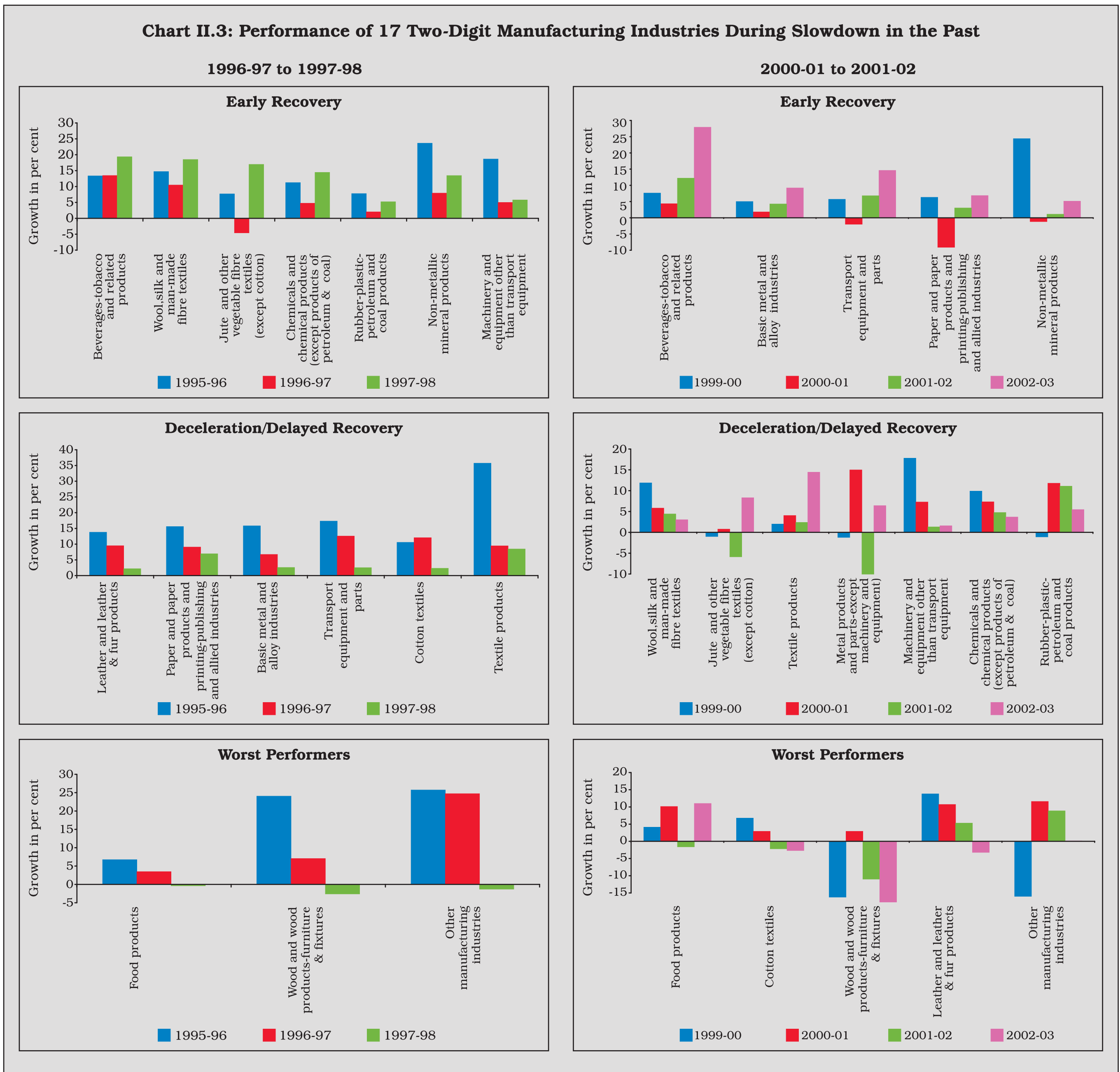


Chart II.3: Performance of 17 Two-Digit Manufacturing Industries During Slowdown in the Past

groups accounting for 74.4 per cent weight in IIP, registered negative/decelerated growth during 2008-09 (Chart II.4; Appendix Tables 7 and 8). Like the previous two phases of slowdown, 'cotton textiles', 'food products', 'leather and leather products', 'wood and wood products' and 'furniture and fixtures' exhibited negative growth in the current phase as well. The sluggish performance of industries with higher export intensities (apart from textile products) is a key feature of the current slowdown, reflecting the overall impact of global recession.

II.2.37 In terms of use-based classification, moderation in industrial activity has been observed across all the sectors, but with varying intensity (Table 2.8; Appendix Table 9). The decline in intermediate goods production, which began as early as August 2008, intensified and became broad-based during the third quarter of 2008-09.

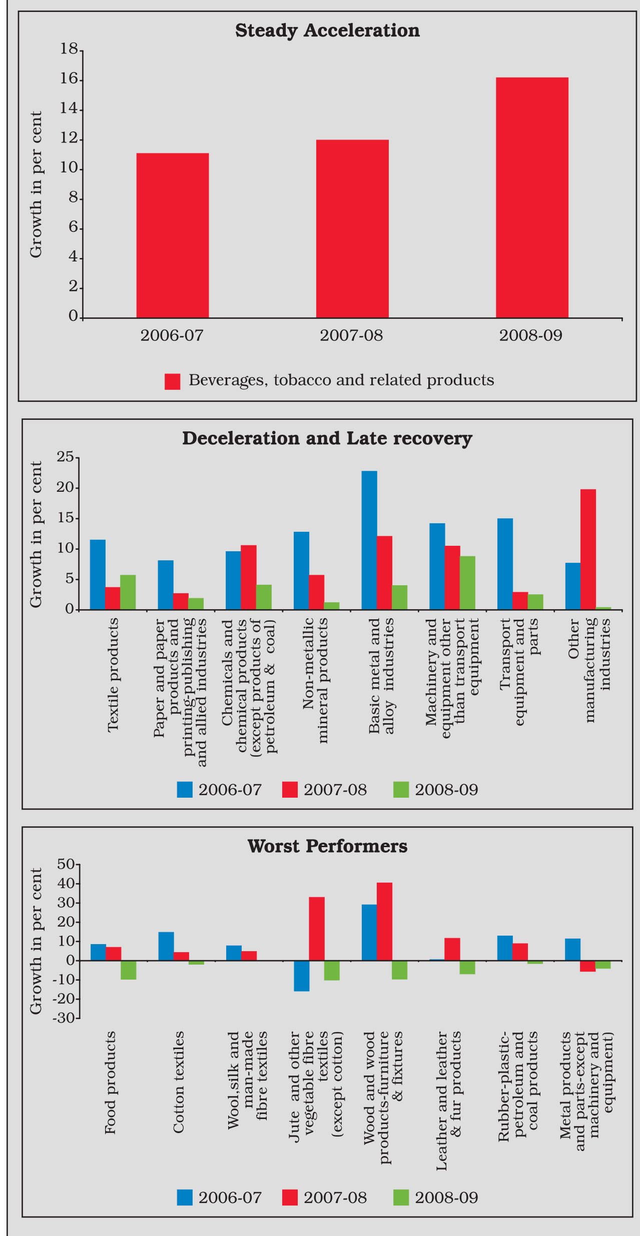


Table 2.8: Index of Industrial Production: Sectoral and Use-based Classification of Industries

(Per cent)

Industry Group	Growth Rate		Weighted Contribution	
	2007-08	2008-09	2007-08	2008-09
Sectoral Classification				
Mining	5.1	2.6	4.2	6.3
Manufacturing	9.0	2.6	89.5	85.3
Electricity	6.3	2.8	6.3	8.3
Use-Based Classification				
Basic Goods	7.0	2.6	24.8	32.2
Capital Goods	18.0	7.3	25.1	38.2
Intermediate Goods	8.9	-1.9	27.5	-31.6
Consumer Goods (a+b)	6.1	4.7	23.0	59.1
a) Consumer Durables	-1.0	4.5	-1.0	14.3
b) Consumer Non-durables	8.5	4.8	24.1	44.7
General	**8.5**	**2.7**	**100**	**100**

Source: Central Statistical Organisation.

Overall, the sector posted negative year-on-year growth in seven out of the twelve months. There was a perceptible decline in growth in sectors producing intermediate inputs for the export oriented industries. Similarly, the slump in the domestic automobile industry impinged on the performance of 'auto ancillary and parts' as well as ‘metal products and parts industry’. The deceleration in the construction industry impacted heavily on the production of non-metallic mineral inputs such as ceramic tiles, stone chips/polished granite and cement sheets.

II.2.38 Basic goods started losing momentum in the second half of the year. Deceleration in electricity, negative growth in basic chemicals and chemical products, nitrogenous and phosphatic fertilisers, rubber, plastic, petroleum, coal and aluminium products led to lower growth in basic goods. The moderation in the capital goods sector was spread across ‘machinery and equipment’, 'textile machinery', 'refrigerators and air conditioning', 'machine tools', 'air and gas compressors' and ‘transport equipment and parts’, manifesting slowdown in the investment demand. Consumer goods sector experienced a relatively moderate deceleration, reflecting slackening of the overall private consumption demand in the economy. The slowdown in consumer goods industry emanated primarily from the decline in consumer non-durables. Consumer durable, however, performed better during 2008-09 than a year ago, *albeit,* with high inter-month volatility (Table 2.9). These gains in consumer durables may be partly attributed to sustained rural demand arising from good harvests in the last three years and agriculture debt waiver.

Table 2.9: Trends in Growth of Consumer Goods

(Per cent)

Month/Year	Total Consumer Goods			Consumer Durables			Consumer Non-Durables		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
1	2	3	4	5	6	7	8	9	10
April	8.9	14.7	8.5	7.4	2.4	3.2	9.4	18.7	10.0
May	10.5	8.7	7.4	17.5	-0.7	2.8	8.2	12.1	9.0
June	6.1	3.6	9.9	19.9	-3.6	4.6	1.8	6.3	11.6
July	16.8	7.1	5.9	16.1	-2.7	13.9	17.1	10.5	3.4
August	15.0	0.0	6.4	19.0	-6.2	3.9	13.6	2.4	7.3
September	12.1	-0.2	7.4	11.8	-7.3	14.7	12.2	2.6	4.8
October	-2.8	13.7	-0.9	0.2	9.0	-1.6	-4.1	15.8	-0.6
November	13.5	-2.9	9.4	10.1	-5.5	0.3	14.8	-2.0	12.4
December	10.7	8.7	1.7	1.8	2.8	-4.2	13.5	10.3	3.2
January	8.2	8.4	3.6	5.3	-0.5	2.1	9.1	11.1	4.0
February	7.4	11.7	-1.3	1.8	3.1	6.0	9.3	14.3	-3.4
March	15.8	0.9	1.3	3.8	-2.0	8.4	20.2	1.9	-1.0
April-March	**10.1**	**6.1**	**4.7**	**9.2**	**-1.0**	**4.5**	**10.4**	**8.5**	**4.8**

Source: Central Statistical Organisation, Government of India.

Capacity Utilisation

II.2.39 The capacity utilisation[9] in industrial sector dropped by over 2 per cent for all industries during 2008-09 as compared to the previous year, mainly in manufacturing and electricity sectors. The impact of demand slowdown was evident in manufacturing sector, as out of 17 two-digit manufacturing industries, 15 industries posted lower capacity utilisation during 2008-09 than in the previous year (Table 2.10). During the second half of 2008-09, the decline in capacity utilisation was pronounced in most of the industries. The Reserve Bank's Industrial Outlook Survey of manufacturing companies in the private sector, which provides leading information about the expectations for the quarter ahead, indicated that the level of capacity utilisation (compared to the average in the preceding four quarters) decelerated in the second quarter and declined in the last two quarters of 2008-09. The Survey indicates that expectations of capacity utilisation of the main products turned positive for the second quarter of 2009-10, after witnessing a modest decline for the first quarter.

Infrastructure Industries

II.2.40 The infrastructure sector witnessed deceleration alongside the industrial sector (Appendix Table 10). The core sector comprising coal, electricity, finished steel, cement, petroleum refinery and crude oil decelerated to 2.8 per cent in 2008-09 (from 5.9 per cent in 2007-08), which is the lowest growth thus far since 1998-99 (Chart II.5). The electricity sector recorded a sharp deceleration because of lagging performance of new units (Box II.8).

II.2.41 The sharp decline in international crude oil prices, contraction in domestic demand, insufficient logistics support, delay in installation of processing platforms, power shutdowns, decrease in reservoir pressure and environmental factors affected the production of crude oil. Steel production remained

[9] Capacity utilisation has been estimated using the peak output approach. Under this approach, the peak monthly output during a financial year for a particular industry is regarded as the productive capacity for that year, while the monthly average output is used to work out utilisation level for that year. Accordingly, monthly capacity utilisation of a particular industry is the ratio of monthly production to the peak level of production during the year.

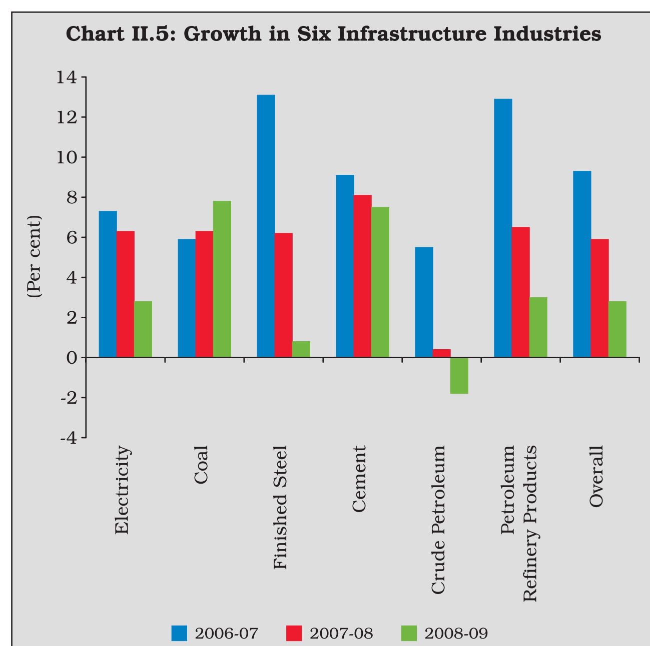
Table 2.10: Capacity Utilisation

(Per cent)

Industry	Weight	Capacity Utilisation		
		2006-07	2007-08	2008-09
1	2	4	5	6
Food products	9.08	67.8	68.9	65.2
Beverages, tobacco and related products	2.38	84.2	83.4	81.8
Cotton textiles	5.52	94.6	96.5	93.0
Wool, silk and man-made fibre textiles	2.26	87.4	86.8	87.4
Jute and other vegetable fibre textiles (except cotton)	0.59	71.4	90.4	86.8
Textile products (including wearing apparel)	2.54	92.3	95.6	94.5
Wood and wood products, furniture and fixtures	2.70	69.6	88.9	74.8
Paper and paper products and printing, publishing and allied activities	2.65	93.8	93.3	88.5
Leather, and leather and fur products	1.14	81.1	89.1	83.5
Chemicals and chemical products except products of petroleum and coal	14.0	79.2	81.1	77.2
Rubber, plastic, petroleum and coal products	5.73	86.8	86.5	80.0
Non-metallic mineral products	4.40	85.8	86.8	85.2
Basic metal and alloy Industries	7.45	83.4	85.3	90.2
Metal products and parts (except machinery and equipment)	2.81	65.3	74.2	69.6
Machinery and equipment other than transport equipment	9.57	74.9	77.0	73.4
Transport equipment and parts	3.98	80.7	81.4	78.5
Other manufacturing industries	2.56	73.4	73.4	70.0
Manufacturing Industry	**79.36**	**80.1**	**82.5**	**79.3**
Mining and Quarrying	**10.47**	**83.2**	**83.3**	**84.9**
Electricity	**10.17**	**93.4**	**95.9**	**92.7**
All Industries	**100**	**81.8**	**83.9**	**81.3**

Note : 1. Data are provisional.
2. Capacity utilisation has been calculated from the production data for 296 industries supplied by the Ministry of Statistics and Programme Implementation.
3. The capacity utilisation estimated under the peak-output approach is only indicative of the trends and may not be viewed as reflecting the actual capacity utilisation levels. In the absence of any other data or indicator on capacity utilisation, peak-output approach is used as a proxy for capacity utilisation.

Source : Based on data from Ministry of Statistics and Programme Implementation, Government of India.



subdued, mirroring the slowdown in construction and automobile industry. The year-on-year growth in cement production in 2008-09 was only marginally short of the production growth achieved in the previous year.

II.2.42 Almost all the infrastructure industries fell short of the target set for 2008-09 (Table 2.11). The gap between target and achievement widened for power, steel, fertilisers, crude oil and natural gas production.

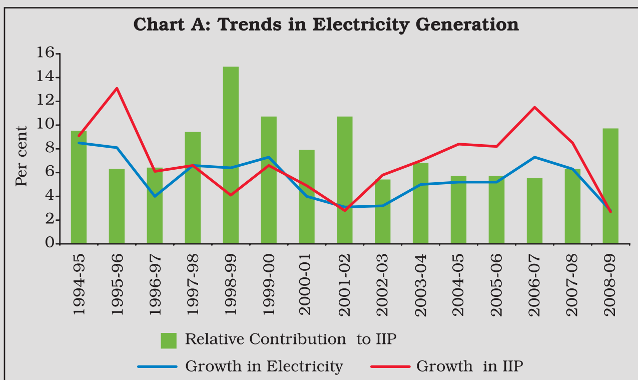
Performance of Central Sector Projects

II.2.43 The number of central sector projects under various stages of implementation increased by 7.4 per cent at end-March 2009 over the previous year. The number of projects on schedule, constituting

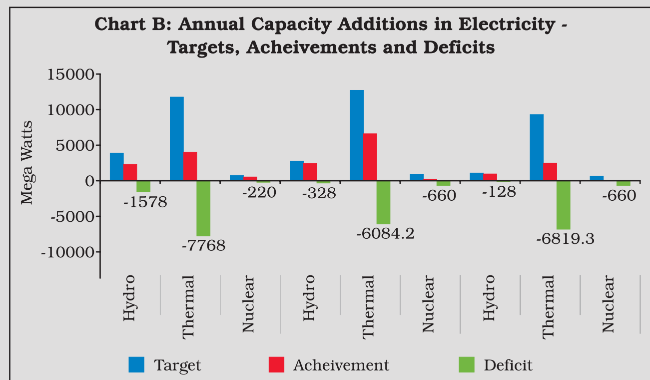
Box II.8
Performance of the Electricity Sector

The Indian electricity sector has exhibited significant production and efficiency gains in the post-reforms period. The installed generation capacity has more than doubled to 1,47,965 MW as at end-March 2009 (from 71,750 MW as at end-March 1990). Electricity generation by power utilities has increased by over 150 per cent to 662 billion KWH in 2007-08 (from 264 billion KWH in 1990-91). Plant load factor, which is a powerful indicator of operational efficiency in thermal power plants during excess demand has increased from 53.8 in 1990 to 77.2 in 2006-07. The efforts of the Government towards accelerating rural electrification have made access to electricity more extensive and inclusive. According to the Central Electricity Authority, as at end-February 2009, 4,87,338 or 82.1 per cent of the villages in India had access to electricity. The annual per capita consumption of electricity in India has also grown overtime from 566.7 KWH in 2002-03 to 704.2 KWH in 2007-08.

Despite notable progress, the electricity supply could not keep pace with the rapid growth in demand in the economy. In terms of energy availability, the deficit in power supply has expanded from 8.5 per cent in 1992 to 12.0 per cent in 2008-09. The average growth rate in electricity generation has, in fact, decelerated from 6.8 per cent in the second half of 1990's to 4.7 per cent since then (Chart A).



The increasing supply constraints could be attributed to inadequate capacity additions, high aggregate and transmission losses, poor inter-regional transmission links and fuel supply bottlenecks. Shortfall in capacity additions in generation has been acute in the thermal segment for the past three years (Chart B). While 66.4 per cent of the targeted capacity was added during the Tenth plan, during the first two years of the Eleventh Plan (2007-08 and 2008-09), a meagre 16.2 per cent of the targeted capacity addition (78,700 MW) was achieved.



Only 4.4 per cent of the targeted capacity was actually realized in 2008-09.

Private investment in the power sector has been constrained by the presence of certain peculiar characteristics such as high cross subsidisation and consequent low realisation of power cost and high aggregate transmission and commercial losses (AT&C). Total electricity subsidies amounted to Rs.42,607 crore during 2007-08. In 2006-07, against a cost of supply of Rs.2.76 per unit, the realisation was only Rs.2.27 per unit including agriculture. Realisation from the agriculture sector alone was as low as Rs.0.71 per unit.

Despite central schemes like Accelerated Power Reforms and Development Programme introduced in 2000, AT&C losses have exhibited downward rigidity primarily due to inadequate metering, power theft and low collection efficiency. In order to increase competition and improve access to power, reforms need to be accelerated with a focus on development of ultra mega power projects and merchant power plants, private sector participation in hydro power development, power trading, operationalisation of open access in inter-state transmission and adoption of information technology in the areas of energy accounting to improve the efficiency of transmission and distribution of power.

Reference

1. Central Electricity Authority (2009), *Highlights of the Sector.*
2. Central Electricity Authority (2008), *Highlights of the Sector.*
3. Central Electricity Authority (2008), *Electricity Generation Review*, April-January.
4. Government of India (2009), *Economic Survey – 2008-09.*

Table 2.11: Targets and Achievements of Infrastructure Industries

Sector	Unit	2007-08			2008-09		
		Target	Achievement	Gap (%)	Target	Achievement	Gap (%)
Power	Billion Units	710	704	-0.8	774	724	-6.5
Coal	Million Tonnes	455	450	-1.0	492	487	-0.9
Finished Steel	000' Tonnes	56984	55240	-3.1	60867	56413	-7.3
Railways	Million Tonnes	790	794	0.5	850	833	-2.0
Shipping (Major Ports)	Million Tonnes	515	519	0.7	576	530	-7.9
Fertilisers	000' Tonnes	16823	14706	-12.6	16332	14334	-12.2
Cement	Million Tonnes	–	174	–	–	187	–
Crude Petroleum	Million Tonnes	35	34	-2.5	36	34	-6.8
Petroleum Refinery Products	Million Tonnes	146	156	6.7	165	161	-2.4
Natural Gas Production	Million Cubic Mtrs.	33241	32274	-2.9	36943	32846	-11.1

Source: Ministry of Statistics and Programme Implementation.

27.4 per cent of the total projects, showed an increase of 11.9 per cent at end-March 2009 as against a decline of 24.6 per cent recorded as at end-March 2008. The number of delayed projects, which constituted 52 per cent of the total projects, also increased by 24.1 per cent as at end-March 2009, as compared with an increase of 35.7 per cent as at end-March 2008. The sectoral break-up shows that there is a rise in delayed projects in sectors like coal, petroleum, power, railways and telecommunications. The delay in implementation of projects in the railways, surface transport and power sectors was attributed to the problems of land acquisition; obtaining environmental clearances; finalisation of detailed engineering plans; changes in/finalisation of the scope; and lack of complementary infrastructure support in some regions. The global financial crisis also contributed to the delay in terms of non-availability of requisite funds and inputs procurement. The overall cost overrun during 2008-09 increased by 54.2 per cent, while the cost overrun in the case of delayed projects increased by 95.6 per cent (Table 2.12). The cost overrun of delayed projects as percentage of original project cost, which was coming down in recent years, had increased during 2008-09.

Table 2.12: Performance of Central Sector Projects

Item	2000-01	2005-06	2006-07	2007-08	2008-2009
1	2	3	4	5	6
1. Number of Projects (a to d)	187	396	491	514	552
(a) Ahead	5	6	6	16	8
(b) On Schedule	58	113	179	135	151
(c) Delayed	65	149	171	232	288
(d) Without Date of Commissioning	59	128	135	131	105
2. Cost Overrun of Total Projects (Rupees Crore)	40,303	47,337	39,741	40,906	63,065
3. Cost Overrun of Total Projects (% of Original Cost)	36.4	18.2	12.4	11.9	13.7
4. Cost Overrun of Delayed Projects (Rupees crore)	23,374	29,655	20,808	22,351	43,722
5 Cost Overrun of Delayed Projects (% of Original Cost)	91.6	35.6	19.8	13.9	19.1

Note : Central Sector Projects amounting to Rs.100 crore and above are included.
Source : Ministry of Statistics and Programme Implementation, Government of India.

Table 2.13: Industrial Investment Proposals

Year	IEMs		LOI	
	No. of Proposals	Proposed Investment (Rs. crore)	No. of Proposals	Proposed Investment (Rs. crore)
1	2	3	4	5
2003	3,875	1,18,612	102	1,057
2004	5,118	2,67,069	39	381
2005	6,203	3,53,956	24	333
2006	6,261	5,88,550	20	137
2007	3,725	8,27,500	8	74
2008	3,979	15,22,566	4	38
2009*	1,342	4,04,380	0	0

*: Up to May 2009.
IEM : Industrial Entrepreneurs Memoranda.
LOI : Letters of Intent.
Source: Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, GOI.

Investment Climate

II.2.44 The investment climate in 2008 had remained upbeat before the intensification of the global crisis by mid-September 2008, which is evident from 84.0 per cent rise in the Industrial Entrepreneurs Memoranda (IEM) submitted to the Government of India (Table 2.13). The proposed investment in 2008 in terms of letters of intent (LOI) issued, subsequent to the submission of IEMS, however, failed to pick up.

Micro, Small and Medium Enterprises

II.2.45 The Micro, Small and Medium Enterprises (MSMEs) in India occupy an important place in manufacturing and service sector. Over the years, the MSMEs have established a reputation for their contribution to industrial production, exports, employment and creation of entrepreneurial base in the economy. During 2007-08, MSMEs recorded a growth of 18.8 per cent in the nominal value of output as against 17.5 per cent in 2006-07 (Table 2.14). The rise in production in this sector, however, was accompanied by a significant deceleration in employment growth to 2.9 per cent in 2007-08 as compared to 4.3 per cent in 2006-07. Accordingly, output per worker had increased, reflecting both a rise in labour productivity as well as cost savings strategy to manage the pressure on margins during economic slowdown.

II.2.46 The slowdown in the Indian industry, which began in the first quarter of 2007-08 accentuated on the back of global economic slack that intensified further with the unfolding of financial crisis in September 2008. The slowdown partly reflected sharp fall in global commodity trade, which impacted India's external demand for manufacturing products. As compared to other emerging economies, however, the impact of the financial crisis on industrial output in India has been moderate (Box II.9).

Developments during 2009-10

II.2.47 During the first quarter of 2009-10 (April-June), the growth in IIP recovered to 3.7 per cent although it remained lower than 5.3 per cent in the corresponding period of the previous year. The output of basic and intermediate goods increased by 6.1 per cent and 7.1 per cent, respectively during 2009-10 as compared with 3.1 per cent and 2.6 per cent in the same period of 2008-09. The

Table 2.14: Performance of Micro, Small and Medium Enterprises

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08P
1	2	3	4	5	6	7
Number of Units (Lakh numbers)	15.91	16.97	17.53	18.71	20.98	24.68
Employment (Lakh persons)	264	275	288	300	313	322
Fixed Investment (Rupees crore)	1,69,913	1,79,306	1,85,821	1,96,186	2,13,219	2,38,975
Value of Output (Rupees crore)	3,14,850	3,64,547	4,29,796	4,97,842	5,85,112	6,95,126
Exports from MSMEs (Rupees crore)	86,013	97,644	1,24,417	1,50,242	1,77,600 P	n.a.

n.a.: Not Available. P : Provisional.
Source: Ministry of Micro, Small and Medium Enterprises, Government of India.

Box II.9
Industrial Performance – Select Economies

The financial markets turmoil that started in the US snowballed into a global economic crisis during 2008-09 spreading across the real and financial sectors of both developed and developing economies. Industrial output declined across the countries, although with varied intensity (Table A).

The US industrial production contracted by 2.2 per cent in 2008 as against a growth of 1.5 per cent in 2007. During the second quarter of 2009, overall industrial output in the US dropped at an annual rate of 13.2 per cent. The capacity utilisation rate for industry fell to a historical low of 69.3 per cent as at end-March 2009 from 80.5 per cent a year ago.

Industrial production in Japan contracted by 3.0 per cent in 2008 as compared to expansion of 2.8 per cent in 2007, reflecting increased adjustment pressures on inventories. Production registered a significant decline in the fourth quarter of 2008 (-14.3 per cent) due to negative contribution of industries such as transport equipment (excluding ships and rolling stocks), electronic parts and devices and general machinery. Shipments also decreased substantially by 11.8 per cent in the fourth quarter of 2008, led by capital goods. The production in the first quarter of 2009 contracted sharply by 33.5 per cent over the previous year which is the lowest level since the fourth quarter of 1983. Similar weakness was observed in the industrial output of Western Europe too. The weakness in the developed economies resonated in the performance of Emerging Market Economies (EMEs) led by the dismal industrial performance in China and Korea in 2008. Other EMEs like Malaysia and Brazil also put up a dismal show. Malaysia, an export-oriented economy, recorded a decelerated growth of 0.03 per cent in industrial production during 2008, as compared to 2.3 per cent in 2007, led by contraction in export oriented industries. Industrial production in Brazil also decelerated from 5.9 per cent in 2007 to 3.0 per cent in 2008 led by moderation in all sectors such as capital, intermediate and consumer goods production. Notably, the industrial growth in China rebounded with 5.1 per cent during first quarter of 2009 reflecting on massive fiscal stimulus and monetary easing.

In contrast to a decline in production of both developed and several other EMEs, India recorded a deceleration in industrial performance in 2008 because of the higher role of domestic demand in conditioning the growth process in India. The Index of Industrial Production registered a growth of 4.4 per cent during 2008, on account of higher domestic demand and the fiscal and monetary measures already implemented. The growth in industrialised sector, based on IIP decelerated in the first quarter (January-March) of 2009, but revived in the second quarter (April-June) of 2009. Thus, although industrial production in most of the countries declined at a rapid pace in 2008 and first quarter of 2009 under the impact of global recession, India's industrial production experienced deceleration at a relatively lower pace. Industrial growth during the second quarter of 2009 shows some improvement, led by China and India.

Table A: Industrial Performance of Developed and Developing Economies

(per cent)

	2006				2007				2008				2009	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2#
Developed Economies														
Japan	2.6	4.1	4.9	5.7	2.9	2.3	2.6	3.3	2.5	0.8	-1.3	-14.3	-33.5	-27.9
US	2.1	2.1	3.2	1.7	1.3	1.5	1.4	1.8	1.2	-0.3	-3.2	-6.6	-11.5	-13.2
UK	2.0	-0.5	0.2	1.5	-0.6	0.9	0.5	1.7	-0.3	-0.7	-1.7	-7.7	-12.7	-11.9
Germany	4.7	6.3	7.1	6.6	8.9	6.7	6.3	5.8	5.3	3.3	0.4	-7.6	-21.8	-19.2
Developing Economies														
China	-13.1	9.3	-0.2	-10.0	n.a	1.7	12.2	18.7	n.a	-13.1	-28.5	-63.3	5.1	9.0
South Korea	10.5	9.0	9.9	4.8	4.1	6.3	6.1	10.9	10.9	8.9	5.6	-11.3	-16.3	-6.1
Brazil	3.5	1.6	3.0	3.3	3.8	5.6	6.3	7.9	6.7	5.2	6.3	-6.1	-14.0	-12.3
Malaysia	5.2	5.5	4.3	3.2	0.6	1.8	2.1	4.5	5.9	3.1	0.2	-9.1	-16.3	-10.7
India	8.7	10.5	11.8	11.2	12.5	10.3	8.7	8.3	7.0	5.3	4.7	0.8	0.5	3.7

: Based on The Economist. n.a. : Not Available.
Source: International Financial Statistics and CSO.

Reference:

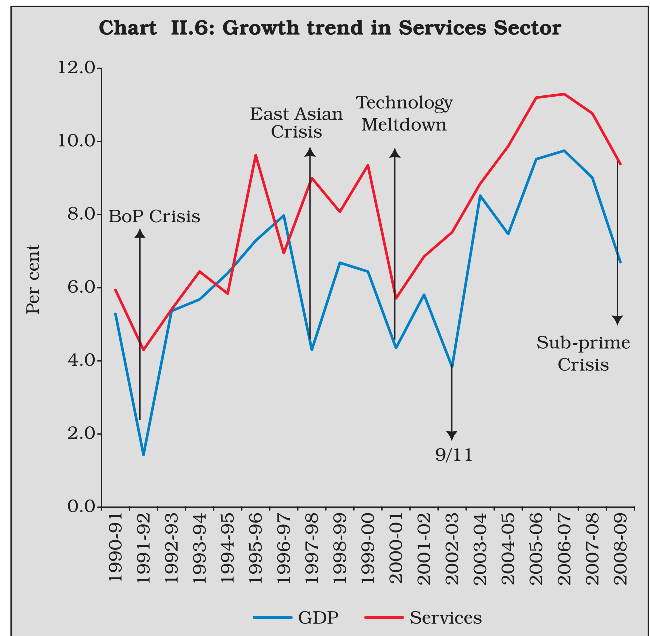
1. International Monetary Fund (2009), *World Economic Outlook*, April.
2. Bank of Japan (2009), *Monthly Report of Recent Economic and Financial Developments*, March.
3. Bank Negara Malaysia (2009), Economic and Financial Developments in Malaysia in the First and Fourth Quarter of 2009, *Overview,* May.

consumer goods output contracted by (-)0.1 per cent during the first quarter of 2009-10 as compared with a growth of 8.6 per cent during the corresponding period of the previous year due to the substantial decline in the production of consumer non-durables. The production of consumer durables increased by 15.0 per cent as compared with 3.5 per cent a year ago. The capital goods production increased by 1.0 per cent in April-June 2009 as compared with 7.9 per cent growth in April-June 2008. The core infrastructure sector recorded a higher growth of 4.8 per cent during April-June 2009 as compared with 3.5 per cent in the corresponding period of previous year. Various leading indicators of industrial production, both quantitative and qualitative, suggest that the downturn has been arrested and a pick-up is on the way forward.

Services Sector

II.2.48 The services sector, which made rapid strides in growth in the Indian economy over the past few years, witnessed moderate slowdown in growth during 2008-09, owing to the contagion from the global economic downturn. Historically, services sector showed resilience during periods of overall growth slowdown in India since 1990-91. The growth in services sector has remained consistently higher than the overall growth in the economy except for two years. More importantly, as compared with rest of the economy, the services sector appears to have been less affected by the global financial crisis (Chart II.6).

Chart II.6: Growth trend in Services Sector



II.2.49 The robust expansion in services output since 2004-05 has also been driven by services exports. While the direct contribution of global factors to the services sector output in India came from step-up in external demand for Indian services, the indirect contribution came through increasing globalisation and the resultant pressure on cost efficiency, which expanded the scope for outsourcing of business processes, activities and knowledge. Reflecting India's comparative advantage in the outsourcing market, the ratios of both gross and net services exports (service exports *minus* service imports) to services sector GDP accelerated significantly since 2004-05 with moderate decline in 2007-08 (Box II.10 and Chart II.7).

II.2.50 According to the estimates released by the CSO, the growth in real GDP originating from services sector moderated to 9.4 per cent during 2008-09 from 10.8 per cent in 2007-08. While services sector's share in GDP improved marginally from 63.0 per cent in 2007-08 to 64.5 per cent during 2008-09, its relative contribution to GDP growth increased significantly from 74.1 per cent to 88.2 per cent during the same period (Table 2.15).

II.2.51 The slowdown in global demand affects output of services sector, especially in emerging economies like India, through various channels (Box II.10). Moderation in the services sector growth during 2008-09 was largely confined to construction, trade, hotels, transport and communication, financing, insurance, real estate and business services. The sluggish condition in the real estate market, contraction in household disposable income and slowdown in project execution in the private sector operated as a drag on construction activities. Trade, hotels, transport and communication services were affected by global slowdown through reduced traffic related to business, commerce and tourism. In fact, the lower growth in commercial vehicles production,

Box II.10
Global Recession and the Services Sector

Prior to the onset of the sub-prime related global financial crisis, several emerging markets had witnessed high growth in services, particularly since the early 1990s. The share of services sector in aggregate GDP of the respective countries had also become dominant by the time the global recession started to affect the performance and prospects of this sector. The period following 1990s was marked by a new wave of services growth, particularly in the medium to high income countries that were seen to be democratic, open to trade, and situated relatively closer to the major global financial centres (Eichengreen and Gupta, 2009). In India, number of factors, *viz.,* growing integration with global economy, buoyancy in global services trade, skilled manpower, increasing tradability of services due to commensurate developments in information technology and liberalisation in the regulatory framework and economic environment contributed to the boom in services sector. The information technology revolution on a global scale in particular, created downstream demand for services like financial advices, auditing, accounting, legal, hospitality, brokerage, *etc.,* which also expanded the scope for cross-border trade in services. Since the early 1990s and particularly since 2003-04, there has been a compositional shift in services output in favour of exports driven by offshore demand, especially in hospitality, financial, and information technology sectors. The services sector, however, lost the momentum with weak external demand in the wake of the global downturn and its growth started slowing down from the first quarter of 2008-09 following through the entire year. However, slowdown in services sector was more pronounced during the fourth quarter of 2008-09. The slowdown mainly emanated from 'financing, insurance, real estate and business services' and 'trade, hotel, transport and communication services'.

Reflecting India's comparative advantage in the outsourcing market, the share of services exports in services sector GDP, which had increased from an average of 5.4 per cent during 1995-2000 to 15.0 per cent in 2006-07, declined moderately during 2007-08 but rose sharply to 21.6 per cent in 2008-09. Similarly, net services exports also increased from 0.8 per cent in 1995-2000 to the peak of 6.6 per cent in 2008-09. In fact, India recorded the second largest growth after China in the services sector among the major emerging market economies during the recent period (Table A).

Until the current global meltdown, it appeared that the global penetration in the services sector may continue and India could emerge as a global services hub. Given the unprecedented nature of the current crisis and the higher sensitivity of demand for services to decline in disposable income in relation to agriculture and manufacturing products, recovery in the services sector would critically depend on revival in domestic consumption and investment demand. The risk of global economic slowdown to services output in emerging countries like India arises from several channels besides decline in demand such as the slowdown in private capital flows and lower confidence in the financial systems, depressed business confidence, contraction in trading and commercial activities as well as sharper fall in income sensitive demand like knowledge outsourcing and tourism. It is often believed that the first round impact of the global contagion could be limited to the urban economy, as rural / semi-urban areas are not closely integrated into the services sector. There is a risk, however, that an intensified urban slowdown could lead to reverse migration of workers. The risk from the possible protectionist bias in OECD economies, under the pressure from job losses and taxpayers should also be reckoned. There have already been certain instances by some countries resorting to protectionist policies on outsourcing services to save their local businesses and jobs. At the same time, however, it is believed that cost cutting pressures to deal with recession may create added incentives for clients to move work offshore to emerging economies like India.

Table A: Performance of Services Sector in Emerging Markets

(Per cent)

Country	Services sector share in GDP			Services sector growth			GDP growth		
	2001-05	2006	2007	2001-05	2006	2007	2001-05	2006	2007
1	2	3	4	5	6	7	8	9	10
India	52	52	52	8.4	11.0	11.0	6.8	10.0	9.0
Brazil	65	65	66	2.8	4.0	6.0	2.8	4.0	5.0
Chile	56	49	49	4.2	5.0	6.0	4.2	4.0	5.0
China	40	40	40	10.0	12.0	13.0	9.4	12.0	13.0
Korea	56	57	58	4.0	4.0	5.0	4.6	5.0	5.0
Russia	59	57	57	6.4	10.0	10.0	6.0	7.0	8.0

Source: World Development Indicators, World Bank.

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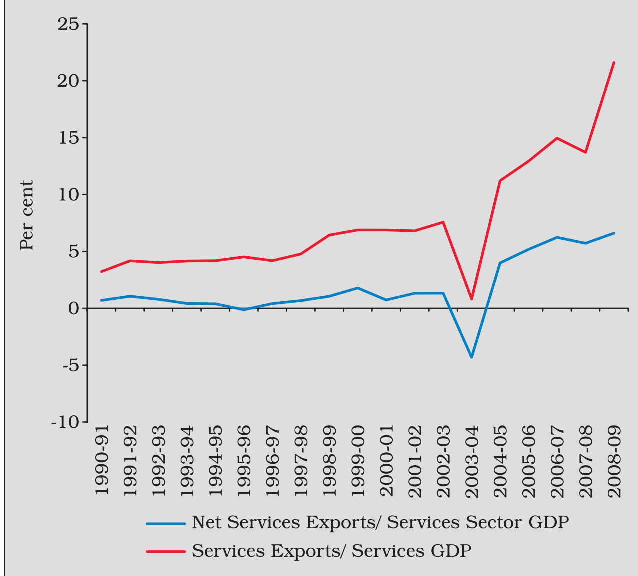

Table 2.16: Indicators of Services Sector Activity

(Growth rates in per cent)

Sub-sector	2006-07	2007-08	2008-09
1	2	3	4
Tourist arrivals	13.0	12.2	-2.5
Commercial vehicles production#	33.0	4.8	-24.0
Railway revenue earning freight traffic	9.2	9.0	4.9
New cell phone connections	85.4	38.3	44.8
Cargo handled at major ports	9.5	11.9	2.1
Civil aviation			
Export cargo handled	3.6	7.5	3.4
Import cargo handled	19.4	19.7	-5.7
Passengers handled at international terminals	12.1	11.9	3.8
Passengers handled at domestic terminals	34.0	20.6	-12.1
Cement **	9.1	7.8	7.5
Steel **	13.1	6.8	0.6

\# : Leading Indicator for transportation.
** : Leading indicators for construction
Source : Ministry of Tourism; Ministry of Commerce and Industry; Ministry of Statistics and Programme Implementation; Reserve Bank of India; and Centre for Monitoring Indian Economy.

railway revenue earning freight traffic, cargo handled at major ports and most of the indicators in the civil aviation sector reflects depressed internal and international trade during 2008-09 compared to previous year.

II.2.52 Despite having no direct exposure to the troubled assets in the advanced economies, the financing, insurance, real estate and business services exhibited sluggish performance, mainly on account of indirect effect of the financial crisis. Financial services recorded steep decline mainly due to significant correction in the capital market, following the international trends, heightened economic uncertainties and market expectations of a sluggish performance by the corporates. On the other hand, the growth in community, social and personal services accelerated, reflecting counter-cyclical fiscal measures and the Sixth Pay Commission payouts. All the major segments of services activity, with the exception of new cell phone connections, showed deceleration in growth or declined in 2008-09 (Table 2.16).

II.2.53 One of the most discernible fallout of current global meltdown is the contraction in industrial and services sectors, and the resultant significant loss

Table 2.15: Performance of the Services Sector

(Per cent)

Sub-sector	Growth Rate						2008-09 (RE)
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	
1	2	3	4	5	6	7	8
Trade, Hotels, Transport and Communication	9.4	12.0	10.7	12.1	12.8	12.4	9.0
Financing, Insurance, Real Estate and Business Services	8.0	5.6	8.7	11.4	13.8	11.7	7.8
Community, Social and Personal Services	3.9	5.4	6.9	7.0	5.7	6.8	13.1
Construction	7.9	12.0	16.1	16.2	11.8	10.1	7.2
Services Sector	**7.5**	**8.8**	**9.9**	**11.2**	**11.3**	**10.8**	**9.4**
Memo:							
Shares of Services in GDP	58.7	58.9	60.2	61.1	62.0	63.0.	64.5
Relative Contribution to GDP growth	111.1	60.9	77.7	70.8	70.8	74.1	88.2

RE: Revised estimates.
Source: Central Statistical Organisation.

of employment amidst growing uncertainty in the labour markets. If the recovery is delayed as anticipated by the IMF, scenario for the labour markets could be further disconcerting. The adverse employment effects of global slowdown remains a clear downside risk and a policy concern (Box II.11).

Box II.11
Effects of Global Recession on Unemployment in India

One of the serious ramifications of the global recession has been the rising unemployment and heightened uncertainty in the labour markets, particularly in the advanced countries. This has set off a vicious circle, whereby contraction in aggregate demand leads to higher unemployment and job market uncertainty, which in turn amplifies the rate of contraction in aggregate demand. In India, due to the dependence of a large section of the labour force on the agriculture sector for employment, the negative employment effect has been relatively moderate due to the resilient agricultural sector during 2008-09, but the adverse employment effects of a growth slowdown remains a policy concern. This explains the magnitude and nature of the stimulus measures already delivered by the Government, despite concerns about the available fiscal space in India.

Available scattered reports suggest that the employment intensive SMEs have been affected by the crisis and there is reverse migration from the urban to rural areas, thereby accentuating the vulnerabilities of rural population. Internationally, migrant workers' remittances are falling, contributing to a further deterioration in income/employment in remittance receiving economies. As the labour market recovery comes with considerable lags even after output picks up, a weak recovery of the global economy only in 2010 as projected by the IMF suggests grave implications for the employment scenario, with serious social and political consequences (ILO, April 2009).

According to the International Labour Office's (ILO) 'Global Employment Trends Report' released in May 2009, in all probabilities, there will be a sharp increase in the global unemployment in 2009, particularly in developing countries engaged in labour-intensive exports. Unemployment rate is estimated to rise up to 6.5 per cent in 2009 as compared with 5.7 per cent in 2007. In a worst case scenario it could rise up to 7.1 per cent (or 50 million people). The Report also estimated that the proportion of people in vulnerable employment could rise considerably in the worst case scenario to reach a level of 53 percent of the employed population. The unemployment level in South Asia was estimated at 32.2 million and it may vary between 32.6-32.1 million in 2009 depending upon the extent of slowdown. The Report also noted that over 2009 and 2010, an estimated 20.3 million additional jobs would be needed to absorb India's growing labour force. Women and young labour force could be affected the most. In fact, Indian workers in sectors with high exposure to the global market and which employ millions of women workers have already faced job cuts, particularly in civil aviation, textiles, leather and gems and jewellery sectors. The Report underlined the importance of public spending programmes that have high multiplier effect on employment.

In order to assess the unemployment situation in the context of the economic slowdown, the Ministry of Labour conducted two quick quarterly surveys for the period October-December 2008 and January-March, 2009 covering 21 centres (10 states/ UTs) and sectors such as mining, textiles, metals, gems and jewellery, automobiles, transport and IT/BPO covering more than 60 per cent of the GDP. The Reports observed that about half a million workers lost their jobs during October-December 2008 while employment increased by about half a quarter million during January-March 2009. The estimated employment in all the sectors declined from 16.2 million during September 2008 to 15.7 million in December 2008. The employment growth rate was placed at (-) 3.03 per cent during the third quarter of 2008-09 which improved somewhat during the quarter January-March 2009. Sector-wise, the decline in employment was observed in all the sectors, except for the IT/ BPO during October-December 2008 whereas sector like gems and jewellery, textiles, IT/ BPO, handloom/power-loom and automobiles posted rise in employment in January-March 2009.

The Government has undertaken several measures to promote growth in the sectors facing slowdown. Prominent among these are establishment of two new mega clusters for handlooms and carpets, interest subvention on pre-shipment credit for labour intensive export oriented sectors, enhanced ECGC cover and reduction in basic customs duty and service tax exemption to select exports. Enhanced allocation of resources for national flagship schemes such as National Rural Employment Guarantee Scheme (NREGS) (rise by144 per cent), Bharat Nirman (rise by 45 per cent), National Highway Development Programme (rise by 23 per cent), Jawaharlal Nehru Urban Renewal Mission (JNNURM) (rise by 87 per cent) is also likely to generate additional employment, particularly in unorganised sectors, both in rural and urban areas during 2009-10.

Reference:

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II.2.54 The compositional shift in services output in favour of exports observed during the 1990s, became more discernable since 2003-04 with global integration driven by technology facilitating larger demand for Indian services onshore. However, the momentum was lost somewhat after the outbreak of the sub-prime crisis. Although services sector has placed itself on an impressive growth trajectory powered by internal demand, openness and integration with global economy rendered it difficult to remain completely decoupled from the global developments.

Developments during 2009-10

II.2.55 The lead indicators of services sector activity during the first quarter of 2009-10 suggest decline in growth momentum barring few segments. The trade-related services such as cargo handled at major sea and airports, and passengers handled at international terminals continued to show deceleration/negative growth during April-June 2009. Domestic activity-related services such as communication, construction and automobile segments show signs of upturn.

AGGREGATE DEMAND

II.2.56 The relative resilience of Indian growth in the face of a severe synchronised global recession has largely been ascribed to the relatively greater role played by the domestic demand as opposed to external demand in shaping the overall growth outcome in India. Domestic demand in the form of both consumption and investment continued to remain the main driver of the India's economic growth process in 2008-09. Consumption expenditure dominated the demand side of national income, accounting for 66.6 per cent share in GDP. Private final consumption expenditure (PFCE) accounted for 55.5 per cent, while government final consumption expenditure (GFCE) constituted 11.1 per cent of GDP in 2008-09. Gross capital formation accounted for 36.6 per cent of GDP during the same period (Table 2.17).

II.2.57 Given the significant importance of PFCE for GDP, it is notable that the growth rate of PFCE decelerated significantly to 2.9 per cent in 2008-09 from 8.5 per cent in 2007-08 (Table 2.18). Despite the moderation, this growth was much higher compared to the advanced economies, where private consumer expenditure almost stagnated — growing at only 0.6 per cent in 2008.

II.2.58 The growth in GFCE in India registered a sharp increase and more than doubled to 20.2 per cent in 2008-09 from 7.4 per cent in 2007-08, reflecting the pay out of the Sixth Pay Commission Award and other counter-cyclical fiscal stimulus measures. For the advanced economies as a whole, public consumption grew at the rate of 2.4 per cent in 2008 – up from 2.2 per cent in 2007.

Table 2.17: Demand Side of GDP-Shares@
(1999-2000 Prices)

(As percentage of GDP at Market Prices)

Item	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 QE	2008-09 RE
1	2	3	4	5	6	7	8	9
Total Final Consumption	76.7	75.6	73.6	71.5	69.8	67.6	67.0	66.6
Private Final Consumption Expenditure	64.5	63.9	62.5	60.9	59.5	57.7	57.2	55.5
Government Final Consumption Expenditure	12.2	11.7	11.1	10.6	10.3	9.9	9.8	11.1
Gross Domestic Capital Formation #	22.2	25.0	27.1	30.5	33.3	34.4	35.9 ^	36.6^
Net Exports	0	1.4	0.3	1.1	-2.5	-3.5	-4.4	-5.8

@ : Share may not add up to GDP due to statistical discrepancy.
QE : Quick Estimate. RE: Revised Estimate
: Adjusted for errors and omissions. ^: Gross Capital Formation.
Source: Central Statistical Organisation.

Table 2.18: Demand Side of GDP - Growth Rates #
(At 1999-2000 Prices)

(Per cent)

Item	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 QE	2008-09 RE
1	2	3	4	5	6	7	8	9
1. Total Final Consumption Expenditure	5.2	2.3	5.5	5.2	6.7	6.3	8.3	5.4
of which:								
(i) Private Final Consumption	5.7	2.8	6	5.5	6.8	6.4	8.5	2.9
(ii) Government Final consumption	2.3	-0.4	2.6	3.6	6.2	5.5	7.4	20.2
2. Total Investment +	-3.5	-2.9	17	19.9	19.5	19.4	10.9	8.3^
(i) Private Investment ++	4.1	18.4	14.4	24.6	19.6	13.6	12.9	n.a.
(ii) Public Investment ++	3	-7	8.3	14.7	21.5	14.7	24.6	n.a.
(iii) Valuables ++	-5.4	-4.2	66.6	57.2	-2.2	14.9	2.7	27.5
3. Total Fixed Investment	0	7.4	6.6	13.7	18.9	17.4	12.9	8.2
of which:								
(i) Private Fixed	8.9	8.9	14.6	23.6	17.5	13.1	10.8	n.a.
(ii) Public Fixed	3.6	1.3	10.8	5.2	18.1	19.3	19.7	n.a.
4. Exports	5.7	21.8	7.4	27.2	17.6	21.1	2.1	12.8
5. *Less* Imports	3.4	10.4	16.3	22.2	41.1	24.5	6.9	17.9

\# : Based on real GDP at market prices. QE : Quick Estimates RE: Revised Estimates.
\+ : Adjusted for errors and omissions. ^ : Gross Capital Formation ++ : Unadjusted for errors and omissions. n.a. : Not Available.
Note : 'Valuables' cover the expenditures made on acquisition of valuables, excluding works of art and antiques.
Source : Central Statistical Organisation.

II.2.59 Gross fixed capital formation contracted in most of the advanced economies in 2008. The growth rate of gross fixed capital formation in India decelerated sharply to 8.2 per cent in 2008-09 from 12.9 per cent in 2007-08. This is to be seen as a combination of financing constraints facing Indian enterprises, despite easy domestic liquidity conditions and on account of greater risk aversion among suppliers of finance, as well as a sharp downturn in investors' confidence that dampened investment demand. Increase in net exports gap in successive quarters of 2008-09 also had an adverse impact on overall GDP growth.

II.2.60 During 2008-09, there was a compositional shift within consumption expenditure. The contribution of PFCE to overall growth declined sharply to 27.0 per cent in 2008-09 from 53.8 per cent in 2007-08. On the other hand, the contribution of GFCE to overall growth increased to 32.5 per cent in 2008-09 from 8.0 per cent in 2007-08, partly offsetting the growth impact of deceleration in PFCE. As a result, the overall contribution of consumption demand to growth declined marginally to 59.5 per cent in 2008-09 from 61.8 per cent in 2007-08.

II.2.61 Predominance of domestic demand not only enabled India to maintain a relatively high growth in the wake of current global financial crisis and even during earlier episodes of crises, it has also been a key factor explaining as to why, in each of the past crises episodes, India's recovery has been faster than the world economy.

II.2.62 Trends in the sub-components of aggregate demand during past instances of major external shocks suggest decline in domestic investment expenditure has been key factor in lowering aggregate demand and the income growth. Variance decomposition results drawn through vector autoregression (VAR) estimates shows that although Indian economy is far more integrated in the recent period, it continues to be driven by domestic demand. Though impact of exports on investment expenditure is found to be positive and significant, in relative terms, it continues to be less significant than the impact of consumption expenditure (Box II.12).

Box II.12
Financial Crisis and Economic Growth: An Inter-temporal Perspective

Analysis of shocks has been an integral part of most assessments of growth dynamics and since the 1970s, the global economy has confronted with a spate of supply shocks. Literature distinguishes between demand and supply shocks, domestic and external shocks, country specific and global shocks, nominal (monetary) and real shocks, *etc*. According to the neoclassical school of thought, shocks cause unpredictable changes in short-run aggregate demand and supply and hence, induce fluctuations in the short-run growth rate.

If one takes into account the chronology of some of the global financial crises and their impact on select macroeconomic aggregates in India, one could notice a clear fall in the output and investment from the potential levels during the crisis. In India, the actual output (Y) remained below the potential output (Y*) only for three quarters during the Asian Crisis, five quarters during the dotcom bust, partly attributable to sharp fall in investment and below normal monsoon (Chart A).

The output-gap (*i.e.*, actual in relation to potential) in India increased to -30.8 per cent during the crisis led by dotcom burst in 2000 (Table A). As regards the current global crisis, it is still unfolding and, therefore, output loss cannot be captured fully. The possible effects of the global crisis on India's exports, investment and consumption and hence on overall growth, operating through dynamic interactions between trade, real and business confidence channels were assessed by estimating vector auto-regression (VAR) model for investment, export and consumption for the period 1996-97(Q1) to 2008-09(Q4). One major objective of such an assessment is to examine the extent to which exports (external demand) and consumption (domestic demand) influence the investment demand. Though the impact of exports on investment expenditure in India is found to be positive and significant, it continues to be relatively smaller than the impact of consumption expenditure. The Cholesky variance decomposition suggests that variation in investment explained by exports is small in relation to consumption.

Table A : Impact of Financial Crisis on Select Macroeconomic Variables

(Percentage of Potential)

Nature of Crisis	Period	PFCE gap	Investment Gap	Saving gap	GDP gap
1	2	3	4	5	6
East Asian Crisis	1997	-32.4	14.4	5.1	-27.7
	1998	28.8	-59.8	-52.5	10.7
Dotcom Burst	2000	-34.7	-92.7	-80.5	-30.8
Global Financial Crisis	2008				-18.9
	2008*				-22.9

*: If the actual GDP growth is 6.6 per cent.

Note : HP Filter applied on growth rate to decompose growth into trend and cyclical components.

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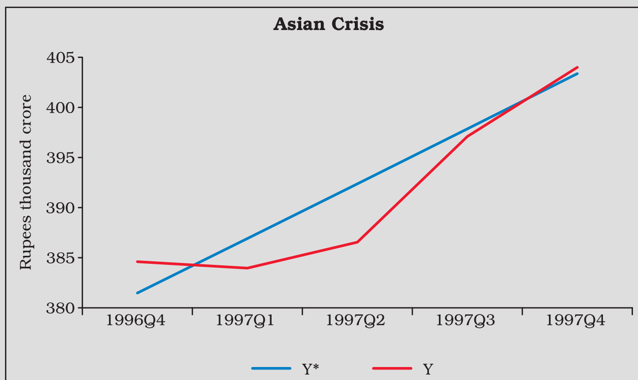
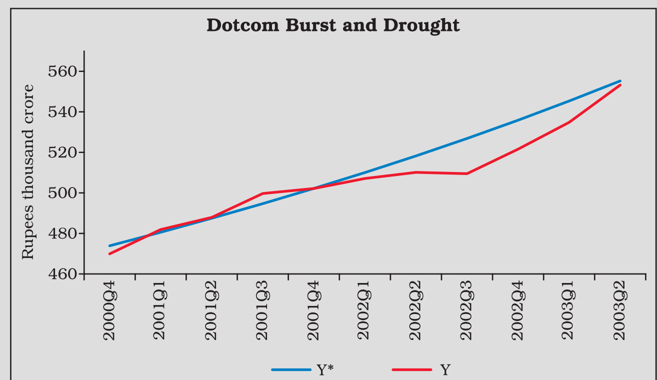
Chart A: Movement in Potential and Actual Output





II.2.63 Growing global imbalances had been clearly recognised as a source of risk to the world economy much before the onset of the crisis, and post-crisis period may necessitate a serious rethinking on rebalancing the growth strategies taking into account the lessons from the crisis, without reversing the globalisation process. The need for rebalancing growth in several countries through appropriate policies could be necessary to enhance the resilience of countries to such shocks in future (Box II.13).

Saving and Capital Formation

II.2.64 The Indian economy has been witnessing an increasing trend in gross domestic saving since 2002-03, which reached a peak level by 2007-08, with improved performance of the private corporate sector and enhanced contribution of public sector, due to the progress made in fiscal consolidation. Gross domestic saving as per cent of GDP at current market prices increased from 35.7 per cent in 2006-07 to 37.7 per cent in 2007-08. The private

Box II.13
The Management of Economic Slowdown: Rebalancing of Growth

Prolonged global imbalances have been at the root of the current crisis. While inappropriate policies and regulatory frameworks in some countries contributed to the crisis, saving glut in some countries in the face of inadequate absorption capacity, and excessive consumption and investment in relation to domestic saving in some other also contributed to the imbalances. There is a broad emerging consensus now that rebalancing of growth is required in several countries to tackle the global crisis, overcome its adverse effects and also strengthen the resilience of the countries to future shocks. In the midst of the crisis, surplus countries in particular, could lead rebalancing the growth through higher expenditure to promote domestic demand growth. Country specific conditions like size of the domestic market, export dependence and potentials, fiscal space, income inequality, underlying causes of the current account status in balance of payments and several other economic factors could decide the path and speed of rebalancing.

In its *Asian Development Outlook 2009*, the ADB suggested the following set of rebalancing policy measures for Asian countries to build strong demand and use resources more efficiently:

- Strengthening domestic consumption requires policies which transfer more corporate saving to households, as well as policies, which reduce the precautionary motive for saving among households.
- Governments should give priority to improving the investment climate rather than quantitative expansion of investment.
- A more active fiscal policy can mitigate weak external demand in the short-run as well as lay the foundation for a more robust domestic demand beyond the short run.
- Supply-side policies, which promote small and medium-sized enterprises and services industries, will increase the relative importance of production that caters to domestic demand.
- Policies pertaining to financial development and exchange rate will ease the adjustment of both supply and demand towards a more balanced structure.

Prasad (2009) noted that there are other aspects of potential growth imbalances that also need to be considered. For instance, whether the economy is driven by consumption or by investment determines the kind of measures that would be required for rebalancing growth. This has implications for growth in household labour income, employment and the overall welfare. Measures to rebalance growth suggested by Prasad include: (a) increasing spending on social safety nets and other government insurance mechanisms to reduce precautionary saving and boost consumption; (b) financial market development for more efficient risk sharing, inter-temporal smoothing of consumption and diversification of opportunities across income and assets; (c) improving financial system efficiency for optimal allocation of capital and efficient risk sharing which would promote entrepreneurial activity and employment; (d) enhancing financial inclusion for better consumption and saving patterns; (e) more flexible exchange rate regime that allows the exchange rate to respond to productivity growth differentials relative to trading partners, which could generate positive wealth effects through favourable terms of trade changes.

References:

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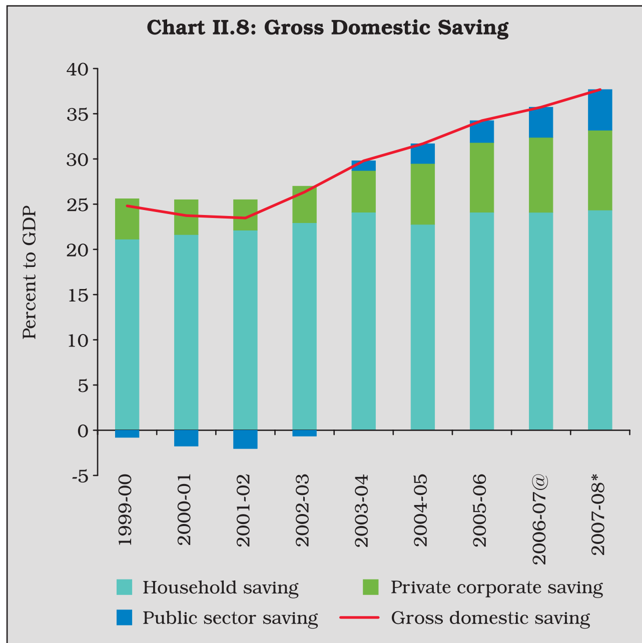


corporate saving rate improved for the sixth consecutive year, reflecting better corporate performance and higher retained earnings. Saving of the household sector also increased, *albeit,* marginally. Public sector saving – which had witnessed a turnaround from dis-saving prior to 2003-04 to positive saving, was largely the result of higher savings of non-departmental as well as departmental enterprises, which recorded gradual but significant improvement in 2007-08 (Chart II.8).

II.2.65 While the domestic saving rate improved by 2.0 percentage points of GDP during 2007-08, domestic investment registered an increase of 2.2 percentage points of GDP. Domestic saving financed more than 95 per cent of investment, and the remaining, by capital flows. Domestic investment rate reached 39.1 per cent of GDP in 2007-08 from 36.9 per cent in 2006-07 (Table 2.19).

II.2.66 Estimation of gross domestic saving and investment have assumed immense significance in the recent times when the Indian economy is undergoing rapid structural changes in the income levels and the saving behaviour. The extent to which foreign capital should supplement domestic saving to ensure high growth without creating unsustainable pressures on the management of the external account has also become an important issue, given India's past experience as well as current lessons from the ramifications of large global imbalances. The Reserve Bank had suggested to the Government for the appointment of a High Level Committee to review the estimation procedures and place the estimation of household saving on a sound footing, including improving the methodology for compilation of saving and investment. Recognising the criticality of the issue, the Government of India appointed the *High Level Committee on Estimation of Saving and Investment* (Chairman: Dr. C. Rangarajan) which submitted its report on March 2, 2009 (Box II.14).

II.2.67 Preliminary estimates, based on latest available information, place financial saving (net) of the household sector in 2008-09 at 10.9 per cent of GDP at current market prices, which is lower than

Table 2.19: Gross Capital Formation
(at current market prices)

Per cent of GDP

Sector	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08*
1	2	3	4	5	6	7
1. Household Sector	12.6	12.7	12.7	12.4	12.4	12.6
2. Private Corporate Sector	5.9	6.8	10.8	13.7	14.8	15.9
3. Public Sector	6.1	6.3	6.9	7.6	8	9.1
4. Valuables	0.6	0.9	1.3	1.2	1.2	1.1
5. Gross Domestic capital Formation (GDCF)#	25.2	27.6	32.1	35.5	36.9	39.1
6. Net Capital Inflow	-1.2	-2.2	0.4	1.2	1.1	1.4

*: Quick Estimates. #: Adjusted for errors and omissions.
Source : Central Statistical Organisation.

Box II.14
Report of the High Level Committee on Estimation of Saving and Investment
(Chairman: Dr. C. Rangarajan)

Background

At a time when Indian economy was going through a phase of robust economic growth, backed by rising domestic saving and investment as well as surge in capital inflows, the High Level Committee on Estimation of Saving and Investment (HLC) was constituted on December 12, 2007 under the Chairmanship of Dr. C. Rangarajan. The Committee addressed long list of Terms of References (ToRs) encompassing various compilation methodology and data issues. The HLC examined the feasibility of directly estimating household saving through integrated income and expenditure surveys; improvements in the methods and procedures used in the estimation of corporate investment and saving; new data bases, if any, to be devised/built-up for improving the reliability or checking validity of the estimates, *etc*.

Approach

The HLC followed a sector-wise approach and recommended shift to the extent possible from sample-based estimates of saving and investment to a census based estimates. The HLC also undertook discussions with apex institutions and the National Sample Survey Organisation (NSSO) and worked out trial estimates for some of the changes recommended. This was a contrast from the approach followed by the earlier Committees.

Major Recommendations

1. Household Saving

- The existing practice of indirect method of estimation of household saving may continue due to non-availability of an acceptable, practical and alternative method.
- Since households sector is a conglomerate entity consisting of both consumer and producer households with significant structural changes in its saving behaviour, the approach adopted by the HLC was to pave way for eventual introduction of periodical comprehensive income-expenditure surveys for the household sector.
- Combined with Enterprise Surveys, it is expected to provide direct estimation of household saving for the consumer households as is the practice in a number of advanced countries and also help in cross-validation of the present residual based estimates.

2. Private Corporate Sector Saving

- To replace the presently followed sample-based methodology of estimation of saving and investment using blow up factors by a census-based procedure.
- HLC in this regard is entering into an understanding with the Ministry of Corporate Affairs (MCA) to share their database under an E-Governance arrangement (MCA 21) on a regular basis to substantially improve the quality of the private corporate sector saving and investment.
- The HLC recommended that saving and investment estimates from the year 2010-11 may be made using MCA21 data for all companies, dispensing with the blow up factor method.

3. Public Sector Saving

- In the case of public sector saving, the HLC suggested for separate estimates of GDP, consumption expenditure, saving and capital formation for the Local Bodies and quasi/autonomous Government bodies by the CSO.
- The HLC's recommendation that a mechanism needs to be instituted to capture the annual accounts of the PPPs would ensure that the saving and investment estimates from these ventures are adequately captured.

Other Related Issues

- The HLC recommended compilation of flow-of-funds data in a more timely manner to consider different ratios including the ratio of households' cash holding on a more realistic basis. In view of the emerging importance of farmers and institutions like Non-Government Organisations (NGOs) and self-help groups (SHGs) in the financial system and also from the perspective of policy issues, the HLC recommended that such unincorporated non-profit institutions be treated as separate categories under households. Accordingly, there is need to capture these entities in the returns for deposits provided by banks to the Reserve Bank.
- In view of the inadequate provision made for manning the statistical wings with adequate number and quality of technical staff, the Committee has recommended strengthening of staff positions in the statistical wings of the Department of Company Affairs, the Department of Industrial Policy and Promotion and in the CSO, as also in the Reserve Bank, SEBI and NABARD.

the estimates for 2007-08 at 11.5 per cent (Table 2.20). Decline in the household investments in shares and debentures were the main factors responsible for the lower household financial saving in 2008-09. In addition, moderation in the overall growth rate in the economy in 2008-09 *vis-à-vis* the previous

Table 2.20 : Household Saving in Financial Assets

(Amount in Rupees crore)

Item	2006-07	2007-08 P	2008-09 #
1	2	3	4
A. Financial assets (Gross)	650,412	715,994	746,865
	(15.8)	(15.2)	(14.0)
	{100.0}	{100.0}	{100.0}
1. Currency	66,274	81,278	93,056
	(1.6)	(1.7)	(1.7)
	{10.2}	{11.4}	{12.5}
2. Deposits@	319,385	374,088	436,710
	(7.7)	(7.9)	(8.2)
	{49.1}	{52.2}	{58.5}
3. Claims on Government	19,198	-28,315	-23,479
	(0.5)	-(0.6)	-(0.4)
	{3.0}	-{4.0}	-{3.1}
4. Investment in shares and debentures+	58,598	89,134	19,349
	(1.4)	(1.9)	(0.4)
	{9.0}	{12.4}	{2.6}
5. Contractual savings**	186,957	199,809	221,228
	(4.5)	(4.2)	(4.2)
	{28.7}	{27.9}	{29.6}
B. Financial Liabilities	176,787	173,135	165,656
	(4.3)	(3.7)	(3.1)
C. Saving in financial assets (Net) (A-B)	473,624	542,859	581,209
	(11.5)	(11.5)	(10.9)

P : Provisional; # : Preliminary.
@ : Comprise bank deposits, non-bank deposits and trade debt (net).
+ : Including units of specified undertaking of the Unit Trust of India and other mutual funds.
** : Comprise 'life insurance funds' and 'provident and pension funds'.
Note : 1. Components may not add up to the total due to rounding off.
2. Figures in ( ) indicate per cent of GDP at current market prices and { } indicate per cent of financial assets (gross).

years might also have some adverse impact on the household financial saving. Household saving in other instruments, *viz.,* currency, deposits, contractual instruments and claims on government, however, remained broadly stable during the year. Financial liabilities of the household sector declined from 3.7 per cent of GDP in 2007-08 to 3.1 per cent of GDP in 2008-09, mainly on account of decline in loans and advances from banks. Decline in the gross financial assets far outpaced the decline in financial liabilities, resulting in lower net financial saving for the household sector during 2008-09.

II.2.68 After recording robust economic growth for five consecutive years, the Indian economy witnessed a marked moderation of real GDP growth during 2008-09, reflecting the impact of cyclical downturn in certain sectors to begin with but subsequently due to the adverse effects of the global recession. Despite the moderation, India's GDP growth remained one of the highest in the world. The impact of the deceleration in growth of industrial and services sectors during successive quarters of the year was somewhat off-set by the turnaround in agricultural and allied activities in the fourth quarter of the year. Indian agriculture, however, faces risks associated with global climate change, particularly because of the dependence on monsoon. In this context it is important to preserve India's food security while also enhancing agricultural productivity. During 2008-09, the deceleration in industrial output as measured by the IIP was broad-based, affecting all the three sectors, *viz.*, mining, manufacturing and electricity. The pace of deceleration, however, was relatively lower than in most countries. Services sector, which has been the main driver of economic growth, witnessed a moderate slowdown due to the contagion from the synchronised global economic slowdown. Intensification of the global economic slowdown and the resultant protectionist tendencies may affect the prospects of certain services, which though may not be significant because of the cost cutting pressures in these economies to deal with the recession.

II.2.69 While the greater role played by domestic demand provided some resilience to Indian economic growth in the face of the severe global recession, the significant deceleration in private consumption expenditure as well as moderation in investment demand required counter-cyclical fiscal stimulus measures. The growth in government final consumption expenditure, therefore, increased sharply to 20.2 per cent in 2008-09 which helped in cushioning the impact of the slowdown. Available information for 2009-10 indicate early signs of industrial recovery but the delay in the progress of monsoon could affect agricultural production and dampen the growth prospects. Stimulus measures directed at boosting consumption demand entails the risk of affecting medium-term growth prospects, if sustained longer, and hence, the timing of return to fiscal consolidation would be important in balancing the short-term needs of recovery and medium-term needs of sustainable high growth.

III. MONEY, CREDIT AND PRICES

II.3.1 The monetary and credit conditions in India showed phases of sharp shifts during 2008-09, reflecting the volatile developments in growth, inflation and financial markets, and the consequent policy responses. During 2008-09, while growth decelerated significantly in the second half of 2008-09, WPI inflation scaled above the 12 per cent level by August 2008 to subsequently decline sharply to below one per cent level by the end of the year, even though CPI inflation continued to remain firm. During the third quarter of 2008-09, the liquidity needs of the financial markets and financial institutions tested the liquidity management operations of the Reserve Bank. Reflecting the moderation in growth and associated subdued aggregate demand, credit growth also decelerated considerably by the end of the year. The nature and scale of these developments got reflected in the pattern of growth in monetary and credit aggregates during 2008-09.

II.3.2 In the early part of the year, the previously experienced pattern in terms of increase in net foreign assets of the Reserve Bank as a primary driver of expansion in reserve money continued. As capital outflows and the resultant interventions in the foreign exchange market led to contraction in net foreign assets of the Reserve Bank in the second half of the financial year, the impact on liquidity had to be more than offset by expansion in net domestic assets of the Reserve Bank, which became necessary to meet the growing demand for liquidity in the face of trickling contagion from the global financial crisis.

II.3.3 During 2008-09, net Reserve Bank credit to the Government became the key source for expanding the net domestic assets, and this option also coincided with a time when large fiscal stimulus had become necessary to contain the economic slowdown. Besides the policy induced compositional shifts on the asset side of the Reserve Bank's balance sheet, on the liability side also there were major policy driven changes, on account of reduction in reserve requirement and unwinding of Government's deposits under market stabilisation scheme (MSS) with the Reserve Bank. While both these measures expanded the liquidity available to the banking system and the Government, the combined effect amounted to contraction in Reserve Bank's balance sheet. Thus, unlike in many other countries where expansion in the central bank balance sheet size became the symbol of quantitative easing, the behaviour of the Reserve Bank's balance sheet reflected the policy driven expansion in liquidity through lower reserve requirements and unwinding of MSS on the liabilities side and increase in domestic assets to offset the impact of the contracting foreign assets on the assets side of the balance sheet.

II.3.4 The evolution of monetary aggregates in India during 2008-09, thus, has been consistent with the policy stance of the Reserve Bank and reflects the outcome of operations of the Reserve Bank on several fronts, aimed at ensuring adequate liquidity in the system, restoring orderly conditions in the markets and supporting faster recovery of growth in the face of subdued inflation.

Monetary Conditions in India

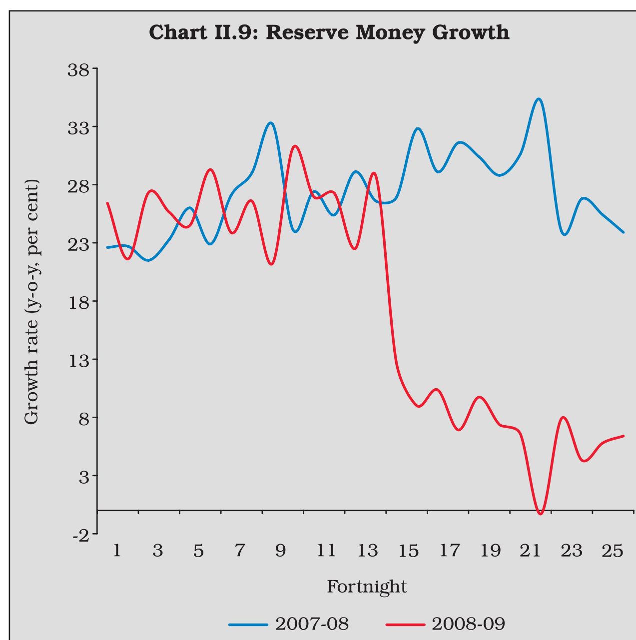
II.3.5 The large and exogenous capital inflows that remained the major driver of liquidity during the preceding years exhibited a notable turnaround in 2008-09 with the intensification of the global financial crisis. The expansion in bank credit in India also receded, reflecting the moderation in growth momentum from the third quarter of 2008-09. Accordingly, growth in monetary and liquidity aggregates during 2008-09 witnessed some moderation. Broad money growth during the last quarter of 2008-09 moderated reflecting slowdown in growth and aggregate demand. Expansion in bank credit to the commercial sector remained strong up to October 2008 in the backdrop of drying up of other sources of funds to industry, but decelerated subsequently and remained below the Reserve Bank's Third Quarter Review (January 2009) projection of 24.0 per cent for the year 2008-09. The contractionary impact of decline in net foreign exchange assets on reserve money and domestic liquidity was offset by purchases under open market

operations (OMOs), unwinding of balances under MSS and other measures to augment rupee liquidity which gave rise to significant expansion in the net Reserve Bank credit to the Central Government. There was a significant turnaround in the net Reserve Bank credit to the Centre during 2008-09 as compared with the previous years.

RESERVE MONEY

II.3.6 Growth in reserve money during 2008-09 reflected the impact of monetary policy responses to the changing liquidity positions arising from domestic and global financial conditions. In terms of components, reserve money variation during 2008-09 was conditioned by the increase in currency in circulation and changes in cash reserve ratio (CRR) for banks. In view of the inflationary pressures in the beginning of 2008-09, the Reserve Bank initially raised CRR by 150 basis points during April-August 2008-09 to 9.0 per cent. Subsequently, in view of the contagion from the international financial turmoil and associated impact on the domestic monetary and liquidity conditions, particularly against the comfort of easing inflationary pressures, the Reserve Bank reduced CRR by a total of 400 basis points, since October 11, 2008. This reduction in CRR released primary liquidity of the order of Rs.1,60,000 crore into the banking system. Bankers' deposits with the Reserve Bank, as a result, contracted by 11.3 per cent during 2008-09 as against an increase of 66.5 per cent during 2007-08. Reserve money growth as on March 31, 2009 was 6.4 per cent (y-o-y) as compared with 31.0 per cent a year ago (Chart II.9). In the context of sharp changes in the CRR during 2008-09, for analytical purposes, use of reserve money growth adjusted for the first round impact of CRR changes is considered more appropriate (Box II.15). Adjusted for the first round effect of the changes in CRR, reserve money growth (y-o-y) as on March 31, 2009 was at 19.0 per cent as compared with 25.3 per cent a year ago.

II.3.7 The changes in CRR impacted the money multiplier, *i.e.,* the ratio between broad money and



reserve money. The money multiplier, which had declined from 4.7 at end-March 2007 to 4.3 at end-March 2008 in the wake of CRR hikes, increased to 4.8 at end-March 2009, reflecting lowering of CRR. Money multiplier has exhibited much volatility during 2008-09. However, when money multiplier is calculated with respect to adjusted reserve money, as expected, it exhibits much greater stability (Chart A in Box II.15). The currency-deposit (C-D) ratio, which exhibited a general trend of moderation in last few years, increased somewhat in the recent period. This is a notable development, since a higher C-D ratio could potentially offset the impact of declining reserve requirement on the money multiplier. It is important to note that the declining trend in the C-D ratio has almost paused since September 2007 (*i.e.* the onset of sub-prime crisis), and there have been occasional increases in the C-D ratio, suggesting that despite high deposits growth, currency growth remained higher. The pattern in C-D ratio in 2008-09 could be largely explained by high inflation expectations, increased preference for liquidity in the face of heightened risk, besides 2008-09 also preceding a general election, which often could be associated with higher currency demand. In 2009-10, though, growth in currency clearly lags behind the growth in deposits.

Box II.15
Adjusted Reserve Money and Money Multiplier

Commercial banks' deposits with the Reserve Bank not only determine the size of the reserve money, but also serve as a base for multiple expansion of money in the banking system. By changing the reserve requirement, which is a conventional monetary policy tool, both reserve money and the money multiplier could be changed, though with opposite effects on the broad money. High or low growth in reserve money is often viewed with concern, even though such growth in reserve money might have been deliberately engineered through changes in the reserve requirement. Once the effects of policy induced changes in the reserve money are adjusted, the growth in adjusted reserve money may not appear significantly volatile. That has been the case in India in 2008-09, when the Reserve Bank first increased CRR by 150 basis points up to August 2008 and reduced thereafter by 400 basis points, leading to large fluctuation in the reserve money. As a result, while the reserve money exhibited a high growth of 34.1 per cent as on October 3, 2008 the growth rate fell sharply to 6.4 percent by the end March 2009. But for the policy driven changes to the reserve requirement, the reserve money growth would have been conditioned by the non-policy related factors such as the currency growth and the excess reserves, which depend on the behaviour of the public and the commercial banks, respectively. Adjusted reserve money, as a concept, thus makes the money multiplier invariant to changes in the reserve requirement. When such concept of adjusted reserve money is used, the multiplier should also be adjusted correspondingly by taking only factors other than the reserve requirement in arriving at the multiplier.

The adjusted reserve money could be defined as:

Adjusted RM: RM – $(r_t – r_0)$ NDTL

Where r_t is current CRR, r_0 is initial benchmark CRR and NDTL is net demand and time liabilities relevant for the purpose of computation of CRR. If CRR is changed over a period of time in bi-directional way, then a judgement about the initial benchmark CRR would be required.

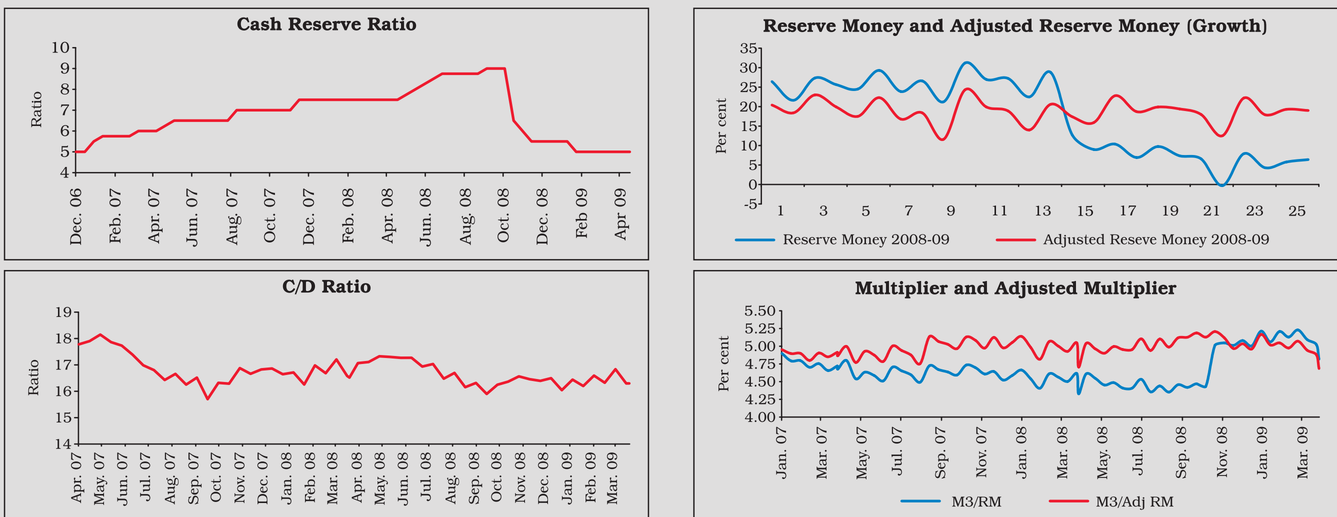
According to the behavioural definition of broad money multiplier (m), it is a function of CRR (r) and currency-deposits (c) ratio [m = (1+c)/(c + r)]. Though CRR, as a policy variable, is controlled by the central bank, the 'c' is a behavioural ratio and could be expected, in the short run, to be influenced by income, interest rate, risk perception of the investors, and in the long run, by institutional factors like monetisation of the economy and development of non-money substitutes in the form of liquid financial assets as well as non-cash substitutes in the form of debit/credit cards. In the Indian context, the 'c' ratio has witnessed a secular declining trend since 1970s. However, in recent years, currency growth has been somewhat higher than the high deposits growth and therefore the 'c' ratio has recorded some increase since August 2007, although with some variation. Since the multiplier is inversely related to both 'r' and 'c', when c increases somewhat in the face of policy drawn reduction in 'r' that could partly offset the expansionary effects of the policy on broad money. The secular decline in 'c' ratio since 1970, with the change in banking habits of the people after bank nationalisation and financial deepening have resulted in a higher money multiplier in India.

The panel chart A in this box presents the behaviour of the multiplier (m) during 2008-09, which is quite volatile. The multiplier with the adjustment for the first round effect of CRR changes in the reserve money, however, exhibits higher stability and explains the need for the use of adjusted reserve money for analytical purposes. This result also reveals the crucial role of the 'c' ratio in monetary management that could alter both reserve money and the multiplier.

Reference

1. Reserve Bank of India (1998), The Report of the Third Working Group on "Money Supply: Analytics and Methodology of Compilation". Mumbai, June.

Chart A: Adjusted Reserve Money and Money Multiplier



II.3.8 Monetary management during 2008-09 was dominated by the response to the spillover effects of global financial crisis and the need to address slackening of domestic demand conditions, especially during the second half of the year. As the Reserve Bank had to provide foreign exchange liquidity to meet the demand from importers and contain excess volatility arising out of capital outflows by the foreign institutional investors, its net foreign exchange assets (NFEA) declined. The contractionary impact of decline in net foreign exchange assets on reserve money and domestic liquidity was offset by expansion of net domestic assets through purchases under open market operations (OMO), unwinding of balances under MSS and other measures to augment rupee liquidity. Therefore, on the sources side of the reserve money, in contrast to the preceding years, net foreign exchange assets (adjusted for valuation) declined substantially during 2008-09 while net Reserve Bank credit to the centre increased (Table 2.21, Appendix Table 13 and 14).

Table 2.21 : Reserve Money – Variations

(Amount in Rupees crore)

Item	Outstanding as on Mar 31, 2009	2007-08	2008-09	2008-09			
				Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8
Reserve Money	9,88,001	2,19,412 (31.0)	59,698 (6.4)	3,416	25,218	-70,452	1,01,516
Adjusted Reserve Money	10,15,751	1,72,412 (25.3)	1,61,948 (19.0)	-24,584	-4,532	69,548	1,21,516
Components (1+2+3)							
1. Currency in Circulation	6,91,153	86,702 (17.2)	1,00,352 (17.0)	36,859	-14,516	38,277	39,733
2. Bankers' Deposits with RBI	2,91,275	1,31,152 (66.5)	-37,172 (-11.3)	-29,333	39,219	-1,15,773	68,714
3. 'Other' Deposits with the RBI	5,573	1,558 (20.8)	-3,482 (-38.5)	-4,110	514	7,045	-6,931
Sources (1+2+3+4-5)							
1. RBI's net credit to Government	61,580	-1,15,632	1,74,789	-13	51,360	30,230	93,212
of which: to Centre (i+ii+iii+iv-v)	61,761	-1,16,772	1,76,397	1,430	51,379	29,932	93,657
i. Loans and Advances	0	0	0	0	0	0	0
ii. Treasury Bills held by the RBI	0	0	0	0	0	0	0
iii. RBI's Holdings of Dated Securities	1,57,389	17,421	42,796	-39,239	56,975	-44,206	69,266
iv. RBI's Holdings of Rupee Coins	99	121	-34	-1	-26	27	-33
v. Central Government Deposits	95,727	1,34,314	-1,33,635	-40,670	5,570	-74,111	-24,424
2. RBI's Credit to Banks and Commercial Sector	24,177	-2,794	17,799	-3,358	4,963	5,032	11,163
3. NFEA of RBI	12,80,116	3,69,977 (42.7)	43,986 (3.6)	1,03,932	10,336	-1,56,330	86,048
of which : FCA, adjusted for valuation		3,70,550	-1,00,308	15,535	-31,641	-92,102	7,900
4. Governments' Currency Liabilities to the Public	10,054	1,063	831	225	206	186	213
5. Net Non-Monetary liabilities of RBI	3,87,927	33,202	1,77,706	97,369	41,648	-50,431	89,120
Memo:							
Net Domestic assets	-2,92,115	-1,50,565	15,712	-1,00,516	14,882	85,878	15,468
LAF- Repos (+) / Reverse Repos(-)	-1,485	21,165	-51,835	-45,350	51,480	-62,170	4,205
Net Open Market Sales # *	-	-5,923	-94,548	-8,696	-10,535	-7,669	-67,649
Centre's Surplus	16,319	26,594	-60,367	-42,427	6,199	-32,830	8,691
Mobilisation under the MSS	88,077	1,05,418	-80,315	6,040	-628	-53,754	-31,973
Net Purchases(+)/Sales(-) from Authorised Dealers	-	3,12,054	-1,78,592	3,956	-52,761	-1,11,877	-17,910
NFEA/Reserve Money @	129.6	133.2	129.6	143.8	141.1	134.7	129.6
NFEA/Currency @	185.2	209.2	185.2	213.5	220.2	183.3	185.2

NFEA: Net Foreign Exchange Assets. FCA: Foreign Currency Assets. LAF: Liquidity Adjustment Facility.
*: At face value. # : Excludes Treasury Bills @ : Per cent; end of period

Note: 1. Data are based on March 31 for Q4 and last reporting Friday for all other quarters.
2. Figures in parentheses are percentage variations during the fiscal year.

Net Reserve Bank's credit to the Centre during 2008-09 increased by Rs.1,76,397 crore as against a decrease of Rs.1,16,772 crore during the corresponding period of the previous year (Chart II.10). The Reserve Bank's foreign currency assets (adjusted for valuation) decreased by Rs.1,00,308 crore as against an increase of Rs.3,70,550 crore during the corresponding period of the previous year. On the sources side, it may be noted that marketable securities held by the Reserve Bank (which include both OMOs and LAF) did not increase significantly. Since the period following November 2008, the liquidity released through relatively sharp unwinding of the MSS has also partly been offset by the banks resorting to reverse repos (despite a 2.75 percentage points reduction in reverse repo rate since December 8, 2008), indicating a lower credit off-take and availability of adequate surplus liquidity in the banking system.

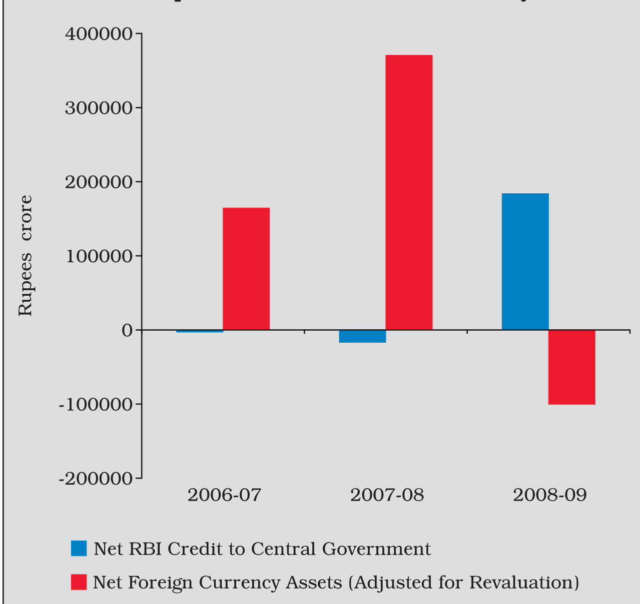
II.3.9 The MSS was mainly introduced as an innovative sterilisation instrument to absorb excess liquidity in the period of large capital inflows. It also gave the monetary policy the much needed flexibility, even in the period of capital outflows, as simply by unwinding the balances under MSS, domestic liquidity could be expanded.

Developments during 2009-10

II.3.10 Reserve money year-on-year (y-o-y) declined by 2.8 per cent as on August 14, 2009 as compared with an increase of 31.2 per cent, a year ago. Adjusted for the first round effect of the hike in CRR, reserve money growth was 14.7 per cent as compared with 24.4 per cent a year ago. The Reserve Bank's foreign currency assets (adjusted for valuation), on a y-o-y basis, decreased by Rs.71,658 crore as against an increase of Rs.2,51,201 crore a year ago. The Reserve Bank's net credit to the Centre increased by Rs.80,507 crore as compared with an increase of Rs.6,125 crore a year ago.

MONETARY SURVEY

II.3.11 Broad money (M_3) growth (y-o-y) was at 18.6 per cent at end-March 2009, lower than 21.4 per cent a year ago (Chart II.11, Table 2.22 and Appendix Table 15). Expansion in the residency-based new monetary aggregate (NM_3) – which does not directly reckon non-resident foreign currency deposits such as FCNR(B) deposits – was lower at 18.2 per cent (y-o-y) at end-March 2009 than 21.6 per cent a year ago. Similarly growth in liquidity aggregate, L_1, was lower at 17.7 per cent than 20.9 per cent a year ago (Appendix Table 16 and 17).



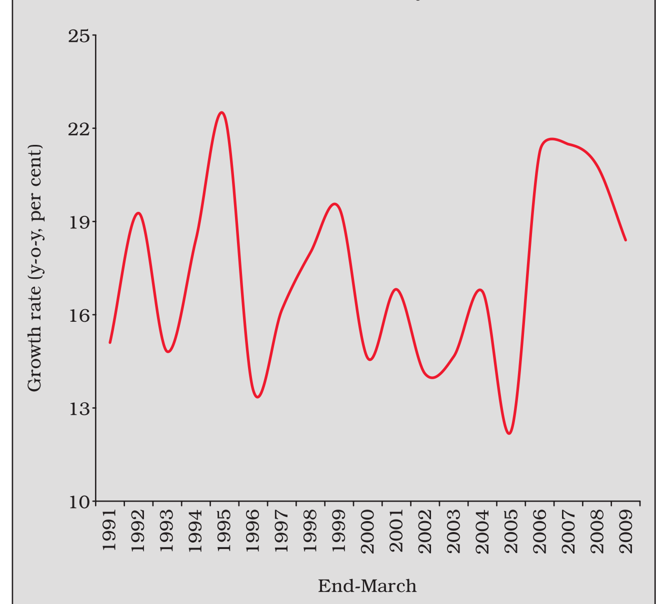


Table 2.22: Monetary Indicators

(Amount in Rupees crore)

Item	Outstanding as on March 31, 2009	Variation (year-on-year) Mar 31, 2008 Absolute	Per cent	March 31, 2009 Absolute	Per cent
1	2	3	4	5	6
I. Reserve Money	9,88,001	2,19,412	31.0	59,698	6.4
(Adjusted Reserve Money)		1,72,412	25.3	1,61,948	19.0
II. Narrow Money (M_1)	12,53,184	1,87,882	19.4	97,347	8.4
III. Broad Money (M_3)	47,64,019	7,07,815	21.4	7,46,136	18.6
a) Currency with the Public	6,66,364	85,556	17.7	97,953	17.2
b) Aggregate Deposits	40,92,083	6,20,701	22.0	6,51,665	18.9
i) Demand Deposits	5,81,247	1,00,768	21.1	2,875	0.5
ii) Time Deposits	35,10,835	5, 19,933	22.2	6,48,790	22.7
of which: Non-Resident Foreign Currency Deposits	67,268	-10,525	-15.6	10,332	18.1
IV. NM_3	47,81,333	7,19,019	21.6	73,73,93	18.2
of which: Call Term Funding from FIs	1,13,936	20,668	24.1	7,432	7.0
V. a) L_1	48,95,354	7,18,321	20.9	7,36,563	17.7
of which: Postal Deposits	1,14,021	-698	-0.6	-830	-0.7
b) L_2	48,98,286	7,18,321	20.9	7,36,563	17.7
c) L_3	49,22,933	7,19,154	20.7	7,36,358	17.6
VI. Major Sources of Broad Money					
a) Net Bank Credit to the Government (i+ii)	12,77,199	71,891	8.7	3,77,681	42.0
i) Net Reserve Bank Credit to Government	61,580	-1,15,632	-	1,74,789	-
of which: to the Centre	61,761	-1,16,772	-	1,76,397	-
ii) Other Banks' Credit to Government	12,15,619	1,87,523	22.7	2,02,892	20.0
b) Bank Credit to the Commercial Sector	30,13,337	4,50,127	21.1	4,34,347	16.8
c) Net Foreign Exchange Assets of the Banking Sector	13,52,184	3,81,952	41.8	57,053	4.4
d) Government Currency Liability to Public	10,054	1,063	13.0	831	9.0
e) Net Non-Monetary Liabilities of the Banking Sector	8,88,754	1,97,219	34.7	1,23,775	16.2
Memo:					
Aggregate Deposits of SCBs	38,34,110	5,85,006	22.4	6,37,170	19.9
Non-food Credit of SCBs	27,29,338	4,32,846	23.0	4,11,824	17.8

SCBs: Scheduled Commercial Banks. FIs: Financial Institutions. NBFCs: Non-Banking Financial Companies.

NM_3 is the residency-based broad money aggregate and L_1, L_2 and L_3 are liquidity aggregates compiled on the recommendations of the Working Group on Money Supply, 1998.

$L_1 = NM_3$ + Select deposits with the post office saving banks.

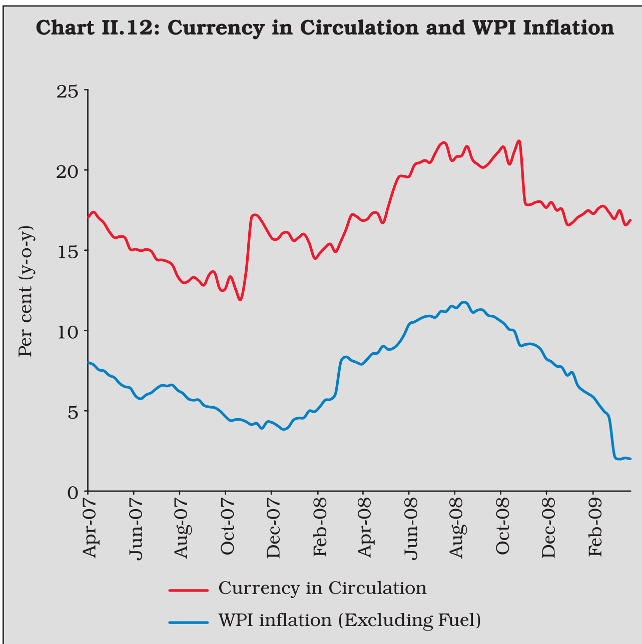
$L_2 = L_1$ +Term deposits with term lending institutions and refinancing institutions + Term borrowing by FIs + Certificates of deposit issued by FIs.

$L_3 = L_2$ + Public deposits of NBFCs.

Note: 1. Data are provisional. Wherever data are not available, the data for last available month are repeated as estimates.

II.3.12 The moderation in broad money (M_3) growth mainly reflected a deceleration in aggregate deposits expansion during 2008-09 in response to the downturn in economic activity. Currency with public remained high during the first half of 2008-09 reflecting the effects of disbursement under Farmers' Debt Waiver Scheme and the Sixth Pay Commission payouts along with higher inflationary situation prevailing during that period (Chart II.12). Expansion in currency started moderating from the third quarter reflecting moderation in economic activity. Currency with the public grew by 17.2 per cent (y-o-y) at end-March 2009 as compared with 17.7 per cent a year ago. The pattern of fortnightly

Chart II.12: Currency in Circulation and WPI Inflation



variation in currency in circulation, however, remained more or less similar in 2007-08 and 2008-09 (Chart II.13).

II.3.13 Growth in time deposits decelerated during the first two quarters of 2008-09 but witnessed robust expansion thereafter reflecting some switching from demand deposits and other savings instruments to time deposits. With depressed equity markets, increase in risk perception in the face of snowballing uncertainty and risk free high interest rates still available on time deposits, motivated investors to shift their financial savings to time deposits during the third quarter of 2008-09. The expectations of near-term decline in interest rates also contributed to the compositional shift in deposits in favour of term-deposits. Time deposits recorded a higher growth of 22.7 per cent (y-o-y) at end-March 2009 as compared to 22.2 per cent a year ago (Chart II.14). Accordingly, demand deposits recorded a marginal growth (0.5 per cent) as against a robust growth in the previous year (21.1 per cent). The net outflows from small savings schemes that started from December 2007 continued up to March 2009, the period for which the latest data are available (Chart II.15).

II.3.14 On the sources side of broad money (M_3), growth in bank credit to the commercial sector decelerated and expansion in net foreign exchange assets of the banking sector moderated to a large extent during 2008-09. On the other hand, net Reserve Bank credit to the Centre increased reflecting the decline in outstanding balances under MSS, increase in purchases under open market operations (including purchase of oil bonds under

Chart II.13: Fortnightly Variation in Currency in Circulation

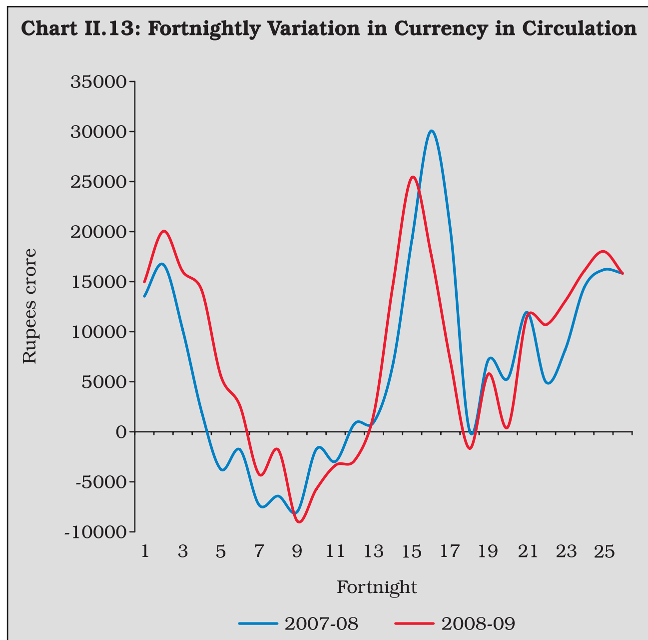
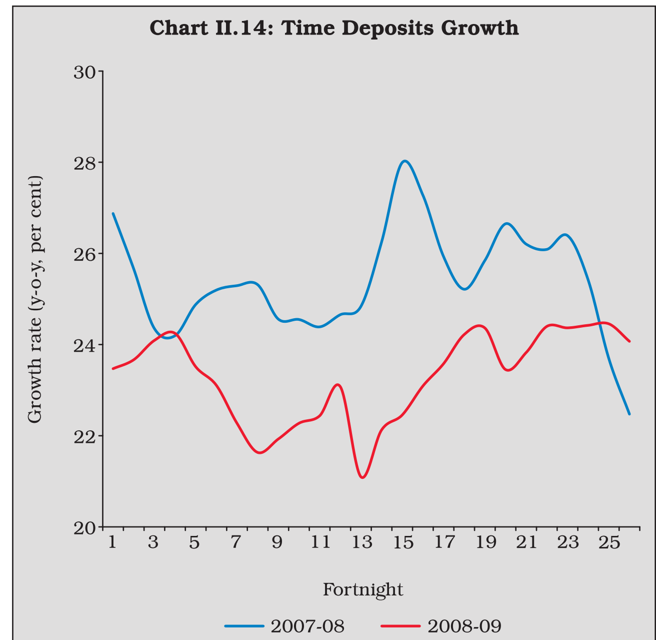
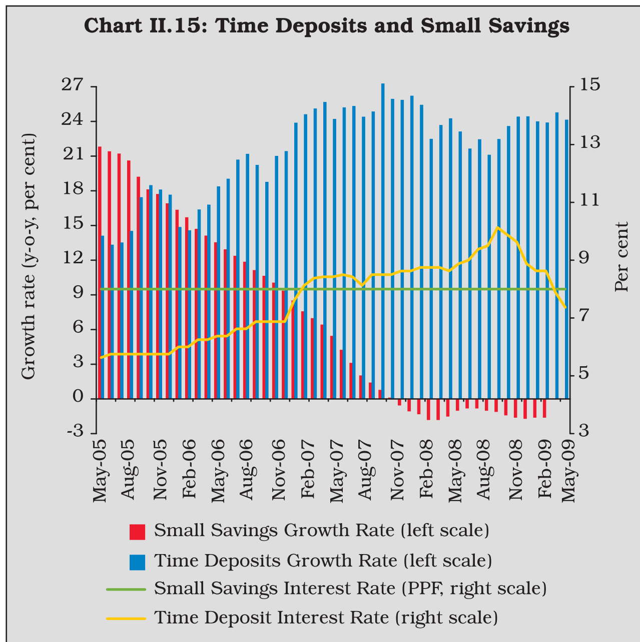


Chart II.14: Time Deposits Growth





special market operations) and decline in the Centre's surplus balances with the Reserve Bank. However, growth in scheduled commercial banks' (SCBs) credit to the Government witnessed some moderation during this period. Bank credit to the commercial sector expanded by 16.8 per cent (y-o-y) at end-March 2009 as compared to 21.1 per cent a year ago.

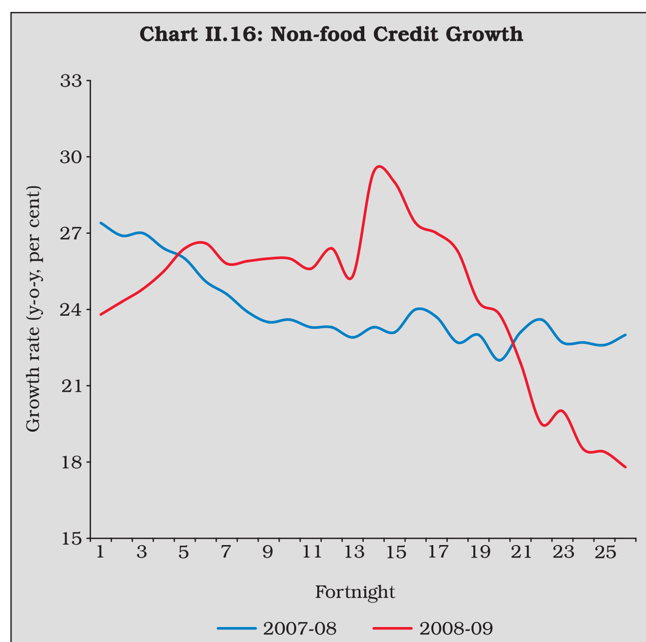
II.3.15 During 2008-09, the growth in non-food bank credit (year-on-year basis) decelerated from a peak of 29.4 per cent in October 2008 to 17.8 per cent by March 2009 (Table 2.23, Appendix Table 18 and 19, Chart II.16). At this rate, non-food credit expansion was lower than that of 23.0 per cent in 2007-08 as also the indicative projection of 24.0 per cent set in the Third Quarter Monetary Policy Review of January 2009. The intra-year changes

Table 2.23: Operations of Scheduled Commercial Banks

(Amount in Rupees crore)

Item	Outstanding as on March 27, 2009	2007-08	2008-09	Variations during 2008-09			
				Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8
C.I. Aggregate Deposits of Residents (C.I.1+C.I.2)	37,66,842	5,95,531	6,26,838	53,155	1,83,287	1,11,471	2,78,925
C.I.1 Demand Deposits	5,23,085	94,579	-1,225	-77,630	52,219	-60,449	84,635
C.I.2 Time Deposits of Residents (C.I.2.1+C.I.2.2)	32,43,757	5,00,952	6,28,063	1,30,785	1,31,068	1,71,920	1,94,290
C.I.2.1 Short-term Time Deposits	14,59,691	2,25,429	2,82,628	58,853	58,980	77,364	87,430
C.I.2.1.1 Certificates of Deposits	6,24,427	69,200	4,57,785	-2,527	3,418	-18,045	4,74,940
C.I.2.2 Long-term Time Deposits	17,84,067	2,75,524	3,45,435	71,932	72,087	94,556	1,06,859
C.II. Call/Term Funding from Financial Institutions	1,13,936	20,668	7,432	-1,116	7,015	-685	2,217
S.I. Domestic Credit (S.I.1+S.I.2)	41,51,147	6,41,799	6,43,388	73,716	1,11,296	2,25,311	2,33,064
S.I.1 Credit to the Government	11,55,786	1,82,603	1,97,124	33,245	-19,641	99,566	83,955
S.I.2 Credit to the Commercial Sector (S.I.2.1+S.I.2.2+S.I.2.3+S.I.2.4)	29,95,361	4,59,196	4,46,264	40,471	1,30,938	1,25,746	1,49,109
S.I.2.1 Bank Credit	27,75,549	4,30,724	4,13,636	31,325	1,57,787	92,708	1,31,815
S.I.2.1.1 Non-food Credit	27,29,338	4,32,846	4,11,824	25,577	1,62,758	85,774	1,37,714
S.I.2.2 Net Credit to Primary Dealers	1,671	721	-1,850	-797	-1,174	1,520	-1,400
S.I.2.3 Investments in Other Approved Securities	10,624	-2,405	-2,429	-194	-567	-1,360	-309
S.I.2.4 Other Investments (in non-SLR Securities)	2,07,517	30,155	36,907	10,136	-25,109	32,877	19,003
S.II. Net Foreign Currency Assets of Commercial Banks (S.II.1-S.II.2-S.II.3)	-53,359	-29,585	16,837	-19,924	-5,564	33,708	8,618
S.II.1 Foreign Currency Assets	55,312	-27,564	24,123	-8,383	2,934	24,151	5,421
S.II.2 Non-resident Foreign Currency Repatriable Fixed Deposits	67,268	-10,525	10,332	2,048	3,898	-2,323	6,710
S.II.3 Overseas Foreign Currency Borrowings	41,404	12,546	-3,047	9,494	4,600	-7,234	-9,907
S.III. Net Bank Reserves (S.III.1+S.III.2-.III.3)	2,46,748	81,050	-24,418	28,526	35,997	-1,16,193	27,252
S.III.1 Balances with the RBI	2,38,195	76,900	-18,927	24,277	36,902	-1,08,427	28,321
S.III.2 Cash in Hand	20,281	1,905	2,237	1,861	3,577	-2,226	-974
S.III.3 Loans and Advances from the RBI	11,728	-2,245	7,728	-2,388	4,482	5,539	94
S.IV. Capital Account	3,32,444	69,821	59,822	47,618	4,932	3,043	4,230
S.V. Other Items (net) (S.I+S.II+S.III-S.IV-C.I-C.II)	1,31,313	7,244	-58,285	-17,339	-53,506	28,998	-16,437

Note : Data relate to the last reporting Friday of each quarter.



in credit flow could be attributed to several factors. First, the demand for bank credit increased sharply during April-October 2008 as corporates found their access to external sources of credit constrained, and shifted that demand to domestic credit. Second, there was a sharp increase in credit to oil marketing companies by Rs.36,208 crore during April-October 2008 as compared to a decline of Rs.1,146 crore in the corresponding period of the previous year. In the subsequent period, however, the demand for credit moderated reflecting the slowdown of the economy in general and the industrial sector in particular. Working capital requirements had also come down because of decline in commodity prices and drawdown of inventories by the corporates. The demand for credit by oil marketing companies also moderated. In addition, substantially lower credit expansion by private and foreign banks also muted the overall flow of bank credit during the year (Table 2.24). The lower expansion in credit relative to the expansion in deposits resulted in a decline in the incremental credit-deposit ratio (y-o-y) of SCBs to 64.9 per cent at end-March 2009 from 73.6 per cent a year ago.

II.3.16 Bank credit growth, which had started moderating from 2006 onwards, witnessed large deceleration during 2008-09. With moderation in credit growth as well as slowdown in GDP, credit-GDP ratio during 2008-09 remained almost at the same level as a year ago. Bank credit to GDP ratio that increased from 30 per cent at end-March 2000 and 47 per cent at end March 2006 to 51 per cent at end-March 2007 and further to 55 per cent at end-March 2008 remained at 56 per cent at end-March 2009. Bank's investment in government securities increased in consonance with increase in time deposits (Chart II.17).

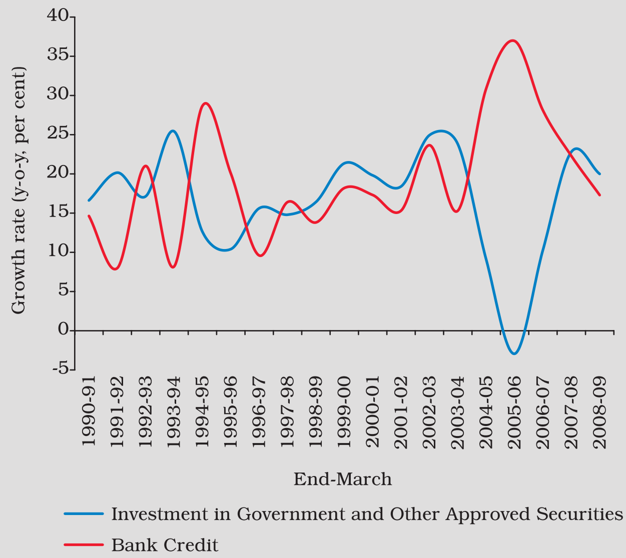
II.3.17 During 2003-04 to 2008-09, Indian economy experienced an average real GDP growth of 8.5 per cent, average WPI inflation of 5.8 per cent and average money supply growth of 17.9 per cent. Growth and inflation conditions, however, changed significantly during the course of 2008-09, and the broad money growth at 18.6 per cent at end-March 2009 in the face of moderating growth and below one per cent (year-on year) WPI inflation has to be seen in the context of significant fall in the velocity of circulation of money (Chart II.18).

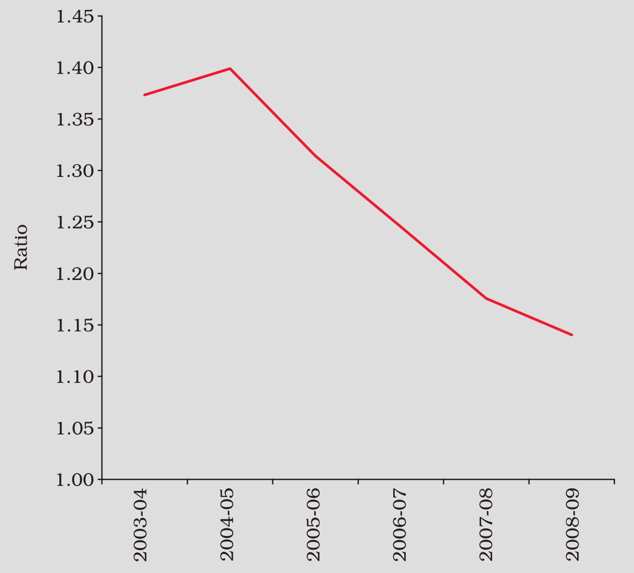
Table 2.24: Credit Flow from Scheduled Commercial Banks

(Amount in Rupees crore)

Item	Outstanding as on March 27, 2009	Variation (year-on-year)			
		As on March 28, 2008		As on March 27, 2009	
		Amount	Per cent	Amount	Per cent
1	2	3	4	5	6
1. Public Sector Banks	20,18,711	3,07,310	22.5	3,48,562	20.9
2. Foreign Banks	1,69,335	36,116	28.5	6,467	4.0
3. Private Banks	5,23,492	78,301	19.9	52,013	11.0
4. All Scheduled Commercial Banks*	27,75,549	4,30,724	22.3	4,13,636	17.5

* : Includes Regional Rural Banks.





II.3.18 Provisional data on sectoral deployment of non-food bank credit indicate deceleration in credit growth to services sector and personal loans in 2008-09. Credit to commercial real estate continued to grow fast and its share in total non-food credit also increased during 2008-09. The share of credit to agriculture in total non-food credit increased to 13.0 per cent during the year (Table 2.25, Appendix Table 20 and 21).

II.3.19 Apart from banks, the commercial sector mobilised resources from a variety of other sources

Table 2.25: Non-food Bank Credit - Sectoral Deployment

(Amount in Rupees crore)

Sector/Industry	Outstanding as on March 27, 2009	Year-on-Year Variations			
		2007-08		2008-09	
		Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6
Non-food Gross Bank Credit (1 to 4)	**26,02,290**	**4,01,650**	**22.3**	**3,99,400**	**18.1**
1. Agriculture and Allied Activities	**3,38,656**	**44,966**	**19.5**	**63,313**	**23.0**
2. Industry (Small, Medium and Large)	**10,54,390**	**1,69,536**	**24.3**	**1,87,515**	**21.6**
of which: Small Enterprises	2,57,027	76,932	65.2	62,185	31.9
3. Personal Loans	**5,62,479**	**54,730**	**12.1**	**54,991**	**10.8**
Housing	2,76,957	26,802	11.6	19,165	7.4
Advances against Fixed Deposits	48,676	4,170	10.2	3,671	8.2
Credit Cards	28,000	8,094	44.2	1,607	6.1
Education	28,579	5,324	35.0	8,047	39.2
Consumer Durables	8,187	-390	-4.2	-612	-7.0
4. Services	**6,46,765**	**1,32,419**	**31.5**	**93,580**	**16.9**
Transport Operators	39,302	9,486	33.5	1,484	3.9
Professional & Other Services	45,373	3,201	13.4	18,240	67.2
Trade	1,44,377	17,059	16.0	20,656	16.7
Real Estate Loans	91,575	19,235	43.6	28,261	44.6
Non-Banking Financial Companies	98,853	30,094	61.5	19,835	25.1

Note : 1. Data are provisional and relate to select scheduled commercial banks.
2. Data also include figures of Bharat Overseas Bank, American Express Bank and State Bank of Saurashtra which were merged with Indian Overseas Bank, Standard Chartered Bank and State Bank of India, respectively.

such as capital markets, commercial papers (CPs), non-banking financial companies (NBFCs), financial institutions, external commercial borrowings, American Depository Receipts(ADRs)/ Global Depository Receipts(GDRs) and foreign direct investment. During 2008-09, flow of resources from domestic non-bank sources increased while flow of resources from external sources declined sharply as compared with the previous year. Among the domestic non-bank sources, resources raised through systemically important NBFCs, gross private placements by non-financial entities, total gross accommodation by four Reserve Bank-regulated AIFIs and gross investment by LIC increased, while resources raised by other sources declined. Within external sources, resources raised through external commercial borrowing, ADR/GDR issues and short-term credit declined significantly, while investment through FDI routes registered an increase. Thus, besides the decline in the flow of non-food credit during 2008-09 as compared with 2007-08, the flow of resources from non-bank sources also declined substantially, resulting in lower annual flow of financial resources to the commercial sector (Table 2.26).

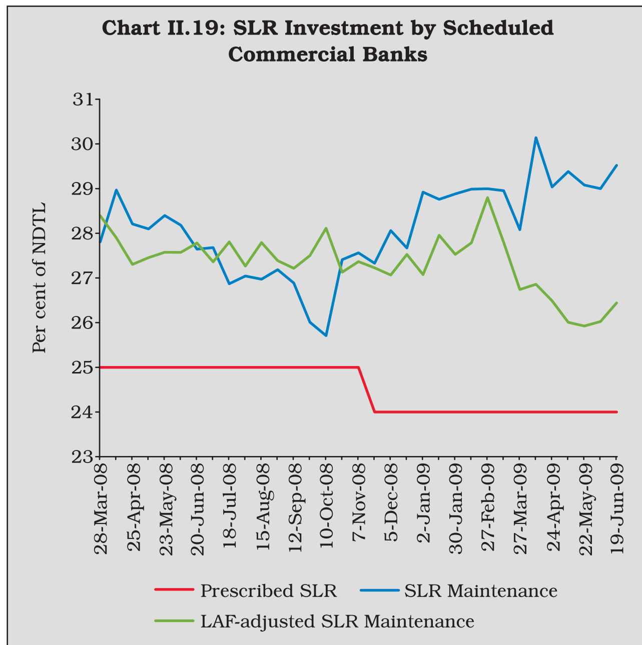
II.3.20 Scheduled commercial banks' investment in SLR securities as a per cent of their net demand and time liabilities (NDTL) increased at end-March 2009 to 28.1 per cent from 27.8 per cent a year ago. However, adjusted for LAF collateral securities on an outstanding basis, SCBs' holding of SLR securities amounted to Rs.11,10,820 crore or 26.8 per cent of NDTL at end-March, 2009 - implying an excess of Rs.1,69,846 crore or 4.1 per cent of NDTL over the prescribed SLR of 24.0 per cent of NDTL (Chart II.19).

II.3.21 Non-SLR investments (i.e., investments in commercial papers, shares, bonds and instruments of financial institutions and mutual funds) by scheduled commercial banks witnessed a large expansion during 2008-09. In the period of high growth in time deposits and moderation in credit expansion, banks channelised their resources to non-SLR investments. Banks' investments in non-

Table 2.26: Flow of Resources to Commercial Sector

(Rupees crore)

Item	2007-08	2008-09
1	2	3
A. Adjusted non-food Bank Credit (NFC)	**4,44,807**	**4,21,091**
i) Non-Food Credit	4,32,846	4,11,824
of which: Petroleum and fertilizer Credit	5,057	31,632
ii) Non-SLR Investment by SCBs	11,961	9,267
B. Flow from Non-banks (B1+B2)	**5,87,659**	**4,66,895**
B1. Domestic Sources	**2,55,230**	**2,96,679**
1 Public issues by non-financial entities	51,478	14,205
2 Gross private placements by non-financial entities	68,249	76,184
3 Net issuance of CPs subscribed by non-banks	10,660	5,590
4 Net Credit by housing finance companies	41,841	26,634
5 Total gross accommodation by 4 RBI regulated AIFIs - NABARD, NHB, SIDBI & EXIM Bank	22,267	31,423
6 Systemically important non-deposit taking NBFCs net of bank credit	36,460	76,828
7 LIC's gross investment in Corporate Debt, Infrastructure and Social Sector	24,275	65,815
B2. Foreign Sources	**3,32,429**	**1,70,216**
1 External Commercial Borrowings / FCCB	91,180	38,009
2 ADR/GDR Issues excluding banks and financial institutions	34,937	4,788
3 Short-term Credit from abroad	68,878	-31,160
4 Foreign Direct Investment to India	1,37,434	1,58,579
C. Total Flow of Resources (A+B)	**10,32,466**	**8,87,986**



SLR securities increased to 25.5 per cent during 2008-09 as compared with 21.5 per cent during 2007-08 (Table 2.27).

Developments during 2009-10

II.3.22 On a year-on-year basis, growth in broad money (M_3) was 20.0 per cent as on July 31, 2009 as compared with 19.9 per cent a year ago. Amongst the major components, growth in aggregate deposits increased marginally to 20.9 per cent from 20.3 per cent a year ago. On the sources side, expansion in bank credit to the commercial sector moderated to 15.5 per cent (y-o-y) as on July 31, 2009 as compared with 23.6 per cent a year ago.

II.3.23 Reserve money growth that remained high during the first quarter of 2008-09, witnessed a sharp decline from end-October 2008 reflecting subsequent reduction in CRR. Since this reduction in reserve money was the result of a deliberate policy action to inject additional liquidity to the banking system and to ensure higher growth in broad money through the higher money multiplier, it is appropriate to assess the monetary conditions in terms of growth in adjusted reserve money. During 2008-09, adjusted reserve money increased by 19.0 per cent as compared with 25.3 per cent a year ago. Broad money (M_3) growth during 2008-09 moderated somewhat and remained lower than a year ago. Net bank credit to the Government was the major driving source of broad money, while credit to the commercial sector witnessed a decline. The expansion in net foreign exchange assets also

Table 2.27: Scheduled Commercial Banks' Non-SLR Investments

(Rupees crore)

Item	Mar. 2006	Mar. 2007	Mar.2008	Mar. 2009
1	2	3	4	5
1. Commercial Paper	**4,821**	**8,978**	**13,045**	**19,688**
2. Units of Mutual Funds	**10,345**	**11,659**	**18,692**	**36,781**
3. Shares issued:	**15,044**	**20,178**	**28,454**	**30,753**
By Public Sector Undertakings	2,274	2,127	3,023	2,767
By Private Corporate Sector	10,501	16,225	23,387	25,043
By Public Financial Institutions	2,270	1,826	2,044	2,943
4. Bonds/debentures issued by	**1,03,170**	**98,201**	**1,08,791**	**1,16,408**
By Public Sector Undertakings	32,345	28,595	27,382	24,182
By Private Corporate Sector	29,523	27,620	28,669	33,093
By Public Financial Institutions	26,402	24,362	23,511	28,103
Others	14,899	17,623	29,230	31,030
Total (1 to 4)	**1,33,380**	**1,39,016**	**1,68,983**	**2,03,630**

Note: Data are provisional and exclude regional rural banks.

witnessed a decline. Commercial banks' investment in non-SLR securities expanded. Besides the decline in non-food credit, flow of non-bank resources to commercial sector during 2008-09 also declined as compared with 2007-08.

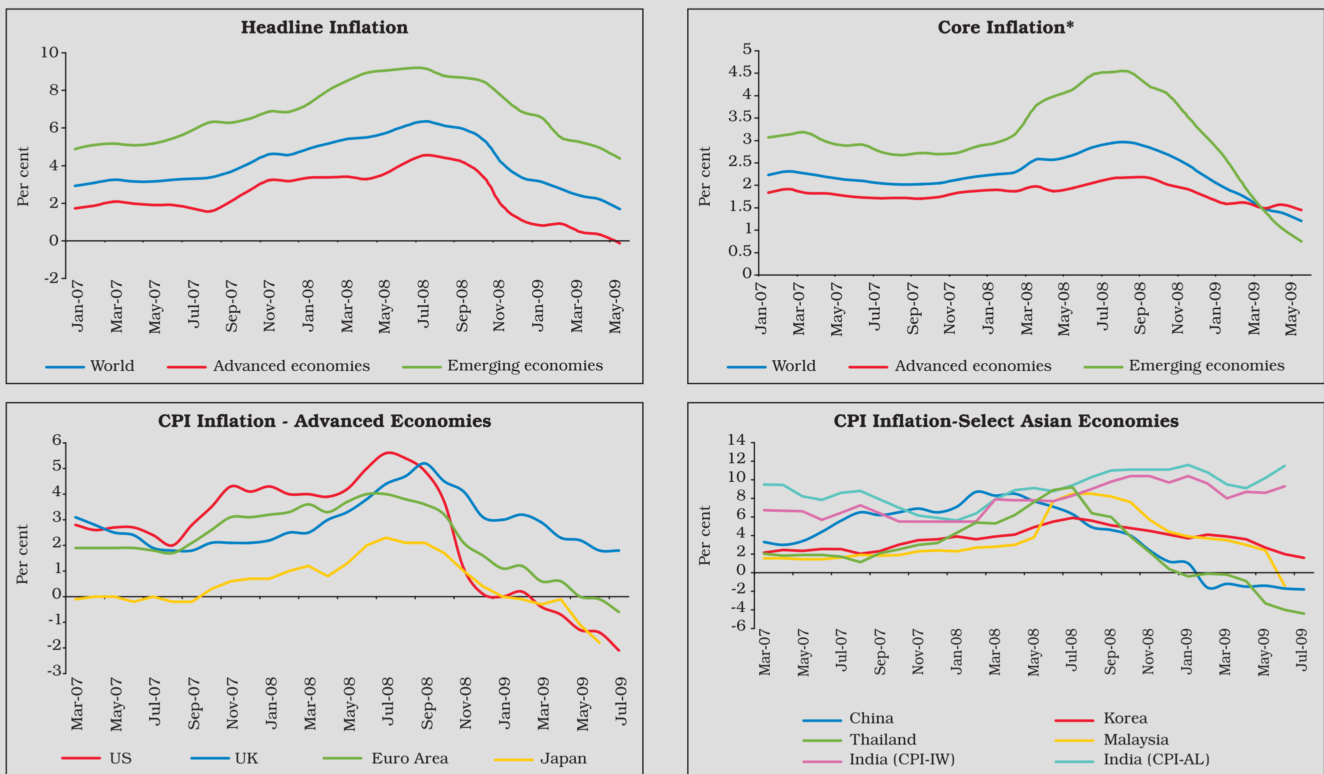
PRICE SITUATION

II.3.24 The significant volatility in inflation that was witnessed in India during the course of 2008-09 is unprecedented, and different contrasting phases within the year had different dynamics in terms of the underlying factors explaining the inflation process, posing equally contrasting policy challenges. The external and supply side factors had a dominant role during the first phase of accelerating inflation to double digit level as well as during the subsequent sharp slowing down to below one per cent by the end of the fiscal year. Mirroring global trends, WPI inflation in India reached an intra-year peak of 12.9 per cent in August 2008 but declined subsequently to 0.8 per cent by end-March 2009. Accordingly, the monetary policy stance of the Reserve Bank during the first half of 2008-09 was primarily conditioned by the urgency to contain inflationary expectations, whereas in the second half, fading inflation concerns allowed the balance of policy focus to clearly shift towards preventing deceleration in growth and preserving orderly conditions in the financial markets.

Global Inflationary Conditions and Monetary Policy Responses

II.3.25 Inflation pressures across the globe, which began to firm up during the second half of 2007-08, magnified during the first half of 2008-09, largely driven by the increase in international commodity prices (Chart II.20). Though the advanced

Chart II.20: Global Inflation



* Excluding food and energy
IW: Industrial Workers. AL: Agricultural Labourers.
Source: World Economic Outlook, International Financial Statistics, IMF, and official websites of respective countries.

economies had started to experience some moderation in aggregate demand pressures during the first half of 2008-09 itself, following the gradually unfolding ramifications of the sub-prime crisis, sustained pressures from international commodity prices kept the headline inflation rising to higher levels. Emerging market economies, on the other hand, witnessed inflationary pressures not only from the increasing international commodity prices but also from the demand pressures following their stronger growth. The inflationary impact of higher food and fuel commodities in the international market, though, was much higher in emerging market economies as compared to the advanced economies, as food and fuel items have higher weights in the consumption baskets in the case of emerging economies. Most countries that operate with inflation targeting frameworks also witnessed their headline inflation diverging significantly from the targets during the first half of 2008-09.

II.3.26 The monetary policy responses to emerging inflationary pressures during the first half of 2008-09 were mixed in view of growth implications of anti-inflationary monetary policy stance, in the face of growing concerns of growth deceleration on account of the snowballing effects of the global financial crisis. Most central banks in advanced economies were faced with the difficult trade-off arising from the combination of slowing economic activity and heightened inflationary pressures. Central banks of the developed countries such as the US, the UK and Canada, which had reduced policy rate in early 2008, paused subsequently. On the other hand, many central banks in emerging economies continued with pre-emptive monetary tightening to contain inflation and inflationary expectations up to September 2008, as the general perception till that time was that the impact of the US sub-prime crisis on the real economy of most developing countries could be minimal.

II.3.27 Inflationary pressures started abating significantly in major economies from August 2008 as international commodity prices declined sharply under the pressure of contracting global demand. The decline in inflation during the second half of 2008-09 in the advanced economies turned out to be much sharper than in the emerging economies, reflecting the more serious contraction in demand in advanced economies. Moreover, as the emerging economies had taken specific measures to limit the full pass-through of international commodity and food prices to domestic inflation during the increasing phase of international commodity prices, the significant decline in international commodity prices also correspondingly did not translate into an equal decline in domestic inflationary pressures in the developing countries. Contrary to earlier perceptions about possible decoupling, however, emerging/developing countries also faced almost the same combination of outcome in terms of slowing growth alongside minimal inflation risk, which significantly widened the scope for adoption of easy monetary policy stance. Monetary policy concerns during the second half of 2008-09, thus, were largely oriented towards mitigating the adverse impact of global financial crisis on economic growth and employment. Hence, most central banks in developed as well as emerging economies reduced their policy rates substantially since September 2008 (Table 2.28).

II.3.28 One of the major challenges that most central banks encountered during 2008-09 was the sharp volatility in inflation experienced within one year. The volatility, as measured by coefficient of variation, which was declining since 2003 increased significantly from 2007 onwards. It could also be seen that the volatility in inflation has been much higher in advanced economies as compared to emerging economies (Chart II.21), notwithstanding the fact that inflation rates in emerging economies have been consistently above the levels experienced in advanced economies.

II.3.29 As inflation fell to near zero levels, and even entered the negative zone temporarily, there was a growing concern about policy options to deal with deflation. Deflation could pose severe challenges to the scope and effectiveness of monetary policy. The policy rates in many advanced

Table 2.28: Global Inflation Indicators

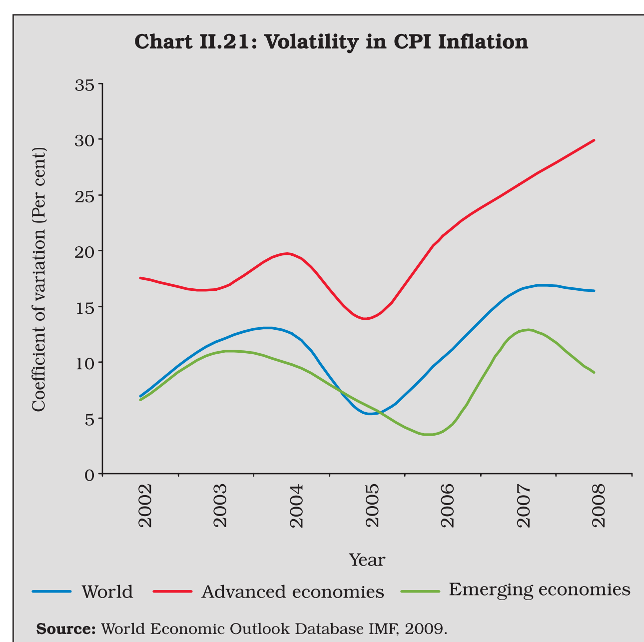
(Per cent)

Country/ Region	Key Policy Rate	Policy Rate (As on Aug. 20, 2009)	Changes in Policy Rates (basis points)			CPI Inflation (y-o-y)		
			Mar 08-Sept 08	Sept 08-Mar 09	Since end-Mar 09	Jul. 2008	Mar. 2009	Jul. 2009
1	2	3	4	5	6	7	8	9
Developed economies								
Australia	Cash Rate	3.00 (Apr.8, 2009)	25	(-) 400	(-) 25	4.5 Q2	2.5 Q1	1.5 Q2
Canada	Overnight Rate	0.25 (Apr.21, 2009)	(-)100	(-) 250	(-) 25	3.4	1.2	-0.9
Euro area	Interest Rate on Main Refinancing Operations	1.00 (May 13, 2009)	25	(-) 275	(-) 50	4.0	0.6	-0.6
Japan	Uncollateralised Overnight Call Rate	0.10 (Dec.19, 2008)	0	(-) 40	0	2.0 *	-0.3	-1.8 *
UK	Official Bank Rate	0.50 (Mar. 5, 2009)	(-)25	(-) 450	0	4.4	2.9	1.8
US	Federal Funds Rate	0.00 to 0.25 (Dec.16, 2008)	(-)25	(-) 200	0	5.6	-0.4	-2.1
Developing economies								
Brazil	Selic Rate	8.75 (July 23, 2009)	250	(-) 250	(-) 250	6.4	5.6	4.5
India	Reverse Repo Rate	3.25 (Apr. 21, 2009)	0	(-) 250	(-) 25	7.7 *	8.0	9.3 *
	Repo Rate	4.75 (Apr. 21, 2009)	125	(-) 400	(-) 25			
			(150)	(-) 400	0			
China	Benchmark 1-year Lending Rate	5.31 (Dec. 23, 2008)	0	(-) 216	0	6.3	-1.2	-1.8
			(200)	(-300)	0			
Indonesia	Bank Indonesia (BI) Rate	6.50 (Aug. 5, 2009)	100	(-) 150	(-) 125	11.9	7.9	-2.7
Israel	Key Rate	0.50 (Apr.1, 2009)	50	(-) 350	(-) 25	4.8	3.6	3.5
Korea	Base Rate	2.00 (Feb. 12, 2009)	25	(-) 325	0	5.9	3.9	1.6
Philippines	Reverse Repo Rate	4.00 (July 9, 2009)	100	(-) 125	(-) 75	12.3	6.4	0.2
Russia	Refinancing Rate	10.75 (Aug. 10, 2009)	50	200	(-) 225	14.7	14.0	12.0
South Africa	Repo Rate	7.00 (Aug. 4, 2009)	100	(-) 250	(-) 250	12.2 *	8.5	6.9 *
Thailand	1-day Repurchase Rate	1.25 (Apr. 8, 2009)	50	(-) 225	(-) 25	9.2	-0.2	-4.4

* : June.

Note : 1. For India, data on inflation pertain to CPI for Industrial Workers.
2. Figures in parentheses in column (3) indicate the dates when the policy rates were last revised. 3. Figures in parentheses in column (4) indicate the variation in the cash reserve ratios during the period.

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



countries having already been brought down to near zero levels, persistence of deflationary conditions could imply that the monetary policy may not ensure required reduction in the real interest rate that may be necessary to contest deflationary head winds. If deflationary symptoms persist, they could give rise to even more serious debt-deflation *i.e.,* an increase in debt burden in real terms. This could trigger widespread defaults and further amplify the negative causal feedback running from the real economy to the financial sector, which, over time could mutually reinforce each other to increase the intensity of the crisis. The real policy rate in most countries have declined since September 2008 (excluding a few), indicating the aggressive monetary easing stance adopted by central banks (Table 2.29).

Table 2.29: Nominal and Real Policy Rates : Select Countries

(Per cent)

Country	Nominal Policy Rate			Real Policy Rate		
	March 2008	Sept. 2008	March 2009	March 2008	Sept. 2008	March 2009
1	2	3	4	5	6	7
Developed Economies						
US	2.25	2.00	0.25	-1.75	-2.90	0.05
UK	5.25	5.00	0.50	2.75	0.20	-2.50
Euro area	4.00	4.25	1.50	0.40	0.65	0.30
Developing Economies						
Brazil	11.25	13.75	11.25	6.55	7.45	5.65
China	7.47	7.20	5.31	-0.83	2.60	6.91
India	7.75	9.00	5.00	-0.15	-0.80	-3.00
				(0.00)	(-3.10)	(4.16)
Indonesia	8.00	9.25	7.75	1.70	-2.85	-0.15
Israel	3.75	4.25	0.75	0.05	-1.25	-2.85
Korea	5.00	5.25	2.00	1.10	0.15	-1.90
Phillipines	5.00	6.00	4.75	-1.40	-5.90	-1.65
Russia	10.25	11.00	13.00	-3.05	-5.10	-1.00
South Africa	11.00	12.00	9.50	0.40	-1.10	0.90
Thailand	3.25	3.75	1.50	-2.05	-2.25	1.70

Note : 1. Real policy rate is the policy rate less year-on-year consumer price inflation. For India, repo rate is taken as the policy rate, while inflation refers to that for CPI-Industrial Workers.
2. Figures in parentheses for India are based on wholesale price inflation.

Source : International Monetary Fund, The Economist and official websites of respective central banks.

Global Commodity Prices

II.3.30 During 2008-09, international commodity prices witnessed sharp increases up to July 2008, but declined thereafter at a fast pace (Table 2.30 and Chart II.22).

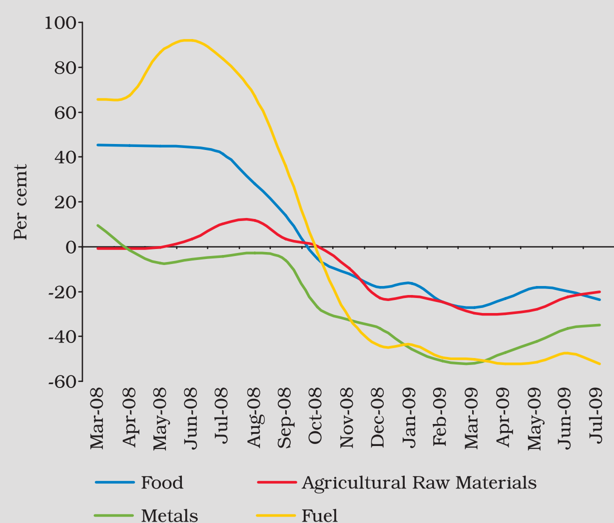
Table 2.30: International Commodity Prices

Commodity	Unit	2004 Market Price	Index (2004=100)								Variation (Per cent)	
			2005	2006	2007	2008-09					Mar.09 over Mar. 08	Mar.09 over Jul.08
						Mar.	Jun.	Sep.	Dec	Mar		
1	2	3	4	5	6	7	8	9	10	11	12	13
Energy												
Coal	$/mt	53.0	90	93	124	223	302	283	149	115	-48.4	-66.1
Crude oil (Average)	$/bbl	37.7	142	170	188	270	349	264	110	124	-54.2	-64.9
Non-Energy Commodities												
Palm oil	$/mt	471.3	90	101	165	265	257	164	107	127	-52.2	-47.1
Soybean oil	$/mt	616.0	88	97	143	240	250	199	120	118	-50.9	-52.0
Soybeans	$/mt	306.5	90	88	125	188	203	166	117	123	-34.3	-40.4
Rice	$/mt	237.7	120	128	137	250	318	288	224	247	-1.0	-19.6
Wheat	$/mt	156.9	97	122	163	280	222	188	140	147	-47.5	-29.6
Maize	$/mt	111.8	88	109	146	210	257	209	142	147	-29.8	-38.0
Sugar	c/kg	15.8	138	206	141	184	169	189	164	187	1.5	-5.8
Cotton A Index	c/kg	136.6	89	93	102	129	124	119	90	83	-35.8	-33.4
Aluminium	$/mt	1716.0	111	150	154	175	172	147	87	78	-55.5	-56.5
Copper	$/mt	2866.0	128	235	248	294	288	244	107	131	-55.6	-55.4
Gold	$/toz	409.2	109	148	170	237	217	203	199	226	-4.6	-1.6
Silver	c/toz	669.0	110	173	200	287	255	182	154	196	-31.8	-27.4
Steel cold-rolled coilsheet	$/mt	607.1	121	114	107	132	181	181	181	148	12.5	-18.2
Steel hot-rolled coilsheet	$/mt	502.5	126	119	109	149	199	199	199	159	6.7	-20.0
Tin	c/kg	851.3	87	103	171	233	261	216	132	125	-46.1	-53.9
Zinc	c/kg	104.8	132	313	309	240	181	166	105	116	-51.5	-34.3

$: US dollar. c : US cent. bbl : barrel. mt : metric tonne. kg : Kilogram. toz : troy oz.

Source: Based on World Bank's actual commodity price data. The year 2004 has been taken as the base to better exhibit price trends over the relevant period.

Chart II.22: Increase in International Commodity Prices (year-on-year)



Source: IMF Primary Commodity Price Data

II.3.31 The boom in international commodity prices up to July 2008 was driven by a number of factors. Since 2007, the demand-supply balance in markets for many commodities remained tight against the backdrop of already low inventory levels. This was further amplified by the strong demand from emerging economies, which accounted for much of the incremental increase in commodity consumption. Diversion of arable land to bio-fuel production affected the supply of certain food commodities like corn and sugar. Effective depreciation of the US dollar against major currencies and increased interest of financial market participants in commodity futures also contributed to the increase in prices.

II.3.32 The sharp decline in international commodity prices during July-December 2008 was largely driven by the indications that the slowdown in economic growth in both advanced as well as emerging economies may turn out to be much deeper and prolonged than what was expected earlier. Some part of the decline in prices could also be attributed to unwinding of commodity investment positions by financial market investors on account of the tight liquidity conditions in financial markets.

Inflation Conditions in India

II.3.33 The Annual Policy Statement for 2008-09 (April 2008) of the Reserve Bank was announced in the background of elevated inflation levels, and the Policy Statement reaffirmed its resolve to bring down inflation to around 5.5 per cent in 2008-09 with a preference for bringing it as close to 5.0 per cent as early as possible, recognising the evolving complexities in the underlying determinants of inflation, spearheaded by transmission of higher inflation from the global market. Inflation hardened during the first quarter of 2008-09 on account of strong demand and significant international commodity price pressures. It was recognised in that context that an adjustment of overall aggregate demand on an economy-wide basis was warranted to ensure that generalised instability did not develop and erode the hard-earned gains in terms of both outcomes of and positive sentiments on India's growth momentum. Accordingly, the Reserve Bank increased the cash reserve ratio (CRR) by a total of 125 basis points between May and August 2008 to 9.0 per cent and the repo rate under the Liquidity Adjustment Facility (LAF) was increased by a total of 125 basis points to 9.0 per cent during June-July 2008.

II.3.34 WPI inflation started to decline from August 2008, mainly on account of decline in prices of freely priced petroleum products, edible oils and textiles. The Mid-Term Review of Annual Policy for the Year 2008-09 observed that in the absence of further shocks, generalised inflation could not be sustained, especially with money supply contained at the average rate of 2003-08, a period when inflation was low and stable. The challenge for the setting of monetary policy was identified to be balancing the costs of lowering inflation in terms of output volatility against the risk of then prevailing levels of inflation persisting and getting embedded in inflation expectations. Starting from September 2008, the Reserve Bank shifted its policy stance from containing aggregate demand to supporting demand expansion with a view to arresting the moderation in growth. Accordingly, between

October 2008 and March 2009, the Reserve Bank reduced the repo rate under the LAF from 9.0 per cent to 5.0 per cent, the reverse repo rate under the LAF from 6.0 per cent to 3.5 per cent and the CRR from 9.0 per cent to 5.0 per cent. The aim of these measures was to augment domestic liquidity and to ensure that credit continues to flow to productive sectors of the economy. The Third Quarter Review of the Annual Statement on Monetary Policy for 2008-09 also noted that the consumer price inflation was yet to moderate and the decline in inflation expectations had not been commensurate with the sharp fall in WPI inflation.

II.3.35 The Annual Policy Statement of the Reserve Bank for the year 2009-10 observed that with WPI inflation falling to near zero, possibly likely to get into a negative territory, *albeit* for a short period, CPI inflation was expected to moderate indicating that inflationary risks had clearly abated. The policy statement assessed that WPI inflation could be around 4.0 per cent by end-March 2010. Given this background of abating inflationary pressures, the Reserve Bank announced further monetary stimulus measures in terms of reduction in the repo rate under the LAF from 5.0 per cent to 4.75 per cent and the reverse repo rate under the LAF from 3.5 per cent to 3.25 per cent on April 21, 2009.

WPI Inflation

II.3.36 During 2008-09, inflation in India, based on year-on-year variation in the wholesale price index (WPI), firmed up to an intra-year peak of 12.9 per cent on August 2, 2008 from 7.7 per cent at end-March 2008. The rapid increase in international commodity prices and the partial pass-through of high international crude oil prices to domestic prices as well as elevated levels of prices of iron and steel, basic heavy inorganic chemicals, machinery and machine tools, oilseeds/oil cakes, raw cotton and textiles were the key drivers of inflation during this period (Table.2.31). The increase in inflation during this period also reflected strong demand pressures emanating from the high growth that the Indian economy witnessed during this period.

II.3.37 As a response to increasing inflation concerns, apart from the monetary policy responses discussed above, a number of fiscal

Table 2.31: Key Commodity Price Movements – Global *vis-à-vis* Domestic

(per cent)

Item	Phase I (End-March 2008 to July 2008)		Phase II (July 2008 to end-March 2009)		Annual March 2009 over March 2008	
	Global	India	Global	India*	Global	India*
1	2	3	4	5	6	7
1. Rice	23.2	1.2	-19.6	13.6	-1.0	12.8
2. Wheat	-25.4	4.1	-29.6	0.5	-47.5	5.2
3. Raw Cotton	-3.6	24.3	-33.4	-17.6	-35.8	2.5
4. Oilseeds	10.3	6.5	-40.4	-7.7	-34.3	-2.3
5. Sugar	7.8	0.1	-5.8	18.5	1.5	18.4
6. Coal mining	52.2	0.0	-66.1	-1.0	-48.4	-1.0
7. Minerals Oil	30.4	17.8	-64.9	-22.5	-54.2	-8.7
8. Edible Oils	2.4	2.5	51.9	-12.4	-50.7	-10.2
9. Oil Cakes	14.7	21.2	-32.5	-9.9	-22.6	19.4
10. Basic Heavy Inorganic Chemicals	..	8.5	..	-19.9	..	-13.7
11. Iron and Steel	34.2	2.8	-23.5	-20.6	2.7	-18.4
12. Non-Ferrous Metals #	34.2	0.1	-45.0	-9.1	-48.2	-9.1

* : Based on WPI as on March 28, 2009.
# : Global prices are represented by IMF metals price index, which covers copper, aluminium, iron ore, tin, nickel, zinc, lead and uranium.
Note: Global price increases are based on the World Bank and IMF primary commodity prices data.

policy initiatives were undertaken by the Government to moderate the impact of high international commodity prices. These included reduction/abolition of import duty in the case of commodities like rice, pulses, wheat, edible oils, maize, milk, iron and steel, cotton, crude oil and petroleum products. Exports of essential commodities like pulses, edible oils and non-basmati rice were banned in April 2008. Export duties were also imposed on commodities like iron and steel products and the tax benefits made available to cotton exporters were withdrawn. Apart from these direct measures, the Government, by not fully passing on the impact of international oil prices to domestic prices of administered petroleum products and issuing oil bonds for the state run oil companies also pursued the strategy of burden sharing.

II.3.38 WPI inflation exhibited strong downward trend starting from August 2008 and reached 0.8 per cent as on March 28, 2009. Between August 2, 2008 and March 28, 2009, WPI declined by 5.3 per cent, driven by the reduction in the administered prices of petroleum products and electricity as well as decline in prices of freely priced minerals oil items, iron and steel, oilseeds, edible oils, oil cakes and raw cotton. Significant part of the end year reduction in WPI inflation could also be attributed to the base effect reflecting the rapid increase in inflation recorded during the last quarter of 2007-08. This decline in WPI, however, does not represent the prevalence of deflationary conditions in India (Box II.16).

II.3.39 Although high volatility in fuel prices has been the major driver of inflation outcome during 2008-09, a look at the inflation excluding the fuel component suggests the generalised nature of inflation. The y-o-y inflation, excluding fuel, was at 2.7 per cent as on March 28, 2009 as compared with 8.0 per cent a year ago. It could be observed that during the period June-October 2008, when WPI inflation was at substantially high levels, overall inflation was higher than the WPI excluding fuel inflation. Since October 2008 the overall inflation has been lower than the inflation excluding fuel (Chart II.23) indicating that the non-fuel components of inflation have not been as volatile as the fuel group. The annual average WPI inflation rate (average of 52 weeks) increased to 8.3 per cent as on March 28, 2009 from 5.8 per cent at end-June 2008 and 4.7 per cent at end-March 2008.

II.3.40 Amongst the major commodity groups, primary articles inflation, y-o-y, increased from 9.7 per cent at end-March 2008 to a peak of 12.7 per cent on November 15, 2008. This mainly reflected increase in the prices of food articles as well as non-food articles. It is important to note that since April 2007, the rate of increase in food prices in India has been much lower than in other emerging economies (Chart. II.24). The y-o-y increase in food prices was 9.6 per cent in July 2008 as against 41 per cent increase in IMF food price index during the same period. This could be attributed to the various supply-side measures undertaken by the Government as well as improved domestic supply conditions in several items in relation to the world supply situation.

II.3.41 Primary articles inflation eased substantially starting from January 2009 and reached 5.2 per cent as on March 28, 2009 as prices declined in the case of food articles, especially vegetables and fruits and non-food articles like raw cotton, oilseeds and minerals. While the decline in prices of food articles partly reflected the improved *rabi* crops during 2008-09 as well as seasonal pattern, the decline in non-food primary articles prices was largely driven by decline in international prices of cotton, oilseeds and minerals. Prices of food articles such as, rice, pulses and vegetables continue to be at elevated levels.

II.3.42 As international crude oil prices increased considerably during the first half of 2008-09, fuel group inflation, increased to an intra-year peak of 18.0 per cent on August 2, 2008 from 6.8 per cent at end-March 2008. This was driven by increase in the prices of mineral oils reflecting the effect of the hikes in the prices of petrol (Rs.5 per litre), diesel (Rs.3 per litre) and LPG (Rs.50 per cylinder) on June 4, 2008 as well as increase in the prices of freely priced petroleum products.

Box II.16
The Deflation Perceptions

In India, the inflation rate dropped from a high of 12.9 per cent on August 02, 2008 to below one per cent by end-March, 2009, with the outlook at that point suggesting the possibility of inflation dropping to sub-zero level temporarily, or even for a longer period, giving rise to the emerging perceptions of a deflation. The year-on-year WPI inflation turned negative since the first week of June 2009. Despite growing concerns, however, there was neither any technical deflation, nor any visible evidence of the severe adverse effects that often accompany a deflation.

According to Bernanke (2002), "Deflation is defined as a general decline in prices, with emphasis on the word 'general'." Thus, price declines in specific sectors, cannot be considered as deflation. Decline in a representative wide-spread broad based index of prices alone could signal deflation. Moreover, the falling prices must be sustained over some time to be seen as a deflation.

The primary causative factor behind a deflation is the collapse of aggregate demand even though deflation could also result from a sudden, large expansion in aggregate supply because of rapid gains in productivity and sharply declining costs. Supply-side deflation though could be more rare.

In the context of the technical definition and the primary factor causing deflation, it could be seen that India's WPI declined over a period of close to six months between September 2008 to February 2009, not on account of any sharp contraction in domestic aggregate demand nor because of a strong favourable domestic supply shock, but because of a sharp correction in international prices. Moreover, the CPI based inflation continued to remained high at around 9 per cent when the WPI inflation was hovering around zero.

The sudden contraction in aggregate demand could result from a bursting of an asset-price bubble, sudden change in over-optimistic growth and productivity expectations, or increase in uncertainty associated with geopolitical or other reasons. None of these factors were present in the case of India, and as against contraction in output alongside negative inflation, despite some deceleration in growth, the output actually expanded by 6.7 per cent in 2008-09, which was one of the highest in the world.

Notwithstanding the fact that India never experienced any deflation, it is, however, important to recognise the severe adverse effects of a deflation and the policies that could be used to counter the deflationary forces. Deflation invariably leads to a situation where a central bank exhausts its conventional policy tool, as the interest rate drops to zero in the process of containing falling aggregate demand. The "liquidity trap" associated with "zero bound" nominal interest rate constraint gives rise to positive real rates, which become worse when falling prices create expectations of even more decline in inflation in future. This scenario not only encourages postponement of consumption, particularly credit financed consumption, but may also give rise to a severe "debt deflation". Besides the loss in output and employment, the debt deflation could lead to rising default, which in turn may degenerate fast to cause a financial crisis. Preventing a deflation is often viewed, therefore, as even more important than containing inflation.

Despite the general perception that a central bank runs out of instruments when it confronts a zero-bound limit on its interest rate actions, Bernanke (2002) viewed that a central bank "definitely (does) *not* run out of ammunition. … a central bank, either alone or in cooperation with other parts of the government, retains considerable power to expand aggregate demand and economic activity even when its accustomed policy rate is at zero". According to Bernanke, a healthy, well capitalised banking system and smoothly functioning capital markets constitute an important line of defence against deflationary shocks. Nominal wage flexibility, *i.e.* wages falling more than the drop in inflation could also help in dealing with a deflation. Svensson (2003) suggested specific options to counter deflationary forces: (a) money financed fiscal expansion, (b) a depreciation of the currency, (c) a tax on money (to escape the zero-bound constraint), (d) expand money base (till it raises inflation expectations), and (e) announce a positive (credible) inflation target.

In India, the policy rates are nowhere in the "zero bound" trap, and the banking system is sound and resilient, and the financial markets also remain orderly. There is no evidence of any debt deflation as a source of vulnerability to the banks. Moreover, despite the decline in WPI inflation, inflation expectations do not seem to have come down at the same rate. The transmission lag from lower policy rates to lower lending rates and the possibility of some pressure on asset quality of the banks because of the current slowdown are issues of some concern; but that is not because of the presence of any deflationary forces in India. As noted in the Annual Policy Statement of the Reserve Bank for 2009-10, negative inflation "...should not be interpreted as deflation for policy purposes. This expected negative inflation in India has only statistical significance and is not a reflection of demand contraction as is the case in advanced economies".

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1. Bernanake, Ben S. (2002), "Deflation: Making Sure it Doesn't Happen Here", Remarks before that National Economists Club, Washington DC, November 21, 2002.
2. Svensson, Lars E O. (2003), "Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others", *Journal of Economic Perspectives* 17, 145-166.
3. Reserve Bank of India (2009), *Annual Policy Statement for the Year 2009-10*, April, 21, 2009.

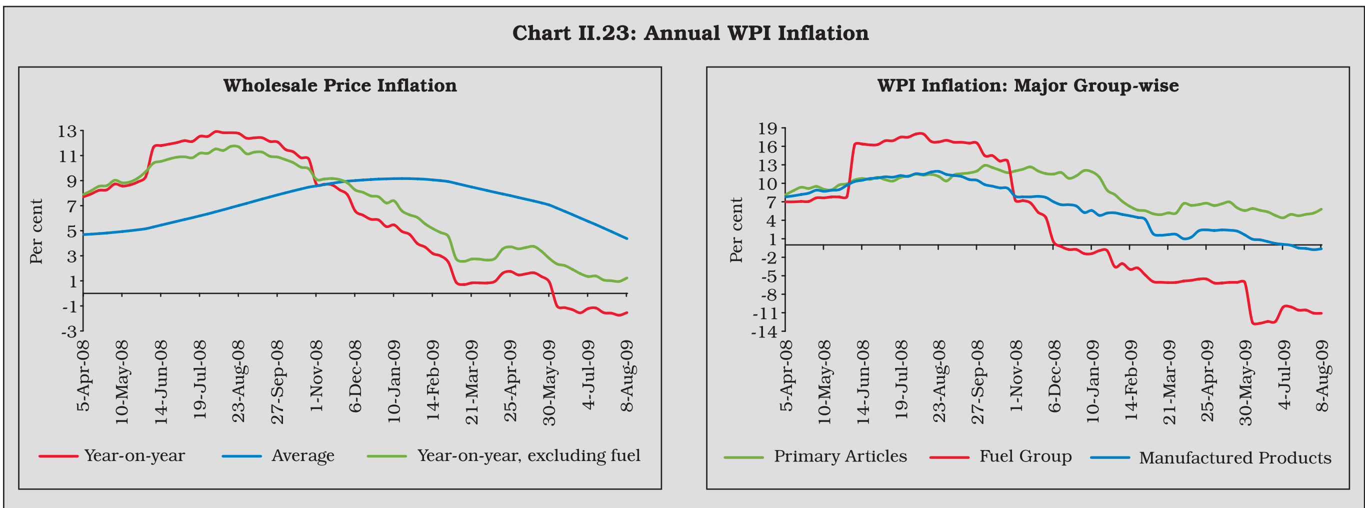

Chart II.23: Annual WPI Inflation

II.3.43 International crude oil prices started to decline from July 2008, and domestic prices of freely priced petroleum products followed the trends in international prices and declined substantially. As international crude oil prices continued to remain considerably low at around US$ 40 per barrel, the Government decided to cut the prices of administered petroleum products twice (price of petrol by Rs. 5 per litre and diesel by Rs. 2 per litre effective from December 6, 2008 and price of petrol by Rs. 5 per litre, diesel by Rs. 2 per litre and LPG for domestic use by Rs.25 per cylinder, effective from January 28, 2009). Reflecting these, the fuel group inflation turned negative (-6.1 per cent) as on March 28, 2009.

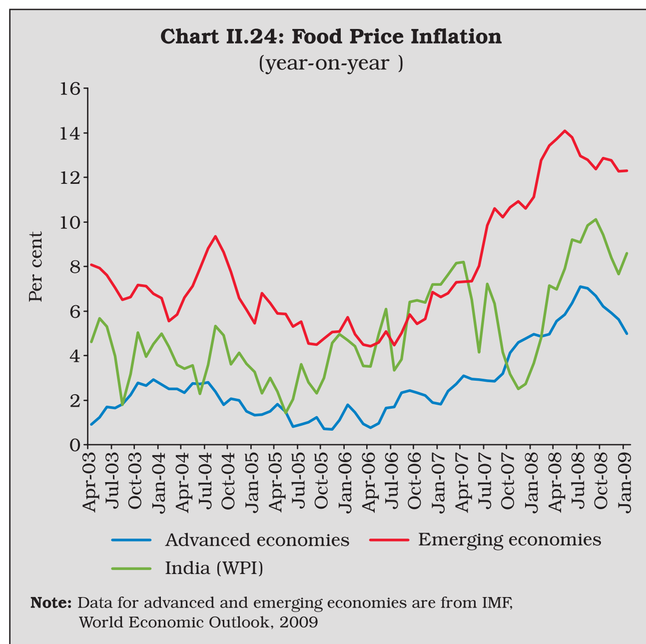

Chart II.24: Food Price Inflation
(year-on-year)

Note: Data for advanced and emerging economies are from IMF, World Economic Outlook, 2009

II.3.44 Manufactured products inflation, year-on-year, increased to a peak of 11.9 per cent in mid-August 2008 from 7.3 per cent at end-March 2008 (Table 2.32). This was mainly driven by sharp increase in prices of iron and steel, sugar, edible oils/oil cakes, textiles, chemicals, and machinery and machine tools. Starting from September 2008, manufactured products inflation declined substantially and reached 1.7 per cent as on March 28, 2009.

II.3.45 Among the major manufactured food products, the sharp increase in domestic edible oils and oil cake prices up to August 2008 reflected increase in demand, lower domestic *rabi* oilseeds production during 2007-08 as well as sharp increase in international prices. Thereafter, oilseeds and edible oils/oil cakes prices declined reflecting the effect of fiscal measures as well as easing international prices on the back of projected increase in global production. However, the risks on further firming up of prices remain as the Fourth Advance Estimates for 2008-09 predict 5.4 per cent decline in domestic oilseeds production. Sugar prices continued to firm up during 2008-09 and have now emerged as one of the major drivers of inflation. The increasing sugar prices partly reflected the firm international prices as well as considerable decline in production in India (22.1 per cent decline

Table 2.32: Wholesale Price Inflation in India (year-on-year)

(Per cent)

Commodity		2007-08 (March 29)		2008-09 (March 28)		2009-10 (Aug. 8)P	
	Weight	Inflation	WC	Inflation	WC	Inflation	WC
1	2	3	4	5	6	7	8
All Commodities	**100.0**	**7.7**	**100.0**	**0.8**	**100.0**	**-1.5**	**100.0**
1. Primary Articles	**22.0**	**9.7**	**28.2**	**5.2**	**141.4**	**5.8**	**85.7**
Food Articles	15.4	6.5	13.2	7.0	128.9	10.5	104.1
i. Rice	2.4	9.1	2.5	14.9	38.7	15.4	20.8
ii. Wheat	1.4	5.1	1.0	4.5	7.7	3.6	3.2
iii. Pulses	0.6	-1.9	-0.2	9.4	7.4	17.6	7.6
iv. Vegetables	1.5	14.2	2.3	-5.2	-8.2	39.7	37.6
v. Fruits	1.5	4.1	1.0	5.9	12.4	-0.5	-0.5
vi. Milk	4.4	8.7	4.7	7.0	35.6	4.2	11.2
vii. Eggs, Fish and Meat	2.2	2.4	0.8	3.2	8.9	8.7	12.8
Non-Food Articles	6.1	11.4	8.8	0.1	1.0	-1.5	-6.3
i. Raw Cotton	1.4	14.0	2.0	2.5	3.5	-10.8	-9.5
ii. Oilseeds	2.7	20.3	6.7	-1.6	-5.6	-1.1	-2.0
iii. Sugarcane	1.3	-0.4	-0.1	0.0	0.0	0.0	0.0
Minerals	0.5	49.9	6.2	7.2	11.6	-14.4	-12.4
2. Fuel, Power, Light and Lubricants	**14.2**	**6.8**	**18.9**	**-6.1**	**-155.7**	**-11.1**	**-162.3**
i. Coal Mining	1.8	9.8	2.5	-1.0	-2.4	-1.0	-1.2
ii. Minerals Oil	7.0	9.3	15.1	-8.7	-132.8	-16.1	-150.6
iii. Electricity	5.5	1.5	1.4	-2.6	-21.1	-2.6	-10.8
3. Manufactured Products	**63.7**	**7.3**	**52.8**	**1.7**	**114.0**	**-0.6**	**-22.4**
i. Food Products	11.5	9.4	12.4	8.8	108.7	9.6	63.6
of which: Sugar	3.6	1.1	0.4	18.4	52.8	34.3	51.1
Edible Oils	2.8	20.0	5.5	-7.6	-21.6	-9.9	-14.5
Oil Cakes	1.4	27.2	5.6	19.3	43.2	6.3	8.6
ii. Cotton Textiles	4.2	-6.8	-2.8	16.2	53.5	-0.7	-1.5
iii. Man -made Fibres	4.4	2.8	0.7	-1.5	-3.2	-6.1	-7.4
iv. Chemicals and Products	11.9	6.0	8.7	2.0	26.4	1.9	13.5
of which : Fertilisers	3.7	5.1	2.0	4.8	17.5	-0.5	-1.0
v. Non-Metallic Mineral Products	2.5	6.4	2.0	1.9	5.4	4.5	6.7
of which: Cement	1.7	5.1	1.1	2.2	4.4	3.4	3.5
vi. Basic Metals, Alloys and Metal Products	8.3	20.3	25.2	-12.2	-155.9	-15.0	-101.5
of which: Iron and Steel	3.6	34.2	20.1	-18.4	-124.4	-21.1	-75.1
vii. Machinery and Machine Tools	8.4	3.5	2.9	2.6	18.9	-2.5	-9.9
of which: Electrical Machinery	5.0	4.8	2.0	1.1	4.2	-4.6	-9.4
viii. Transport Equipment and Parts	4.3	3.9	1.7	3.1	12.0	-0.1	-0.1
Memo:							
Food Items (Composite)	**26.9**	**7.7**	**25.6**	**7.7**	**237.6**	**10.2**	**167.7**
WPI Excluding Food	**73.1**	**7.8**	**74.4**	**-1.6**	**-137.6**	**-5.5**	**-267.7**
WPI Excluding Fuel	**85.8**	**8.0**	**81.1**	**2.7**	**255.7**	**1.2**	**62.3**

WC : Weighted Contribution. P : Provisional.

Source: Office of the Economic Adviser, Ministry of Commerce and Industry, Government of India.

as per the Fourth Advance Estimates for 2008-09). Responding to the price pressures, on May 26, 2009, the Forwards Markets Commission banned futures trading in sugar.

II.3.46 Metal prices were one of the key drivers of inflation in India during 2008-09. Domestic iron and steel prices inflation had reached 36 per cent, y-o-y, by end-August 2008 reflecting sharp increases in global prices. Since then, iron and steel prices have shown a decline and y-o-y change has turned negative (-18.4 per cent as on March 28, 2009). This decline in domestic iron and steel prices could be attributed to declining global prices, expected

deceleration in demand, both domestic and external, as well as various fiscal measures in the form of reductions in customs duties and imposition of export duties on various steel items announced by the Government since April 2008. Overall, thus, changes in the prices of minerals oil, iron and steel, edible oils/oilseeds and oilcakes, cotton and sugar along with primary food articles were the key drivers of the WPI inflation trend in India during 2008-09.

II.3.47 One of the notable features of inflation trends during 2008-09 has been its relationship with the movements in the exchange rate of the rupee. Inflation increased significantly in India during November 2007-August 2008, a period when the exchange rate underwent appreciation largely on account of increased inflows of foreign capital, which should have benefitted inflation management through favourable pass-through effects. Since August 2008, inflationary pressures subsided considerably even though the exchange rate depreciated. While this might have enhanced the price competitiveness of Indian exports at a time when external demand was contracting, the pass-through effects on domestic inflationary conditions should have worked towards moderating the rapid decline in prices. A *prima facie* observation of the trends in the behaviour of the nominal exchange rate and inflation may suggest that the exchange rate pass-through effects on prices were working in the opposite direction in relation to the expected normal behaviour. However, in view of the leads and lags in transmission of effects from exchange rate to inflation, as also the unprecedented volatility seen in the primary determinants of inflation during 2008-09, empirical evidence on pass-through has to be seen as a dynamic process (Box II.17).

Box II. 17
Pass-through of Exchange Rate Movements to Inflation in India

Exchange rate pass-through, as a concept, refers to the degree of change in domestic prices that may result in response to movements in exchange rates of the domestic currency. The degree of pass-through from exchange rate movements to import prices and subsequently to general price level in the economy may depend on a number of microeconomic and macroeconomic factors. Microeconomic factors include price discrimination by producers, mark-up adjustments, local distribution costs, non-tariff barriers, the degree of returns to scale, and the price elasticity of demand for imported goods. The macroeconomic factors include the level of inflation, perception about the nature of exchange rate movements (temporary or permanent), invoicing pattern of trade, tariffs structure, the size and openness of an economy, and the monetary policy environment. The interactions among these host of factors often give rise to incomplete pass-through, suggesting that domestic prices do not change exactly in the same magnitude as the rate of change in the nominal exchange rate.

Available empirical findings in the Indian context provide broadly similar results as suggested in the literature, although the size of the pass-through coefficient differs. An analysis of exchange rate pass-through to domestic prices for the period 1970 to 2004, found the coefficient of exchange rate pass-through to be in the range of 8-17 basis points for different price indices (RBI, 2004). The same study using a different methodology for the period 1993-2004 found that a 10 per cent depreciation of the exchange rate increases wholesale prices by 0.4 per cent. Almost 60 per cent of this pass-through takes place within one year while 80 per cent of the pass-through is completed within two years of a shock to the exchange rate. With regard to the sensitivity of inflation to exchange rate movements, it was estimated that an increase of 10 per cent in import price inflation raises domestic inflation by up to 1.1 percentage points. The effect is the minimum for CPI inflation (0.5 percentage points) followed by GDP deflator (0.8 percentage points) and wholesale inflation (1.1 percentage points). These differences could be on account of the varied significance of imported goods in the respective baskets. Covering the period 1980-2005, Ghosh and Rajan (2006) found evidence of stronger pass-through in the post-reform period. Using Nominal Effective Exchange Rate (NEER), however, the pass-through coefficient was found to be statistically not significant. Moreover, estimated results from the Error Correction Models (ECM) showed little evidence of short run pass-through, whether for nominal Rupee-US Dollar or NEER.

The above results were also corroborated in the study by Khundrakpam (2007) for the post-reform period (August 1991 to March 2005). The study estimated the pass-through coefficients and found that a 10 per cent change in exchange rate leads to change in final prices by about 0.6 per cent in the short-run and 0.9 per cent in the long-run. The statistical tests on temporal behaviour of pass-

(Contd....)

(....Concld.)

through obtained from rolling regressions showed that, unlike in many countries, there was no evidence of decline in pass-through. A recent BIS study by Mihaljek and Klau (2008) provides estimates of the pass through from exchange rate and foreign price changes to inflation in 14 emerging market countries for the period 1994 to mid-2006. For India, this study suggests that 10 per cent change in exchange rate could lead to change in inflation to up to 2 per cent. Using recursive VAR models, Samantaraya (2009) found modest exchange rate pass-through to CPI inflation during the study period April 1993 to March 2008. Contrary to expectations, the exchange rate appreciation was found to be associated with rising WPI inflation in India, which could be attributed to several factors, like, administered fuel prices, progressive reduction of import tariffs and government incentives to domestic exporters in the face of the exchange rate appreciation.

To sum up, the various empirical studies for India show evidence of incomplete exchange rate pass-through to domestic prices. Since November 2007, both variables have moved in the same direction (*i.e.*, inflation increased when exchange rate was appreciating and inflation declined when exchange rate was depreciating). This could be attributed to the dominating effects of sharp international commodity price movements on domestic inflation, which might have more than swamped the pass-through effects of exchange rate changes. In an extremely volatile inflation environment, particularly in the face of equally volatile international commodity prices and exchange rates, empirical estimates of pass-through may turn out to be noisy, and even misleading, unless the estimates of pass-through control for the variations in other sources of inflation, including international commodity prices.

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International commodity prices increased at a much faster rate than the rate of appreciation in the exchange rate during the first phase and, as a result, the net effect on inflation through import prices still remained positive and strong. Similarly, since August 2008, the decline in global commodity prices has been much sharper than the exchange rate depreciation, causing the net effect on import costs to be negative and significant.

Consumer Price Inflation

II.3.48 Inflation, based on y-o-y variations in consumer price indices (CPIs), increased starting from June 2008, mainly due to increase in the prices of food, fuel and services (represented by the 'miscellaneous' group). Various measures of consumer price inflation remained high in the range of 8.0-9.7 per cent in March 2009 as compared with 7.3-8.8 per cent in June 2008 and 6.0-7.9 per cent in March 2008 (Table 2.33). The higher order of increase in consumer price inflation as compared to WPI inflation in recent months could be attributed to higher weight of food articles in CPIs and higher prices of food articles.

II.3.49 The recent divergence between inflation, as measured by wholesale price index and consumer price indices has been viewed in many quarters as a challenge for the conduct of monetary policy. In view of the large difference between WPI and CPI inflation, and inflation expectations not tracking the WPI inflation Reserve Bank uses full array of available information on inflation. For the conduct of policy, any index providing lead information and which is more representative could meet the necessary requirements of a price series. An important statistical issue of relevance to policy has been to examine why divergences between different price indices become large and particularly, if the divergences persist longer, then what are the lags in the transmission of wholesale price changes to retail prices (Box II.18).

Table 2.33 : Consumer Price Inflation - Major Groups

(Year-on-year variation in per cent)

CPI Measure	Weight	Mar-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Apr-09	May-09	Jun-09
1	2	3	4	5	6	7	8	9	10	11
CPI-IW (Base: 2001=100)										
General	**100.0**	**6.7**	**7.9**	**7.7**	**9.8**	**9.7**	**8.0**	**8.7**	**8.6**	**9.3**
Food Group	46.2	12.2	9.3	10.5	13.1	13.1	10.6	10.4	11.7	–
Pan, Supari *etc.*	2.3	4.4	10.9	7.1	7.8	8.5	8.3	6.7	7.5	–
Fuel and Light	6.4	3.2	4.6	8.4	9.1	9.7	7.4	6.6	5.9	–
Housing	15.3	4.1	4.7	4.7	3.8	3.8	6.0	6.0	6.0	–
Clothing, Bedding *etc.*	6.6	3.7	2.6	2.5	2.5	4.2	5.0	4.2	4.1	–
Miscellaneous	23.3	3.3	6.3	6.2	7.6	8.3	7.4	7.4	7.4	–
CPI-UNME (Base: 1984-85=100)										
General	**100.0**	**7.6**	**6.0**	**7.3**	**9.5**	**9.8**	**9.3**	**8.8**	**9.7**	**9.6**
Food Group	47.1	10.9	7.8	9.6	13.2	13.4	12.2	11.1	12.9	13.6
Fuel and Light	5.5	6.4	4.6	5.3	6.2	7.7	5.9	6.7	5.8	1.3
Housing	16.4	5.6	4.0	3.8	3.5	3.5	5.8	6.0	6.0	6.0
Clothing, Bedding *etc.*	7.0	3.6	4.3	3.4	3.1	2.7	3.3	4.2	4.2	4.2
Miscellaneous	24.0	4.4	4.8	6.6	8.4	9.3	8.6	7.6	8.1	7.3
CPI-AL (Base: 1986-87=100)										
General	**100.0**	**9.5**	**7.9**	**8.8**	**11.0**	**11.1**	**9.5**	**9.1**	**10.2**	**11.5**
Food Group	69.2	11.8	8.5	9.6	12.0	11.9	9.7	9.1	11.2	12.4
Pan, Supari *etc.*	3.8	5.7	10.4	11.2	12.8	13.7	15.3	14.5	14.4	14.2
Fuel and Light	8.4	6.9	8.0	8.9	10.2	11.3	11.5	10.9	10.6	11.0
Clothing, Bedding *etc.*	7.0	3.5	1.8	3.1	6.0	7.0	7.4	7.9	7.6	8.3
Miscellaneous	11.7	6.8	6.1	6.5	7.1	7.0	6.5	6.2	6.6	6.1
CPI-RL (Base: 1986-87=100)										
General	**100.0**	**9.2**	**7.6**	**8.7**	**11.0**	**11.1**	**9.7**	**9.1**	**10.2**	**11.3**
Food Group	66.8	11.5	8.2	9.6	12.0	11.9	10.0	9.1	11.2	12.4
Pan, Supari *etc.*	3.7	5.7	10.6	10.9	12.5	13.4	15.0	14.0	14.1	14.1
Fuel and Light	7.9	6.9	8.0	8.9	10.5	11.3	11.5	10.9	10.6	11.0
Clothing, Bedding *etc.*	9.8	3.1	2.8	4.1	6.5	7.3	8.2	8.4	8.3	8.8
Miscellaneous	11.9	6.3	6.2	6.8	7.4	7.5	6.7	6.2	6.4	6.2
Memo:										
WPI Inflation (end of period)		5.9	7.7	12.0	12.1	5.9	0.8	1.7	0.9	-1.6
GDP Deflator based Inflation*		5.5	4.9	8.0	10.6	8.3	7.8	–	–	–

* : Data for March pertain to full year.
IW : Industrial Workers. UNME : Urban Non-Manual Employees. AL : Agricultural Labourers. RL : Rural Labourers.
Source : Ministry of Commerce and Industry, Labour Bureau and Central Statistical Organisation, Government of India.

Asset Prices

II.3.50 Asset price cycles regained renewed interest in the aftermath of the sub-prime crisis, with increasing realisation that asset price cycles could lead and even to some extent condition the course of the business cycle. Despite the absence of any one convergent view on the monetary policy response to asset price cycles, asset prices clearly represent lead indicators of growth and inflation outcome, even though the exact magnitude of the impact of asset price cycles on inflation and growth and the timing and duration of the impact could be country specific and empirical in nature. In the context of India, the wealth effect associated with the significant correction in stock prices during the global crisis could be viewed as not very significant (Box II.20).

Box II.18
WPI and CPIs : Divergence in Inflation

WPI based inflation has been generally considered as the measure of headline inflation in India, even though the Reserve Bank monitors the full set of available price indices for its overall macroeconomic assessment. Apart from WPI, four different consumer price indices targeting at different sections of the labour force *viz.*, industrial workers (IW), urban non-manual employees (UNME), agricultural labourer (AL) and rural labourer (RL) are also available in India.

In the recent period, the large difference between WPI based and CPI based inflation has raised some confusion about the information properties of such data for meaningful economic analysis. The differences in CPI and WPI inflation could emerge, to a large extent, on account of the differences in the coverage of commodities/target groups in the different indicators (Table A).

The WPI and CPIs differ in terms of their weighting pattern. While food items get the maximum weight ranging from 46 per cent in CPI-IW to 69 per cent in CPI-AL, food articles in the primary group and food products in the manufactured group in the WPI series together have a weight of only 27 per cent. The CPIs are, therefore, more sensitive to changes in prices of food articles. The fuel group on the other hand gets a much higher weight in the WPI series (14.23) than the CPIs (ranging from 5.5 to 8.4). While services do not come under the ambit of present WPI, the coverage of non-agricultural products or tradable items is better in WPI than CPI.

The prices of primary food articles remained high both in WPI and CPIs during 2008-09. As CPIs have higher weights, prices of food articles dominated the current inflation more in CPI than that of WPI. In addition, the fall in the prices of manufactured food products though contributed to a part of the decline in WPI during the second half of 2008-09, it did not get reflected with the same impact in CPI due its lower weight. The CPI fuel group continued to register inflation in the range of 9 per cent due to the high prevailing price of LPG. It may be mentioned that even after the recent downward revision (from the increase of Rs.50 to Rs.25 per cylinder) of LPG price, it is still higher than the levels a year ago.

The CPI inflation generally tends to lag behind the WPI inflation, and the lag pattern is not static. Some part of the divergence between CPI and WPI may also be attributed to actual price differences at the wholesale and retail levels. As the retail market receives commodities from wholesale market, it is expected that the changes in the wholesale prices will be reflected in retail prices after some time lag.

Econometric evidence indicates that the divergence between CPI-IW and WPI is a stationary series (*i.e.*, deviations are around the mean) with zero mean implying that there exists no secular upward or downward movement in the difference between CPI and WPI. The contemporaneous correlation between WPI and CPIs continue to be high and statistically significant. Their association, though, is gradually falling over the years. Thus it is the differences between the commodity baskets and the weights which largely explain the difference between the WPI and CPI based inflation in India. Moreover, the past empirical behaviour suggests that with a lag, the CPI exhibits better correlation with the WPI. As the headline inflation, WPI continues to be relevant indicator of inflation in India, though persistent divergence between different price series, when observed, could weaken the case for use of WPI alone for price analyses. In this context, the plans to generate data on two new price series, namely, CPI(Rural) and CPI(Urban) could be useful (Box II.19).

Table A: Salient features of price indices

Sr.No.	Item	CPI-UNME*	CPI-IW	CPI-AL	CPI-RL	WPI
	1	2	3	4	5	6
1	Weights allocated on the basis of	Consumer Expenditure Survey				Weights allocated based on wholesale transactions
		First:1958-59	First:1958-59	First:1956-57	First:1983	
		Latest: 1982-83	Latest: 2001	Latest: 1983	Latest: 1983	
2	Base year of the current series	1984-85	2001	1986-87	1986-87	1993-94
3	No. of items/commodities in basket	146-365	120-160	260	260	435
4	No. of centres/villages/quotations	59	76	600	600	1918
5	Time lag of the index	2 Weeks	1 month	3 weeks	3 weeks	2 weeks
6	Frequency	Monthly	Monthly	Monthly	Monthly	Weekly

* : Price collection for CPI-UNME was discontinued with effect from April 2008 and CPI-UNME is now compiled based on ratio method after aggregating the subgroup level indices of CPI-IW using CPI-UNME weights at group/sub-group level for all India.

Source : Government of India, Economic Survey 2006-07.

Box II.19
CPI for the Urban and Rural Population: The Approach

The National Statistical Commission (2001) has recommended, *inter alia*, that the current CPIs do not provide information on changes in the prices for the entire rural and urban population since they are designed to measure the changes in the prices of goods and services consumed by specific segments of the population and hence, there is a need to compile the CPI separately for the entire rural and urban population. Ideally, a measure of inflation should cover the entire gamut of goods and services being purchased by an average consumer in the domestic market. At present, there is no common measure of inflation arising from consumer prices in India, which covers all the population groups and a common set of transactions. The existing CPI measures differ also in terms of basket of goods and services and their weights, geographical areas, base period, etc. These indices do not, as such, reflect the change in the price behaviour and effect of price fluctuations of various goods and services consumed by the population of the country. Therefore, there is a need to construct a harmonised measure of CPI, which can provide a common measure of consumer price-based inflation for the country as a whole. The compilation of CPI (Urban(U)) would be a major step towards this direction. Similar exercise for CPI(Rural(R)) could be taken up at the time of revision of CPI (Agricultural Labour(AL)) and CPI (Rural Labour(RL)), in keeping with the recommendations of the National Statistical Commission.

For monetary policy purpose, a measure of inflation that truly reflects the purchasing power of domestic currency in domestic market would be appropriate. The way the existing CPIs are compiled renders the interpretation of inflationary pressures difficult. The analytical value of information provided by CPIs for the measurement of inflation could be enhanced if the coverage represents the entire population of consumers. The CPI(U) would be a building block towards this goal and is expected to provide a useful tool for monitoring the underlying price movements of the target group. As Consumer Expenditure Survey (CES) is conducted by NSSO once in every five years, it would be possible to construct weighting diagram of CPI(U) afresh every time this survey is conducted. As the sample size of the detailed quinquennial CES is fairly large, CPI(U) is expected to adequately capture the underlying price movements of urban population.

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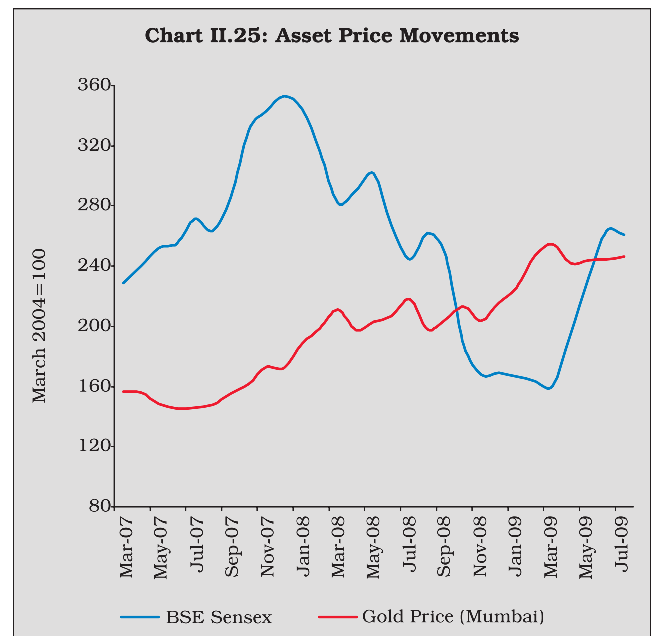
II.3.51 The trends in equity prices during 2008-09 were largely in consonance with trends in major international financial markets, which declined substantially in the wake of deepening turmoil in international financial markets, and the associated concerns about slowdown in the domestic economy (Section V on financial markets of this Chapter for more detailed analysis). Domestic gold prices, which had eased somewhat during the second quarter of 2008-09 mirroring movements in international prices, hardened subsequently to around Rs.15,255 per 10 grams in March 2009 as international prices recorded further increase (Chart II.25).

II.3.52 Apart from the information on equity and gold prices, information on other major assets of the households like house prices have become increasingly important, both for monitoring price trends in these fronts and as leading indicators of economic activity. There have been substantial methodological improvements in recent years in terms of collection and compilation of data pertaining to house prices (Box. II.21).



Box II.20
Wealth Effects of Corrections in Stock Prices in India

Since the onset of the global crisis, stock markets around the world have delivered significant negative wealth effects, and in country specific conditions the associated effects on aggregate demand, particularly consumption demand, could have been varied. Transmission of assert price cycles to business cycles and even to headline inflation cycles through the wealth effect is an issue which has assumed enormous policy significance in the aftermath of the sub-prime crisis.

A stock market boom may increase consumption demand, whereas a decline in stock market wealth may either contribute to a slowdown in economic activity or accelerate an existing slowdown (Deaton, 1992). Estimates of stock market wealth effects for a 10 per cent change in equity prices range from 0.15 to 0.30 per cent in Japan and 0.1 to 0.3 per cent in various European countries to 0.3 to 0.7 per cent in the United States (IMF, 2002).

This issue of stock market wealth effect in India is relevant in the context of a sharp upswing in stock prices between April 2003 and November 2008, followed by an equally steep decline. The BSE Sensex *average* monthly index declined by about 55 per cent between December 2007 (the peak) and March 2009 (the trough), from 19,827 to 8,966. Such a large swing in stock prices could have resulted in substantial erosion of household wealth, with associated implications for the consumption demand, which may be relevant for the countercyclical demand management policies.

In a structural VAR model, four variables are used for examining the impact of changes in stock market wealth effect on consumption demand, *i.e.*, y = real income, c = real consumption demand, r = short-term interest rate, and w = real stock price. These are the key variables which could influence real consumption demand; nominal interest rate has the combined effects of inflation and real interest rate, both of which may influence consumption demand in opposite directions. Data for the period 1996:Q2 to 2008:Q4 were used, *i.e.*, the period coinciding with significant changes observed in the Indian stock price cycles.

The estimated model shows that a positive real income shock causes a persistent increase in real consumption demand. The magnitude of the shock reveals that one per cent increase in real income causes on an average 0.57 per cent increase in the real consumption demand. The stock price shock, signifying the stock market wealth effect, has only short-run and marginal effect on consumption demand. The estimates suggest that a 10 per cent positive shock (increase) to stock prices raises consumption demand by 0.44 per cent in the next quarter. There does not seem to be any long-run effect of stock market wealth effect on consumption demand. The variance decomposition analysis explains the contribution of various factor specific shocks to overall fluctuation in real consumption demand. It is the real income shocks that explain the movement of real consumption demand over the medium to long-run horizon (Table A). Short run interest rate and stock wealth shocks explain only marginal fluctuations in real consumption demand.

Table A: Percentage Variance of Consumption Demand Explained by Various Shocks

Quarter	Income shock	Interest rate	Stock wealth	Consumption demand shock
1	13.1	0.0	0.0	86.9
4	29.8	4.4	5.9	59.9
8	46.9	3.8	6.5	42.9
12	57.4	3.1	7.4	32.1
16	63.9	2.7	8.2	25.2
20	68.5	2.5	8.7	20.4

Note: Shocks to real consumption demand itself explains the role of missing variables (which may include housing wealth as well), and the aggregation of variation in consumption demand on account of all factors should add to 100 (*i.e.,* the total for each row).

Leverage could have a critical role in magnifying and propagating the adverse effects of a major asset price correction, and in the Indian stock market, possible absence of large leveraged positions (unlike in developed countries) could be one of the main factors that could yield weak effects on consumption demand. When leverage is used to build assets, correction in asset prices could entail negative wealth effects, but the contractual liabilities have to be serviced at the contracted rate. Such eventualities could have two major ramifications of significance to a central bank: (a) with lower asset prices (implying lower value of the collaterals), the capacity of the borrowers to borrow would be constrained on the one hand, and on the other, banks may also tighten the credit standards (in terms of asking for more margins and collaterals, since banks address the problem of information asymmetry to a large extent through collaterals), which together could further dampen credit growth, and (b) to offset the negative effect of wealth erosion arising from asset price correction, public in general may save more from current income and deleverage as well, which could delay the recovery process. For explaining the pace and timing of recovery from a slowdown, the wealth effects associated with asset price cycles could be useful.

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Box II.21
House Price Index: Recent Developments

In recent years, many countries have experienced wide swings in the housing prices. In the context of the sub-prime crisis, collection of representative data on house price indices and analytical interpretation of the dynamics of house price changes in relation to the macroeconomic conditions of a country has assumed critical significance for conduct of policies. Housing serves as a major source of individual wealth. Hence, changes in its value may influence consumer spending and saving decisions, in turn, could affect the overall economic activity. Changes in housing prices could also both impact and reflect the health of the residential investment sector, which is a major source for employment generation. Furthermore, house prices represent one of the key determinants of housing affordability, which is an important public policy goal in many countries. To understand the behavior of housing prices and their influence on the economy, it is crucial to have an accurate measure of aggregate housing prices. In practice, however, it is difficult to develop such a measure. Housing is an extremely heterogeneous good, and houses are sold only infrequently. Heterogeneity makes it difficult to distinguish between aggregate and individual price variations. The infrequency of sales implies that, in any time period, prices are not observed for most houses.

Academic research shows that a house price index should be estimated using the finest disaggregation of time variable as possible. There is an obvious benefit of building an index at a higher frequency level, for facilitating empirical research and conduct of policies. A timely and frequently reported index could unsmooth the true price movements and tend to better address market efficiency questions. Two criteria have to be taken into account, however, when using a small data set at a higher frequency level for index reporting. The first criterion is the index's stability at various sample sizes. The second criterion is the index's consistency when updated. In other words, what the overall index's volatility could be when the next period's sales or previous period's late sales get recognised and updated.

From a statistical point of view, shortening the data collection time could imply that: a smaller sample size (sub-sample) will have to be used; and such a collected sub-sample will at best represent the sample population only. The sample size is related to the precision of the estimate (usually precision is inversely proportional to the square root of the sample size). Often it uses a confidence interval to express the precision. The other thing which one needs to be concerned about, when a small sample size is used, is that whether we can assume normality of the population. Asymptotic normality is assumed for many econometric estimators but it only holds if the sample contains large number of observations. How "large" a sample size should be for asymptotic analysis to be appropriate depends on the underlying population distribution. Obviously, there is a balance between the sample size and temporal aggregation in real estate index construction.

In the face of such challenges, three methodologies have been developed to measure the aggregate price of housing. One approach takes a simple average of all house prices observed in a period—usually a mean or median. Doing so essentially ignores the problems raised by heterogeneity and infrequent sales. The benefit is that price series employing this average methodology can often summarise an immense number of transactions on a timely basis. A second approach—the repeat sales methodology—focuses on houses that have been sold more than once. So long as the quality of the houses remain unchanged, their rate of price appreciation is expected to be the same as the rate of aggregate house price appreciation. Price data employing the repeat sales methodology do a very good job of controlling for heterogeneity, while providing aggregate price estimates for numerous geographies. A third approach the hedonic methodology—uses statistical techniques to control for differences in quality. In particular, correlations between the sale price of homes and their attributes are used to estimate "prices" for various attributes, which are then used to calculate the sum total price of a representative bundle of attributes. Unfortunately, properly implementing the hedonic approach requires more detailed data attributes than are typically available. Nevertheless, a leading series employing the hedonic approach does an excellent job in pricing an approximately constant-physical-quality new house over time.

Which of these measures could provide the best estimates may very much depend on one's purpose. One possible purpose relevant to policy is to estimate the increase in homeowners' wealth from increase in house prices. To estimate such an aggregate price rise, the repeat sales index is best; it does a reasonably good job of controlling for variations in the quality houses. The main caveat is that the typical rate of price change as per this measure could be somewhat overstated, due both to the failure to control for home improvement and the unrepresentative nature of homes with repeat sales. A second related purpose could be to estimate the aggregate change in household net worth due to the increase in house prices. In other words, rather than estimating the typical gain, this purpose seeks to estimate the total gain. A third possible purpose could be to gauge the health of the residential construction sector. Rising prices are an obvious stimulant to residential investment. On the one hand, developers have a greater incentive to build. On the other, owners of existing homes could extract equity and engage in home improvement. A fourth possible purpose for estimating the aggregate price of housing could be to gauge average affordability.

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II.3.53 Information on other asset prices like housing has not been available in India on a continuous basis. The Economic Survey, Government of India, in recent years presents details of house price indices of select cities in India. To improve the data availability on house prices the Reserve Bank constituted a Technical Advisory Group (TAG) on Development of Housing Start Up Index (HSUI). The details of the recent developments in initiatives for constructing a house price index as well as recommendations of the TAG are given in Box II.22.

Box II.22
Housing Start-Up Index in India

Information on housing start ups is considered to be one of the leading economic indicators. As high financial outlays are included in new construction projects, that could symbolises the outlook for investment, business and consumer confidence. Trends in the housing start ups may also provide valuable clues to homebuilders, banks, lenders, and home furnishings companies.

Keeping in mind the importance of such an indicator for Central Banks, Reserve Bank of India constituted a Technical Advisory Group on Development of Housing Start Up Index (TAG on HSUI) under the Chairmanship of Prof. Amitabh Kundu, Jawaharlal Nehru University, New Delhi. The TAG comprised top officials from RBI, CSO, NSSO, NHB, NBO, HUDCO, SBI, 4 state DES and renowned academicians in the field. The Group submitted its Report in the final meeting of the TAG on HSUI, held on 3rd March 2009. The major recommendations of the Group are summarised as follows:

The HSUI may be constructed based on two sets of data: (a) The start up coefficients reflecting the recent experience of conversion of housing permits into housing starts and (b) the number of permits issued during the last two years or so. The Group observed that the present system of data collection, as reported by National Building Organisation (NBO), Ministry of Housing and Urban Poverty Alleviation, GoI along with its formats may be fine tuned to obtain the requisite data on building permits on a quarterly basis. Conducting a field survey with adequate coverage of the urban centres that can be representative of the country as a whole would be the first step in institutionalising a system for regular release of HSUI. The Group recommended that the survey may be conducted once in three years for estimating/updating the start rate matrices for each of the selected centres. The Group recommended that as an initial effort, the HSUI may be launched in six Metros and a select sample of Class I towns. The field survey for estimating the start rate matrices can be done in two phases. In the first phase, the data on building permits can be collected in the selected centres using Survey on Building Permits (SBP). The SBP can be conducted by collecting the details of all permits issued for new residential construction from permit issuing authorities of the selected centres. In the second phase, a Survey on the Housing Starts (SHS) based on a sample of permits issued for new residential buildings can be identified. The follow-up of this sample permits can be done by canvassing a Schedule.

Based on this data corresponding to each quarter of any year, 9 start rates (1 for the quarter in which permits are issued + 7 for the 7 succeeding quarters + 1 for all the starts after 2 years) corresponding to 4 different quarters of a year can be worked out and a 4x9 matrix of start rates (coefficients) can be obtained. These start rate (coefficient) matrices can be used to obtain the housing starts for the selected Metros and Class I towns for which the regular data on building permits can be obtained on quarterly basis. For All India level Index the formulae given below can be used to estimate the HSUI for the quarter t.

$$HSUI_t = \frac{\sum_{i=1}^{n} A_{i0} S_{it}}{\sum_{i=1}^{n} A_{i0} S_{i0}}$$

Where **n** is the number of centres, $\mathbf{A_{i0}}$ is the average FSA of the ith centre in the base period; $\mathbf{S_{it}}$ is the number of housing starts in the tth quarter in i^{th} centre; $\mathbf{S_{i0}}$ is the number of housing starts in the base period in the ith centre.

The Group recommended a Standing Committee to be set up by the Reserve Bank of India to launch the initiative, monitor its progress, commission and overview the surveys for constructing start up matrices and consider increasing the scope and coverage of HSUI over time. It also suggested constituting an Advisory Committee on HSUI to be formed at the NBO to guide and oversee the entire process of compilation of housing permit data from concerned local bodies and the Department of Economics and Statistics of the state governments on a regular basis.

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Developments during 2009-10

II.3.54 WPI inflation (y-o-y) declined further from 0.8 per cent at end-March 2009 and turned negative in June 2009 and continued to remain negative since then (-1.5 per cent as on August 8, 2009) largely reflecting the base effect of sharp increase in prices recorded during the first half of 2008-09. During 2009-10 (up to August 8, 2009), however, the WPI has increased by 3.8 per cent indicating the existence of price pressures. Consumer price inflation, as reflected in various consumer price indices, increased further and remained in the range of 9.3-11.5 per cent in June 2009.

II.3.55 To sum up, the large volatility in inflation conditions during 2008-09, which was driven largely by non-monetary factors, posed complex challenges for the conduct of monetary policy in India. Significant divergence between CPI and WPI based inflation and major corrections in asset prices added to the complexity of the challenges. Before the ramifications of the financial crisis became visible, global commodity and food prices had escalated to crisis proportions, which fell equally sharply in the second half of the year as the global recession deepened. In both phases of the cycles, the transmission of the global inflation to Indian inflation was fast and significant, notwithstanding the fiscal measures taken to reduce import costs of certain price sensitive items and the limited pass-through because of administered pricing of certain commodities. The stance of monetary policy also shifted the balance of focus from containing inflation in the first half of the year to arresting slowdown in growth and preserving financial stability in the second half of the year. During 2009-10, year-on-year WPI inflation has remained low and turned negative since June 2009, which is on account of the high base of sharp increases in prices during the first half of 2008-09. Thus, the low WPI inflation reflects mostly a statistical phenomenon, and should not be interpreted as structural deflation arising from demand contraction.

IV. GOVERNMENT FINANCES

II.4.1 The stabilising role of fiscal policy assumed centre stage in the face of a slowing economy confronted with a decline in external demand as well as domestic private demand. This necessitated significant and swift change in the fiscal stance from gradual consolidation in the previous years to proactive counter-cyclical expansion in 2008-09, which led to considerable deviation from the recent trends in all deficit parameters.

II.4.2 The concern over high inflation in the first half of the year was addressed by appropriate fiscal measures in the form of tax cuts and subsidies. During the second half, concerns relating to growth slowdown and associated widespread demand for government support gave rise to use of a fiscal strategy combining both higher expenditure and tax cuts, the aggregate magnitude of which turned out to be significant at 3.1 per cent of GDP (including subsidies and agricultural debt waiver). In a globalised world facing synchronised recession, appropriate use of discretionary fiscal stabilisation has been a common response across several countries, even though the magnitude and content of measures have varied, depending on country specific needs and conditions.

II.4.3 The combined finances of the Central and State Governments deteriorated considerably in the revised estimates (RE) for 2008-09 owing to the impact of global economic slowdown and fiscal stimulus measures by way of indirect tax cuts and additional expenditure through three supplementary demands for grants undertaken by the Central Government to support growth. Consequently, revenue buoyancy dipped substantially resulting in lower revenue receipts to GDP ratio, while total expenditure to GDP ratio increased sharply (Table 2.34). As a result, the key deficit indicators, *viz.*, gross fiscal deficit (GFD), revenue deficit and primary deficit in 2008-09 (RE) widened substantially from the budgeted levels, and were higher than those of 2007-08 by 4.2-4.8 percentage points of GDP. It may be noted that the

Table 2.34: Major Fiscal Indicators: Combined Finances

(Per cent of GDP)

Item	1990-91	1995-96	2007-08	2008-09 RE
1	2	3	4	5
1. Gross Fiscal Deficit	9.4	6.5	4.2	8.9
2. Revenue Deficit	4.2	3.2	0.2	4.4
3. Primary Deficit	5.0	1.6	-1.3	3.5
4. Revenue Receipts	18.6	18.3	22.2	21.9
(i) Tax Revenues	15.4	14.7	18.5	18.1
Direct Taxes	2.5	3.5	7.5	7.4
Indirect Taxes	12.9	11.2	11.0	10.7
(ii) Non-tax Revenue	3.2	3.6	3.7	3.8
5. Total Expenditure	28.7	25.4	27.4*	31.2
(i) Developmental Expenditure	17.1	13.9	14.7*	18.6
(ii) Non-developmental Expenditure	11.5	11.5	12.7	12.6
of which: Interest Payments	4.4	5.0	5.5	5.4
6. Debt@	64.7	61.0	75.1	74.7
		Per cent		
Extra-Budgetary Items	0.2	0.3	0.8	1.8
Capital Outlay/ Total Expenditure	13.1	10.8	17.0	14.2
Interest Payments/ Revenue Receipts	23.6	27.2	24.6	24.5
Revenue Deficit/ Gross Fiscal Deficit	44.6	48.8	4.7	49.6

RE : Revised Estimates.

* : Includes an amount of Rs.35,531 crore on account of acquisition of the Reserve Bank's stake in State Bank of India (SBI) by the Government of India.

@ : Includes 'reserve funds' and 'deposits and advances'.

Note : 1. All indicators are based on combined data of the Centre and States with inter-Governmental transactions netted out.

2. Data in respect of the State Governments are provisional for the years 2007-08 onwards and relate to budgets of 27 State Governments of which 2 are *vote on account*.

3. The fiscal ratios of combined finances are based on latest GDP available from the Central Statistical Organisation.

gains acquired in terms of fiscal consolidation in the recent years through the concerted efforts of the Central and State Governments provided the fiscal space to the Government to pursue counter-cyclical fiscal policy.

CENTRAL GOVERNMENT FINANCES – 2008-09

Revised Estimates

II.4.4 The Union Budget for 2008-09 was presented against the backdrop of robust average GDP growth of 8.8 per cent witnessed during the period 2003-04 to 2007-08, and accordingly the Budget had set somewhat optimistic targets for the key deficit indicators for 2008-09. The key deficit indicators of the Central Government in the revised estimates, however, turned out to be significantly higher than the budget estimates (Table 2.35 and Chart II.26), reflecting the impact of adequate fiscal interventions that became necessary to deal with the challenges of high inflation in the first half and the slowing economy in the second half. The deviations in the deficit indicators as given in the revised estimates from their respective budgeted levels need to be seen in the context of the unprecedented and unexpected post-budget developments in the economy and the fiscal response to the same. During the first half of 2008-09, the Government undertook fiscal measures in the form of tax cuts in primary and manufactured products to contain the inflationary pressures arising from high global commodity prices, which led to some revenue loss. During the second half of the year, as concerns relating to growth moderation increased, the Government had to undertake additional spending and effect further tax cuts as part of the fiscal stimulus package to support aggregate demand in the face of sharp deceleration in private consumption demand.

II.4.5 When contraction in private demand leads to decline in output to below its potential level, higher government expenditure directly helps in generating supply response, given the existence of excess capacity on account of the decline in private demand. As a result, the output-gap gets narrowed down. This is as per the normal counter-cyclical stabilising effect of fiscal policy. Moreover, national income accounting practices impute the output of the Government as equivalent of expenditure incurred by the Government for provision of its services. While a part of the total increase in

Table 2.35: Major Fiscal Indicators of the Central Government

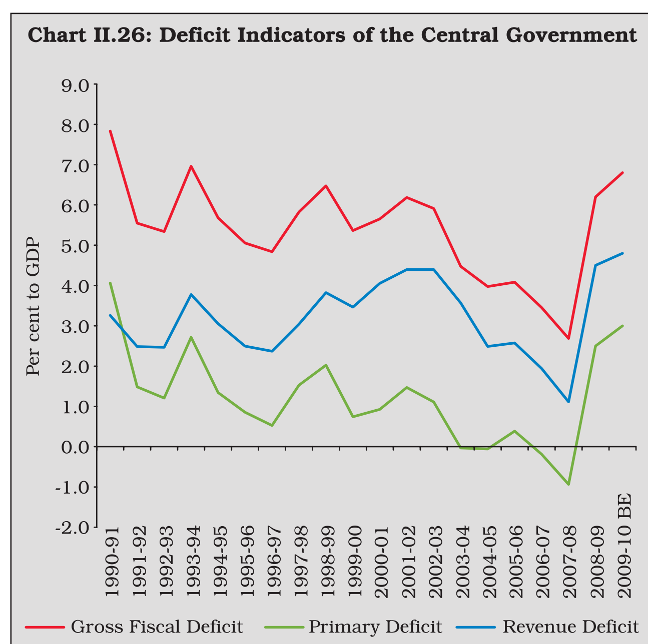
(Amount in Rupees crore)

Item	2008-09 (BE)	2008-09 (RE)	2009-10 (BE)	Variation (3 over 2)		Variation (4 over 3)	
				Amount	Per cent	Amount	Per cent
1	2	3	4	5	6	7	8
1. Revenue Receipts	6,02,935	5,62,173	6,14,497	-40,762	-6.8	52,324	9.3
2. Disinvestment	10,165	2,567	1,120	-7,598	-74.7	-1,447	-56.4
3. Revenue Expenditure	6,58,119	8,03,446	8,97,232	1,45,327	22.1	93,786	11.7
of which: (a) Interest Payments	1,90,807	1,92,694	2,25,511	1,887	1.0	32,817	17.0
4. Capital Outlay	84,522	83,305	1,11,267	-1,217	-1.4	27,962	33.6
of which:							
Defence	48,007	41,000	54,824	-7,007	-14.6	13,824	33.7
5. Net Lending	3,746	4,504	8,114	758	20.2	3,610	80.2
6. Aggregate Expenditure	7,50,884	9,00,953	10,20,838	1,50,069	20.0	1,19,885	13.3
7. Revenue Deficit (3-1)	55,184 (1.0)	2,41,273 (4.4)	2,82,735 (4.8)	1,86,089	337.2	41,462	17.2
8. Gross Fiscal Deficit (4+5+7-2)	1,33,287 (2.5)	3,26,515 (6.0)	4,00,996 (6.8)	1,93,228	145.0	74,481	22.8
9. Primary Deficit (8-3a)	-57,520 (-1.1)	1,33,821 (2.5)	1,75,485 (3.0)	1,91,341	332.7	41,664	31.1

BE : Budget Estimates. RE : Revised Estimates.
Note: Figures in parentheses are percentages to GDP.

expenditure by the Government in 2008-09 relates to transfers, the remaining relates to expansion in both consumption and investment demand. The

Chart II.26: Deficit Indicators of the Central Government



Central Government's net additional expenditure of Rs.1,58,858 crore provided for in the supplementary demand for grants during 2008-09 included transfers such as fertiliser subsidies (Rs.38,863 crore) and agricultural debt waiver (Rs.15,000 crore). The remaining net additional expenditure of Rs.1,04,995 crore could be broadly segregated into consumption of goods and services (Rs.66,255 crore) and the investment component (Rs.38,740 crore). The fiscal multiplier is generally observed to be higher for investment expenditure than consumption expenditure, though the impact of investment expenditure could be felt over a longer period.

II.4.6 Reflecting the large variations in the economic conditions during the year, the gross tax revenue of the Central Government, which witnessed a growth of 25.3 per cent during the first half of 2008-09 over the corresponding period of the preceding year, declined by 11.6 per cent during the third quarter of the year over the corresponding quarter of the preceding year. This was primarily on account of

post-budget tax cuts as well as dampened revenue effects of growth moderation. The gross tax revenue in the revised estimates for 2008-09 was, thus, placed lower than the budget estimates, on account of changes in the indirect taxes such as customs and excise duties and lower realisation in direct taxes due to the economic slowdown, which together affected collections under all the major forms of taxes. Collections under service tax and taxes such as banking cash transaction tax, fringe benefit tax, taxes of UTs and other taxes and duties, which constitute a small proportion of the gross taxes, however, were somewhat higher than the budgeted level (see Table 2.43). Consequently, the net tax revenue (*i.e.,* net of tax revenue transferred to the States) was also placed lower than the budgeted level. Non-tax revenue, however, was placed higher in 2008-09 (RE) than the budget estimates for the year due to an increase of 10.0 per cent in 'other non-tax revenue', such as, economic services, other general services and grants-in-aid and contributions. Other major components, *viz.,* dividends and profits and interest receipts were lower in the revised estimates than in the budget estimates. The revenue receipts (net) of the Centre in the revised estimates for 2008-09 were, therefore, lower than the budgeted level.

II.4.7 On the expenditure front, large sums were provided for under the three supplementary demands for grants with a view to meeting the resource needs of the fiscal stimulus measures and other expenditures. The aggregate expenditure of the Central Government, as a result, were substantially higher in the revised estimates for 2008-09 than the budget estimates, particularly in the revenue account (see Table 2.35). The increase in revenue expenditure was on account of subsidies and defence expenditure in the non-plan component and rural development under the plan component. Subsidies in the revised estimates were higher by 80.9 per cent, primarily due to increase in fertiliser and food subsidies that were necessary to soften the impact of significant rise in international commodity prices (Table 2.36). Implementation of the Sixth Pay Commission award for defence personnel increased defence revenue expenditure. With regard to capital expenditure, while the defence capital outlay declined during 2008-09, non-defence capital outlay increased. Net lending was also higher in the revised estimates for 2008-09, with loan disbursements more than offsetting loan recoveries.

II.4.8 In view of the sharp increase in expenditure and the deceleration in tax revenue, the key deficit indicators, *viz.,* revenue deficit, gross fiscal deficit (GFD) relative to GDP, widened significantly in the revised estimates for 2008-09 over the budget estimates and primary balance was a high deficit in contrast to the budgeted primary surplus for 2008-09 (see Table 2.35).

Table 2.36: Subsidies of the Centre

Item	2005-06	2006-07	2007-08	2008-09BE	2008-09RE	2009-10BE
1	2	3	4	5	6	7
Subsidies	47,522	57,125	70,926	71,431	1,29,243	111276
	(1.3)	(1.4)	(1.5)	(1.3)	(2.4)	(1.9)
of which:						
i. Food	23,077	24,014	31,328	32,667	43,627	52490
	(0.6)	(0.6)	(0.7)	(0.6)	(0.8)	(0.9)
ii. Fertiliser	18,460	26,222	32,490	30,986	75,849	49,980
	(0.5)	(0.6)	(0.7)	(0.6)	(1.4)	(0.8)
iii. Petroleum	2,683	2,699	2,820	2,884	2,877	3,109
	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)

RE : Revised Estimates BE : Budget Estimates
Note : Figures in parentheses are percentages to GDP.

II.4.9 Reflecting the financing needs of an enlarged fiscal deficit, the net market borrowings were over two and a half times the budgeted levels and financed over four-fifths of the GFD in the revised estimates as compared with the budgeted financing of about three-fourths of the GFD during 2008-09. Short-term borrowings financed about one-fifth of GFD in the revised estimates (9.3 per cent in the budget estimates). Draw down of cash balances financed nearly a tenth of GFD (5.4 per cent in budget estimates). Contribution to GFD financing from 'deposit and advances' and 'external assistance' were less in the revised estimates than in the budget estimates (see Table 2.47).

II.4.10 The widening of key fiscal deficit indicators during 2008-09 has been the result of the combined effect of the operation of automatic stabilisers due to economic slowdown and the discretionary policy measures to contain the slowdown. Thus, while the economic slowdown has widened the deficit indicators through direct effects in terms of compressing revenue receipts, the fiscal response to the slowdown has been manifested in the form of higher expenditure and tax cuts, which together have contributed to wider deficits. In the cross-country context, the size of discretionary fiscal stimulus appears to have been determined partly by the magnitude of economic slowdown, as in the G-20 countries, and partly by the size of automatic stabilisers, as in the OECD countries (Box II.23). Despite India being one of the least affected countries in relation to the other G-20 countries in terms of the scale of growth deceleration, the fiscal stimulus used by India has been one of the largest as percentage of GDP.

II.4.11 As against the large dose of discretionary stimulus, the size of automatic stabilisers in India could be at around 0.5 per cent of GDP in 2008-09. This may appear to be on the lower side when compared with those in the advanced economies but is comparable with those in EMEs such as Brazil, China, Indonesia, and South Africa (Box II.24).

Provisional accounts

II.4.12 The provisional accounts for 2008-09 released by the Controller General of Accounts indicate that the revenue deficit and the GFD relative to GDP deteriorated by 0.2 percentage points each *vis-à-vis* the revised estimates mainly on account of lower revenue receipts (Table 2.36). It may be noted that although total expenditure in the provisional accounts was lower than the revised estimates by Rs.19,484 crore, it is the deterioration in revenue receipts (by Rs.17,522 crore), recovery of loans (by Rs.3,540 crore) and other receipts (by Rs.2,021 crore), which led to further widening of deficit indicators.

Debt Position of the Central Government

II.4.13 The outstanding domestic liabilities of the Central Government comprising of internal debt and other liabilities such as National Small Savings Fund (NSSF), state provident funds, other accounts, reserve funds and deposits declined to 56.6 per cent of GDP at end-March 2009 (RE) from 57.7 per cent at end-March 2008. The reduction in debt to GDP ratio, despite the sharp increase in Government borrowings to finance the higher deficits and increased recourse to extra-budgetary liabilities such as special securities to oil marketing and fertiliser companies, was enabled by a higher nominal GDP growth relative to the growth in domestic liabilities and a sharp reduction in government's liabilities under the MSS. Internal debt continues to be the largest component of the outstanding liabilities of the Central Government (64.2 per cent of the total debt at end-March 2009) followed by liabilities on account of NSSF and other accounts (15.2 per cent and 10.2 per cent, respectively).

Box II.23
Fiscal Stimulus Measures: Cross-Country Evidence

In the context of the fiscal policy response to the current crisis there has been a renewed debate on the role of discretionary fiscal policy as a counter-cyclical measure. Several countries have undertaken fiscal stimulus measures to boost aggregate demand and thereby support growth. The types of instruments used and the quantum of stimulus have, however, varied across countries, depending upon the severity of the crisis, the country-specific significance of automatic stabilisers, the accompanying monetary policy actions and most importantly, the availability of fiscal space. In the OECD countries, though most have adopted broad ranging stimulus programmes that involve adjusting various taxes and spending simultaneously, a larger number of them have given priority to tax cuts over boosting expenditure. 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 large number of countries have increased expenditure on investment (infrastructure) and provision of safety nets through transfers (OECD, 2009). Among the G-20 countries, almost all the expenditure measures announced have been temporary in nature. On the other hand, the cuts announced on personal income tax have been permanent in nature in almost all the countries. Indirect tax exemptions have been permanent in some and temporary or self-reversing in others (IMF, 2009).

The size of these discretionary measures varies substantially across the countries. For the G-20 countries, the weighted average of the stimulus in 2009 is placed at about 2.0 per cent of GDP, with the range moving from no stimulus in Turkey to 3.3 per cent of GDP in Saudi Arabia (Chart A).

Unlike the magnitude of fiscal stimulus measures, the actual impact of these measures on economic activity may be difficult to quantify as the multiplier-accelerator interactions may remain highly uncertain during a global crisis of this severity. This is evident from the wide range of outcomes arrived at by different empirical studies depending upon the econometric models and specifications used to estimate the fiscal multipliers. The wide range of results point to a variety of empirical problems, most notably, the difficulty in distinguishing passive changes in taxes, transfers, and spending from those that represent true discretionary adjustments in fiscal policy. Multipliers also depend on country-specific circumstances, including type of instruments used, trade openness, constraints on borrowing, the response of monetary policy, and long-term sustainability. With the above caveats, the IMF's broad estimates of multiplier for the G-20 as a group range 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. With similar caveats, the fiscal multipliers estimated for the OECD countries show that spending measures have a higher multiplier than revenue measures and that the multiplier is higher in the second year than in the first year. Among the spending measures, infrastructure investment was found to have the highest multiplier, followed by direct government purchase of goods and government transfers. Among the revenue measures, cut in personal income tax was likely to have higher multiplier effects than cut in indirect tax. The growth impact of the announced stimulus package in the OECD countries was found to be small (less than 1.0 per cent of GDP) as compared to the magnitude of the impending output gap, barring six countries (Australia, Canada, New Zealand, Poland, Spain and the United States) (OECD, 2009).

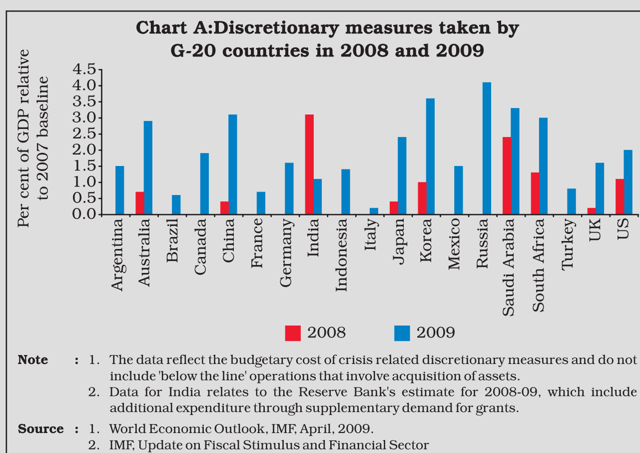


Chart A:Discretionary measures taken by G-20 countries in 2008 and 2009

Note : 1. The data reflect the budgetary cost of crisis related discretionary measures and do not include 'below the line' operations that involve acquisition of assets.
2. Data for India relates to the Reserve Bank's estimate for 2008-09, which include additional expenditure through supplementary demand for grants.

Source : 1. World Economic Outlook, IMF, April, 2009.
2. IMF, Update on Fiscal Stimulus and Financial Sector

For India, following IMF (2009), the three stimulus packages announced by the Union Government during December 2008-February 2009 and the additional expenditure through three supplementary demands for grants during October-December 2008 and February 2009 were segregated into the three categories *viz.,* revenue loss due to tax cuts, investment expenditure and other expenditures. In 2008-09, tax reductions, investment and other expenditure as per cent of GDP amounted to 0.2 per cent, 0.8 per cent and 1.4 per cent, respectively. Based on the IMF estimated multipliers, the stimulus measures adopted by India could help in containing growth deceleration in the range of 0.7 per cent and 2.3 per cent. While the wide range does not suggest any point estimate of the impact, one could infer that the rate of deceleration in growth would have been sharper without the fiscal stimulus.

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3. Organisation of Economic Cooperation and Development (2009), "The Effectiveness and Scope of Fiscal Stimulus", *OECD Economic Outlook*.

Box II.24
Role of Automatic Fiscal Stabilisers

Aggregate demand could be influenced by fiscal measures in the form of government purchases, taxes and transfer payments. When a government deliberately changes its spending or taxation policies in order to influence aggregate demand, it is known as 'discretionary fiscal policy'. Spending and taxation may also automatically change in response to the fluctuations in economic activity during the course of the business cycles. Under a progressive tax system, when income rises during an economic upswing, the tax collection may increase more than proportionately due to higher tax rate on higher incomes and more people moving to the higher tax brackets and *vice versa* during economic downturns. In contrast, transfer payments under unemployment compensation, government purchases and income supplements for the poor increase during economic downswing as more people become eligible for these transfers and services and *vice versa* during economic upswings. These automatic changes in taxes, transfers, and purchases driven by the different phases of the business cycles, often lead to widening/narrowing of deficit during economic downswing/upswing by raising/reducing aggregate demand and act as automatic stabilisers of the economy.

The magnitude of automatic stabilisers depends upon several factors such as the size of the public sector, the cyclicality of the tax base, the design of the public social security system, the progressive nature of the tax system and the degree of output fluctuation. As these conditions differ across countries, the impact of automatic stabilisers on fiscal outcomes also varies across countries. Automatic stabilisers tend to be smaller in emerging market economies (EMEs), reflecting lower magnitude of social transfers and less progressive income taxes. In the OECD countries, it is found that the size of discretionary fiscal stimulus is inversely related to the size of the automatic stabilisers (OECD, 2009). In other words, greater the operation of automatic stabilisers, smaller could be the required magnitude of discretionary fiscal intervention.

Automatic stabilisers are believed to have played an important role of stabilisation in the earlier episodes of business downturn in the G-20. In many countries, changes in discretionary policy were found to have been not well synchronised with the business cycle, suggesting that automatic stabilisers are often a more important source of systematic counter-cyclical policy actions. Thus, in the counter-cyclical role of fiscal policy, there is the need for further augmenting the role of automatic stabilisers, which could be achieved in several alternative ways. In the current downturn, which is deeper and prolonged, however, it has often been emphasised that the operation of automatic stabilisers would not be enough to stabilise the economy, and therefore, well designed discretionary fiscal policy should be activated (see Box II.1).

The automatic stabilisers (AS) for India was estimated as the change in cyclical deficit (COB) between two consecutive years defined as,

$$AS_t = \Delta COB_t = \Delta\,[(\eta_{Rt} - \eta_{Gt})] * GAP_t$$

Where $\eta_{Rt} = (\varepsilon_R - 1)\frac{R_t}{Y_t}$ and $\eta_{Gt} = (\varepsilon_G - 1)\frac{G_t}{Y_t}$, ε_R and ε_G are non-interest revenue and expenditure elasticities with respect to the output gap (GAP_t) assumed to be constant over time and $\frac{R_t}{Y_t}$ and $\frac{G_t}{Y_t}$ are ratios of primary revenue and expenditure to GDP.

The automatic stabilisers is estimated to be about 0.5 per cent of GDP in 2008-09, which compares well with the estimates for the G-20 countries by the IMF (2009).

References

1. Atish R. Ghosh and *et al* (2009), "Coping with the Crisis: Policy Options for Emerging Market Countries", *IMF Staff Position Note*, April 23.
2. IMF (2009), Companion Paper – The State of Public Finances: Outlook and Medium Term Polices after the 2008 Crisis, March 6.
3. Organisation of Economic Cooperation and Development (2009), "The Effectiveness and Scope of Fiscal Stimulus", *OECD Economic Outlook.*

II.4.14 The ratio of interest payments to revenue receipts increased from 31.6 per cent in 2007-08 to 34.3 per cent in 2008-09 (RE) largely on account of increase in the net market borrowings on the one hand and slowdown in the growth of revenue receipts on the other (Chart II.27). The average interest rate on outstanding market loans, however, declined during the year (Table 2.38).

Extra - Budgetary Items

II.4.15 In addition to providing explicit subsidies through the Budget, the Central Government has, over the years, also been providing implicit subsidies to Food Corporation of India (FCI), fertiliser companies and oil marketing companies through issuance of special bonds to compensate

Table 2.37 : Key Deficit Indicators of the Centre for 2008-09 - Provisional Accounts

(Rupees crore)

Indicator	Budget Estimates	Revised Estimates	Provisional Accounts	Variation (per cent)	
				Col. 4 over Col.3	Col.4 over Col.2
1	2	3	4	5	6
Revenue Deficit	55,184 (1.0)	2,41,273 (4.4)	2,47,046 (4.6)	2.4	347.7
Gross Fiscal Deficit	1,33,287 (2.5)	3,26,515 (6.0)	3,30,114 (6.2)	1.1	147.7
Primary Deficit	-57,520 (-1.1)	1,33,821 (2.5)	1,39,629 (2.6)	4.3	-342.7

Note: Figures in parentheses are percentages to GDP.

for under-recoveries arising from keeping retail prices below the input costs. These bonds are considered to be fiscal deficit neutral since they do not involve immediate cash outflow and are, therefore, not treated as part of budgetary expenditure/receipts. However, these bonds have fiscal implications as they carry repayment obligations at a later date and, hence, add to the fiscal liabilities of the Government. Furthermore, as interest payments on such bonds are treated as part of the revenue expenditure, they affect the revenue deficit and, thereby, the fiscal deficit. During 2008-09, special bonds amounting to Rs.75,942 crore and Rs.20,000 crore were issued to oil marketing companies and fertiliser companies, respectively, together accounting for 1.8 per cent of GDP. Along with explicit subsidies provided for food, fertiliser and petroleum in the Budget, the total subsidy burden of the Central Government in 2008-09 was about 4.2 per cent of GDP.

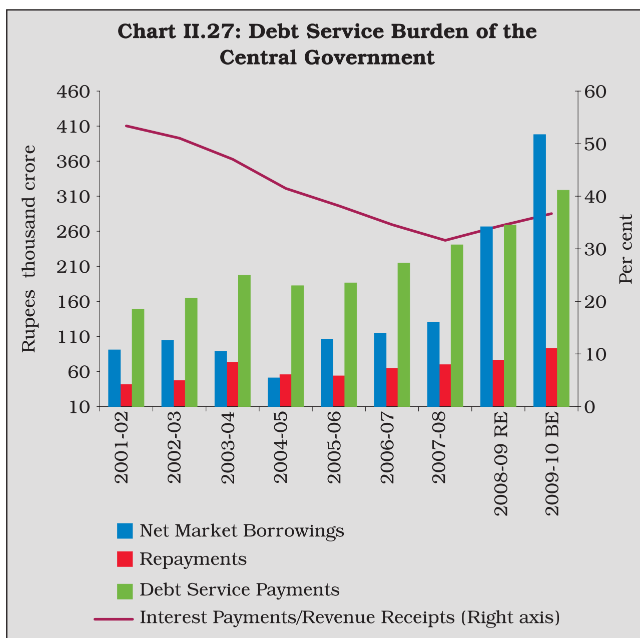


Table 2.38: Average Interest Rates on Outstanding Domestic Liabilities of the Centre

(Per cent)

Year	Market Loans	Small Savings / NSSF	State Provident Funds	Special Deposits
1	2	3	4	5
1990-91 to1994-95 (Average)	10.86	10.85	11.63	11.53
1995-96 to1999-2000 (Average)	12.39	11.62	11.62	10.93
2000-01	12.99	11.6	10.54	9.87
2001-02	12.83	11.61	9.09	10.5
2002-03	12.11	11.56	8.53	8.82
2003-04	11.11	10.88	7.39	7.94
2004-05	9.87	9.37	7.99	7.65
2005-06	10.07	8.90	7.46	7.25
2006-07	8.90	8.91	7.63	6.85
2007-08	9.89	8.37	7.26	5.60
2008-09(RE)	9.14	8.86	8.04	4.73

RE : Revised Estimates.

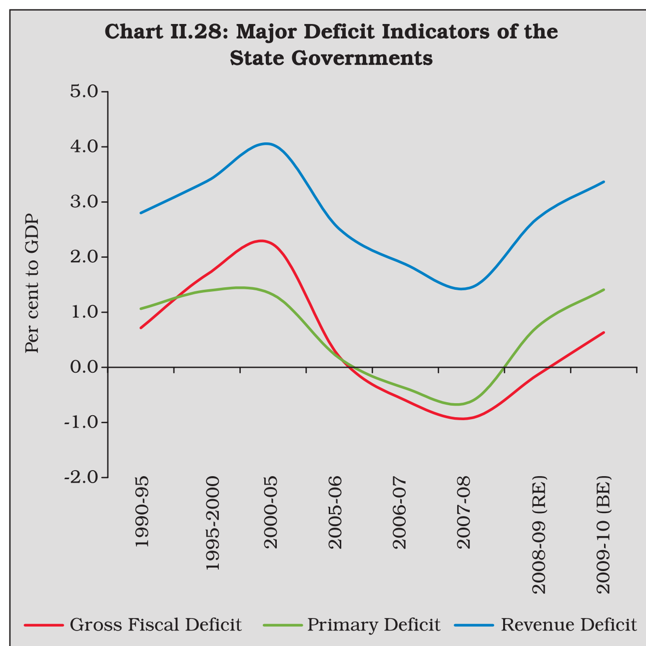
Note: 1. Market loans represent dated securities.

2. Small savings represent small saving deposits, certificates and public provident fund. Since 1999-2000, interest on small savings represents interest on Central Government Special Securities issued to the National Small Savings Fund (NSSF).
3. The Government notified the freezing of the corpus of the Special Deposit Scheme as on June 30, 2003.
4. The interest rate for each component is computed by dividing the interest payments in a year by the outstanding liabilities at the end of the preceding year.

STATE GOVERNMENT FINANCES: 2008-09[10]

II.4.16 The fiscal correction and consolidation path followed by the State Governments in the recent years had enabled them to achieve considerable improvement in their finances up to 2007-08, with the revenue surplus of States reaching 0.9 per cent of GDP and gross fiscal deficit (GFD) moderating to 1.5 per cent of GDP in 2007-08. Reflecting the ramifications of the overall macroeconomic slowdown, however, the consolidated fiscal position of States witnessed deterioration in revised estimates (RE) for 2008-09 *vis-à-vis* the budget estimates (BE). The consolidated revenue surplus of twenty-seven States at 0.1 per cent of GDP in 2008-09 (RE) was lower by 0.4 percentage points than the budget estimates for the year (Chart II.28, see Table 2.49). Out of 27 States, the revenue account of 23 States continued to be in surplus in 2008-09 (RE) *albeit* at a lower level. The decline in revenue surplus in the revised estimates for 2008-09 over the budgeted level was mainly on account of higher growth in revenue expenditure (5.2 per cent above the budgeted level) than in revenue receipts (2.5 per cent above the budgeted level).

Chart II.28: Major Deficit Indicators of the State Governments



II.4.17 During 2008-09 (RE), increase in grants from Centre (by 8.2 per cent) and States' own non-tax revenue (by 19.4 per cent) over their respective budgeted levels contributed to higher than budgeted revenue receipts, despite a decline in States' own tax revenue (by 1.9 per cent). The increase in revenue expenditure in 2008-09 (RE) over the budgeted level was solely contributed by higher development expenditure (by 10.9 per cent) on education, sports, art and culture, medical and public health, expenditure on natural calamities, power and transport. Implementation of the Sixth/State Pay Commission awards by some State Governments also contributed to the increase in revenue expenditure.

II.4.18 The consolidated GFD of States at 2.7 per cent of GDP in 2008-09 (RE) was around 30.3 per cent higher than the budget estimates. Apart from the decline in revenue surplus, the increase in GFD in 2008-09 (RE) was on account of increase in capital outlay (by 8.6 per cent) coupled with the decline in non-debt capital receipts (by 64.6 per cent) over the budgeted level. The capital outlay was higher on account of increase in expenditure on irrigation and flood control, transport, education, sports, art and culture. In order to address the overall macroeconomic slowdown, the Central Government allowed the States to raise additional market borrowings to the extent of 0.5 per cent of gross state domestic product (GSDP) in 2008-09 for undertaking capital investment. Several State Governments implemented various fiscal stimulus measures. Reflecting the deteriorating fiscal situation, the primary deficit re-emerged at 0.7 per cent of GDP in 2008-09 (RE) after the primary balance remained in surplus in the previous two years (Appendix Table 30).

II.4.19 The financing pattern of GFD at the State level has undergone a significant change in recent years on account of decline in collections under the NSSF. Market borrowings continued to be the major source of financing of GFD in 2008-09 (RE), contributing more than two-third of the financing needs, while the special securities issued to

[10] Based on the budget documents of twenty-seven State Governments, of which two are Vote on Account.

NSSF financed merely 1.5 per cent of GFD (Appendix Table 31).

COMBINED GOVERNMENT BUDGETARY POSITION OF CENTRE AND STATES - 2008-09

II.4.20 The combined finances of the Central and State Governments in terms of the key deficit indicators showed significant deterioration during 2008-09 (RE) as compared with the budget estimates due to decline in revenue receipts coupled with sharp increase in expenditure (Table 2.39). The tax receipts in the revised estimates as per cent to GDP declined due to the combined impact of economic slowdown and fiscal stimulus measures in terms of tax cuts to support growth. Aggregate expenditure was higher than budget estimates mainly on account of additional expenditure incurred by the Central Government for the implementation of Sixth Pay Commission Award, agricultural debt waiver scheme, rural employment programme and infrastructure. Some of the State Governments also announced the measures akin to the Central Government and effected pay revisions consequent upon the implementation of Sixth Pay Commission by the Central Government.

Combined Debt

II.4.21 The combined outstanding liabilities as a proportion of GDP at 74.7 per cent showed a marginal decline over end-March 2008 despite the substantial increase in fiscal deficit. This was mainly due to the growth in nominal GDP surpassing the growth in liabilities (Table 2.40).

II.4.22 Rising deficits associated with counter-cyclical expansionary fiscal policy and the revenue loss arising from economic slowdown could impinge

Table 2.39: Indicators of Combined Finances of the Centre and States

(Amount in Rupees crore)

Items	1990-91	1995-96	2000-01	2007-08	2008-09 BE	2008-09 RE	Variation (RE over BE)	
							Amount	Per cent
1	2	3	4	5	6	7	8	9
Gross Fiscal Deficit [II-IA-IB(a)]	**53,580**	**77,671**	**1,99,852**	**1,97,037**	**2,42,273**	**4,71,520**	**2,29,247**	**94.6**
	(9.4)	**(6.5)**	**(9.5)**	**(4.2)**	**(4.6)**	**(8.9)**		
Revenue Deficit [II1-IA]	**23,871**	**37,932**	**1,38,803**	**9,163**	**30,147**	**2,33,938**	**2,03,791**	**676.0**
	(4.2)	**(3.2)**	**(6.6)**	**(0.2)**	**(0.6)**	**(4.4)**		
Primary Deficit	**28,585**	**18,598**	**75,035**	**-60,495**	**-43,604**	**1,86,034**	**2,29,638**	**-526.6**
	(5.0)	**(1.6)**	**(3.6)**	**(-1.3)**	**(-0.8)**	**(3.5)**		
I. Total Receipts(A+B)	1,51,593	2,96,629	5,94,804	13,11,589	14,70,354	16,42,815	1,72,461	11.7
A. Revenue Receipts (1+2)	1,05,757	2,17,526	3,78,817	10,48,406	11,93,487	11,66,470	-27,017	-2.3
1. Tax Receipts (a+b)	87,564	1,74,851	3,05,374	8,73,779	10,12,456	9,65,102	-47,354	-4.7
a) Direct Taxes	14,267	41,603	80,215	3,55,929	4,08,571	3,93,060	-15,511	-3.8
b) Indirect Taxes	73,297	1,33,248	2,25,159	5,17,850	6,03,885	5,72,042	-31,843	-5.3
2. Non-Tax Receipts	18,193	42,675	73,443	1,74,627	1,81,031	2,01,368	20,337	11.2
B. Capital Receipts	45,836	79,102	2,15,987	2,63,183	2,76,867	4,76,345	1,99,478	72.0
a) Non Debt Capital Receipts	3,531	6,968	12,591	50,460	32,267	21,119	-11,148	-34.5
b) Debt Capital Receipts	42,305	72,134	2,03,396	2,12,723	2,44,600	4,55,226	2,10,626	86.1
II. Aggregate Expenditure (1+2+3 = 4+5)	1,62,868	3,02,166	5,91,258	12,95,903	14,68,027	16,59,109	1,91,082	13.0
1. Revenue Expenditure	1,29,628	2,55,457	5,17,618	10,57,569	12,23,634	14,00,408	1,76,774	14.4
2. Capital Outlay	21,353	32,594	55,875	2,19,853	2,24,159	2,34,906	10,747	4.8
3. Loans and Advances	11,887	14,115	17,766	18,481	20,234	23,795	3,561	17.6
4. Development Expenditure	97,149	1,65,361	3,08,546	6,96,200	8,22,517	9,88,513	1,65,996	20.2
5. Non-Development Expenditure	65,719	1,36,805	2,82,712	5,99,703	6,45,510	6,70,596	25,086	3.9

RE : Revised Estimates. BE : Budget Estimates

Notes: 1. Inter-Governmental transactions have been netted out.

2. Figures in parentheses are percentages to GDP.

3. Data in respect of States are provisional from 2007-08 onwards and relate to 27 States of which 2 are *vote on account*.

Table 2.40: Combined Liabilities of the Centre and States

End-March	Outstanding Liabilities (Rupees crore)			Debt-GDP Ratio (per cent)		
	Centre	States	Combined	Centre	States	Combined
1	2	3	4	5	6	7
1990-91	3,14,558	1,28,155	3,68,824	55.2	22.5	64.7
1995-96	6,06,232	2,49,535	7,26,854	50.9	20.9	61.0
2000-01	11,68,541	5,94,147	14,84,106	55.6	28.3	70.6
2005-06	22,60,145	11,67,866	28,79,705	63.0	32.6	80.3
2006-07	25,38,596	12,50,819	31,90,698	61.5	30.3	77.3
2007-08	28,37,425	13,14,355	35,47,790	60.1	27.8	75.1
2008-09 RE	31,36,075	14,44,165	39,73,203	58.9	27.1	74.7
2009-10 BE	34,95,452	16,12,377	44,85,955	59.7	27.5	76.6

RE : Revised Estimates. BE : Budget Estimates.

Note: 1. Data in respect of the States are provisional from 2007-08 onwards and relate to 27 States of which 2 are *vote on account.*
2. Under 'combined liabilities', inter-governmental transactions are netted out.
3. Data include 'reserve funds' and 'deposits and advances'.

on the sustainability of debt in the near term. This could potentially lead to adverse market reactions and may, thereby, render the fiscal stimulus partly counterproductive. The steady state debt dynamics show that the debt sustainability condition in terms of maintaining debt-GDP ratio constant was comfortably satisfied in 2007-08, even after including all off-budget borrowings but this condition would be significantly violated in 2008-09. The debt service burden in terms of the ratio of interest payments to revenue receipts which had continuously declined since 2001-02 has also reversed during 2008-09. Therefore, there would be a need for reverting to fiscal consolidation as outlined in the Fiscal Responsibility and Budget Management (FRBM) Act, 2003 in the medium-term. In India, progress on fiscal consolidation has been associated with higher growth momentum and once the recovery from the current phase of slowdown becomes visible, consolidation may have to be pursued with renewed focus (Box II.25).

Box II.25

Fiscal Stimulus and Debt Sustainability in India

Fiscal solvency requires that government debt should not slip to an explosive path. The substantial widening of deficit indicators due to fiscal stimulus could be expected to alter adversely the debt sustainability conditions, which must reverse with the return to normalcy in economic situation. Taking into account the debt position, nominal GDP growth and nominal interest on debt for the years 2007-08 and 2008-09 (RE), the required primary balance to keep the debt-GDP ratio constant for these two years could be estimated using the following steady state identity.

$$\Delta\left(\frac{D}{Y}\right)_t = \left\{\frac{r-g}{1+g}\right\}\left\{\frac{D}{Y}\right\}_{t-1} - pb \quad (1)$$

Where D is the debt stock[11], Y is GDP, r is the nominal interest rate, g is the nominal growth rate, pb is the primary fiscal balance as a share of GDP, and Δ indicates a change over the previous year. From (1) it can be derived that the debt ratio is constant when

$$(D/Y)\,(r-g)\,/(1+g) = pb \quad (2)$$

The primary balance was inclusive of all off-budget borrowings such as oil and fertiliser bonds, as these borrowings are included in the outstanding liabilities. The estimates suggest that, for 2007-08, given the excess of nominal growth over nominal interest rate, a primary deficit of 2.72 per cent of GDP could keep the debt–GDP ratio constant. The debt sustainability condition was comfortably satisfied, with the primary balance recording a surplus of 0.1 per cent of GDP. For 2008-09, however, the recorded primary deficit of 4.3 per cent of GDP would be significantly higher than the threshold primary deficit of 2.73 per cent of GDP to keep the debt-GDP ratio constant.

Another indicator of debt sustainability is the debt service burden measured in terms of interest payments to revenue receipts ratio. It indicates the extent of pre-emption of government's current receipts by its past fiscal actions. This ratio, which had fallen continuously since 2001-02, also shows a reversal during 2008-09 that may continue during 2009-10.

Therefore, debt sustainability parameters, measured in terms of the actual primary balance relative to required primary balance to keep debt-GDP ratio constant and also in terms of the ratio of interest payments to revenue receipts, indicate some deterioration in 2008-09.

[11] An adjusted debt stock concept removing those components not related to the size of fiscal deficit from the total outstanding has been considered. The components are National Small Savings Fund (NSSF) utilised by the States and the outstanding stock of market stabilisation bonds (MSS). NSSF utilised by the States is already reflected in the outstanding debt stock of the State Governments and the interest dues are also met by the States. MSS is backed by a corresponding equivalent amount of cash balances with the Reserve Bank and has no direct relationship with the movement in fiscal deficit. To make the exercise consistent, interest payment on MSS was excluded from the total interest payments.

Contingent Liabilities/Guarantees of the Government

II.4.23 The outstanding amount under guarantees of the Central Government continued to decline during 2007-08 and stood at Rs.1,04,872 crore at end-March 2008 (Table 2.41). The net depletion in the stock of contingent liabilities in the form of guarantees extended by the Central Government was 0.5 percentage points of GDP. During 2008-09, the assumption of contingent liability in the form of guarantee will amount to Rs.36,606 crore, which includes Rs.10,000 crore for India Infrastructure Finance Company Limited (IIFCL) to support the financing of infrastructure projects under the public-private partnership (PPP) mode. Although this would lead to a deviation from the limit of 0.50 per cent of GDP on net accretion to contingent liabilities under the FRBM Rules, it was necessary to stimulate demand and increase investment in infrastructure projects which is expected to help re-invigorate the economy and contribute to higher revenue buoyancy.

FISCAL OUTLOOK FOR 2009-10[12]

Central Government

II.4.24 The Union Budget for 2009-10 was presented against the backdrop of continued uncertainties in the global economy and its attendant effects on Indian economy. It reiterated the objective of the Government to keep the economy on a high growth trajectory amidst global slowdown by creating demand through increased public expenditure in identified sectors. The fiscal stimulus needed to do so has necessitated the continuance of the deferment in attaining the FRBM targets for the year 2009-10 also. As a medium term objective, however, the imperative to revert to fiscal consolidation process at the earliest has been recognised. The key deficit indicators, *viz.,* GFD, revenue deficit and primary deficit, as per cent of GDP, were budgeted higher than their revised estimates in the preceding year (see Table 2.35). The share of revenue deficit which had been declining since 2003-04 increased to nearly three fourths of GFD in 2008-09 and continued to remain high in 2009-10 (Table 2.42).

Pattern of Receipts

II.4.25 The adverse impact of economic slowdown on the revenue receipts is expected to continue during 2009-10, *albeit*, with some moderation. Revenue receipts are budgeted to be higher in 2009-10 than in 2008-09 mainly on account of non-

Table 2.41 : Outstanding Government Guarantees

(Amount in Rupees crore)

End-March	Centre		States		Total		End-March	Centre		States		Total	
	Amount	Per cent of GDP	Amount	Per cent of GDP	Amount	Per cent of GDP		Amount	Per cent of GDP	Amount	Per cent of GDP	Amount	Per cent of GDP
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1995	62,468	6.1	48,479	4.8	1,10,947	10.9	2002	95,859	4.2	1,65,386	7.3	2,61,245	11.5
1996	65,573	5.5	52,631	4.4	1,18,204	9.9	2003	90,617	3.7	1,84,294	7.5	2,74,911	11.2
1997	69,748	5.1	65,339	4.7	1,35,087	9.8	2004	87,780	3.2	2,19,658	8.0	3,07,438	11.2
1998	73,877	4.8	73,751	4.8	1,47,628	9.7	2005	1,07,957	3.4	2,04,426	6.5	3,12,383	9.9
1999	74,606	4.3	79,457	4.5	1,54,063	8.8	2006	1,10,626	3.1	1,96,914	5.5	3,07,540	8.6
2000	83,954	4.3	1,32,029	6.8	2,15,983	11.1	2007	1,09,826	2.7	1,54,183	3.7	2,64,009	6.4
2001	86,862	4.1	1,68,719	8.0	2,55,581	12.2	2008	1,04,872	2.2	1,71,058 P	3.6	2,75,930 P	5.8

P : Provisional.

Note : Ratios to GDP may not add up to the total due to rounding off.

Source : 1. Data on Centre's guarantees are from budget documents of the Central Government.

2. Data on States' guarantees are based on the information received from State Governments and pertain to 17 major States. Data for 2007 and 2008 pertain to 19 major States and 17 major States, respectively.

[12] All comparisons of 2009-10 in this section are with the revised estimates of 2008-09, unless stated otherwise.

Table 2.42: Decomposition of the GFD of the Central Government

(Per cent)

Year	Revenue Deficit	Capital Outlay	Net Lending	Other
1	2	3	4	5
1990-91	41.6	27.2	31.9	-0.7
1995-96	49.4	23.4	29.6	-2.3
2000-01	71.7	20.8	9.2	-1.8
2005-06	63.0	37.6	0.5	-1.1
2006-07	56.3	42.3	1.8	-0.4
2007-08	41.4	56.3 *	4.9	-2.6
2008-09 (RE)	73.9	25.5	1.4	-0.8
2009-10 (BE)	70.5	27.7	2.0	-0.2

* : Net of acquisition cost of transfer of Reserve Bank's stake in SBI to the Central Government at Rs. 35,531 crore.

tax revenue (Table 2.43). The growth in gross tax revenue is budgeted to be lower than in 2008-09; as a ratio to GDP, it is slated to further decline in 2009-10 (Table 2.44). Non-tax revenue, however, is budgeted to reverse the decline in 2008-09 and record a substantially higher growth in 2009-10, mainly on account of anticipated receipts of Rs.35,000 crore from the auction of third generation (3G) spectrum and Rs.28,000 crore (58 per cent higher than the previous year) in dividend/surplus transfer from the Reserve Bank, nationalised banks and financial institutions. As a result, non-tax revenue to GDP ratio is budgeted higher at 2.4 per cent of GDP (as against a decline to 1.8 per cent of GDP in 2008-09). The non-debt capital receipts are budgeted to decline due to lower disinvestment proceeds during 2009-10 than in 2008-09.

Pattern of Expenditure

II.4.26 Aggregate expenditure is budgeted to increase to 17.4 per cent of GDP in 2009-10 as compared with 16.9 per cent in the preceding year despite moderation in growth, indicating the continued thrust of fiscal stimulus in 2009-10. Both revenue expenditure and capital expenditure as proportion of GDP are budgeted to increase in 2009-10 over the previous year (Table 2.45). The moderation in the growth of aggregate expenditure in 2009-10 would emanate mainly from revenue expenditure, particularly through cutback in fertiliser subsidy, which had risen sharply during 2008-09 due to rapid rise in international fertiliser prices.

II.4.27 Capital expenditure is budgeted to increase in 2009-10 as compared with that in 2008-09, mainly on account of higher growth in capital outlay which is budgeted to increase by 33.6 per cent in 2009-10 as against a decline of 22.1 per cent in 2008-09. Defence outlay would account for nearly half of the budgeted increase in capital outlay; increase in non-defence capital outlay is mainly attributable to economic services. An analysis of expenditure pattern in terms of plan and non-plan components shows that in 2009-10, the budgeted moderation in the growth of plan expenditure would be greater than that of non-plan expenditure. Interest payments and defence would mainly account for the increase in non-plan expenditures. The increase in interest payments would result from the substantial hike in the size of government borrowings and special securities issued to oil marketing and fertiliser companies during 2008-09. Sizeable rise in budgeted non-Plan expenditure in defence services is on account of enhanced provision for pay and allowances, maintenance expenditure, and modernisation of defence services. The Budget has also proposed to provide higher grants to the States. Among the major development expenditures, expenditures on education, health, rural development and irrigation are budgeted to increase in 2009-10 from the levels in 2008-09 (RE). As per cent to GDP, major developmental expenditures would increase, barring agriculture and rural development (Table 2.46).

Financing of Gross Fiscal Deficit

II.4.28 The financing pattern of GFD reveals that the Government would finance almost the entire fiscal deficit for 2009-10 through market borrowings (dated securities and 364-days Treasury Bills). While external borrowings and securities against small savings would contribute more towards GFD financing in 2009-10 than in 2008-09, deposits and

Table 2.43 : Revenue Position of the Centre

(Amount in Rupees crore)

Item	2007-08	2008-09 (RE)	2009-10 (BE)	Variation			
				2008-09		2009-10	
				Amount	Per cent	Amount	Per cent
1	2	3	4	5	6	7	8
Total Receipts (1+2)	**6,78,362 * (14.4)**	**9,00,953 (16.9)**	**10,20,838 (17.4)**	**2,22,591**	**32.8**	**1,19,885**	**13.3**
1. Revenue Receipts	5,41,864 (11.5)	5,62,173 (10.6)	6,14,497 (10.5)	20,309	3.7	52,324	9.3
Tax Revenue (Net)	4,39,547 (9.3)	4,65,970 (8.8)	4,74,218 (8.1)	26,423	6.0	8,248	1.8
Non-Tax Revenue	1,02,317 (2.2)	96,203 (1.8)	1,40,279 (2.4)	-6,114	-6.0	44,076	45.8
2. Capital Receipts	1,36,498 * (2.9)	3,38,780 (6.4)	4,06,341 (6.9)	2,02,282	148.2	67,561	19.9
Non-Debt Capital Receipts	9,586 * (0.2)	12,265 (0.2)	5345 (0.1)	2,679	27.9	-6,920	-56.4
Debt Capital Receipts	1,26,912 (2.7)	3,26,515 (6.1)	4,00,996 (6.8)	1,99,603	157.3	74,481	22.8
Memo :							
Gross Tax Revenue	**5,93,147 (12.6)**	**6,27,949 (11.8)**	**6,41,079 (10.9)**	**34,802**	**5.9**	**13,130**	**2.1**
i) Corporation Tax	1,92,911 (4.1)	2,22,000 (4.2)	2,56,725 (4.4)	29,089	15.1	34,725	15.6
ii) Income Tax@	1,02,644 (2.2)	1,08,000 (2.0)	1,06,800 (1.8)	5,356	5.2	-1,200	-1.1
iii) Customs Duty	1,04,119 (2.2)	1,08,000 (2.0)	98,000 (1.7)	3,881	3.7	-10,000	-9.3
iv) Union Excise Duty	1,23,425 (2.6)	1,08,359 (2.0)	1,06,477 (1.8)	-15,066	-12.2	-1,882	-1.7
v) Service Tax	51,301 (1.1)	65,000 (1.2)	65,000 (1.1)	13,699	26.7	0	0.0
vi) Securities Transaction Tax	8,576 (0.2)	5,500 (0.1)	6,000 (0.1)	-3,076	-35.9	500	9.1
vii) Banking Cash Transaction Tax	586 (0.0)	600 (0.0)	50 (0.0)	14	2.4	-550	-91.7
viii) Fringe Benefit Tax	7,098 (0.2)	8,500 (0.2)	– (0.0)	1,402	19.8	-8,500	–

BE : Budget Estimates. RE : Revised Estimates.

* : Adjusted for an amount of Rs. 34,309 crore which represents Reserve Bank's profit on account of transfer of its stake in SBI to the Central Government.

@ : Excluding Fringe Benefit Tax. Fringe Benefit Tax has been withdrawn with effect from July 7, 2009.

Note : Figures in parentheses are percentages to GDP.

Table 2.44 : Gross Tax Revenues of the Central Government

(Per cent to GDP)

Year	Direct Tax	Indirect Tax	Total
1	2	3	4
1991-92	2.3	8.0	10.3
1995-96	2.8	6.5	9.3
2001-02	3.0	5.2	8.2
2002-03	3.4	5.4	8.8
2003-04	3.8	5.4	9.2
2004-05	4.2	5.5	9.7
2005-06	4.6	5.6	10.2
2006-07	5.6	5.9	11.5
2007-08	6.6	5.9	12.6
2008-09 (RE)	6.5	5.3	11.8
2009-10 (BE)	6.3	4.6	10.9

RE : Revised Estimates. BE: Budget Estimates.

advances would contribute less than in the previous year. The Budget has made no provision in 2009-10 for drawdown of cash balances, which had financed nearly a tenth of GFD during 2008-09 (Table 2.47).

II.4.29 Both revenue and fiscal deficits have been budgeted to be larger than the Eleventh Plan projections for 2009-10, with total expenditure higher by 3.6 percentage points of GDP and revenue receipts lower by 0.1 percentage point of GDP from their respective Plan projections. The expenditure would be higher than projected mainly due to the non-plan (primarily the interest payments

Table 2.45 : Expenditure Pattern of the Central Government

(Amount in Rupees crore)

Item	2007-08	2008-09 RE	2009-10 BE	Variation 2008-09 Amount	Variation 2008-09 Per cent	Variation 2009-10 Amount	Variation 2009-10 Per cent
1	2	3	4	5	6	7	8
Total Expenditure (A+B=1+2)	**6,77,140 * (14.3)**	**9,00,953 (16.9)**	**10,20,838 (17.4)**	**2,23,813**	**33.1**	**1,19,885**	**13.3**
A. Revenue Expenditure	**5,94,433 (12.6)**	**8,03,446 (15.1)**	**8,97,232 (15.3)**	**2,09,013**	**35.2**	**93,786**	**11.7**
B. Capital Expenditure	**82,707 * (1.8)**	**97,507 (1.8)**	**1,23,606 (2.1)**	**14,800**	**17.9 ***	**26,099**	**26.8**
1. Non-Plan Expenditure	**4,72,058 * (10.0)**	**6,17,996 (11.6)**	**6,95,689 (11.9)**	**1,45,938**	**30.9**	**77,693**	**12.6**
i) Interest Payments	1,71,030 (3.6)	1,92,694 (3.6)	2,25,511 (3.9)	21,664	12.7	32,817	17.0
ii) Defence Expenditure	91,681 (1.9)	1,14,600 (2.2)	1,41,703 (2.4)	22,919	25.0	27,103	23.7
iii) Subsidies	70,926 (1.5)	1,29,243 (2.4)	1,11,276 (1.9)	58,317	82.2	-17,967	-13.9
iv) Grants to States	35,769 (0.8)	38,421 (0.7)	48,570 (0.8)	2,652	7.4	10,149	26.4
v) Other non-Plan Expenditure	1,02,652 * (2.2)	1,43,038 (2.7)	1,68,629 (2.9)	4,0386	39.3 *	25,591	17.9
2. Plan Expenditure	**2,05,082 (4.3)**	**2,82,957 (5.3)**	**3,25,149 (5.6)**	**77,875**	**38.0**	**42,192**	**14.9**
i) Budgetary Support to Central Plan	1,48,669 (3.1)	2,04,129 (3.8)	2,39,840 (4.1)	55,460	37.3	35,711	17.5
ii) Central Assistance for State and UT Plans	61,614 (1.3)	78,828 (1.5)	85,309 (1.5)	17,214	27.9	6,481	8.2
Memo:							
Grants	1,09,978	1,26,132	1,46,147	16,154	14.7	20,015	15.9
Loans	11,298	14,202	12,339	2,904	25.7	-1,863	-13.1

BE : Budget Estimate. RE : Revised Estimate.

* : Excludes acquisition cost of Reserve Bank's stake in SBI at Rs. 35,531crore.

Note : Figures in parentheses are percentages to GDP.

Table 2.46 : Expenditure on Select Development Heads of the Central Government

(Amount in Rupees crore)

Item	2008-09(RE)	2009-10(BE)
1	2	3
Agriculture	1,23,038 (2.3)	1,07,441 (1.8)
Education	34,429 (0.6)	42,339 (0.7)
Health	16,277 (0.3)	22,733 (0.4)
Rural Development	40,799 (0.8)	43,554 (0.7)
Irrigation	579 (0.0)	664 (0.0)

Note: Figures in parentheses are percentages to GDP.

and subsidies). Even though, plan expenditure or the gross budgetary support to Plan would also be higher than the Eleventh Plan projections, the revenue component would be far higher than the projected, implying major shortfall in the capital component of plan expenditure (Table 2.48).

II.4.30 The fiscal deficit and debt of the Central Government in India continued to be higher than several other emerging market economies in Asia in 2008 (Table 2.49). The deterioration in the deficit position for India also appeared to be the sharpest, reflecting the large size of India's fiscal stimulus.

Table 2.47 : Financing Pattern of Gross Fiscal Deficit of the Central Government

(Amount in Rupees crore)

Item	2008-09 (BE)	2008-09 (RE)	2009-10 (BE)
1	2	3	4
Gross Fiscal Deficit	1,33,287	3,26,515	4,00,996
Financed by:			
Market Borrowings	99,000	2,66,539	3,97,957
	(74.3)	(81.6)	(99.2)
Securities against Small Savings	9,873	1,323	13,256
	(7.4)	(0.4)	(3.3)
External Assistance	10,989	9,603	16,047
	(8.2)	(2.9)	(4.0)
State Provident Funds	4,800	4,800	5,000
	(3.6)	(1.5)	(1.2)
NSSF	53	11,206	-103
	(0.0)	(3.4)	(0.0)
Reserve Funds	-972	-16,808	-8,428
	(-0.7)	-(5.1)	-(2.1)
Deposit and Advances	8,629	12,788	9,026
	(6.5)	(3.9)	(2.3)
Postal Insurance and Life Annuity Funds	4,123	2,594	2,672
	(3.1)	(0.8)	(0.7)
Draw Down of Cash Balances	7,225	29,984	0
	(5.4)	(9.2)	(0.0)
Others	-10,433	4,486	-34,431
	(-7.8)	(1.4)	-(8.6)

Note: Figures in parentheses are percentages to GFD.

Table 2.48 : Eleventh Plan Projections for the Central Government *vis-à-vis* the Budget Estimates

(Per cent to GDP)

Item	2009-10	
	Eleventh Plan Projections	Budget Estimates
1	2	3
1. Gross Budgetary Support to Plan	5.0	5.6
of which:		
(i) Plan revenue Expenditure	2.9	4.8
2. Total Non-Plan	8.9	11.9
of which:		
(i) Interest Payments	3.0	3.9
(ii) Defence	2.3	2.4
(iv) Non-Plan grants to States	0.6	0.8
(v) Subsidies	1.0	1.9
3. Total Expenditure (1+2)	13.8	17.4
4. Gross tax revenue	12.2	11.0
Less: Share of States	3.3	2.8
5. Net Tax to the Centre	8.9	8.1
6. Non-tax Revenue	1.8	2.4
7. Total Revenue Receipts	10.6	10.5
8. Gross Fiscal Deficit	3.0	6.9
9. Revenue Deficit	0.0	4.8

State Budgets 2009-10

II.4.31 The fiscal correction and consolidation at the State Government level during the past few years has suffered a setback in view of the moderation in economic activities. The consolidated revenue account of the State Governments is budgeted to turn into deficit of 0.6 per cent of GDP

Table 2.49: Deficit and Debt Indicators of the Central Government-Select Countries

(As per cent of GDP)

	Fiscal Deficit				Public Debt			
	2005	2006	2007	2008	2005	2006	2007	2008
1	2	3	4	5	6	7	8	9
China	1.2	0.8	-0.6	0.4	17.9	17.3	n.a.	n.a.
Republic of Korea	-0.4	-0.4	-3.8	-1.2	29.5	32.2	32.1	29.1
India	4.1	3.5	2.7	6.1	63.0	61.5	60.1	58.9
Indonesia	0.2	0.9	1.2	0.0	45.6	39.0	35.0	31.2
Malaysia	3.6	3.3	3.2	4.8	43.8	42.2	41.6	41.4
Thailand	-0.2	-0.1	1.1	0.3	47.3	40.3	37.5	38.1

n.a. : Not Available.

Note : Negative sign indicates surplus.

Source : 1) Asia Economic Monitor, December 2008 and July 2009, Asian Development Bank;
2) Union Budget documents and Provisional Accounts of Government of India.

Table 2.50 : Major Deficit Indicators of the State Governments

(Amount in Rupees crore)

Item	2005-06	2006-07	2007-08*	2008-09* BE	2008-09* RE	2009-10* BE
1	2	3	4	5	6	7
Gross Fiscal Deficit	90,084	77,509	68,572	1,10,465	1,43,924	1,97,186
	(2.5)	(1.9)	(1.5)	(2.1)	(2.7)	(3.4)
Revenue Deficit	7,013	-24,857	-43,405	-25,036	-7,336	37,058
	(0.2)	-(0.6)	-(0.9)	-(0.5)	-(0.1)	(0.6)
Primary Deficit	6,060	-15,672	-29,044	3,681	39,283	82,488
	(0.2)	-(0.4)	-(0.6)	(0.1)	(0.7)	(1.4)

BE : Budget Estimates. RE: Revised Estimates.

*: Data from 2007-08 onwards pertain to 27 State Governments, of which two are Vote on Accounts.

Note: 1. Negative (-) sign indicates surplus.

2. Figures in parentheses are percentages to GDP.

3. Data on GDP for 2007-08 are based on CSO's Quick Estimates, while for 2008-09 are based on its Revised Estimates. Data on GDP for 2009-10 are as per the Union Budget Documents, 2009-10.

Source: Budget Documents of the State Governments.

after being in surplus in the previous three years (Table 2.50 and Appendix Table 30). As a result, GFD is budgeted to be higher at 3.4 per cent of GDP as compared with that in 2008-09 (RE). The consolidated primary deficit is budgeted to increase to 1.4 per cent of GDP in 2009-10 from 0.7 per cent in 2008-09 (RE). Out of 27 States, 13 States have budgeted revenue surplus in 2009-10 as against 23 States during 2008-09 (RE). The progress with respect to implementation of Fiscal Responsibility Legislation (FRL) at State level has, therefore, suffered a setback (Box II.26).

II.4.32 The deterioration in revenue account of State Governments during 2008-09 (RE) and 2009-10 (BE) reflects the combined impact of sluggishness in own tax collections and devolution from the Centre along with higher expenditure commitment to implement recommendations of the Sixth Pay Commission by many of the State Governments. During 2009-10, the increase in revenue expenditure is budgeted to be higher than the increase in revenue receipts. The increase in revenue receipts would be contributed by States' own taxes, share in Central taxes and grants from the Centre (Table 2.51).

II.4.33 Revenue expenditure is budgeted to increase sharply during 2009-10 over 2008-09 (RE) (Table 2.52). This would be mainly on account of increase in non-development expenditure (contributing around 56.0 per cent of the increase in revenue expenditure). Higher expenditure on administrative services (like expenditure on wages and salaries on account of implementation of recommendations of the Sixth Central Pay Commission), pension and interest payments together would contribute around 63.1 per cent of the increase in revenue expenditure during 2009-10. Increase in development expenditure would be mainly on account of education, sports, art and culture, family welfare, rural development and irrigation and flood control.

II.4.34 The worsening of gross fiscal deficit to 3.4 per cent of GDP in 2009-10 (BE) from 2.7 per cent in 2008-09 (RE) would be mainly due to deterioration in the revenue account coupled with an increase in net lending. The consolidated capital outlay as a percentage to GDP is budgeted to decline in 2009-10 by 0.2 percentage points to 2.6 per cent. The Central Government allowed the State Governments to raise additional market borrowing to the extent of 0.5 per cent of their GSDP during 2009-10. The GFD would be financed mainly through market borrowings (57.7 per cent) followed by provident funds (10.5 per cent) (Table 2.53 and Appendix Table 31).

Box II.26
Implementation of Fiscal Responsibility Laws at State Level – Recent Developments

The enactment of Fiscal Responsibility Legislations (FRLs) at the State level has been one of the major institutional reforms undertaken for promoting rule-based fiscal policy. Karnataka was the first State to implement FRL in August 2002, followed by Tamil Nadu, Kerala and Punjab in 2003. Following the recommendations of the Twelfth Finance Commission (TFC), which had incentivised adoption of fiscal responsibility framework by the State Governments by linking debt relief mechanism to enactment of FRL, 22 more States enacted the FRLs in subsequent years. Although there are variations across States in the choice of target and the time frame for achieving the target, most of the FRLs stipulated elimination of revenue deficit by March 31, 2009 and reduction in GFD as per cent of gross state domestic product (GSDP) to 3 per cent by March 31, 2010, in line with the targets prescribed by the TFC. In addition, several States targeted to reduce their liabilities.

Progressive enactment of FRLs by the States (except Sikkim and West Bengal) provided impetus to the process of attaining fiscal sustainability. The movements in the key deficit indicators show that at the consolidated level, States made considerable progress in bringing down their deficits till 2007-08. Despite the overall improvement in consolidated fiscal position of the States, wide variations across the State Governments with regard to fiscal performance were observed. While some State Governments were able to achieve the TFC targets with regard to several indicators well ahead of the time frame, there were some other States where the fiscal correction was slow.

Despite the fact that the enactment of FRLs by most of the States has ushered in a rule-based fiscal policy framework at the State level, the fiscal position of States has come under strain in view of the ongoing global turmoil. Given the moderation in economic growth in 2008-09, the revenue buoyancy achieved up to 2007-08 may not be realised. Thus, the pace of fiscal correction and consolidation which was witnessed in recent years is likely to pause or even suffer a setback on account of the growth deceleration and most States could overshoot the target of maintaining GFD-GSDP ratio within 3 per cent. States are also under pressure to increase both their revenue and capital expenditure in order to boost the demand in the economy. In fact, the Central Government allowed the States to raise additional market borrowings to the extent of 0.5 per cent of GSDP during 2008-09 and increase the limit of fiscal deficit to 3.5 per cent of GSDP for undertaking capital expenditure, thereby providing them additional fiscal space. In Union Budget 2009-10, States have been allowed to raise additional market borrowings of 0.5 per cent of GSDP, thus increasing the limit of GFD to 4.0 per cent of GSDP during 2009-10.

The impact of the overall macroeconomic slowdown on State finances is discernible from the deterioration in deficit indicators across the States. In majority of the States revenue surplus as percentage to GSDP has shown a decline in 2008-09 (RE) over 2007-08, resulting an increase in GFD. Out of 27 States, 18 States recorded GFD-GSDP ratio higher than 3.0 per cent in 2008-09 (RE). The fiscal position of the States is budgeted to deteriorate further in 2009-10. Out of 27, 13 States have presented budgets with revenue deficit for 2009-10. This indicates that some States may have to amend their respective FRLs to accommodate slippages in deficit targets.

Once the economic recovery gathers momentum, the foremost task for the State Governments should be to revert back to the path of fiscal correction. The design of post-FRL framework at the State level, therefore, has to aim at regaining and sustaining the fiscal correction. The FRL regime of State Governments since 2003-04 has been associated with a phase of high GDP growth. The resultant high growth in their own tax revenues and higher Central transfers, aided to some extent by reduction in revenue expenditure, enabled the States to bring about reduction in deficits and step up capital outlay and developmental expenditure. In the absence of such conducive economic conditions, States may need to place greater emphasis on expenditure rationalisation to curb wasteful expenditure and expenditure reorientation towards more productive expenditure. Presently, the FRLs of the States do not provide for any expenditure rules. In the post-FRL regime, certain numerical targets in respect of certain categories of expenditure may be stipulated so as to make the expenditure allocation process more efficient. At present, a few States have debt-GSDP rules and interest payment-revenue receipts (IP-RR) targets in their FRLs. With a view to attaining debt sustainability, each State may prescribe a target for debt-GSDP and IP-RR.

The recent downturn in the economy and the associated impact on State finances reflects the need for introducing the counter-cyclical clause in the post-FRL fiscal architecture. Given the lack of standardisation across States in terms of budgetary practices and transparency rules, the post-FRL framework may place emphasis on institutional reforms towards adoption of common practices.

To sum up, the post-FRL framework may be designed keeping in view the experience gained so far from implementation of FRLs. The post-FRL framework may build in specific rules for debt and expenditure besides the current focus on deficits. The States may place emphasis on transparency in budgetary operations. The need for counter-cyclical fiscal policy framework may also be explored.

Table 2.51: Aggregate Receipts of the State Governments

(Amount in Rupees crore)

Item	2007-08*	2008-09*	2008-09* RE	2009-10* BE	Percentage variations		
					Col.4/2	Col.4/3	Col.5/4
1	2	3	4	5	6	7	8
Aggregate Receipts (1+2)	7,47,364 (15.8)	8,76,991 (16.5)	9,05,381 (17.0)	10,02,710 (17.1)	21.1	3.2	10.8
1. Total Revenue Receipts (a+b)	6,10,261 (12.9)	7,04,518 (13.2)	7,22,054 (13.6)	7,85,046 (13.4)	18.3	2.5	8.7
(a) States Own Revenue	3,60,363 (7.6)	3,99,851 (7.5)	4,06,198 (7.6)	4,46,310 (7.6)	12.7	1.6	9.9
States Own Tax	2,84,169 (6.0)	3,34,143 (6.3)	3,27,711 (6.2)	3,63,511 (6.2)	15.3	-1.9	10.9
States Own non-Tax	76,194 (1.6)	65,708 (1.2)	78,487 (1.5)	82,798 (1.4)	3.0	19.4	5.5
(b) Central Transfers	2,49,898 (5.3)	3,04,667 (5.7)	3,15,856 (5.9)	3,38,736 (5.8)	26.4	3.7	7.2
Shareable Taxes	1,50,063 (3.2)	1,71,162 (3.2)	1,71,421 (3.2)	1,83,856 (3.1)	14.2	0.2	7.3
Central Grants	99,835 (2.1)	1,33,505 (2.5)	1,44,436 (2.7)	1,54,879 (2.6)	44.7	8.2	7.2
2. Capital Receipts (a+b)	1,37,103 (2.9)	1,72,473 (3.2)	1,83,327 (3.4)	2,17,664 (3.7)	33.7	6.3	18.7
(a) Loans from Centre	6,789 (0.1)	14,741 (0.3)	9,786 (0.2)	17,284 (0.3)	44.1	-33.6	76.6
(b) Others Capital Receipts	1,30,314 (2.8)	1,57,732 (3.0)	1,73,540 (3.3)	2,00,380 (3.4)	33.2	10.0	15.5

BE : Budget Estimates. RE : Revised Estimates

*: Data pertain to 27 State Governments, of which two are Vote on Accounts.

Note : Figures in parentheses are percentages to GDP.

Source : Budget Documents of the State Governments.

Combined Finances: 2009-10

II.4.35 The combined budgetary position of the Central and State Governments for 2009-10 indicates that the key deficit indicators as per cent of GDP are budgeted to remain at elevated levels mainly due to sharp rise in expenditure (Table 2.54).

II.4.36 Combined revenue receipts are budgeted to grow mainly on account of increase in both tax and non-tax revenue. The combined tax-GDP ratio, however, is budgeted to decline in 2009-10 over 2008-09 (Table 2.55). On the expenditure side, the share of development expenditure in total expenditure (and as a ratio to GDP) would decrease to 56.8 per cent (18.1 per cent) in 2009-10 BE from 59.6 per cent (18.6 per cent) during 2008-09 RE. In contrast, non-developmental expenditure would grow substantially and show a rise in terms of GDP. As a result of the increase in non-developmental expenditure, total expenditure as a ratio to GDP would increase moderately.

II.4.37 Market borrowings are budgeted to finance a higher proportion of the combined GFD during 2009-10 than in the preceding year. While the share of State Provident Funds is budgeted to increase marginally, the contribution of small savings to GFD

Table 2.52: Expenditure Pattern of the State Governments

(Amount in Rupees crore)

Item	2007-08*	2008-09* BE	2008-09* RE	2009-10* BE	Percentage variations		
					Col.4/2	Col.4/3	Col.5/4
1	2	3	4	5	6	7	8
Aggregate Expenditure	7,31,679	8,74,663	9,21,673	10,34,426	26.0	5.4	12.2
(1+2 =3+4+5)	(15.5)	(16.4)	(17.3)	(17.7)			
1. Revenue Expenditure	5,66,856	6,79,482	7,14,718	8,22,104	26.1	5.2	15.0
of which:	(12.0)	(12.8)	(13.4)	(14.0)			
Interest Payments	97,615	1,06,783	1,04,641	1,14,698	7.2	-2.0	9.6
	(2.1)	(2.0)	(2.0)	(2.0)			
2. Capital Expenditure	1,64,823	1,95,181	2,06,956	2,12,322	25.6	6.0	2.6
of which:	(3.5)	(3.7)	(3.9)	(3.6)			
Capital Outlay	1,12,912	1,39,636	1,51,601	1,53,528	34.3	8.6	1.3
	(2.4)	(2.6)	(2.8)	(2.6)			
3. Development Expenditure	4,50,391	5,45,287	6,01,061	6,44,454	33.5	10.2	7.2
	(9.5)	(10.2)	(11.3)	(11.0)			
4. Non-Development Expenditure	2,26,962	2,69,929	2,61,521	3,22,012	15.2	-3.1	23.1
	(4.8)	(5.1)	(4.9)	(5.5)			
5. Others#	54,326	59,447	59,092	67,960	8.8	-0.6	15.0
	(1.2)	(1.1)	(1.1)	(1.2)			

BE: Budget Estimates. RE: Revised Estimates.

* : Data pertain to 27 State Governments, of which two are Vote on Accounts.

\# : Comprises Compensation and Assignments to local bodies, Grants-in-Aid and Contributions, Discharge of Internal Debt, Repayment of loans to the Centre.

Note : Figures in parentheses are percentages to GDP.

Source : Budget Documents of the State Governments.

financing is budgeted to increase substantially during 2009-10 (Table 2.56).

Social Sector Expenditure

II.4.38 The combined social sector expenditure as per cent to GDP is budgeted to increase moderately during 2009-10 (BE) over 2008-09 (RE). The share of expenditure on education and medical and public health is budgeted at higher level (Table 2.57).

II.4.39 The combined finances of Central and State Governments are budgeted to show some moderation in the key deficit indicators during 2009-10 *vis-a-vis* 2008-09, but would continue to remain at elevated levels comparable to the pre-FRBM period. In the case of State Governments, the surpluses recorded in the revenue accounts consecutively for three years are budgeted to be wiped out in 2009-10. However, the deterioration in combined finances is perceived to be a temporary phenomenon arising from the use of discretionary fiscal stimulus to deal with the effects of exceptional global economic conditions besides the autonomous effects on the revenue side arising from the domestic economic slowdown.

II.4.40 To sum up, during 2008-09, the fiscal policy responded to the challenges emerging from contracting external and domestic private demand and deceleration in growth. Preserving the growth momentum necessitated appropriate use of discretionary stabilisers, notwithstanding the associated unavoidable deviation from fiscal consolidation path under the FRBM Act. The fiscal stimulus, in the form of both tax cuts and higher

Table 2.53: Decomposition and Financing Pattern of Gross Fiscal Deficit of States

(Per cent)

Item	2007-08*	2008-09* BE	2008-09* RE	2009-10* BE
1	2	3	4	5
Decomposition (1+2+3-4)	100.0	100.0	100.0	100.0
1. Revenue Deficit	-63.3	-22.7	-5.1	18.8
2. Capital Outlay	164.7	126.4	105.3	77.9
3. Net Lending	8.8	9.8	3.5	4.5
4. Non-debt Capital Receipts$	10.1	13.6	3.7	1.1
Financing (1 to 11)				
1. Market Borrowings	73.4	57.3	68.5	57.7
2. Loans from Centre	-1.9	5.8	1.4	4.6
3. Loans against Securities Issued to NSSF	7.6	19.5	1.5	4.0
4. Loans from LIC, NABARD, NCDC, SBI & Other Banks	5.4	5.9	5.8	4.2
5. Provident Fund, *etc.*	17.1	11.2	9.7	10.5
6. Reserve Funds	-8.6	1.0	1.3	1.1
7. Deposits & Advances	21.4	4.6	4.2	4.9
8. Suspense & Miscellaneous	5.5	-1.7	-2.4	-2.1
9. Remittances	1.6	0.1	0.1	0.0
10. Others	1.4	-1.6	-1.4	-0.9
11. Overall Surplus (-)/Deficit (+)	-22.9	-2.1	11.3	16.1

BE : Budget Estimates. RE : Revised Estimates.

* : Data pertain to 27 State Governments, of which two are Vote on Accounts.

$: Includes proceeds from disinvestment and sale of land.

Note : "Others" include Compensation and Other Bonds, Loans from Other Institutions, Appropriation to Contingency Fund, Inter-state Settlement and Contingency Fund.

Source : Budget Documents of the State Governments.

Government expenditure, was significant at about 3.1 per cent of GDP, which though relatively higher than several emerging market economies, was appropriate given the critical importance for India to revert to the high growth trajectory as a matter of policy. Applying the different multiplier effects as

Table 2.54: Measures of Deficit of the Central and State Governments

Year	Amount (Rupees crore)			Per cent to GDP		
	Gross Fiscal Deficit	Revenue Deficit	Primary Deficit	Gross Fiscal Deficit	Revenue Deficit	Primary Deficit
1	2	3	4	5	6	7
1990-91	53,580	23,871	28,585	9.4	4.2	5.0
1995-96	77,671	37,932	18,598	6.5	3.2	1.6
2000-01	1,99,852	1,38,803	75,035	9.5	6.6	3.6
2003-04	2,34,501	1,59,408	56,928	8.5	5.8	2.1
2004-05	2,34,721	1,14,761	42,408	7.5	3.6	1.3
2005-06	2,39,560	99,312	35,583	6.7	2.8	1.0
2006-07	2,30,432	55,366	-399	5.6	1.3	0.0
2007-08	1,97,037	9,163	-60,495	4.2	0.2	-1.3
2008-09 RE	4,71,520	2,33,938	1,86,034	8.9	4.4	3.5
2009-10 BE	5,95,090	3,19,793	2,66,430	10.2	5.5	4.5

BE: Budget Estimates. RE: Revised Estimates.

Note : Data in respect of the States are provisional from 2007-08 onwards and relate to the Budgets of 27 States of which 2 are *vote on accounts.*

Table 2.55: Combined Receipts and Disbursements of the Centre and States

(Amount in Rupees crore)

Items	2008-09 RE	2009-10 BE	Variation	
			Amount	Per cent
1	2	3	4	5
Total Receipts(A+B)	16,42,815	18,39,239	1,96,424	12.0
A. Revenue Receipts (1+2)	11,66,470	12,65,947	99,477	8.5
	(21.9)	(21.6)		
1. Tax Receipts (a+b)	9,65,102	10,21,585	56,483	5.9
	(18.1)	(17.4)		
a) Direct Taxes	3,93,060	4,30,428	37,368	9.5
	(7.4)	(7.3)		
b) Indirect Taxes	5,72,042	5,91,157	19,115	3.3
	(10.7)	(10.1)		
2. Non Tax Receipts	2,01,368	2,44,362	42,994	21.4
	(3.8)	(4.2)		
B. Capital Receipts	4,76,345	5,73,292	96,947	20.4
	(9.0)	(9.8)		
Total Disbursements (C+D)	16,59,109	18,70,955	2,11,846	12.8
	(31.2)	(31.9)		
C. Development Expenditure	9,88,513	10,62,099	73,586	7.4
	(18.6)	(18.1)		
D. Non-Development Expenditure	6,70,596	8,08,856	1,38,260	20.6
	(12.6)	(13.8)		

RE: Revised Estimates. BE: Budget Estimates.

Note: 1. Figures in parentheses are percentages to GDP.

2. Data in respect of the States are provisional from 2007-08 onwards and relate to the Budgets of 27 States of which 2 are *vote on accounts.*

estimated by the IMF for tax cuts, investment in infrastructure and other public expenditure to the Indian fiscal response, the beneficial impact on growth was found to be in the range of 0.7-2.3 percentage points. During 2008-09, the deviations in the deficit parameters of the Central Government

Table 2.56: Financing of Gross Fiscal Deficit of the Centre and States

(Rupees crore)

Year	Market Borrowings	State Provident Funds	Small Savings	External Borrowings	Others	Gross Fiscal Deficit
1	2	3	4	5	6	7
2006-07	1,27,858	15,188	63,746	8,472	15,168	2,30,432
	(55.5)	(6.6)	(27.7)	(3.7)	(6.6)	(100.0)
2007-08	1,80,945	14,216	-4,474	9,315	-2,965	1,97,037
	(91.8)	(7.2)	(-2.3)	(4.7)	(-1.5)	(100.0)
2008-09 BE	1,62,302	16,033	28,498	10,989	24,451	2,42,273
	(67.0)	(6.6)	(11.8)	(4.5)	(10.1)	(100.0)
2008-09 RE	3,65,131	18,086	4,450	9,603	74,250	4,71,520
	(77.4)	(3.8)	(0.9)	(2.0)	(15.7)	(100.0)
2009-10 BE	5,11,669	24,269	24,999	16,047	18,106	5,95,090
	(86.0)	(4.1)	(4.2)	(2.7)	(3.0)	(100.0)

BE : Budget Estimates. RE : Revised Estimates.

Note : 1. Figures in parentheses are percentages to GFD.

2. Data in respect of the States are provisional from 2007-08 onwards and relate to the Budgets of 27 States of which 2 are *vote on accounts*.

from the FRBM targets and the set back in the fiscal consolidation path of the State Governments were conditioned by the needs of the exceptional circumstances. With economic recovery, the automatic stabilisers operating to restore revenue buoyancy could create the necessary fiscal space for the reversion of discretionary fiscal policy stance to the previous path of correction and consolidation, thereby alleviating current concerns associated with the stimulus driven widening of the deficit parameters.

Table 2.57: Combined Expenditure of the Centre and States on Social Sector

(Amount in Rupees crore)

	2007-08	2008-09 BE	2008-09 RE	2009-10 BE
1	2	3	4	5
Expenditure on Social Sector *	3,71,435	4,42,777	5,25,052	6,07,651
Of which:				
Social Services	2,88,500	3,52,188	3,98,828	4,45,751
Of which:				
i) Education	1,27,547	1,58,823	1,67,981	1,98,842
ii) Medical & Public Health	60,869	73,164	76,488	89,305
Per cent of GDP				
Expenditure on Social Sector	7.9	8.3	9.9	10.4
Of which:				
Social Services	6.1	6.6	7.5	7.6
Of which:				
i) Education	2.7	3.0	3.2	3.4
ii) Medical & Public Health	1.3	1.4	1.4	1.5
Per cent of Total Expenditure				
Expenditure on Social Sector	28.7	30.2	31.6	32.5
Of which:				
Social Services	22.3	24.0	24.0	23.8
Of which:				
i) Education	9.8	10.8	10.1	10.6
ii) Medical & Public Health	4.7	5.0	4.6	4.8

* : Expenditure on social sector includes expenditure on social services, rural development and food subsidies.

Note : Data in respect of the States are provisional from 2007-08 onwards and relate to the Budgets of 27 States of which 2 are *vote on accounts*.

V. FINANCIAL MARKETS

II.5.1 The financial markets of the advanced countries were disrupted and at times even turned dysfunctional during 2008-09 as the sub-prime crisis affected the financial markets first, before transmitting to financial institutions and the real economy. With the adverse feedback loop becoming stronger over time, failing institutions and weakening growth prospects increased the level of stress in the financial markets. The significant deterioration in global financial conditions, particularly since mid-September 2008, led to severe disruptions in the short-term funding markets, widening of risk spreads, rapid fall in equity prices and inactivity in the markets for private asset-backed securities and related derivatives. Price patterns over time began to mirror the strains of the economic recession and remained highly volatile given the environment of uncertainty and changing risk perceptions. The crisis that originated in the financial sector in the US, led to collapse or near collapse of some large financial institutions and banks. Every major entity with large financial investment portfolio had to suffer substantial losses due to mark-to-market accounting in the face of collapsing asset prices. Banks, investment banks, non-banks such as insurance companies, pension funds, private equity funds, shadow banks such as structured investment vehicles (SIVs), mutual funds and money market mutual funds came under stress following evaporation of market liquidity. With significant erosion of banks' balance sheets, mistrust among banks intensified, as a result of which inter-bank markets choked and money markets dried up. This engendered a credit squeeze that amplified under deleveraging and got transmitted to the real economy.

II.5.2 The main impact of the unfolding global financial crisis on the Indian financial markets, particularly following the collapse of Lehman Brothers in September 2008, was in the form of reduction in net capital inflows and significant correction in the domestic stock markets on the back of sell-off in the equity market by the foreign

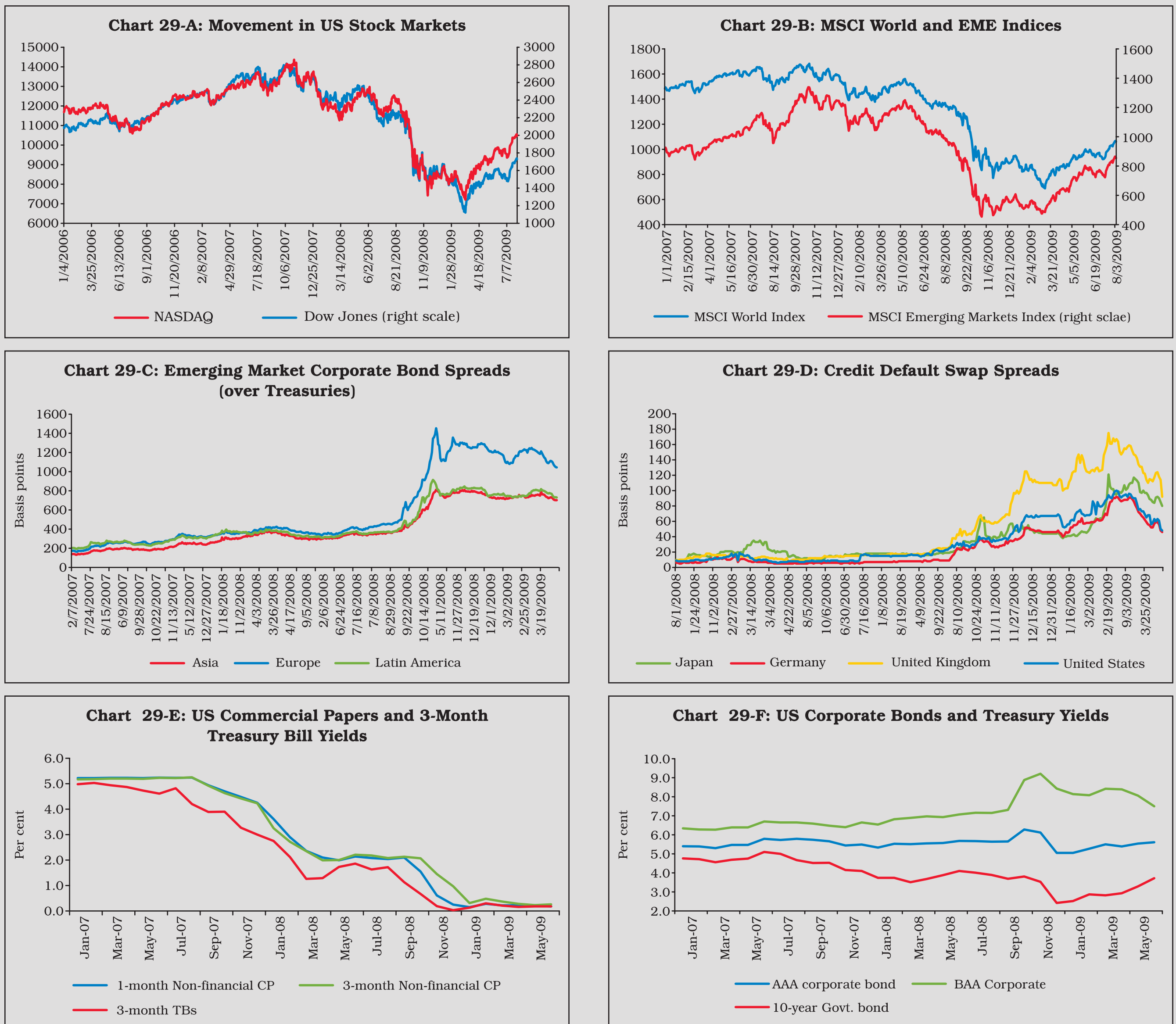
institutional investors (FIIs). The withdrawal of funds from the Indian equity markets, as in the case of other emerging market economies (EMEs) and reduced access of the Indian entities to funds from the international markets put significant pressure on dollar liquidity in the domestic foreign exchange market. These developments created adverse expectations of the BoP difficulties and led to depreciation pressure and higher volatility in the foreign exchange market. The constrained access to foreign funding and the lacklustre domestic capital market put pressures on some segments of the financial system, such as NBFCs and mutual funds. Liquidity pressures on mutual funds, which in turn were provider of funds to other sectors, like NBFCs, further stifled the flow of funds. Consequently, the pressure for funding liquidity came to rest on banks.

INTERNATIONAL FINANCIAL MARKETS

II.5.3 Many systemically important commercial banks, investment banks, insurance companies and other financial institutions in the US and Europe suffered large losses that undermined their capital bases. The credit spreads for corporate papers went up sharply. The US Federal Reserve and other central banks/governments had to rescue a number of failing financial institutions through large scale bailout packages, but financial markets continued to suffer from a crisis of confidence. The unfolding developments entailed broader ramifications for both growth and stability in an integrated world, where cross-exposures, particularly among banks/ financial institutions, and trade links are inextricably strong and complex.

II.5.4 The EMEs, which showed considerable resilience in weathering the crisis up to September 2008, came under strain in the last quarter of 2008 through the spread of contagion. As a sign of flight to safety, capital flows from developed countries to the EMEs declined sharply in 2008. Reflecting lower flows through current and capital accounts, currencies of the EMEs depreciated against the US dollar. EME equity markets suffered large losses in the wake of reversal of portfolio flows. Bank lending to the EMEs declined and credit spreads increased sharply due to the prevailing credit crunch in advanced economies. Notwithstanding, the financial market environment in the EMEs remained quite different. By and large, their financial institutions did not exhibit fragility; inter-bank confidence was relatively normal and inter-bank money markets also continued to function. The crisis affected the EMEs mainly through three key financial channels. The first was the exit of foreign portfolio equity investments, resulting in decline in stock markets which together with rapid decline in export demand, exerted significant pressures on the exchange rate. The second channel was the drying up of overseas lines of credit for banks and corporates, which shifted demand to the domestic credit market. Third, there was severe constraint on trade emanating from drying up of trade finance. Monetary policy actions by the EMEs, therefore, had to respond more to emerging real economy problems rather than financial sector problems.

II.5.5 The extent of disruptions and volatility in the global financial markets could be seen from the behaviour of key indicators in Chart II.29. While the stock market corrections were sharp (Chart 29-A and 29-B), the volatility rose to unprecedented levels; yield spreads on EME corporate bonds escalated significantly, reflecting the rising risk premium (Chart 29-C); and credit default swap premia, signifying the cost of insurance against default, rose sharply (Chart 29-D). Reflecting the pressure on short-term funding markets, the spread on CPs widened (Chart 29-E) and yields on lower rated corporate bonds increased significantly (Chart 29-F). These trends in the financial markets of the advanced countries had the potential to affect the Indian financial markets, in view of the growing globalisation and rising integration of the financial markets. The EMEs in general experienced contagion from the adverse global financial markets in the form of significant corrections in their stock prices (Table 2.58), besides notable depreciation of their currencies.



Source: Global Financial Stability Report and World Economic Outlook databases, IMF; Federal Reserve, US.

II.5.6 As a reflection of the economic and financial markets outlook, the year 2008-09 was characterised by depressed equity valuations. Equity price indices in most advanced economies were relatively flat during July and August 2008, but caught on the downward spiral subsequently, which continued into the fourth quarter of 2008-09 (Table 2.58). The volatility in the markets in the fourth quarter was compounded by the lack of detailed information about government rescue packages.

II.5.7 The US dollar generally appreciated against most of the currencies, except Japanese yen and Chinese yuan, during 2008-09. The US dollar commenced the year on a weak note, exhibiting depreciating trend against most of the currencies during April-July 2008 due to factors such as slowing growth, lowering consumer confidence, weaker equity markets and non-farm payroll employment. However, from early August 2008, the US dollar started strengthening mainly on account

Table 2.58: International Stock Markets

Country (Index)	Percentage variation (year-on-year)		P/E Ratio		Coefficient of variation
	End-March 2008	End-March 2009	End-March 2008	End-March 2009	2008-09 (April-March)
1	2	3	4	5	6
Emerging Market					
Indonesia (Jakarta Composite)	33.7	-41.4	14.8	17.7	26.6
Brazil (Bovespa)	33.1	-32.9	13.8	14.4	25.3
Thailand (SET)	21.3	-47.2	16.5	15.1	27.9
India (BSE Sensex)	19.7	-37.9	16.2	11.0	24.2
South Korea (KOSPI)	17.3	-29.2	12.6	26.0	20.4
China (Shanghai Composite)	9.1	-31.7	26.1	23.0	23.4
Taiwan (Taiwan Taiex)	8.7	-39.2	14.3	65.8	27.6
Russia (RTS)	6.1	-66.4	9.4	5.7	54.3
Malaysia (KLCI)	0.1	-30.1	13.7	15.0	15.4
Singapore (Straits Times)	-4.9	-43.5	10.8	9.4	26.5
Developed Markets					
US (Dow Jones Industrial)	-0.7	-38.0	15.2	18.8	19.3
US (Nasdaq Composite)	-5.9	-32.9	27.3	22.6	21.7
Euro Area (FTSE Eurotop 100)	-15.7	-40.1	11.2	15.4	20.4
UK (FTSE 100)	-9.6	-31.1	11.4	17.4	16.8
Memo:					
MSCI World	-5.1	-44.0	14.2	15.1	24.9
MSCI Emerging	18.9	-48.4	13.9	12.9	34.0

Source : Bloomberg and Bombay Stock Exchange Limited (BSE).

of decline in the risk appetite of the US investors induced by the financial crisis in the US. This resulted in liquidation of their positions in overseas equity and bond markets on flight to safety considerations. During 2009-10 so far, the appreciating trend has been reversed because of declining safe haven flows to the US, large-scale quantitative easing in the US and change in the market sentiment against the dollar. Between end-March 2009 and August 13, 2009, the US dollar depreciated by 6.9 per cent, 13.7 per cent and 2.0 per cent against the euro, the pound sterling and the Japanese yen, respectively. Among the Asian currencies, it depreciated against the Indian rupee, Indonesian rupiah, Malaysian ringgit, South Korean won and Thai baht (Table 2.59).

Table 2.59: Appreciation (+)/Depreciation (-) of the US dollar *vis-à-vis* other Currencies

(Per cent)

Currency	End-March 07 @	End-March 08 @	End-March 09 @	August 13, 2009*
1	2	3	4	5
Euro	-9.12	-15.77	18.82	-6.89
Pound Sterling	-11.40	-1.53	38.67	-13.74
Japanese Yen	0.21	-14.92	-2.00	-2.04
Chinese Yuan	-3.53	-9.25	-2.61	-0.02
Russian Ruble	-6.06	-9.68	44.25	-5.18
Turkish Lira	3.23	-5.75	27.69	-11.87
Indian Rupee	-2.46	-8.30	27.47	-5.52
Indonesian Rupiah	0.47	1.09	25.58	-14.04
Malaysian Ringgit	-6.24	-7.77	14.42	-3.52
South Korean Won	-3.65	5.47	38.86	-11.15
Thai Baht	-9.90	-10.16	12.85	-4.21
Argentine Peso	0.65	2.08	17.32	3.29
Brazilian Real	-6.41	-16.99	31.20	-17.83
Mexican Peso	1.27	-3.48	32.90	-9.09
South African Rand	17.24	11.34	17.22	-16.38

@ : Year-on-year variation.
* : Variation over end-March 2009.

DOMESTIC FINANCIAL MARKETS

II.5.8 The direct impact of the sub-prime crisis on Indian banks/financial sector was almost

negligible till mid-September 2008 because of the limited exposure to the troubled assets and the failing institutions, prudential policies put in place by the Reserve Bank and relatively low presence of foreign banks in the domestic banking sector. There was, however, a sudden change in the external environment following Lehman Brothers' failure in mid-September 2008. As in the case of other major EMEs, there was a large withdrawal of funds from the Indian equity markets by the FIIs, reflecting the credit squeeze and global deleveraging, which resulted in large capital outflows during September-October 2008, with concomitant pressures in the foreign exchange market. Moreover, Indian corporates found their overseas financing drying up, forcing them to shift their credit demand to the domestic banking sector. The substitution of overseas financing by domestic financing brought both money markets and credit markets under pressure.

II.5.9 With a view to maintaining orderly conditions in the foreign exchange market which had turned volatile, the Reserve Bank conducted foreign exchange market operations, particularly in October 2008. In addition, the Reserve Bank instituted a rupee-dollar swap facility for Indian banks with overseas branches/subsidiaries to give them comfort in managing their short-term foreign funding requirements. It also continued with the Special Market Operations (SMO) which were instituted in June 2008 for meeting the foreign exchange requirements of public sector oil marketing companies, taking into account then prevailing extraordinary situation in the money and foreign exchange markets. Finally, measures to ease foreign exchange liquidity also included those aimed at encouraging capital inflows, such as an upward adjustment of the interest rate ceiling on the foreign currency deposits by non-resident Indians, substantially relaxing the external commercial borrowings (ECB) regime for corporates, and allowing NBFCs and housing finance companies access to foreign borrowings (Box II.27).

II.5.10 Reflecting the impact of the measures taken by the Reserve Bank, call rates in the money market settled back into the informal LAF corridor starting November 2008, having breached the upper bound in the preceding two months. In the foreign exchange market, the Indian rupee generally depreciated against major currencies up to the end of the financial year, before appreciating in the first quarter of 2009-10 (Table 2.60). In the credit market, the lending rates of scheduled commercial banks (SCBs) began to soften at a gradual pace from November 2008. The government securities market was bearish for most of the fourth quarter of 2008-09, however yields, particularly in the medium to long-term maturity strengthened. Indian equity markets, picking up global cues, staged some recovery in the last week of March 2009, which continued in Q1 of 2009-10 and thereafter.

II.5.11 As a fallout of the global financial crisis, foreign funding dwindled and the domestic capital market slumped, which, in turn, put pressure on some segments of the Indian financial system such as mutual funds and NBFCs. The Reserve Bank addressed the financial stress faced by non-banks indirectly through the banking channel and through an SPV, without compromising either on the eligible counter-parties or on the asset quality of its balance sheet.

MONEY MARKET

Call/Notice Money Market

II.5.12 Reflecting the orderly conditions in the money market during the first half of 2008-09, the call rate remained largely within the informal corridor of the reverse repo and repo rates. The failure of Lehman Brothers, however, led to volatile conditions in the domestic foreign exchange market. Responding to the situation, the Reserve Bank made available substantial dollar liquidity with a view to curbing excessive volatility, which also had a tightening impact on rupee liquidity. The impact was magnified on account of domestic factors such as advance tax outflows from the banking system. The call rate moved above the repo rate in mid-

Box II.27
Policy Response of the Reserve Bank since mid-September 2008

Monetary Measures

- Cut in the repo rate under the LAF by a cumulative 425 basis points from 9.0 per cent to 4.75 per cent.
- Cut in the reverse repo rate by a cumulative 275 basis points from 6.0 per cent to 3.25 per cent.

Rupee Liquidity/Credit Delivery

- Cut in the CRR by a cumulative 400 basis points of NDTL from 9.0 per cent to 5.0 per cent.
- Introduction of a special refinance facility up to March 31, 2010 under which all SCBs (excluding RRBs) are provided refinance from the Reserve Bank equivalent to 1.0 per cent of each bank's NDTL as on October 24, 2008.
- Term repo facility under the LAF to enable banks to ease liquidity stress faced by mutual funds, NBFCs and housing finance companies (HFCs) with associated SLR exemption of 1.5 per cent of NDTL. This facility is available up to March 31, 2010.
- Reduction in statutory liquidity ratio (SLR) from 25 per cent to 24 per cent of NDTL with effect from the fortnight beginning November 8, 2008.
- Introduction of a mechanism to buyback dated securities issued under the MSS.
- Extension of the period of entitlement by 90 days of the first slab of pre-shipment and post-shipment rupee export credit with effect from November 15, 2008 and November 28, 2008, respectively.
- Increase in the eligible limit of the ECR facility for scheduled banks (excluding RRBs) from 15 per cent to 50 per cent of the outstanding export credit eligible for refinance.
- Amounts allocated, in advance, from SCBs for contribution to the SIDBI and the NHB against banks' estimated shortfall in priority sector lending in March 2009.
- Reduction in the provisioning requirements for all types of standard assets to a uniform level of 0.40 per cent except in case of direct advances to agricultural and SME sector which shall continue to attract provisioning of 0.25 per cent.
- All unrated claims on corporates and claims secured by commercial real estate attract a uniform risk weight of 100 per cent as against the risk weight of 150 per cent prescribed earlier. Claims on rated as well as unrated non-deposit taking systemically important NBFCs are uniformly risk weighted at 100 per cent.
- In order to provide liquidity support to housing, export and MSE sectors, the Reserve Bank provided a refinance facility to NHB, EXIM Bank and SIDBI up to March 2010.
- The scope of OMO widened by including purchases of government securities through an auction-based mechanism.

Foreign Exchange Liquidity

- Sold foreign exchange (US dollars) through agent banks to augment supply in the domestic foreign exchange market or intervene directly to meet any demand-supply gaps.
- Special market operations to meet the foreign exchange requirements of public sector oil marketing companies against oil bonds.
- The ceiling rate on export credit in foreign currency increased to LIBOR plus 350 basis points.
- Authorised Dealer (AD) category - I banks allowed to borrow funds from their head office, overseas branches and correspondents and overdrafts in nostro accounts up to a limit of 50 per cent of their unimpaired Tier 1 capital or US$ 10 million, whichever was higher.
- HFCs registered with the NHB were allowed to raise short-term foreign currency borrowings under the approval route, subject to compliance with prudential norms laid down by the NHB.
- A foreign exchange swap facility with tenure up to three months to Indian public and private sector banks having overseas operations in order to provide them flexibility in managing their short-term funding requirements at their overseas offices.
- Cumulative increase in the interest rate ceilings on FCNR(B) and NR(E)RA term deposits by 175 basis points each since September 16, 2008.
- Proposals from Indian companies to prematurely buyback their FCCBs considered under the approval or automatic route. Extension of FCCBs also permitted.
- The all-in-cost ceiling for ECBs dispensed with up to December 31, 2009 and enhanced for trade credit less than 3 years (6-month LIBOR plus 200 basis points).
- ECBs up to US$ 500 million per borrower per financial year were permitted for rupee/foreign currency expenditure for permissible end-uses under the automatic route.
- The definition of infrastructure sector for availing ECB was expanded and the requirement of minimum average maturity period of 7 years for ECB of more than US$ 100 million for rupee capital expenditure was dispensed with.
- Systemically important non-deposit taking NBFCs were permitted to raise short-term foreign currency borrowings under the approval route, subject to compliance with the prudential requirements of capital adequacy and exposure norms.

Table 2.60: Domestic Markets at a Glance

Year/ Month	Call Money		Govt. Securities		Foreign Exchange				Liquidity Management		Equity			
	Average Daily Turnover (Rs.crore)	Average Call Rates* (Per cent)	Average Turnover (Rs. crore)+	Average 10-year Yield@ (Per cent)	Average Daily Inter-bank Turnover (US$ million)	Average Exchange Rate (Rs. per US$)	RBI's net Foreign Currency Sales (-)/ Purchases (+) (US$ million)	Average 3-month Forward Premia (Per cent)	Average MSS Out-standing# (Rs. crore)	Average Daily LAF Out-standing (Rs. crore)	Average Daily BSE Turnover (Rs. crore)	Average Daily NSE Turnover (Rs. crore)	Average BSE Sensex **	Average S & P CNX Nifty **
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2006-07	**21,725**	**7.22**	**4,863**	**7.78**	**18,717**	**45.28**	**26,824##**	**2.14**	**37,698**	**21,973**	**3,866**	**7,812**	**12,277**	**3,572**
2007-08	**21,393**	**6.07**	**8,104**	**7.91**	**34,044**	**40.24**	**78,203##**	**2.16**	**1,28,684**	**4,677**	**6,275**	**14,148**	**16,569**	**4,897**
2008-09	**22,436**	**7.06**	**7,344**	**7.54**	**34,812**	**45.92**	**-34,922##**	**3.47**	**1,48,889**	**2,885**	**4,498**	**11,325**	**12,366**	**3,731**
Jan-08	27,531	6.69	19,182	7.61	38,676	39.37	13,625	2.07	1,59,866	15,692	8,071	19,441	19,326	5,756
Feb-08	22,716	7.06	12,693	7.57	42,068	39.73	3,884	0.24	1,75,166	-1,294	5,808	13,342	17,728	5,202
Mar-08	22,364	7.37	5,881	7.69	39,087	40.36	2,809	1.25	1,70,285	-8,271	6,166	14,056	15,838	4,770
Apr-08	19,516	6.11	6,657	8.10	37,580	40.02	4,325	2.68	1,70,726	26,359	5,773	13,561	16,291	4,902
May-08	19,481	6.62	6,780	8.04	32,287	42.13	148	2.45	1,75,565	11,841	6,084	13,896	16,946	5,029
Jun-08	21,707	7.75	6,835	8.43	38,330	42.82	-5,229	3.69	1,74,433	-8,622	5,410	12,592	14,997	4,464
Jul-08	24,736	8.76	5,474	9.18	37,173	42.84	-6,320	6.04	1,72,169	-27,961	5,388	12,862	13,716	4,125
Aug-08	23,408	9.10	7,498	9.06	38,388	42.94	1,210	4.71	1,71,944	-22,560	4,996	11,713	14,722	4,417
Sep-08	23,379	10.52	10,418	8.45	44,700	45.56	-3,784	2.35	1,75,666	-42,591	5,147	12,489	13,943	4,207
Oct-08	28,995	9.90	4,321	7.85	36,999	48.66	-18,666	1.13	1,69,123	-45,612	3,911	10,810	10,550	3,210
Nov-08	21,812	7.57	5,866	7.41	31,322	49.00	-3,101	4.20	1,47,648	-8,017	3,539	9,618	9,454	2,835
Dec-08	21,641	5.92	11,451	5.55	34,874	48.63	-318	4.59	1,24,848	22,294	3,851	10,141	9,514	2,896
Jan-09	18,496	4.18	9,568	5.84	27,895	48.83	-29	3.10	1,13,535	45,474	3,526	9,559	9,350	2,854
Feb-09	22,241	4.16	5,916	5.98	25,068	49.26	230	2.68	1,02,934	50,649	2,859	7,887	9,188	2,819
Mar-09	23,818	4.17	5,322	6.59	33,126	51.23	-3,388	3.99	88,077	33,360	3,489	10,140	8,966	2,802
Apr-09	21,820	3.28	7,998	6.55	27,796	50..06	-2,487	3.34	75,146	1,01,561	5,232	15,688	10,911	3,360
May-09	19,037	3.17	7,292	6.41	32,227	48.53	-1,437	3.42	45,955	1,25,728	6,427	19,128	13,046	3,958
Jun-09	17,921	3.21	7,288	6.83	32,431	47.77	1,044	3.30	27,140	1,23,400	7,236	21,928	14,782	4,436
July-09	14,394	3.21	-	-	-	48.48	-	2.60	22,159	1,30,891	6,043	18,528	14,635	4,343

* : Average of daily weighted call money borrowing rates.

@ : Average of daily closing rates.

** : Average of daily closing indices.

\- : Not available.

LAF : Liquidity Adjustment Facility.

BSE : Bombay Stock Exchange Limited.

\+ : Average of daily outright turnover in Central Government dated securities.

\# : Average of weekly outstanding MSS.

\## : Cumulative for the financial year.

MSS : Market Stabilisation Scheme.

NSE : National Stock Exchange of India Limited.

Note: In column 11, (-) indicates injection of liquidity, while (+) indicates absorption of liquidity.

September 2008 (Chart II.30). The weighted average daily call rate increased to 9.46 per cent in the second quarter of 2008-09 from 6.83 per cent in the first quarter (Table 2.60). The concomitant tightening of liquidity conditions coupled with weak market sentiment put pressures on some segments of the financial system, such as NBFCs and mutual funds. A substantial proportion of collections of mutual funds reflected bulk funds from the corporate sector under the money market schemes, partly reflecting tax and other regulatory arbitrage.

As sources of funding dried up due to risk aversion, there was large redemption pressure on mutual funds. Drying up of funds with mutual funds, which in turn were providers of funds to other sectors such as the NBFCs, further attenuated the flow of funds. Consequently, the entire pressure for funds came to rest on banks: from the corporate sector unable to get external funds or new financing from the equity market, NBFCs and mutual funds; and from the growing perception of an emerging credit crunch.

II.5.13 The pressure on money markets continued to prevail in the beginning of the third quarter of 2008-09. The call rate remained above the informal corridor in the first half of October 2008. Subsequently, the call rate declined under the impact of the reduction in the cash reserve ratio (CRR) with effect from the fortnight beginning October 11, 2008. As the series of measures initiated by the Reserve Bank to augment liquidity began to take effect, the weighted average call money rate declined and mostly remained within the LAF corridor from November 2008 onwards (Chart II.30). Moreover, volumes in the money market picked-up since November 2008 (Chart II.31), which suggests that there has not been any adverse perception of counter-party risk and consequently, the inter-bank money market functioned normally in India, in contrast to those of certain advanced economies. Reflecting the easy liquidity conditons, the call rate continued to hover around the lower bound of the LAF corridor during the last quarter of 2008-09 and averaged 4.17 per cent. During 2009-10 so far, in consonance with the reduction in policy rates in April 2009 and the further easing of liquidity conditions, the call rate declined and continued to stay close to the lower bound of the LAF corridor. The call rate averaged at 3.22 per cent in the first quarter of 2009-10 and was placed at 3.24 per cent on August 18, 2009.

II.5.14 The collateralised segment now dominates activity in the money market with a share of over 75 per cent. The interest rate in market *repo* (outside the LAF) and the Collateralised Borrowing and Lending Obligation (CBLO) segments moved in consonance with the call rate but remained below the call rate during 2008-09 in general. The tightening of liquidity conditions till around October 2008, with banks resorting to central bank liquidity facility, led to a decline in average daily volumes in the collateralised segment (see Chart II.31). The volumes, however, picked up substantially in the last quarter of 2008-09, largely reflecting the easing of liquidity conditions and enhanced lending capacity of mutual funds (Table 2.61).

Certificates of Deposit

II.5.15 The indirect impact of the global financial turmoil was also evident in the activity in the certificates of deposit (CD) market. The outstanding amount of CD issued by SCBs, after increasing between March and September 2008, declined thereafter till December 2008, as the global financial market turmoil intensified. With the easing

Chart II.30: Movement of the LAF and Call Money Rate

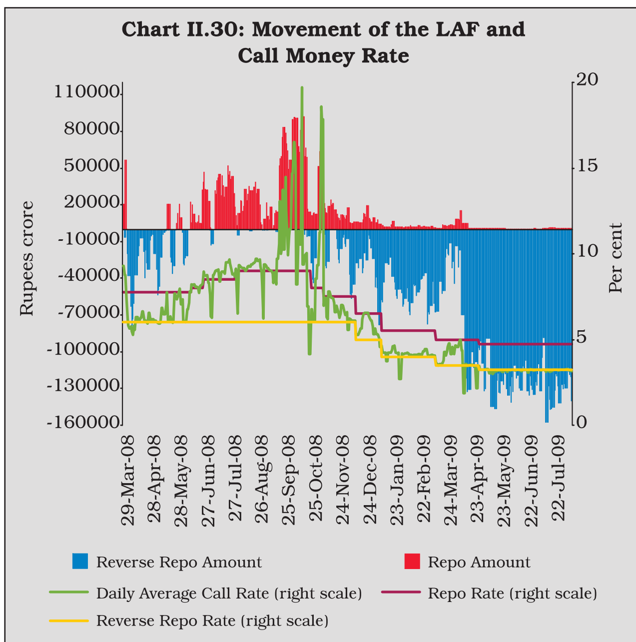


Chart II.31: Volumes and Rates in the Money Market

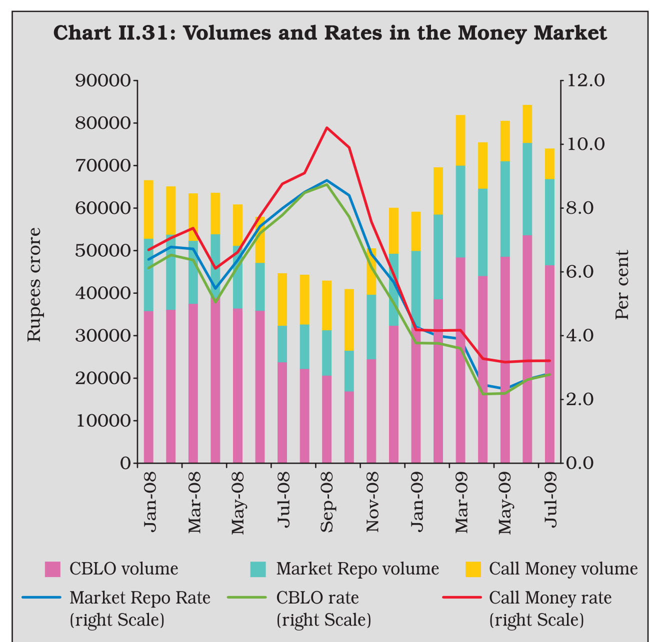


Table 2.61: Activity in Money Market Segments

(Rs. Crore)

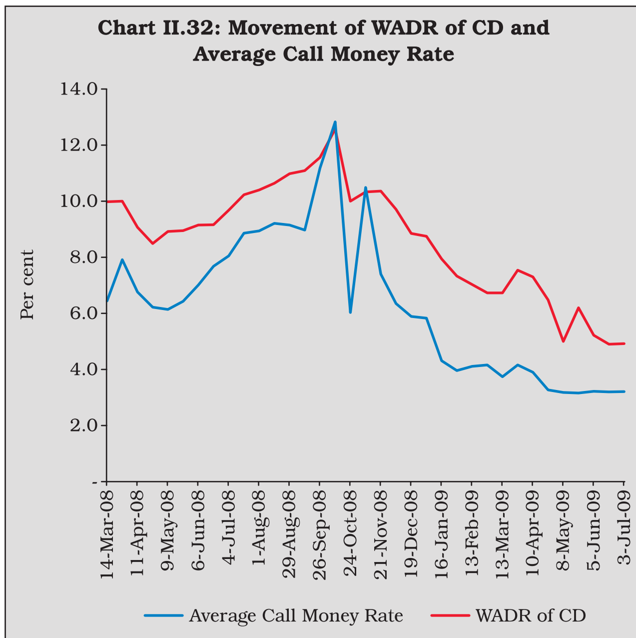
Year/Month	Average Daily Volume (One Leg)					Commercial Paper		Certificates of Deposit	
	Call Money Market	Market Repo (Outside LAF)	CBLO	Total (2+3+4)	Term Money Market	Out-standing	WADR (Per cent)	Out-standing	WADR (Per cent)
1	2	3	4	5	6	7	8	9	10
2006-07	**10,863**	**8,419**	**16,195**	**35,477**	**506**	**21,336**	**8.08**	**64,821**	**8.24**
2007-08	**10,697**	**13,684**	**27,813**	**52,194**	**352**	**33,813**	**9.20**	**1,17,186**	**8.94**
2008-09	**11,218**	**14,330**	**30,776**	**56,323**	**397**	**47,183**	**10.54**	**1,62,574**	**9.31**
Apr-07	14,845	7,173	18,086	40,104	440	18,759	10.52	95,980	10.75
May-07	10,238	8,965	20,810	40,013	277	22,024	9.87	99,715	9.87
Jun-07	8,413	10,295	20,742	39,450	308	26,256	8.93	98,337	9.37
Jul-07	8,290	12,322	20,768	41,380	288	30,631	7.05	1,05,317	7.86
Aug-07	11,802	16,688	26,890	55,380	319	31,784	8.30	1,09,224	8.67
Sep-07	10,995	17,876	29,044	57,915	265	33,614	8.95	1,18,481	8.57
Oct-07	9,275	15,300	29,579	54,154	221	42,183	7.65	1,24,232	7.91
Nov-07	10,073	12,729	28,614	51,416	184	41,308	9.45	1,27,142	8.48
Dec-07	8,124	13,354	30,087	51,565	509	40,243	9.27	1,23,466	8.81
Jan-08	13,765	17,029	35,711	66,505	312	50,062	11.83	1,29,123	8.73
Feb-08	11,358	17,682	36,007	65,047	525	40,642	9.73	1,39,160	9.94
Mar-08	11,182	14,800	37,413	63,395	571	32,952	10.38	1,47,792	10.00
Apr-08	9,758	14,966	38,828	63,552	374	37,584	8.85	1,50,865	8.49
May-08	9,740	14,729	36,326	60,795	420	42,032	9.02	1,56,780	8.95
Jun-08	10,854	11,262	35,774	57,890	253	46,847	10.03	1,63,143	9.16
Jul-08	12,368	8,591	23,669	44,628	226	51,569	10.95	1,64,892	10.23
Aug-08	11,704	10,454	22,110	44,268	501	55,036	11.48	1,71,966	10.98
Sep-08	11,690	10,654	20,547	42,891	335	52,038	12.28	1,75,522	11.56
Oct-08	14,497	9,591	16,818	40,906	345	48,442	14.17	1,58,562	10.00
Nov-08	10,906	15,191	24,379	50,476	319	44,487	12.42	1,51,493	10.36
Dec-09	10,820	16,943	32,261	60,024	415	40,391	10.70	1,51,214	8.85
Jan-09	9,248	18,053	31,794	59,095	454	51,668	9.48	1,64,979	7.33
Feb-09	11,121	19,929	38,484	69,534	669	52,560	8.93	1,75,057	6.73
Mar-09	11,909	21,593	48,319	81,821	451	44,171	9.79	1,92,867	7.53
Apr-09	10,910	20,545	43,958	75,413	332	52,881	6.29	2,10,954	6.48
May-09	9,518	22,449	48,505	80,472	338	60,740	5.75	2,18,437	6.20
Jun-09	8,960	21,694	53,553	84,207	335	68,721	5.00	2,21,491	4.90
July-09	7,197	20,254	46,501	73,952	389	-	-	2,28,638 *	4.92 *

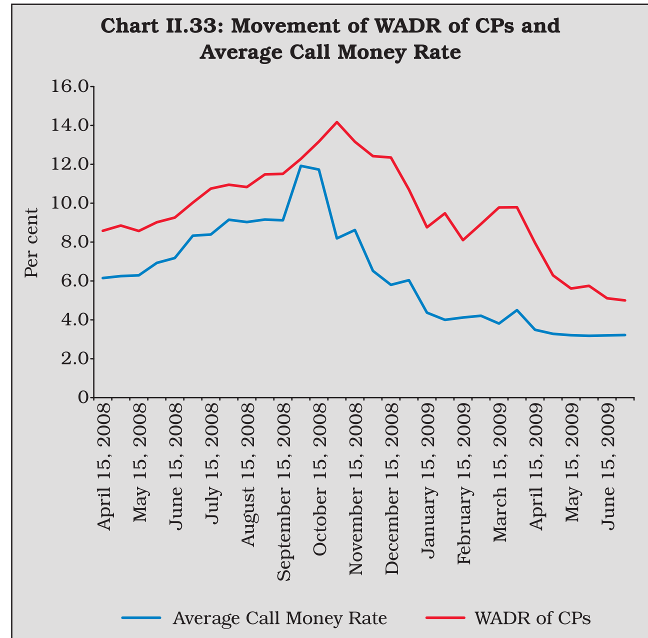
* : As on July 3, 2009. - : Not available. WADR : Weighted Average Discount Rate.

of liquidity conditions, the CD volumes picked up in the last quarter of 2008-09. Most of the CD issued were of more than six months duration. As the financial market turmoil deepened and the liquidity conditions worsened, the weighted average discount rate (WADR) of CD increased steadily between end-June and October 10, 2008, and declined thereafter (Chart II.32).

Commercial Paper

II.5.16 Reflecting indirect effects of the global financial turmoil, the commercial paper (CP) market also exhibited difficulties faced by the corporates in raising funds, particularly during September and mid-December 2008. A few cases of defaults by issuers in meeting the redemptions were also reported by the Issuing and Paying Agents (IPAs).





Subsequently, as liquidity conditions eased, the outstanding amount of CPs picked up (refer Table 2.60). Leasing and finance companies continued to be the major issuers of CPs, followed by 'manufacturing and other companies' and financial institutions (Table 2.62). The WADR on CPs, which was witnessing a steadily declining trend till mid-May 2008, increased sharply thereafter till end-October 2008. With the easing of liquidity conditions, the WADR significantly moderated in the subsequent period (Chart II.33). The most preferred tenor for issuance of CPs was more than 180 days.

Table 2.62: Commercial Paper - Major Issuers

(Rs. crore)

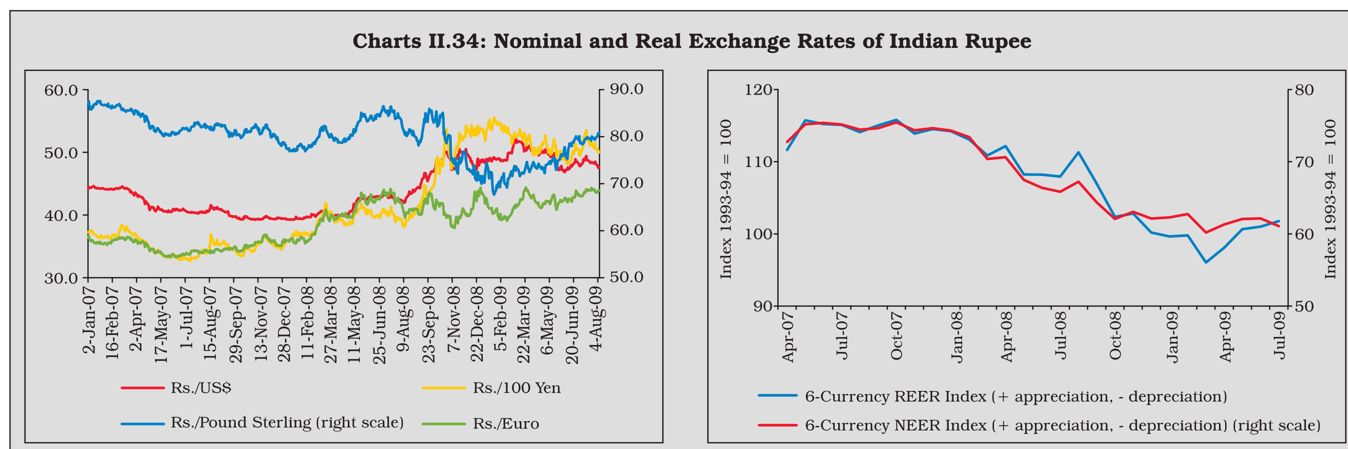
Category of Issuer	End-Jun-08	End-Sep-08	End-Dec-08	End-Mar-09	End-Jun-09
1	2	3	4	5	6
Leasing and Finance	34,957	39,053	27,965	27,183	34,437
	(74.6)	(75.0)	(73.5)	(61.5)	(50.1)
Manufacturing	8,150	9,925	6,833	12,738	23,454
	(17.4)	(19.1)	(18.0)	(28.9)	(34.1)
Financial Institutions	3,740	3,060	3,257	4,250	10,830
	(8.0)	(5.9)	(8.5)	(9.6)	(15.8)
Total	46,847	52,038	38,055	44,171	68,721

Note : Figures in brackets are percentages to total.

FOREIGN EXCHANGE MARKET

II.5.17 The cascading effect of the global financial crisis on the domestic foreign exchange market was felt through the dollar liquidity shocks emanating from the lower level of net capital inflows. Consistent with its policy objective of maintaining orderly conditions in the foreign exchange market, the Reserve Bank sold foreign exchange to meet the mismatch in the market. Despite the deepening of the financial crisis and weakness in economic activity in the US, the flight to safety considerations helped the US dollar to strengthen against most currencies during 2008-09, including the Indian rupee, particularly since the middle of August 2008. The Indian rupee exhibited greater two-way movements during 2008-09, moving between Rs.39.89 and Rs.52.09 per US dollar (Charts II.34). The rupee generally depreciated during the first half of 2008-09, reflecting FIIs outflows, high inflation and higher crude oil prices, indicating higher demand for dollars. The rupee, which stood at 39.99 per US dollar as at end-March 2008, was generally range bound up to April 2008 but subsequently depreciated and moved in a narrow range of Rs. 42-43 per US dollar from the third week of May to the middle of August 2008. With the intensifying external shocks, it depreciated sharply thereafter

Charts II.34: Nominal and Real Exchange Rates of Indian Rupee



breaching the level of Rs.50 per US dollar on October 27, 2008. Despite significant easing of crude oil prices and inflationary pressures in the second half of the year, declining exports, sustained capital outflows and strength of the US dollar against other major currencies continued to exert depreciating pressure on the rupee, taking the rupee-US dollar exchange rate to a low of Rs. 52.09 per US dollar on March 5, 2009.

II.5.18 The rupee generally appreciated against the US dollar during 2009-10 up to mid-August on the back of significant turnaround in FII inflows, continued inflows under FDI and NRI deposits, better than expected macroeconomic performance in Q4 of 2008-09 and weakening of the US dollar in the international markets. Additionally, the outcome of the general elections, which generated expectations of political stability, buoyed the market sentiment and strengthened the rupee, especially in the second half of May 2009. As a result, during 2009-10 (up to August 14, 2009), the rupee appreciated by 5.5 per cent against the US dollar and 2.5 per cent against the Japanese yen. The rupee, however, depreciated by 8.9 per cent against the pound sterling and 2.0 per cent against the euro.

II.5.19 The Reserve Bank's actions in the foreign exchange markets, which were guided by the influence of large volatility created by capital inflows till May 2008, shifted to meet the rising demand of foreign exchange on account of the widening trade deficit and capital outflows in the subsequent period (Table 2.63). The market operations, however, have eased since December 2008 as the liquidity conditions in the foreign exchange markets returned to normalcy.

Table 2.63: Purchases and Sales of US dollar by the Reserve Bank

(US$ million)

Year/ Month	Purchase	Sale	Net Purchases(+)/ Sales(-)	Outstanding Net Forward Purchases(+)/ Sales(-)
1	2	3	4	5
2005-06	15,239	7,096	(+)8,143	0
2006-07	26,824	0	(+)26,824	0
2007-08	79,696	1,493	(+)78,203	(+)14,735
2008-09	26,563	61,485	(-)34,922	(-)2,042
Apr-08	4,325	0	(+)4,325	(+)17,095
May-08	1,625	1,477	(+)148	(+)15,470
Jun-08	1,770	6,999	(-)5,229	(+)13,700
Jul-08	3,580	9,900	(-)6,320	(+)11,910
Aug-08	3,770	2,560	(+)1,210	(+)9,925
Sep-08	2,695	6,479	(-)3,784	(+)2,300
Oct-08	1,960	20,626	(-)18,666	(+)90
Nov-08	2,355	5,456	(-)3,101	(-)487
Dec-08	2,005	2,323	(-)318	(-)1,752
Jan-09	1,055	1,084	(-)29	(-)1,723
Feb-09	1,063	833	(+)230	(-)1,953
Mar-09	360	3,748	(-)3,388	(-)2,042
Apr-09	204	2,691	(-)2,487	(-)1,071
May-09	923	2,360	(-)1,437	(+)131
June-09	1,279	235	(+)1,044	(+)745

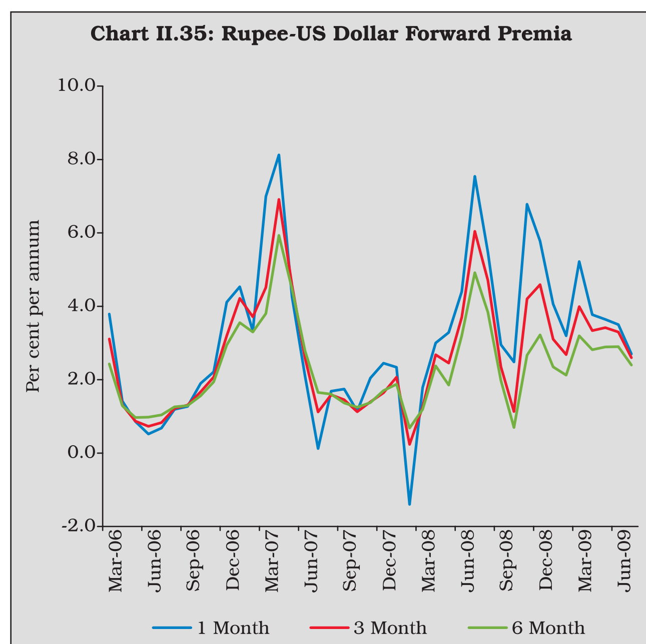
(+) : Purchases including purchase leg under swaps and outright forwards.

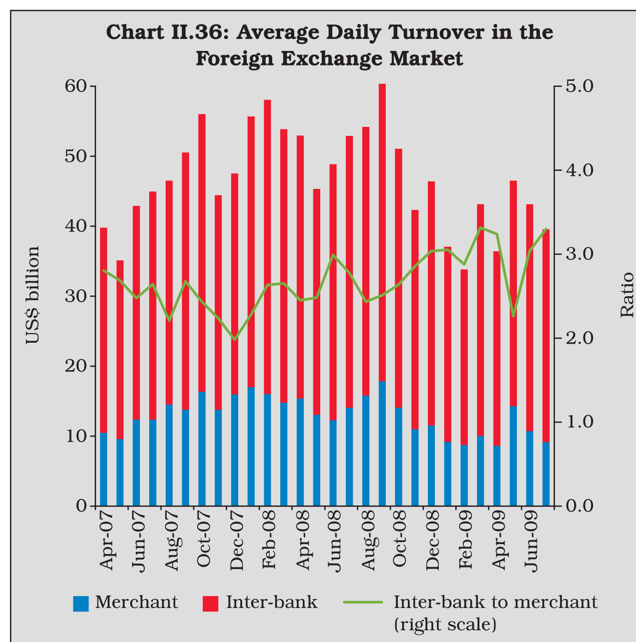
(-) : Sales including sale leg under swaps and outright forwards.

Note : Based on value dates and data are inclusive of transactions under the India Millennium Deposits.

II.5.20 The 6-currency trade-based REER (base: 1993-94=100) depreciated by 13.4 per cent between March 2008 and March 2009 (Chart II.34, Appendix Table 38). The broader 36-currency trade-weighted REER also depreciated by 13.3 per cent during the same period. The sharp depreciation of REER during 2008-09 was mainly on account of significant depreciation of the rupee against the US dollar and against other major currencies such as the euro, the Japanese yen and the Chinese yuan and significant moderation in the inflation rate in India. The 6-currency REER stood at 100.5 on August 14, 2009.

II.5.21 During 2008-09, forward premia showed large volatility reflecting the swift changes in the underlying demand-supply conditions and the relative interest rates (Chart II.35). The one, three and six-month premia exhibited movements in consonance with the evolving liquidity conditions in the domestic money market and recourse to buy-sell swaps by banks on account of shortage of dollar liquidity in the international inter-bank markets. However, after November 2008, with easing dollar liquidity, the forward premia have generally exhibited moderating trend. During 2009-10 (up to July), forward premia generally exhibited declining trend, reflecting the easing supply conditions in the market led by revival of capital flows.





II.5.22 Reflecting significant deceleration in cross-border trade flows and large capital outflows, the total turnover in the foreign exchange market declined by 1.3 per cent during 2008-09 as compared with a robust growth of 86.4 per cent in the previous year (Chart II.36 and Appendix Table 39). The average daily turnover in the foreign exchange market also declined marginally. The ratio of inter-bank to merchant turnover increased from 2.5 in 2007-08 to 2.8 in 2008-09. The declining trend in the total turnover in the foreign exchange market continued in April-July 2009-10. The daily average turnover in the foreign exchange market after showing signs of improvement in May-June 2009, exhibited some moderation in July 2009.

GOVERNMENT SECURITIES (SECONDARY) MARKET

II.5.23 The yields in the secondary market for government securities hardened in Q1 of 2008-09 on account of heightened inflationary expectations in the face of sharp increase in global commodity prices and concomitant monetary policy response in the form of hikes in the CRR and the LAF repo rate. Subsequently, the yields generally eased around mid-September 2008 following some

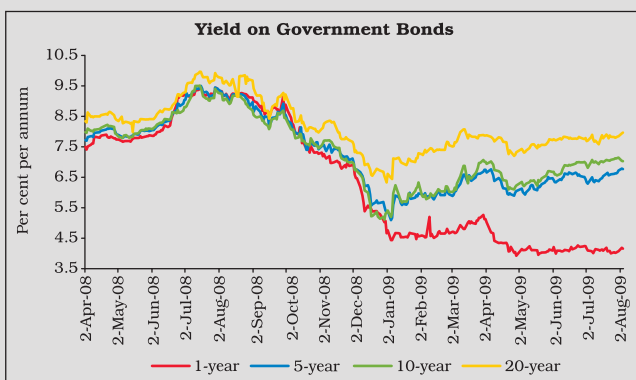
reduction in inflationary pressures due to lower crude oil prices. The yields, however, hardened moderately towards end-September 2008 when liquidity conditions tightened due to advance tax outflows and the adverse developments in international financial markets. In Q3 of 2008-09, the yields sharply moderated, reflecting lower policy rates and injection of ample liquidity to ease the pressure on money markets arising from the financial market turmoil.

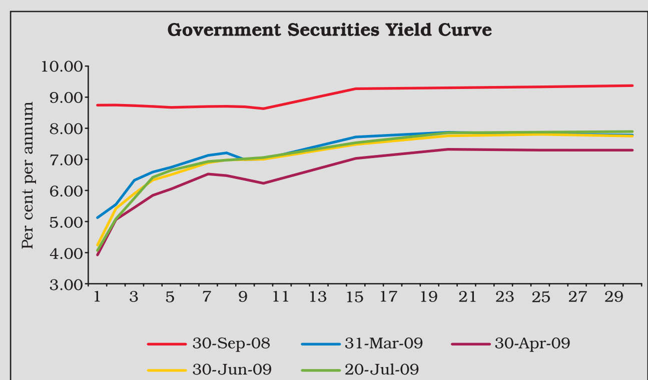
II.5.24 Notwithstanding further reduction in the CRR and LAF rates in January 2009, market sentiment worsened in January and February 2009, following the large and abrupt increase in the Government's market borrowing programme that became necessary to deliver fiscal stimulus. Further, the large market borrowing requirements of the Government for 2009-10 also weighed on the market. Subsequent to the announcement of the Interim Budget on February 16, 2009, even as the Reserve Bank initiated a series of auction-based purchases of government dated securities in addition to its purchases through the NDS-OM, the 10-year yield increased from 6.02 per cent at end-February 2009 to 6.88 per cent on March 12, 2009, notwithstanding a further cut in the LAF interest rates effective March 5, 2009 (Chart II.37). The increased borrowings by the State Governments also impacted the sentiment adversely. The subsequent announcement of enhanced amounts of auction-based purchases of government dated securities by the Reserve Bank helped to improve market sentiment with moderation in yield. The yields again hardened on the back of announcement of government dated securities auction calendar on March 26, 2009. During the initial period of 2009-10, the yield declined on account of easing of liquidity, OMO purchases and reduction in policy rates; however, since the second half of May, yield started hardening.

II.5.25 Movements in the yield curve during 2008-09 are largely reflective of the changes in monetary conditions and the higher Government borrowings. The yield curve moved upwards and peaked by end-July 2008 and thereafter shifted downwards steadily till end-December 2008, while again firming up over the last quarter of 2008-09 (Chart II.37). The yield curve continued to move upwards in Q1 of 2009-10 (barring April 2009) even as the comfortable liquidity conditions prevailed. The yield curve revealed moderation in rates towards the short end on account of abundant liquidity, while the medium to long-term yields hardened on concerns of higher Government borrowings.

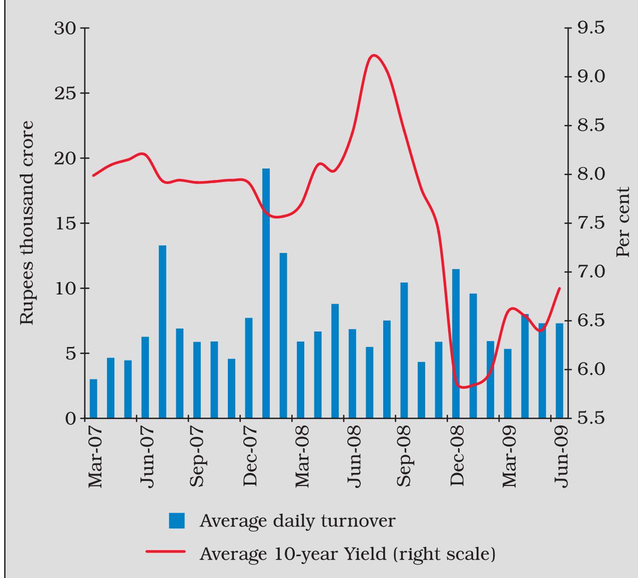
II.5.26 The daily average turnover in the government securities market witnessed some variation due to market uncertainties. The impact of liquidity injected by the Reserve Bank and low credit demand together partly contributed to drive the volumes in the government securities market, particularly since November 2008 (Chart II.38).

Chart II.37: Yield on Government Bonds





Source: FIMMDA



CREDIT MARKET

II.5.27 Bank deposit and lending rates, which hardened up to October 2008, started easing somewhat from November 2008, reflecting measures taken by the Reserve Bank with a view to containing the spillovers of the global financial crisis on the domestic credit markets. Interest rates offered by PSBs on deposits of all maturities eased moderately between March 2008 and March 2009, while those of private sector banks on deposits of one year to three years firmed up (Table 2.64). The actual lending rates, other than export credit on demand and term loans for the SCBs, increased between March 2008 and December 2008. This complicated the transmission mechanism in the face of falling policy rates and declining inflation. Although the policy rates have been substantially

Table 2.64: Movements in Deposit and Lending Rates

(Per cent)

Interest Rates	March 2007	March 2008	September 2008	December 2008	March 2009	April 2009	May 2009	July 2009
1	2	3	4	5	6	7	8	9
Term Deposit Rates								
Public Sector Banks								
a) Up to 1 year	2.75-8.75	2.75-8.50	2.75-10.25	2.75-10.25	2.75-8.25	2.50-7.50	2.50-7.50	1.00-7.00
b) Over 1 year and up to 3 years	7.25-9.50	8.25-9.25	8.75-10.25	8.50-10.75	8.00-9.25	7.00-8.75	6.50-8.50	6.50-8.00
c) Over 3 years	7.50-9.50	8.00-9.00	8.50-9.75	8.50-9.75	7.50-9.00	7.25-8.50	7.00-8.50	6.75-8.25
Private Sector Banks								
a) Up to 1 year	3.00-9.00	2.50-9.25	3.00-9.75	3.00-10.00	3.00-8.75	2.75-8.50	2.75-8.25	2.00-7.50
b) Over 1 year and up to 3 years	6.75-9.75	7.25-9.25	8.30-10.50	9.00-11.00	7.50-10.25	7.50-9.25	7.00-9.00	5.25-8.25
c) Over 3 years	7.75-9.60	7.25-9.75	8.25-10.25	8.50-11.00	7.50-9.75	7.50-9.25	7.00-9.00	5.75-8.50
Foreign Banks								
a) Up to 1 year	3.00-9.50	2.25-9.25	3.50-9.75	3.50-9.75	2.50-8.50	2.25-8.25	2.25-8.25	1.25-8.00
b) Over 1 year and up to 3 years	3.50-9.50	3.50-9.75	3.50-10.50	3.50-11.25	2.50-9.50	2.25-9.00	2.25-9.00	2.25-8.50
c) Over 3 years	4.05-9.50	3.60-9.50	3.60-11.00	3.60-11.00	2.50-10.00	2.25-9.50	2.25-9.50	2.25-9.50
BPLR								
Public Sector Banks	12.25-12.75	12.25-13.50	13.75-14.75	12.50-14.00	11.50-14.00	11.50-13.50	11.00-13.50	11.00-13.50
Private Sector Banks	12.00-16.50	13.00-16.50	13.75-17.75	13.00-17.25	12.75-16.75	12.50-16.75	12.50-16.75	12.50-16.75
Foreign Banks	10.00-15.50	10.00-15.50	10.00-16.00	10.00-17.00	10.00-17.00	10.00-17.00	10.00-17.00	10.50-16.00
Actual Lending Rates*								
Public Sector Banks	4.00-17.00	4.00-17.75	6.00-18.75	5.25-18.00	3.50-18.00	-	-	-
Private Sector Banks	3.15-25.50	4.00-24.00	5.06-23.00	5.06-30.00	4.75-26.00	-	-	-
Foreign Banks	5.00-26.50	5.00-28.00	5.00-25.50	5.00-26.00	5.00-25.50	-	-	-
Weighted Average Lending Rates#								
Public Sector Banks	11.81	12.18	-	-	10.99 @	-	-	-
Private Sector Banks	11.91	12.68	-	-	12.54 @	-	-	-
Foreign Banks	13.03	13.05	-	-	10.73 @	-	-	-

* : Interest rate on non-export demand and term loans above Rs.2 lakh excluding lending rates at the extreme five per cent on both sides.

: Data based on the accounts with credit limit of over Rs.2 lakh and are exclusive of inland and foreign bills purchased and discounted. Outstanding amounts are used as weights for calculating average lending rates.

@ : The data are provisional and are based on 32,693 branches only.

eased since early October 2008, significant rigidity has been witnessed in banks' deposit and lending rates, which continue to be high despite some moderation in the past few months. This rigidity could be attributed to a number of factors. First, the interest rate on small savings continues to be administered and a reduction in interest rates on bank deposits could make bank deposits relatively unattractive, which could lead to some deceleration of growth in bank deposits, as was witnessed in the past. Second, while interest rates on incremental time deposits are coming down, the average cost of deposits still remains high as the bulk of banks' time deposits raised in the past continue to be at higher interest rates. This, in turn, constrains an immediate substantial reduction in lending rates. Third, with increase in risk aversion, lending rates tend to be high even during periods of falling credit demand.

II.5.28 In 2009-10 so far, the reduction in the deposit and lending rates was somewhat more pronounced as the liquidity conditions remained easy and risks seemed to have abated and the impact of policy easing appeared to have worked through. There has been a reduction in the term deposit rates and the BPLRs across bank groups (Table 2.65).

II.5.29 The reduction in BPLRs of most public sector banks was in the range of 125-275 basis points, followed by 100-125 basis points for most private sector banks. The changes in BPLR, however, do not fully reflect the changes in the effective lending rates. During the pre-policy consultations with the Reserve Bank, banks pointed out that lending rates should not be assessed only in terms of reduction in BPLRs since as much as three-quarters of lending is made at rates below BPLR which includes lending to agriculture, export sector, and well-rated companies, including PSUs. The weighted average lending rate increased from 11.9 per cent in 2006-07 to 12.3 per cent in 2007-08, but is estimated to have declined to 11.1 per cent by March 2009. The effective lending rate is expected to have declined further in 2009-10 so far.

Table 2.65: Changes in Deposit and Lending Rates

(Per cent)

Interest Rates	October 2008	End-Jul 2009	Variation* (basis points)
1	2	3	4
Term Deposit Rates			
Public Sector Banks			
a) Up to 1 year	2.75-10.25	1.00-7.00	175-325
b) Over 1 year and up to 3 years	9.50-10.75	6.50-8.00	275-300
c) Over 3 years	8.50-9.75	6.75-8.25	150-175
Private Sector Banks			
a) Up to 1 year	3.00-10.50	2.00-7.50	100-300
b) Over 1 year and up to 3 years	9.00-11.00	5.25-8.25	275-375
c) Over 3 years	8.25-11.00	5.75-8.50	250
Five Major Foreign Banks			
a) Up to 1 year	3.50-9.50	2.25-7.00	125-250
b) Over 1 year and up to 3 years	3.60-10.00	2.25-7.00	135-300
c) Over 3 years	3.60-10.00	2.25-7.00	135-300
BPLR			
Public Sector Banks	13.75-14.75	11.00-13.50	125-275
Private Sector Banks	13.75-17.75	12.50-16.75	100-125
Five Major Foreign Banks	14.25-16.75	14.25-15.50	0-125

* : Variation of July 31, 2009 over October 2008.

EQUITY AND DEBT MARKETS

Primary Market

II.5.30 The primary issuances in the Indian capital market remained subdued during 2008-09, reflecting depressed secondary markets, deceleration in the domestic output growth and associated contraction in investment demand, a sharp drop in FII exposure to Indian capital market and the overall adverse sentiment on account of the global crisis. The global financial crisis adversely affected the primary markets since January 2008. There were withdrawals of planned public issues, under-subscription and innovative attempts at repricing issues immediately after allotment due to large swings in prices. The trend continued with the primary capital market exhibiting a sluggish trend. Resource mobilisation through public issues, private placement, Euro issues and mutual funds witnessed a sharp decline due mainly to postponement of resource raising plans by corporates on the back of uncertain conditions in the secondary market. As a result, resources raised

by the corporate sector from the primary market through public issues contracted sharply during 2008-09 along with shrinkage in the average size of public issues (Table 2.66 and Appendix Table 42).

II.5.31 The pattern of resource mobilisation in the primary market revealed two key developments. First, there was a sharp fall in the resources mobilised by the private sector, both through public issues and private placement. Second, resources mobilised by the public sector companies through private placements did show some resilience even in the face of adverse market developments, perhaps due to the perception of less credit risk in such issues. The share of the initial public offerings (IPOs), both in terms of number of issues and resources mobilised, declined significantly during 2008-09. Out of the 45 public issues in 2008-09, 21 IPOs issued by private sector companies constituted 13.9 per cent and 20 rights issues accounted for 81.8 per cent of the total resources mobilised. Furthermore, all IPOs issued during 2008-09 were in the nature of equity issues. The share of private non-financial companies in equity issues was substantial, whereas private financial companies had only two issues during the year, reflecting the difficulties faced by certain segments of the non-bank financial sector in accessing funds

Table 2.66: Mobilisation of Resources from the Primary Market

(Amount in Rupees crore)

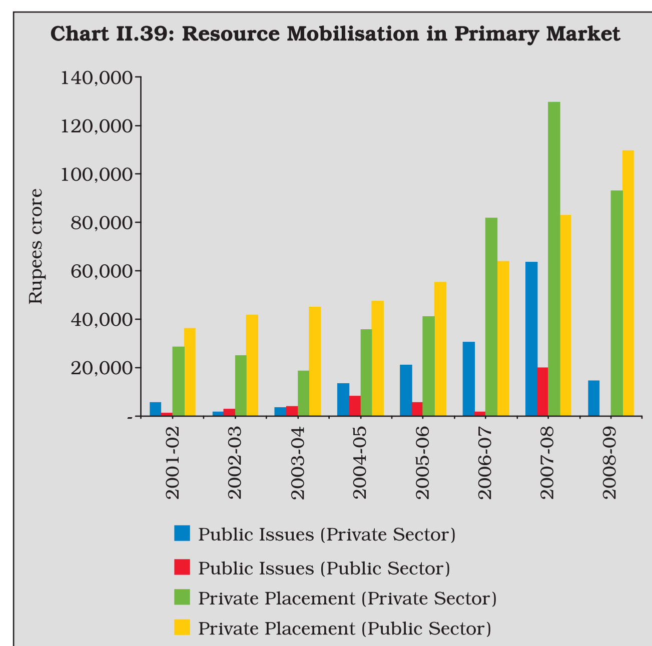
Item	2007-08		2008-09 P	
	No. of Issues	Amount	No. of Issues	Amount
1	2	3	4	5
A. Prospectus and Rights Issues*				
1. Private Sector (a+b)	**115**	**63,638**	**45**	**14,671**
		(107.9)		**(-76.9)**
a) Financial	11	14,676	2	466
b) Non-financial	104	48,962	43	14,205
2. Public Sector (a+b+c)	**4**	**20,069**	**-**	**-**
a) Public Sector Undertakings	-	-	-	-
b) Government Companies	2	2,516	-	-
c) Banks/Financial Institutions	2	17,553	-	-
3. Total (1+2)	**119**	**83,707**	**45**	**14,671**
of which:		**(158.5)**		**(-82.5)**
(i) Equity	116	82,398	45	14,671
(ii) Debt	3	1,309	-	-
B. Private Placement				
1. Private Sector (a+b)	**1,616**	**1,29,677**	**1,053**	**93,036**
a) Financial	905	88,291	683	60,246
b) Non-financial	711	41,386	370	32,790
2. Public Sector (a+b)	**199**	**83,048**	**228**	**1,09,709**
a) Financial	132	56,185	123	64,608
b) Non-financial	67	26,863	105	45,101
3. Total (1+2)	**1,815**	**2,12,725**	**1,281**	**2,02,745**
of which:				
(i) Equity	2	1,410	8	960
(ii) Debt	1,813	2,11,315	1,273	2,01,785
C. Euro Issues (ADRs and GDRs)	**26**	**26,556**	**13**	**4,788**

P : Provisional. * : Excluding offers for sale.
- : Nil/Negligible.
Note : Figures in parentheses are percentage variations over the previous year.
Source : Securities and Exchange Board of India and various merchant bankers.

because of spillover effects of the global financial crisis. During 2008-09, the difficulties involved in raising resources from the primary segment of the capital market were evident even in terms of instances of extension of cut-off dates and withdrawal of some public issues due to low subscription.

II.5.32 The domestic private placement market, which has emerged as a major alternative source of funding for the Indian corporate sector in the recent years, also witnessed a slowdown during 2008-09 due to adverse capital market conditions. Mobilisation of resources through private placement was lower during 2008-09 than in 2007-08. Public sector entities accounted for a larger share in total private placement in 2008-09 (Chart II.39). The resource mobilisation through financial intermediaries registered a decline during 2008-09; however, non-financial intermediaries registered an increase.

II.5.33 Resources raised by Indian corporates through Euro issues – American Depository Receipts (ADRs) and Global Depository Receipts (GDRs) – declined significantly owing to difficult liquidity conditions in the international financial markets.



Secondary Market

II.5.34 The global stock market crash was widespread as the stock prices in almost all countries around the world witnessed substantial correction, notwithstanding the differences across countries in terms of fundamentals and the extent of impact of the financial crisis on the real economies. Many EMEs became part of the global asset price bubble, as the turmoil in the advanced countries became widespread. The domestic equity market remained generally weak during 2008-09 and witnessed one of the highest degrees of volatility in stock prices in recent years. The BSE Sensex fell to a low of 8160 on March 9, 2009, witnessing a decline of 60.9 per cent from the peak of January 8, 2008. The corresponding decline in market capitalisation was 63 per cent. During 2008-09, the BSE Sensex and S&P CNX Nifty decreased by 37.9 per cent and 36.2 per cent, respectively. The slide in the stock prices during 2008-09 reflected the response to a series of negative news (Box II.28).

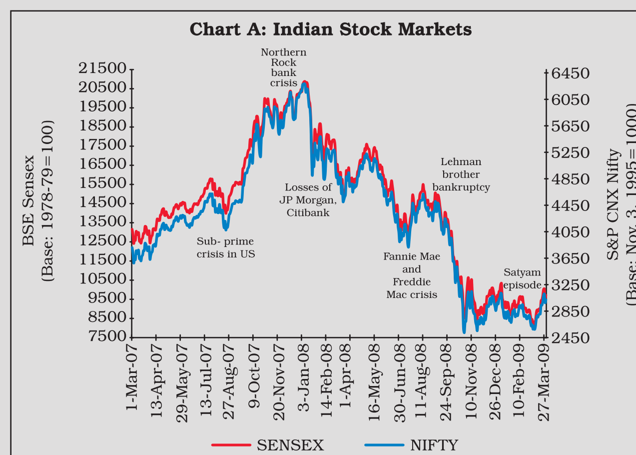
II.5.35 The market capitalisation of BSE contracted sharply by 39.9 per cent by end-March 2009, reflecting fall in stock prices and significantly lower listing of new securities (Table 2.67 and Appendix Table 44). The price-earning (P/E) ratio of BSE Sensex also declined significantly. Volatility in the stock markets increased sharply during 2008-09 with a significant drop in the turnover – both in cash and derivatives segments (Appendix Table 45).

II.5.36 The losses suffered in the domestic stock market during 2008-09 were spread across stocks in all sectors. Consumer durables, metal, capital goods and banking sector indices suffered higher losses than the average BSE Sensex during 2008-09, while information technology, auto, oil and gas, public sector units, healthcare and fast moving consumer goods sectoral indices posted relatively lower losses. The higher losses encountered by the former group of sectors of BSE Sensex perhaps revealed the greater sensitivity of these sectors to economic slowdown and the impact of the global financial crisis. The BSE mid-cap and BSE small-

Box II.28
Turmoil in Global Financial Markets – Impact on Indian Capital Market

The capital markets across the world reacted sharply to the gradually unfolding severity of the sub-prime crisis with steep downward corrections. This created a major negative wealth effect that precipitated the contraction in aggregate demand. While the initial impetus for price corrections came through deleveraging and weakening earning prospects on account of deteriorating growth, adverse expectations gaining prominence over time and the persistent uncertainty left the markets depressed. The Indian stock prices responded significantly to the global developments, partly reflecting the growing integration of the Indian stock market with the global markets, as reflected in a higher correlation of the BSE Sensex with MSCI (Emerging) at 0.63 during 2008-09 as compared to 0.13 and 0.37 with Dow Jones and FTSE, respectively. Although the sub-prime crisis erupted in the latter part of 2007, the effects on the Indian equity markets were felt only in early January 2008. After touching an all-time high of 20873 on January 8, 2008, the BSE Sensex started declining rapidly. During 2008-09, Indian equity markets largely remained weak and volatile, in line with the trends in international equity markets.

In terms of the sequence of major events and their impact on the stock prices in India (Chart A), the turbulence in global financial markets began to deepen in July 2008 when the US Government sponsored mortgage guarantors, Fannie Mae and Freddie Mac, which had guaranteed over US$ 12 trillion in US home mortgage loans, reported a drastic drop in the fair value of their assets. The BSE Sensex dipped to 12576 on July 16, 2008, lower by 19.6 per cent from end-March 2008, and 39.8 per cent from January 8, 2008 peak level. The next round of sell-off pressure in equities was felt after September 15, 2008, when a major US investment bank, Lehman Brothers filed for bankruptcy protection, another major investment bank, Merill Lynch was rescued by merging with Bank of America and the largest US insurer, AIG had to be saved with the largest ever support from the Fed. The BSE Sensex closed lower at 13531 on September 15, 2008, a decline of 3.4 per cent over the previous trading day and it was 35.2 per cent lower than the peak reached on January 08, 2008 (Chart A). The market capitalisation declined by 13.5 per cent on September 15, 2008 over March 2008 and the P/E ratio also fell sharply to 16.77 from 20.11 during the same period.



As the real effects of the financial crisis became visible in the form of a global recession, the depressed conditions in the market continued and got aggravated with further bad news flowing in the form of corporate governance at the Satyam. The BSE Sensex fell to a new low on March 9, 2009, a decline of 60.9 per cent over the peak (as on January 8, 2008). The volatility of the BSE Sensex (coefficient of variation) increased, the market capitalisation fell and P/E ratio declined significantly.

The capital outflows that ensued in the wake of the crisis, particularly in the form of FII disinvestment, affected the Indian equity markets directly. During 2008-09, Indian stock markets witnessed an outflow of around US$ 15 billion. FII outflows raised concerns about the pressures on India's BoP, which were manifested in the form of depreciating rupee and loss of reserves. The confidence factor also weakened on account of deteriorating earnings prospects of the listed companies, thereby further undermining the market sentiment.

cap recorded higher losses during 2008-09, which could be partly because of the greater impact of credit squeeze on these categories of companies and also the greater impact of export slowdown on small and medium sized companies (Table 2.68).

II.5.37 As a part of the global deleveraging process and general increase in risk aversion towards EMEs, the foreign institutional investors (FIIs) withdrew large amount of their investments from the Indian market. According to the data released by the SEBI, FIIs made swift reversals from large net purchases in the Indian equity market during 2007-08 to large net sales during 2008-09. Investments by mutual funds in equities also declined during 2008-09, whereas their investments

Table 2.67: Indian Equity Markets - Key Indicators

Indicator	BSE			NSE		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
1	2	3	4	5	6	7
1. BSE SENSEX / S & P CNX Nifty						
(i) Average	12277	16569	12366	3572	4897	3731
(ii) End of the year	13072	15644	9709	3822	4735	3021
2. Coefficient of variation (per cent)	11.1	13.7	24.2	10.4	14.4	23.2
3. Price-Earning Ratio@	20.3	20.1	13.7	18.4	20.6	14.3
4. Price-Book Value Ratio@	5.1	5.2	2.7	4.9	5.1	2.5
5. Yield (per cent per annum)@	1.3	1.1	1.8	1.3	1.1	1.9
6. Listed Companies (number)	4,821	4,887	4,929	1,228	1,381	1,432
7. Cash Segment Turnover (Rupees crore)	9,56,185	15,78,858	11,00,074	19,45,285	35,51,038	27,52,023
8. Derivative Segment Turnover (Rupees crore)	59,007	2,42,308	12,268	73,56,242	1,30,90,478	1,10,10,482
9. Market Capitalisation(Rupees crore)#	35,45,041	51,38,015	30,86,076	33,67,350	48,58,122	28,96,194
10. Market Capitalisation to GDP Ratio (Per cent)	85.5	108.8	58.0	81.6	102.9	54.4

@ : Based on 30 scrips included in the BSE Sensex and are as at end-March.
# : As at end-March.
Source : Bombay Stock Exchange Limited (BSE) and National Stock Exchange of India Limited (NSE).

in debt increased, reflecting the lesser risk involved in government debt (Table 2.69).

Table 2.68: BSE Sectoral Stock Indices

(Base: 1978-79=100)

Sector	Year-on-year Growth (per cent)		Variation (per cent)	
	End-March 2008	End-March 2009	End-March 2008 over January 08, 2008	End-March 2009 over January 08, 2008
1	2	3	4	5
Auto	-7.1	-32.3	-19.1	-45.3
Bankex	18.0	-41.8	-36.1	-62.8
Capital Goods	54.4	-53.8	-30.7	-68.0
Consumer Durables	8.8	-58.1	-40.9	-75.3
Fast Moving Consumer Goods	31.7	-11.1	-8.6	-18.7
Health Care	5.4	-26.5	-10.4	-34.1
Information Technology	-27.6	-35.6	-16.4	-46.2
Metal	65.2	-58.7	-28.2	-70.3
Oil & Gas	56.0	-29.6	-28.7	-49.8
Public Sector Undertakings	25.4	-29.6	-31.2	-51.6
BSE 500	**24.3**	**-42.8**	**-30.0**	**-60.0**
BSE Sensex	**19.7**	**-37.9**	**-25.1**	**-53.5**
BSE Mid-cap	19.4	-54.0	-34.5	-69.9
BSE Small-cap	21.2	-58.6	-42.0	-76.0

Source : Bombay Stock Exchange Limited (BSE).

II.5.38 During the first quarter of 2009-10, the domestic stock markets witnessed a recovery commensurate with international stock markets and the rate of recovery turned sharper since the announcement of the general election results. The upward trend could be attributed to a number of positive developments such as reduction in policy rates in April 2009, positive results for Q4 of 2008-09 by some Indian banks and corporates, greater political stability in the post-election period and expectations of a larger stimulus in the Union Budget for 2009-10 and resumption of FIIs' interest in the domestic equity market. The BSE Sensex

Table 2.69: Trends in Institutional Investments

(Rupees crore)

Year	FIIs		Mutual Funds	
	Net Investment in Equity	Net Investment in Debt	Net Investment in Equity	Net Investment in Debt
1	2	3	4	5
2003-04	43,631	5,534	1,308	22,701
2004-05	40,991	1,927	448	16,987
2005-06	48,487	-7,334	14,302	36,801
2006-07	26,031	5,881	9,062	52,543
2007-08	52,574	12,499	15,775	73,790
2008-09	-48,248	1,866	6,985	81,803

Source: Securities and Exchange Board of India.

and the S&P CNX Nifty as on August 17, 2009, showed gains of 52.3 per cent and 45.2 per cent, respectively, over end-March 2009.

II.5.39 Activity in the Wholesale Debt Market segment of the NSE improved in 2008-09 with the turnover increasing by 19.0 per cent.

Mutual Funds

II.5.40 As a consequence of the global liquidity squeeze, Indian banks and corporates found their overseas financing drying up, forcing corporates to shift their credit demand to the domestic banking sector. Also, in their frantic search for substitute financing, corporates withdrew their investments from domestic money market mutual funds, putting redemption pressure on the mutual funds, which affected the NBFCs, where the MFs had invested a significant portion of their funds. A substantial proportion of collections of mutual funds reflected bulk funds from the corporate sector under the money market schemes, partly reflecting tax and other regulatory arbitrage. While the mutual funds promised immediate redemption, their assets were relatively illiquid. Maturity mismatches between assets and liabilities of mutual funds further aggravated the problems. Substantial outflows occurred from mutual funds in June, September and October 2008 due to the uncertain conditions in the stock markets and redemption pressures from banks and corporates. Net assets managed by mutual funds also declined by 17.4 per cent during 2008-09 (Table 2.70). The Reserve Bank then announced immediate measures to provide liquidity support to mutual funds through banks. With the easing of overall liquidity conditions, investment in mutual funds again became attractive (Box II.29). During November 2008 – February 2009, net resource mobilisation by mutual funds turned positive, which reversed with considerable outflows during March 2009.

II.5.41 Both the number of schemes and net resource mobilisation by mutual funds declined significantly during 2008-09 as compared to the previous year (Table 2.71).

Table 2.70: Resource Mobilisation by Mutual Funds

(Rupees crore)

Category	2007-08		2008-09P	
	Net Mobili-sation@	Net Assets #	Net Mobili-sation@	Net Assets #
1	2	3	4	5
Private Sector	1,33,304	4,15,621	-34,018	3,35,527
Public Sector *	20,497	89,531	5,721	81,772
Total	**1,53,801**	**5,05,152**	**-28,297**	**4,17,299**

P : Provisional @ : Net of redemptions.
: End-period. * : Including UTI Mutual fund.
Note : Data exclude funds mobilised under Fund of Funds Schemes.
Source : Securities and Exchange Board of India.

All-India Financial Institutions

II.5.42 All-India Financial Institutions (AIFIs) can raise resources, both short-term and long-term, provided the total outstanding at any time does not exceed 10 times of their net owned funds (NOF) as per their latest audited balance sheet. Within this overall ceiling, four FIs, *viz.*, EXIM Bank, SIDBI, NHB and NABARD were provided with umbrella limits to raise resources equivalent to 100 per cent of their NOF through instruments such as term money, term deposit, inter-corporate deposits, CDs and CPs. In case of EXIM Bank and NHB, this has been raised to 200 per cent of their respective NOF since December 2008 and January 2009, respectively. The aggregate umbrella limit for resource mobilisation by these FIs increased to Rs. 26,292 crore as on March 31, 2009. The outstanding resources mobilised, mostly through CPs and CDs, increased significantly in 2008-09.

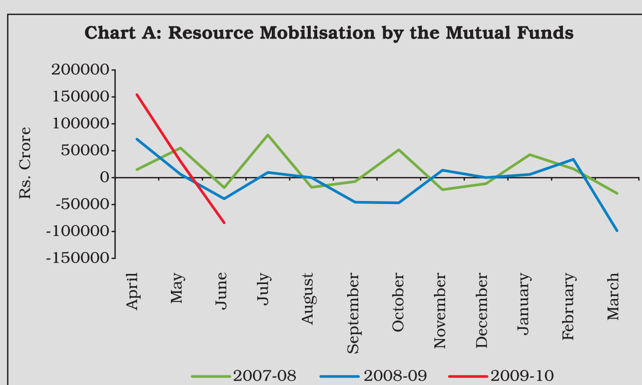
II.5.43 Total resources mobilised by select AIFIs in the form of bonds and debentures declined by 54.0 per cent during 2008-09 (Table 2.72, Appendix Table 46). This mainly reflected the adverse financial market conditions that reduced the access of most financial institutions to domestic capital markets.

II.5.44 To sum up, the adverse confidence channel emanating from the global financial crisis generally magnified the effects of the trade and finance

Box II.29
Mutual Funds Industry in India - Current Issues

In a phase of significant downward correction in stock prices, the falling value of financial savings of small and retail investors and more importantly their confidence in the capital market emerged as significant concerns for the mutual funds industry in India. The mutual funds industry in India has come a long way since 1963, when the Unit Trust of India was set up at the initiative of the Government of India and the Reserve Bank. The industry was opened up to public sector entities such as government-owned banks, life insurance companies and GIC between 1987 and 1993, and to private sector players in 1993. For over a decade, with a view to broadening the range of investor participation, promoting equity culture and spreading the benefits of a deep and liquid capital market, policymakers in India encouraged mutual funds as a safe vehicle of investment for retail or small investors. Fiscal incentives in the form of tax breaks were provided to help the industry to scale up their size and importance in the market.

The growing popularity of mutual funds is clearly evident from the growth of assets over the years. The buoyancy in stock markets during 2004-07 enabled mutual funds to attract fresh inflow of funds. During the first eight months of 2008-09, however, with downtrend in stock markets and in view of the tight liquidity conditions precipitated by a variety of reasons including advance tax outflows, suppliers' credit withdrawal partly on account of freezing of external credit markets and drying up money market liquidity, the mutual fund industry faced unprecedented level of stress. The decline in the net resource mobilisation was especially pronounced in the months of June, September, October, 2008 and March 2009 (Chart A).



The Reserve Bank announced some quick measures in October 2008 to make available liquidity support to mutual funds through banks. With a view to helping redemptions without affecting the cash position of the mutual funds, SEBI announced that for all close-ended schemes (except Equity Linked Savings Schemes) to be launched on or after December 12, 2008, the units must be mandatorily listed. As per the SEBI circular dated January 19, 2009, the tenure of the securities held in the portfolio of liquid schemes was reduced. These measures along with the fiscal–monetary stimuli measures to improve the overall liquidity position seem to have helped the mutual funds industry to reposition itself to face the challenges arising in the light of the ongoing global financial turmoil. Some systemic issues have come up which, however, are crucial for the future of the industry.

Despite a significant growth in the number of schemes and assets under management of mutual funds in India in recent years, their level of penetration remains limited in comparison with other countries. This is reflected in the small size of assets managed by them (amounting to less than 5 per cent of GDP as against 70 per cent in the US, 61 per cent in France and 37 per cent in Brazil) and small share of household savings in units of mutual funds. As per a recent research report on 'Indian Mutual Fund Industry' published by RNCOS, however, the asset size of the industry is projected to touch US$ 300 billion by 2015. Despite immense growth potential, limited involvement of the rural sector due to lack of awareness and limited banking services in the rural regions, could prove to be a constraining factor.

Although the share of equity-oriented schemes has increased significantly in recent years, these still account for less than 25 per cent of the assets of the industry. Most of the funds mobilised by mutual funds are through liquid/ money market schemes, which remain attractive for parking of funds by corporates and other large institutional investors with a short-term perspective. A high dependence on corporates for funds implies a lesser role for retail investors. Moreover, it makes the funds more volatile as corporate and other institutional investors can withdraw funds at short notice. Attempts to ring-fence them in the form of segregation of schemes into institutional and retail have not worked so far, and SEBI is currently contemplating a more detailed disclosure norm for corporate investments.

The proliferation of schemes (1,000 to 5,000 variants) leads to confusion among investors. Over four lakh systematic investment plan (SIP) accounts have been closed over the last few months. Some consolidation in the industry could be effected by linking the number of schemes permitted to the net owned funds. Though the investment by asset management companies in debt papers of realty firms was being viewed with some amount of scepticism in the current backdrop of the sub-prime crisis, SEBI is reported to have issued detailed regulations governing real estate mutual funds, under which mutual funds would be allowed to invest directly or indirectly in real estate assets or other permissible assets.

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2. Tarapore, S.S. (2009), "Mutual Funds: Need for Reforms", editorial in *Business Line*, April 10.

Table 2.71: Funds Mobilised by Mutual Funds - Type of Schemes

(Amount in Rupees crore)

Scheme	2007-08			2008-09 P		
	No. of Schemes	Net Mobilisation	Net Assets*	No. of Schemes	Net Mobilisation	Net Assets*
1	2	3	4	5	6	7
A. Income/Debt Oriented Schemes	**593**	**1,03,867**	**3,12,997**	**599**	**-32,161**	**2,94,349**
(i) Liquid/Money Market	58	14,976	89,402	56	-3,599	90,594
(ii) Gilt	30	434	2,833	34	3,606	6,413
(iii) Debt (other than assured return)	505	88,457	2,20,762	509	-32,168	1,97,343
(iv) Debt (assured return)	0	0	0	0	0	0
B. Growth/Equity Oriented Schemes	**313**	**46,933**	**1,72,742**	**340**	**4,024**	**1,08,244**
(i) Equity Linked Savings Schemes	43	6,151	16,020	47	2,969	12,428
(ii) Others	270	40,782	1,56,722	293	1,055	95,816
C. Balanced Schemes	**37**	**5,768**	**16,283**	**35**	**61**	**10,629**
D. Exchange Traded Fund +	**13**	**-2,767**	**3,130**	**17**	**-998**	**1,396**
(i) Gold ETF	5	276	483	5	84	736
(ii) Other ETFs	8	-3,043	2,647	12	-1,083	660
E. Fund of Funds Scheme	**37**	**1,162**	**3,742**	**10**	**778**	**2,681**
F. Total #	**956**	**1,53,801**	**5,05,152**	**1001**	**-28,296**	**4,17,300**

* : As at end-March. # : Total excludes Fund of Funds Schemes.
P : Provisional.
\+ : Exchange Traded Funds first introduced *vide* SEBI circular no. IMD/CIR No. 4158422/06 dated January 24, 2006.
Source : Securities and Exchange Board of India.

channels, leading to sharp corrections in asset prices of EMEs, with large volatility. Subsequently weakening growth prospects extended the depressed and volatile phase for the financial markets. The EMEs, despite considerable resilience in weathering the crisis up to September 2008, came under strain in the last quarter of 2008 through contagion from the global deleveraging

Table 2.72: Resources Raised by way of Bonds/Debentures by Select All-India FIs

(Rupees crore)

Institution	Resources Mobilised		Outstanding Borrowings		Weighted Average Cost of Funds (Per cent)		Weighted Average Maturity (Years)	
	2007-08	2008-09	End- March 2008	End- March 2009	2007-08	2008-09	2007-08	2008-09
1	2	3	4	5	6	7	8	9
EXIM Bank	3,555	2592	11,871	11950	8.11	8.74	4.09	4.09
SIDBI	..	..	5,415	1,353	6.84	8.56	3.88	7.29
NABARD	13,620	4,251	32,630	23,704	9.50	9.16	3.95	7.09
NHB	..	1,063	7,262	4,001	..	8.94	..	6.65
Total	**17,175**	**7,906**	**57,178**	**41,008**	..	..	..	..

.. : Nil/Not applicable.
Note: 1. Data relate to rupee resources only.
2. Data on resources raised include long-term resources mobilised through bonds/debentures, short-term resources mobilised through commercial papers, certificates of deposit, inter-corporate deposits, term deposits and term money.
3. Data are provisional.

by large financial entities to meet the capital needs in the parent countries and a rise in overall risk towards EMEs. EME equity markets suffered large losses in the wake of reversal of portfolio flows, bank lending declined and credit spreads increased sharply. The financial institutions in EMEs, however, did not exhibit the type of fragility and the magnitude of stress that was seen in the advanced economies. By the second quarter of 2009, the international markets gained a modicum of stability following greater public policy action, however, some segments of financial market still appear vulnerable.

II.5.45 Like other EMEs, although India remained immune to the direct impact of mortgage crisis on the Indian financial markets till September 2008, reduction in net capital inflows following failure of Lehman Brothers and the significant correction in the domestic stock markets on the back of sell-off by FIIs created stress on various segments of the Indian financial market, particularly the foreign exchange and the money markets. The Reserve Bank took a number of conventional and unconventional measures to augment the domestic and foreign exchange liquidity. An important distinction between the actions taken by the Reserve Bank and other central banks is that the operations were conducted through the banking channel and even the measures aimed at addressing the liquidity and redemption needs of mutual funds, NBFCs and housing finance companies were directed through the banks. Monetary transmission weaknesses emerged as an issue as the adjustment in market interest rates in response to changes in policy rates got reflected with some lag and at a slow pace. In India, the monetary transmission has a differential impact across different segments of the financial market. While the transmission turned out to be faster in the money and bond markets, it was relatively muted in the credit market on account of several structural rigidities. Overall, although the shocks emanating from the global financial crisis created liquidity strains on the domestic money and foreign exchange markets, besides triggering major asset price correction in the stock market, the stress impact remained generally temporary and was adequately and swiftly addressed through the policy actions taken by the Reserve Bank. The Indian markets had functioned normally even during the peak of the financial crisis, and the excessive volatility was contained by November 2008 through appropriate policy response from the Reserve Bank. The credit market witnessed some tightening of interest rates due to general risk aversion. With receding risks and volatility, markets improved further in the first quarter of 2009-10 as spreads narrowed significantly and market activity picked up. In Q1 of 2009-10, the bond yield, particularly in the medium to long-term maturity, exhibited increase due to concerns arising from large government borrowings. The equity markets, on the back of some positive global cues and domestic developments, have witnessed significant gains, which may help in reviving the primary equity markets when the investment demand starts looking up.

VI. EXTERNAL SECTOR

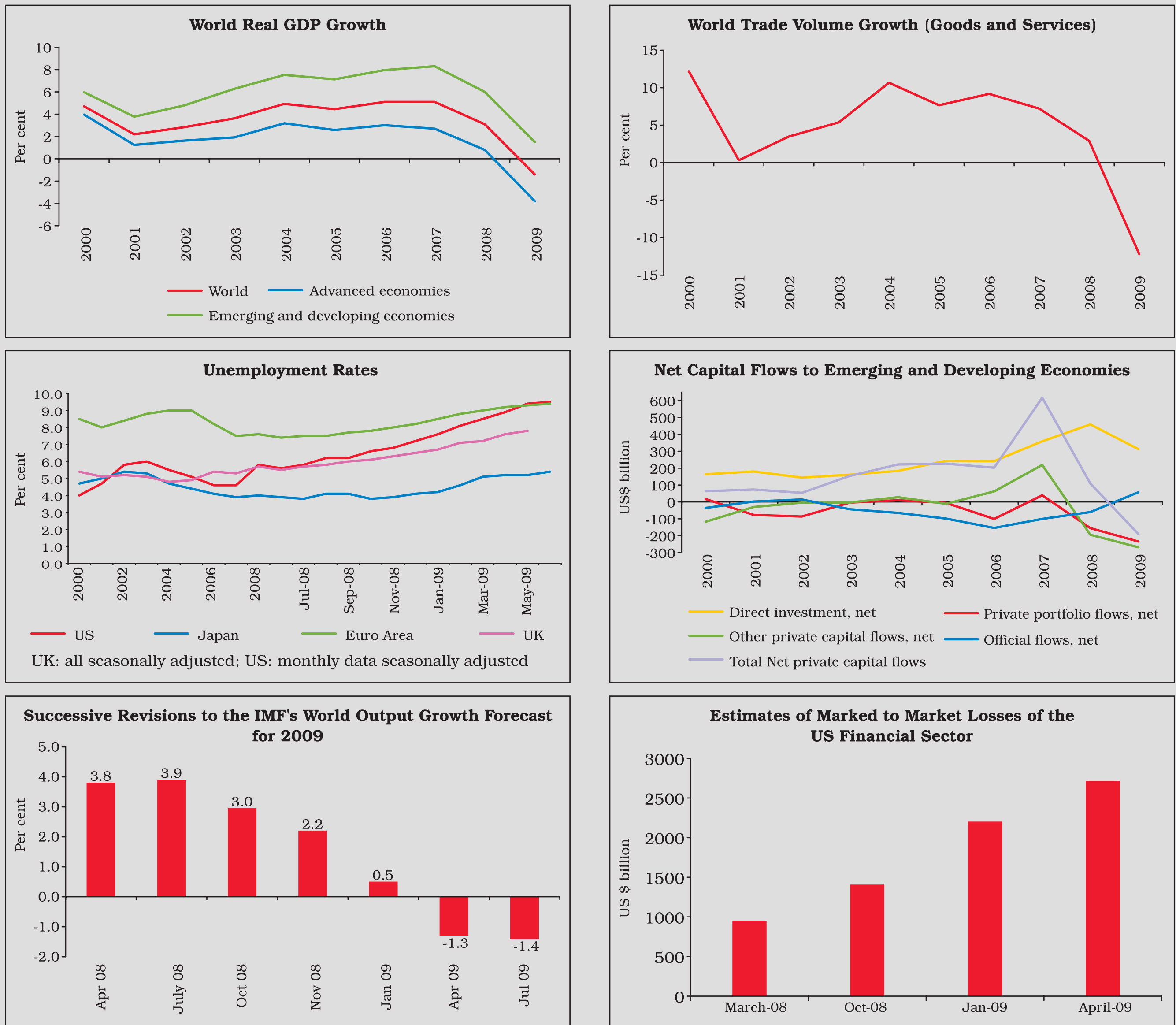
INTERNATIONAL DEVELOPMENTS

II.6.1 The global economic and financial market conditions deteriorated to unprecedented proportions during 2008-09, creating one of the severest external shocks not only for advanced economies but also for all emerging market economies (EMEs), including India. Irrespective of the degree of globalisation of a country and soundness of respective domestic policy environments, the deepening of crisis in the advanced countries snowballed into a synchronised global contraction with specific channels of transmission of contagion gathering speed and intensity over time. The 'negative feedback loop' contaminated each and every sector and the downward spiral turned almost resistant to large doses of policy stimulus engineered and delivered by countries around the world, revealing thereby the complex nature and the enormous dimensions of the crisis.

II.6.2 The subprime crisis that emanated from the US housing mortgage market in the second half of 2007 snowballed into a global financial crisis with the global financial landscape changing significantly during the course of 2008 wherein several large international financial institutions either failed or were restructured to avoid failure. With the unfolding of financial crisis, the strains on the balance sheets of financial institutions increased over time, which further threatened the viability of some of the leading global financial entities. The multi-dimensional ramifications of the crisis were manifested in intense deleveraging, extreme levels of risk aversion, mounting losses of banks and financial institutions, the collapse of commodity prices from their peaks and sharp corrections in asset prices. All these together led to a sharp slowdown in growth and trade flows, and rising unemployment, besides triggering large scale reversals in capital flows (Chart II.40). The deleveraging by large financial institutions was disorderly under the pressure of market driven contraction in their balance sheets on the asset side and inadequacy of capital in the face of rising losses. This deleveraging process created severe disruptions in the short-term funding markets, as reflected in the tightening access and widening of risk spreads. A wide range of non-bank financial institutions also came under strain during the crisis with rapidly falling asset prices. While the pension funds exhibited rapid decline in their asset values, life insurance companies experienced losses on equity and corporate bond holdings. The massive erosion of financial wealth arising from asset price shocks had severe adverse impact on both the corporate and the household balance sheets, which was amplified by the deteriorating employment conditions. These, in turn, led to deterioration in consumer confidence and contraction in consumption demand, while at the same time reducing the values of collaterals of the corporates and their ability to raise resources. The financial crisis, thus, had cascading effects on the global economy through financial, trade and confidence channels. The deceleration in growth outlook was so rapid that the IMF had to repeatedly revise its global growth projections downwards for 2009, i.e. from a somewhat healthy 3.8 per cent in April 2008 to (-) 1.4 per cent in July 2009, which is the deepest recession seen since the post-World War II (IMF, 2009). While major advanced economies slipped into recession, the EMEs - which were perceived to be decoupling till the early part of 2008- also experienced significant growth deceleration.

II.6.3 Apart from the intensity, the global slowdown also remained more widespread and synchronised due to the much higher degree of global integration through international trade and finance. Even EMEs with sound macroeconomic and financial pre-conditions have been strongly affected by the financial contagion, which in late 2008 spilled over to the real sector, with export and GDP growth rates plunging and trade finance contracting across the world. Thus, the notion of decoupling of EMEs, which was held until early 2008, faded as the crisis intensified and spread across countries with greater speed (Box II.31). In the EMEs, the adverse impact of the crisis was transmitted through both financial and trade channels, particularly to the East Asian countries that rely heavily on manufacturing exports and the emerging European and Commonwealth of Independent States (CIS) economies, which excessively depended on capital inflows to propel growth. Latin America, the Middle East and Africa suffered from falling commodity prices and weak export demand. Although emerging and developing economies as a group are projected to grow by 1.5 per cent in 2009, real GDP is expected to contract across many countries under the drag of falling export demand, lower commodity prices and tighter financing constraints.

II.6.4 One of the important manifestations of the global financial crisis was in the form of massive erosion in the capital base of the large financial institutions across countries. IMF's Global Financial Stability Report (April 2009) projected that the write-downs suffered by all holders of the US-originated assets since the outbreak of the crisis until 2010 could increase from an initial estimate of US $ 945



Source: World Economic Outlook Database and Global Financial Stability Reports, IMF; Official data from the websites of the respective countries.

billion to US $ 2.7 trillion, largely as a result of the worsening growth scenario (see Chart II.40). The estimates for write-downs extended to include other assets, although more uncertain, could reach a total of around US $ 4 trillion, about two-thirds of which would be incurred by banks.

II.6.5 The significance of the trade channel was evident in the global world trade decelerating from a growth of 7.2 per cent in 2007 to 2.9 per cent in 2008 and according to the latest IMF projections, it is expected to decline by 12.2 per cent in 2009. The World Trade Organisation (WTO) (2009) estimates also suggest that the world exports could contract by 10.0 per cent in volume terms in 2009 - the largest such contraction witnessed since the Second World War.

II.6.6 The transmission of shocks through the financial channel was largely evident in a flight to safety and rising home bias, besides the compulsions of deleveraging that created selling

Box II.30
Globalisation and the Pattern of World Growth: Issues of Decoupling

When the financial crisis started in the advanced countries, the immediate concern of a vast majority of EMEs was to preserve financial stability at home. As it turned out, the financial system of EMEs, particularly India, remained largely insulated from the direct adverse impact due to limited exposure to the failing financial institutions and to the troubled assets. This started the perception of possible 'decoupling' and the argument was extended that even if the advanced countries experienced significant deceleration in growth, the growth prospects of countries, which are less dependent on external demand, may remain decoupled.

The decoupling hypothesis was driven by the perception that if advanced economies went into a synchronised downturn, emerging economies could remain unscathed because of their substantial foreign exchange reserves, improved policy framework, robust corporate balance sheets and relatively healthy banking sector. An intense recession in the advanced countries, undermined the perception of decoupling at some stage, which later became evident when most of the countries participating in the globalisation started to experience and recognise the impact of the global crisis during the course of 2008-09.

The global economic landscape has shifted dramatically since the mid-1980s. EMEs have increasingly become major players and they now account for about a quarter of world output and a major share of global growth. In a recent study, Kose, Otrok and Prasad (2008) found that during the period of globalisation (1985-2005), there has been some convergence of business cycle fluctuations among the group of industrial economies and among the group of EMEs. Surprisingly, there has been a concomitant decline in the relative importance of the global factors. In other words, there is evidence of business cycle convergence within each of these two groups of countries but divergence (or decoupling) between them. The rising financial linkages could result in a higher degree of business cycle co-movement *via* the wealth effects of external shocks. However, they could reduce cross-country output correlations by stimulating specialisation of production through the reallocation of capital in a manner consistent with countries' comparative advantages. Trade linkages generate both demand-side and supply-side spillovers across countries, which could result in more highly correlated output fluctuations. On the other hand, if stronger trade linkages facilitate increased specialisation of production across countries, and if sector-specific shocks are dominant, then the degree of co-movement of output could fall (Baxter and Kouparitsas, 2005).

The phenomenon of decoupling in the early part of the current global crisis was explained in different ways. It was observed that the correlation of business cycles is specific to the shocks driving the cycles. In 2001 and 2002, the sharp decline in growth in the foreign countries soon after the US economy slowed reflected the global nature of the bursting of the technology bubble and its worldwide transmission through equity markets and manufacturing. In the current slowdown, however, the implosion of the housing sector played the most prominent role in dragging down the US GDP growth. As construction utilises local inputs and results in an output that is not traded internationally, its spillovers abroad were expected to be limited. But financial innovations had made housing tradable and the role of the derivatives was large in relation to the underlying housing loans with major financial institutions exposed to this market.

According to the IMF, the Financial Stress Indices for Advanced Economies turned positive in the second quarter of 2007 and then rose rapidly. In contrast, the Financial Stress Indices for EMEs stayed significantly negative until the first quarter of 2008. It turned positive only in the second quarter of 2008 and then magnified in the third and particularly in the fourth quarter. In this episode, there was a limited early response in emerging economies, but then there was a sharp catch-up. Thus, there was some initial 'decoupling', and subsequent 'recoupling' as the crisis deepened over time. In a rapidly globalising world, the decoupling hypothesis was never totally persuasive. Reinforcing the notion that in a globalised world no country can be an island, growth prospects of EMEs have been undermined by the cascading financial crisis with, of course, considerable variations across countries.

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pressures around the world. Private capital flows are expected to decline in 2009 in line with the projected contraction in world growth. On a net basis, capital flows have been attracted by countries with the most liquid and safe government securities markets. According to the IMF, private capital flows to emerging and developing countries in 2008 declined significantly to US$ 109 billion from US$

618 billion in 2007 (see Chart II.40). Amongst the major components, although foreign direct investment flows are estimated to have increased by around US$ 100 billion to US$ 459 billion in 2008 from the levels during the previous year, net private portfolio flows and 'other capital flows' comprising bank and other borrowings recorded significant outflows during 2008. Overall, emerging markets are expected to experience net capital outflows in 2009 of more than 1 per cent of their GDP.

II.6.7 According to the International Labour Organisation's Global Employment Trends (2009), depending on the developments in the labour market and the timeliness and effectiveness of recovery efforts, the global unemployment rate could rise to 7.1 per cent and result in an increase in the number of unemployed by more than 50 million in the worst case scenario. The global financial system, thus, remained under severe stress as the crisis spread to engulf households, corporations, and the banking sectors in both advanced and emerging market countries.

II.6.8 With inflation concerns waning, advanced and emerging market economies have implemented wide ranging monetary and fiscal stimulus measures to address the financial market problems and support the domestic demand. According to the IMF, based on measures already taken and planned, it is estimated that government debt ratios and fiscal deficits, particularly in advanced economies, may increase significantly. For the G-20 as a whole, the general government balance could deteriorate substantially as governments implement fiscal stimulus plans of the order of 2.0 per cent of GDP in 2009 and 1.6 per cent of GDP in 2010. While the fiscal cost for some countries will be large in the short-run, the alternative of providing no fiscal stimulus or financial sector support could be extremely costly in terms of the lost output and employment as well as the intensity and duration of the crisis (IMF, 2009). The macroeconomic developments in India during 2008-09, thus, need to be seen in the context of these adverse global conditions.

II.6.9 International co-operation is recognised to be critical in resolving the crisis of this proportion. In this context, the G-20 leaders exhibited exemplary solidarity in their London Summit on April 2, 2009 and underscored the need to build a stronger supervisory and regulatory framework in the future. Various Working Groups constituted by the G-20 have emphasised that future regulation and supervision must strengthen risk management capacity, promote transparency, avoid regulatory arbitrage and ensure greater cross-border co-operation. One of the major outcomes of this process is the establishment of a new Financial Stability Board (FSB) with a strengthened mandate, as a successor to the Financial Stability Forum (FSF), including all G-20 countries, FSF members, Spain, and the European Commission. Further, G-20 members have called on the IMF to complete the process of quota and voice reform by January 2011. To alleviate the problem of emerging market and developing economies, G-20 members have agreed to substantially increase the IMF's resources by US$ 250 billion through bilateral borrowing from members, which would be subsequently incorporated into an expanded and more flexible New Arrangements to Borrow (NAB) and to be increased by up to US$ 500 billion. Further, the IMF has approved an increase in SDR allocation to members by US$ 250 billion to strengthen global liquidity. It has also enhanced its crisis lending by modernising conditionality, introducing a new flexible credit line, doubling access limits and rationalising the costs and maturity structures for its lending. The IMF is also rationalising its concessional lending facilities and financial framework for low income countries.

II.6.10 The global economy, however, continues to experience weaknesses in various segments of the financial sector. Rising defaults of the households and corporate sector could lead to further deterioration in the banking sector balance sheets. Although the fiscal stimulus measures seem to have stabilised financial markets, weakness in certain segments could continue to adversly impact the growth prospects. The concerns arising from

large fiscal stimulus plans and consequent widening of fiscal deficit and debt have raised renewed challenges for economies. In addition, the pace and timing of fiscal and monetary unwinding have emerged as important challenges.

INDIA'S BALANCE OF PAYMENTS DEVELOPMENTS

II.6.11 In the face of one of the severest external shocks, India's balance of payments (BoP) exhibited resilience, characterised by a current account deficit (CAD) well within the sustainable limits, and limited use of foreign exchange reserves despite the pressure of large capital outflows. The direct impact of the global financial crisis was transmitted to India through various external sector transactions, some of which exhibited notable trend reversals during the year. The transmission of external demand shocks was much more swift and severe on export growth, which, on BoP basis, declined from a peak of 43 per cent in Q1 of 2008-09 to (-)9 per cent in Q3 and further to (-)24 per cent in Q4 – a fall for the first time since 2001-02. Import demand growth, which remained robust till the Q2 of 2008-09, collapsed to a single digit level in Q3, followed by a substantial decline in Q4 (-27 per cent), moving in tandem with the slowdown in the domestic industrial demand and the sharp decline in international crude oil and other primary commodity prices. Thus, trade deficit generally expanded in the first three quarters of 2008-09 due to the combined effect of high crude oil prices driven increases in imports and the collapse in external demand. However, in Q4 of 2008-09, with the pace of decline in imports outpacing that in exports, trade deficit narrowed down significantly. For the fiscal year 2008-09, trade deficit witnessed a marked expansion to 10.3 per cent of GDP. Two components of the current receipts, which remained relatively resilient in the face of the global slowdown were software services and workers' remittances. The remittance inflows from overseas Indians, though witnessed a slowdown in the second half of 2008-09, still remained relatively stable as compared to the earlier shocks during the Gulf crisis and the Asian crisis. Despite higher invisibles surplus, which turned the current account into a surplus in Q4 of 2008-09, the large expansion in trade deficit led to a higher current account deficit of 2.6 per cent of GDP in 2008-09 (1.5 per cent of GDP a year ago).

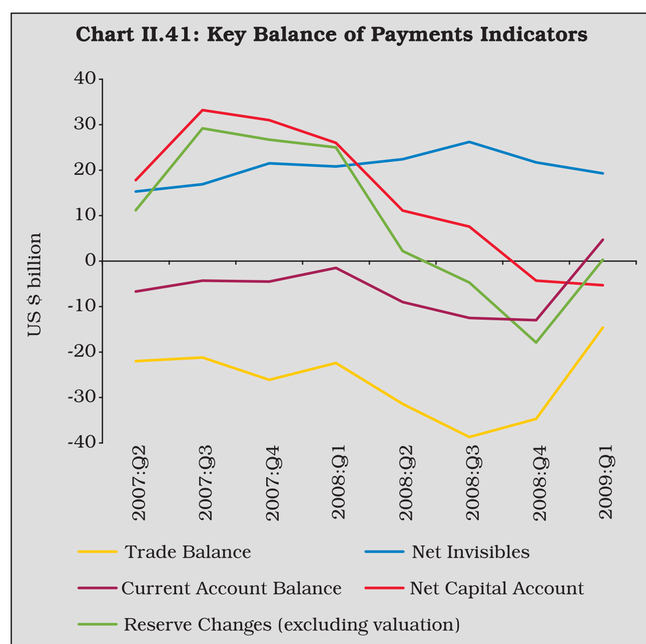
II.6.12 The impact of the crisis through the financial channel was reflected in the sharp turnaround in the capital flows cycle from a sustained phase of surges in capital inflows in to large outflows, particularly in Q3 of 2008-09, which continued during Q4 as well. The early signs of the impact of financial crisis on capital inflows were evident in the portfolio outflows that started in February 2008. Following the failure of Lehman Brothers, there was a sudden change in the external environment, which led to a sell-off in domestic equity markets by portfolio investors, reflecting deleveraging, as evidenced in the case of other major EMEs. Thus, there were large capital outflows by portfolio investors during September-October 2008, with concomitant pressures in the foreign exchange market. The deteriorating external financing conditions also rendered Indian firm's access to external commercial borrowings and trade credits somewhat difficult. The resilience shown by foreign direct investment (FDI) inflows, however, reflects the continued confidence in the Indian economy as a long-term investment destination (Appendix Table 51).

II.6.13 Although during the recessions of the early 1990s and the Asian crisis India had witnessed capital outflows, the current crisis is marked by large volatile movements in capital flows under the pressure of intense deleveraging. Thus, while the policy focus until Q1 of 2008-09,was the management of the surges in capital inflows, with gradually evolving global developments and slowing down of capital inflows since Q2 of 2008-09, the balance of policy emphasis shifted to the financing of the widening current account deficits. The adverse impact of the global trade and financial shocks on the BoP of India could be contained due to the adequate cushion in the form of foreign exchange reserves. The foreign exchange reserves of India (excluding valuation effects) fell by US$ 20.1 billion during 2008-09, even though the foreign

exchange reserves level (including valuation effects) fell by US$ 57.7 billion during the year, reflecting the impact of appreciation of the US dollar against major international currencies (Chart II.41).

II.6.14 Responding to the severity of the crisis and its rapid adverse impact on exports, the Reserve Bank took several measures to support exports in the form of liberalisation of export credit and its refinancing; changes in ceiling interest rates on such credit; liberalisation of interest rate on overseas lines of credit and the limit of the standing liquidity facility for providing flexibility in the dollar liquidity management of banks. The measures taken by the Reserve Bank since September 2008 were essentially to improve foreign exchange liquidity by way of selling dollar into market, forex swap facility to banks, raising interest rate ceilings on Non-Resident Indian (NRI) deposits, providing flexibility to banks to borrow in overseas markets, liberalising premature buyback of foreign currency convertible bonds (FCCBs) and relaxation of ceiling interest rates on short-term trade credit and external commercial borrowings (ECBs). India's BoP situation remained relatively more resilient as reflected by the fact that India did not have to resort to extraordinary measures. Both the Government and the Reserve Bank responded to the challenge

Chart II.41: Key Balance of Payments Indicators



of minimising the impact of the crisis on India in co-ordination and consultation. The thrust of the various policy initiatives by the Reserve Bank has been ensuring comfortable dollar liquidity and maintaining a market environment conducive to the continued flow of credit to productive sectors. At the same time, the process of capital account liberalisation has been continued by further relaxing the regulations governing the movements of cross-border capital flows, while keeping in view the risks emanating from higher levels of capital outflows.

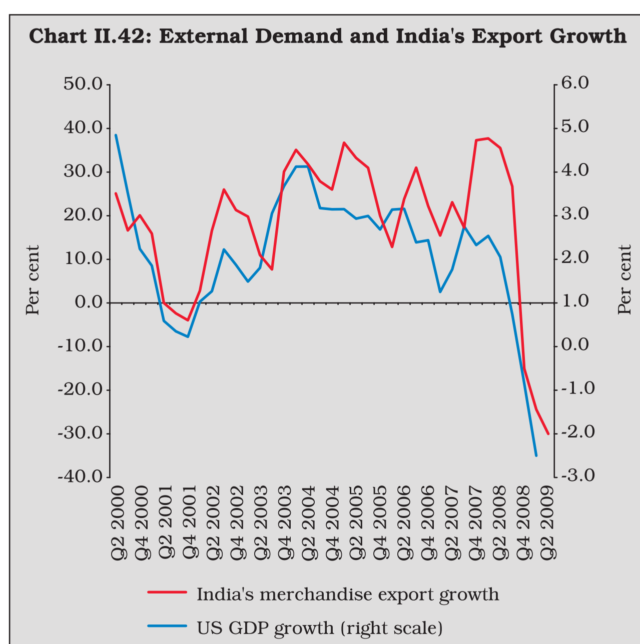
II.6.15 The resilience of the Indian financial sector in the face of the worst global financial crisis can also be attributed to India's approach to financial globalisation. The key features of this approach are reflected in a full opening up of the current account but a more calibrated approach towards the opening up of the capital account. While foreign investment flows, especially FDI inflows are encouraged, debt flows in the form of ECBs are generally subject to ceilings and some end-use restrictions. Macro ceilings have also been stipulated for portfolio investment in government securities and corporate bonds. Capital outflows have also been progressively liberalised. Along with the calibrated approach to opening of the capital account, the prudential regulation for banks have also been strengthened to promote financial stability.

Merchandise Trade

II.6.16 The trade channel of the contagion that intensified in the post-September 2008 phase of the crisis, adversely impacted India's merchandise trade with exports declining in greater intensity and more swiftly as compared to the recession of the early 2000s. According to the provisional trade data released by the DGCI&S, India's merchandise exports growth during 2008-09 sharply decelerated to 3.4 per cent from 29.0 per cent during 2007-08, with large intra-year volatility. Although export growth was buoyant till August 2008 (35.6 per cent during April-August 2008), it decelerated significantly in September 2008 to 14.2 per cent, and subsequently exports declined in all the

remaining months of 2008-09, in tandem with the deepening of recession in the developed countries (Chart II.42 and Box II.31). Import growth decelerated to 14.3 per cent in 2008-09 from 35.5 per cent a year ago; however, the slowdown in imports was delayed due to resilient domestic demand. Synchronised with the moderation in domestic economic activity and movement in crude oil and other commodity prices, merchandise imports, which showed a high growth during the first half of 2008-09 (43.9 per cent during April-September 2008) decelerated sharply during October and November and declined thereafter during the period December 2008 to March 2009. Oil imports, after increasing by 60.0 per cent during April-October 2008, declined by 29.0 per cent during November 2008-March 2009, due to sharp decline in oil prices. Non-oil imports, although remained resilient during the first three quarters of 2008-09 (22.7 per cent growth), declined by 15.3 per cent during Q4 of 2008-09, mainly due to slowdown in the growth in imports of capital goods and gold and silver. Trade deficit during 2008-09 showed a substantial expansion to US$ 119.1 billion from US$ 88.5 billion in 2007-08 (Appendix Table 48).

Chart II.42: External Demand and India's Export Growth



II.6.17 In a phase of weakening export prospects for all countries around the world, the relative performance of countries on the export front, however, varied significantly. The decline in India's exports since Q3 of 2008-09, when the global recession intensified, was lower than the fall in export growth of some of the advanced economies as well as some of the EMEs (Chart II.43).

II.6.18 The commodity-wise exports data available for 2008-09 (April-February) indicated that manufactured goods continued to maintain the largest share followed by petroleum products and primary products (Appendix Table 49). Within the manufactured exports, leather and manufactures, textiles and textile products and chemicals and related products witnessed moderation in growth and gems and jewellery showed decline as these sectors were more severely affected by the demand recession in the developed countries (Chart II.44). Gems and jewellery exports during 2008-09 (April-February) registered a decline, reflecting mainly the recessionary conditions in the largest export destination *viz.*, the US. Exports of textiles and textile products, an important employment intensive sector, also exhibited significant moderation in growth during 2008-09 (April-February). Engineering goods exports, which constitute more than one-fourth of India's total exports, however, showed a high growth at 23.5 per cent during 2008-09 (April-February) on the top of 24.4 per cent during 2007-08 (April-February), contributed largely by transport equipments, iron and steel and electronic goods.

II.6.19 India's export growth to the EU, OPEC, Eastern Europe and Latin American developing countries decelerated, while exports to North America, Asia and Oceania and Asian and African developing countries showed decline. During 2008-09 (April-February), the US continued to be the single largest market for India, despite a fall in its share to 11.7 per cent from 12.8 per cent a year ago, followed by the UAE, China and Singapore (Table 2.73).

Box II.31
Impact of the Global Crisis on India's Exports

India's integration into the world economy over the last decade has been remarkably rapid. India's merchandise trade has been on a high growth path since 2002-03, a trend which continued up to the first five months of 2008-09 (April-August). The sustained export growth witnessed in recent years was facilitated, *inter alia*, by conducive policy environment, changes in the commodity basket, market diversification, exchange rate stability and terms-of-trade benefits stemming from general increase in the prices of certain export items. In spite of the special policy focus accorded to the traditional sectors like textiles, leather and handicrafts, their performance during the high export phase was relatively sluggish due to structural reasons. At the same time, manufactured products like engineering goods, petroleum products and chemicals have emerged as the major drivers of export growth.

The slowdown in exports during 2008-09 was mainly due to demand recession in OECD as well as developing countries, both of which have major shares of about 38 per cent each in India's exports. During 2008-09 (April-February), exports growth to OECD countries decelerated mainly due to slowdown in exports to European Union, North America and Asia and Oceania. Exports to developing countries showed a decline primarily due to moderation in export growth/decline in exports to SAARC and other Asian developing countries as also to African and Latin American developing countries. OPEC, which has about 19 per cent share in India's exports, however, maintained the high growth momentum.

Except 'engineering goods', which has withstood the impact of global economic crisis and continued to exhibit high growth, all other sectors have been adversely affected. Exports of agriculture and allied products, gems and jewellery and ores and minerals have declined, while the other sectors showed sharp deceleration in export growth. Growth in exports of primary products during April 2008-February 2009 declined by 3.6 per cent against a growth of 38.6 per cent during the corresponding period of the previous year. This was due to the decline in exports of agricultural and allied products and ores and minerals (Chart A).

Growth in exports of textiles and textile products during April 2008-February 2009 sharply slowed down with all the major components, especially the readymade garments, which accounted for about 52 per cent share in textiles and textile products exports, witnessing a slowdown in growth (Chart B). Gems and jewellery exports recorded a decline, reflecting mainly the recessionary conditions in the largest destination *viz.*, the US (Chart C). Petroleum products exports, which constituted the second largest component of India's exports, witnessed a sharp deceleration in growth both because of the sharp reduction in international POL prices and recessionary conditions in major export destinations of India (Chart D). Leather and manufactures exports also decelerated. Slowdown in exports of labour-intensive sectors, *viz.*, gems and jewellery, textiles and textile products and leather and manufactures is a concern because of its adverse implications for employment. Thus, the concentration of export slowdown in employment intensive and relatively low technology sectors could potentially enhance the adverse effects of a global slowdown because of the loss of employment associated with such decline in exports.

Chart A: Growth Rate of Exports of Agricultural and Allied Products

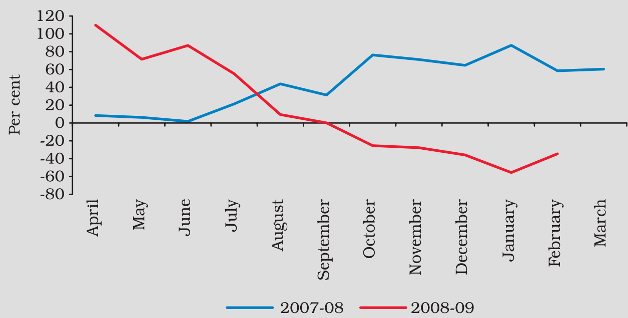


Chart B: Growth Rate of Exports of Textiles and Textile Products

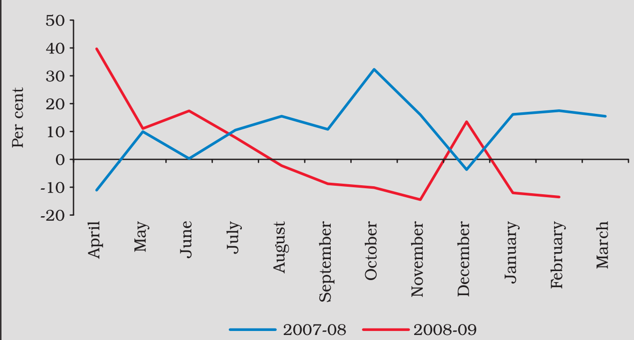


Chart C: Growth Rate of Exports of Gems and Jewellery

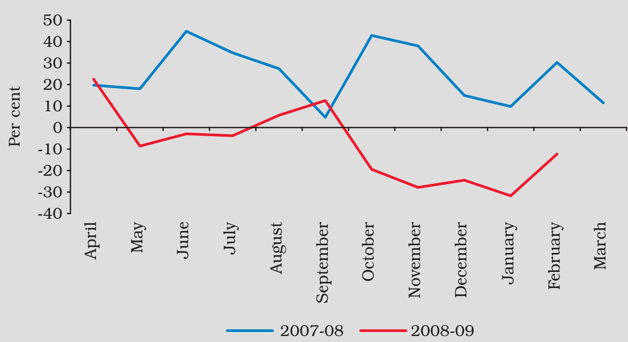


Chart D: Growth Rate of Exports of Petroleum Products

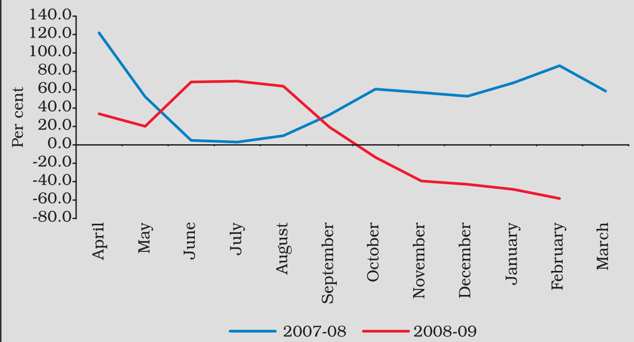
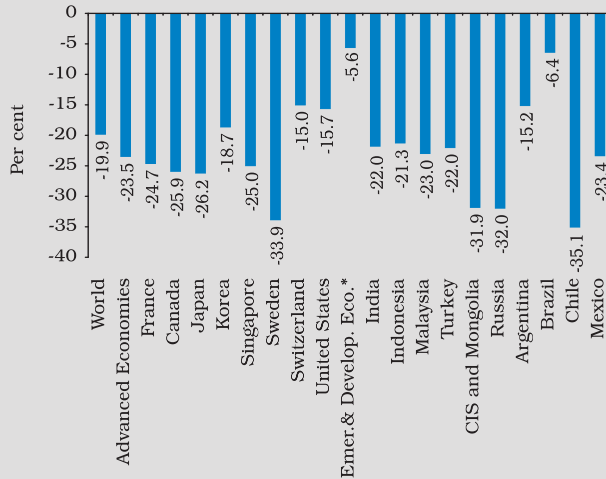
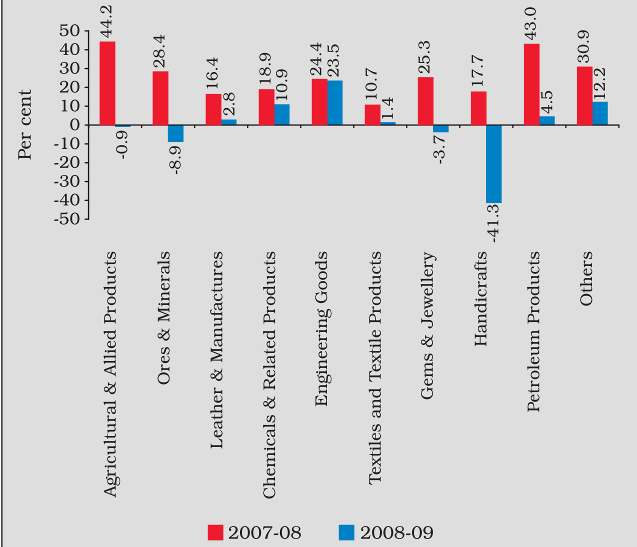


Chart II.43: Export Growth of India *vis-a-vis* Advanced Economies and EMEs during October 2008 - April 2009



* October 2008 to January 2009.

Chart II.44: India's Export Growth - Principal Commodities (April-February)



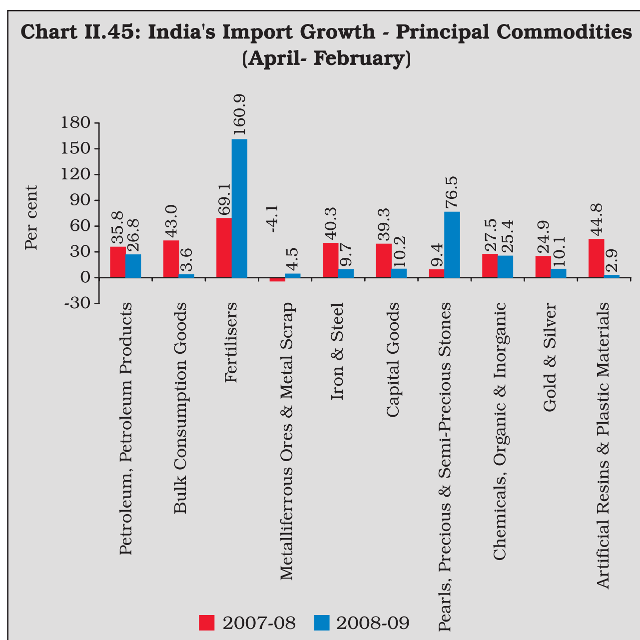
II.6.20 A commodity-wise analysis of imports in 2008-09 reveals that import growth of petroleum, oil and lubricants (POL) significantly moderated to 26.8 per cent from 35.8 per cent in 2007-08, mainly due to sharp decline in international crude oil prices during the second half of the financial year 2008-09 (Chart II.45). During 2008-09, the monthly average price of the Indian basket of crude oil declined from US$ 132.5 per barrel in July 2008 to a low of US$ 40.6 per barrel in December 2008, though it increased to US$ 46.0 per barrel in March 2009. For the full fiscal year, the average price of Indian basket of crude oil stood at US$ 82.7 per barrel. In tandem with the movement in crude prices, POL

Table 2.73: Direction of India's Exports

Group / Country	US $ billion			Variation (per cent)		
	2007-08	2007-08R	2008-09P	2007-08	2007-08	2008-09
		April-February			April-February	
1	2	3	4	5	6	7
1. OECD Countries	62.6	57.2	60.1	20.4	20.2	5.1
of which						
a) EU	32.9	30.6	34.1	27.6	27.5	11.4
b) North America	22.0	19.8	19.7	10.0	10.4	-0.9
US	20.7	18.7	18.4	9.8	10.2	-1.6
2. OPEC	26.7	23.9	29.6	28.8	26.7	24.1
of which						
UAE	15.6	14.0	16.6	29.9	29.3	18.0
3. Developing Countries	69.6	60.5	60.2	37.1	33.6	-0.5
of which						
Asia	51.5	45.0	44.5	36.9	33.0	-1.0
People's Republic of China	10.8	9.5	7.7	30.6	27.1	-18.1
Singapore	7.4	6.4	7.3	21.4	17.3	13.0
4. Total Exports	163.1	145.9	157.2	29.0	28.5	7.8

R: Revised. P: Provisional.
Source : DGCI&S.

Chart II.45: India's Import Growth - Principal Commodities (April- February)



imports showed a secular decline during the period November 2008 to March 2009. Non-POL imports in 2008-09 also recorded a decelerated growth of 13.2 per cent (33.5 per cent a year ago). This deceleration reflects the contraction in domestic demand led by economic slowdown. Non-POL imports, which grew by 22.7 per cent during April-December 2008, declined every successive month during January-March 2009. Within non-POL imports, capital goods imports growth decelerated to 10.2 per cent during 2008-09 (April-February) (39.3 per cent a year ago), while gold and silver imports grew by 10.1 per cent (24.9 per cent in previous year) (Chart II.45 and Appendix Table 50). China was the main source of imports, accounting for 10.3 per cent of India's total imports (Table 2.74). The other major sources of imports were Saudi Arabia, the UAE, the US, Iran and Switzerland.

II.6.21 Though both exports and imports of India slowed down in the second half of 2008-09, the decline in exports during this period was sharper than the decline in imports, as the export demand was more severely affected by the sharp downturn in the advanced economies, which are key market for India's export (Box II.32). Moreover, while the exports showed signs of slowdown since September 2008, imports witnessed a slowdown since October 2008 due to both decline in oil prices

Table 2.74: Direction of India's Imports

Group / Country	US $ billion			Variation (per cent)		
	2007-08	2007-08R	2008-09P	2007-08	2007-08	2008-09
		April-February			April-February	
1	2	3	4	5	6	7
1. OECD Countries	87.4	70.6	82.4	36.6	30.4	16.7
of which						
a) EU	36.8	31.6	35.5	29.5	30.4	12.2
Germany	9.9	8.6	9.6	30.8	27.7	11.2
UK	5.0	4.6	5.5	18.7	25.1	18.3
b) North America	23.0	14.0	17.8	70.1	33.7	27.0
US	21.0	12.2	15.7	79.1	31.8	29.1
2. OPEC	76.1	68.8	87.5	35.7	34.7	27.2
of which						
UAE	13.5	12.2	17.0	55.6	60.5	39.1
3. Developing Countries	80.6	72.4	86.0	34.9	35.7	18.8
of which						
Asia	64.1	58.6	69.4	35.4	37.3	18.5
People's Republic of China	27.1	24.8	28.1	55.2	58.1	13.3
Singapore	8.1	7.1	6.6	47.9	43.5	-6.6
South Korea	6.0	5.4	7.5	25.6	25.4	38.8
4. Total Imports	251.7	228.1	272.2	35.5	35.3	19.3

R: Revised. P: Provisional.
Source : DGCI&S.

Box II.32
The Export Demand Function for India: Some Inferences on the Impact of the Global Recession on India

The net exports of goods and services are conventionally regarded as external demand that supplements aggregate domestic demand in conditioning the growth process. In India, despite the dominant role of domestic demand in shaping the growth path, exports have become increasingly important in raising the country's GDP. During a global recession, when global trade contraction has been sharper than the rate of deceleration in global growth, the performance and prospects of Indian exports have also been affected adversely. Even though export performance could be influenced by a host of factors, both domestic and external, in a phase of global slowdown, it is important to assess the impact of contraction in world GDP and trade volume on Indian exports.

In most empirical studies, export demand, proxied by export volumes, is explained in terms of variation in effective exchange rates, relative export price and world real income. In the Indian context, earliest estimates of India's export demand parameters appear in Murti and Sastri (1951) and Agarwala (1970). As per the export demand function estimated by Agarwala (1970), the income and price elasticities were 0.35 and -0.44, respectively. In more recent period, export demand function for India was estimated by Virmani (1991), Sharma (2000) and RBI (2001). The RBI (2003) study found that the long run elasticity of demand for India's exports with respect to growth in world GDP was 1.5, confirming that with high global growth, the pull factor operating on India's exports could be sizeable. The short-run elasticity was however lower at 0.8.

An estimate of India's exports for the period 1980-81 to 2007-08 reveals that the long run elasticity of demand for India's exports with respect to world GDP is 3.7 and -1.9 with respect to India's relative export price. The empirical relationship could be seen from the viewpoint of statistically significant impact that both world GDP and relative prices have on India's exports.

$$\underset{(-7.72)}{Ln\ X = -\ 56.96} + \underset{(8.43)}{3.73\ Ln\ YW} - \underset{(-1.78)}{1.94\ Ln\ RXP} + \underset{(7.28)}{0.81\ AR(1)}$$

$R^2 = 0.99$ DW = 1.65 SEE = 0.07

where, X = Quantity index of India's exports, YW = World GDP at constant prices in US dollar terms, RXP = ratio of India's export price (unit value index of India's exports deflated by the rupee-US dollar nominal exchange rate) to world export price (unit value index of world exports in US dollar terms).

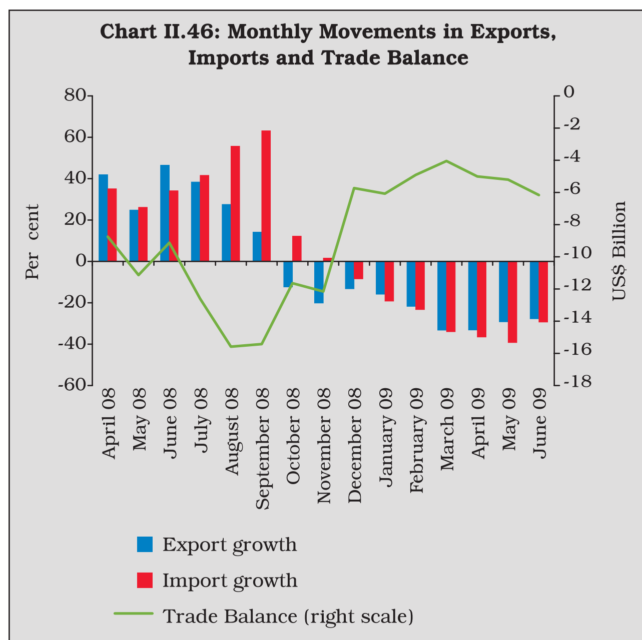
Based on the export demand function, the current global crisis is expected to have a negative impact on India's exports. This has been amply borne out by the secular decline in India's exports during the period October 2008 to June 2009. According to the IMF's WEO update (July 2009), the world merchandise trade volume (goods and services) is projected to decline by 12.2 per cent in 2009. The volume of merchandise exports in respect of advanced economies and emerging and developing economies is projected to decline by 15.0 per cent and 6.5 per cent, respectively, during 2009. In US dollar terms, the merchandise exports of emerging and developing economies are projected to decline by 27.1 per cent in 2009. A key concern is that a deeper and prolonged recession in advanced economies outside Asia may reduce external demand even further, thereby adversely affecting the export prospects of India.

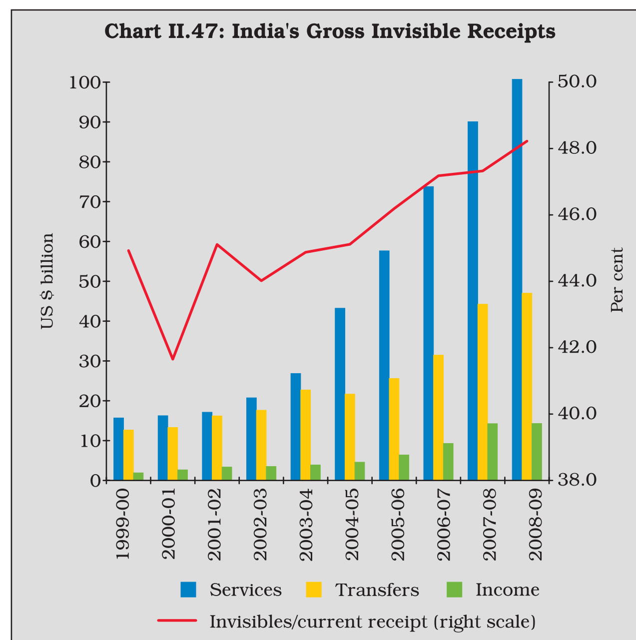
References:

1. Reserve Bank of India (2004), *Report on Currency and Finance 2002-03*.
2. Virmani, A. (1991), "Demand and Supply Factors in India's Trade", *Economic and Political Weekly*, 26 (6) February.
3. Murti, V. N. and Sastry, V. K. (1951), "Elasticities of Demand for Certain Indian Imports and Exports, *Sankhya*, Vol. 11.

and non-oil import demand. Imports also recorded negative growth *albeit* with a lag in relation to the exports (Chart II.46).

II.6.22 India's exports continued to deteriorate during the first quarter of 2009-10 (April-June), with a decline of 31.3 per cent as against a growth of 43.6 per cent in April-June 2008. The rate of decline in exports, however, started moderating and showed consistent improvement. Imports during April-June 2009 also registered a decline of 36.5 per cent (34.7 per cent growth a year ago) with the rate of decline progressively accelerating till May 2009 (39.2 per cent), which improved subsequently in June 2009, reflecting the signs of recovery in domestic demand. Non-POL imports during April-June 2009 recorded a sharp fall of 24.6 per cent as against a growth of 19.1 per cent in April-June 2008, while POL imports declined substantially by 56.8 per cent (growth of 73.8 per cent a year ago), mainly due to sharp





reduction in international crude oil prices. The average price of Indian basket of crude oil during April-June 2009 stood at US$ 59.1 per barrel (ranged between US$ 50.1 - 69.1 per barrel), much below the level of US$ 118.8 per barrel (ranged between US$ 105.8 - 129.7 per barrel) in April-June 2008. Trade deficit during the first quarter of 2009-10 declined to US$ 15.5 billion from US$ 28.6 billion during April-June 2008, due to higher decline in imports than exports during the quarter.

Invisibles: Services, Income and Transfers

II.6.23 The invisibles account reflects the combined effects of the transactions relating to international trade in services, income associated with non-resident assets and liabilities, labour and property and cross border transfers, mainly workers' remittances. Receipts under invisibles, particularly since the beginning of the current decade, have grown significantly on the back of extended period of high global growth and low inflation. India's net invisibles (invisible receipts *minus* payments) increased by 20.1 per cent in 2008-09, led mainly by receipts under private transfers and software services (Appendix Table 52). Growth in gross invisible receipts moderated from 29.7 per cent in 2007-08 to 9.4 per cent in 2008-09 under the influence of the global economic slowdown impacting mainly the growth in software services and private transfer receipts along with decline in travel, business services and investment income receipts (Chart II.47). Invisibles payments showed a marginal decline of 1.4 per cent in 2008-09 as against an increase of 18.7 per cent in 2007-08, mainly on account of slowdown in payments relating to travel and transportation, and decline in payments under software, business and financial services, and investment income account. The net invisibles surplus increased from 6.4 per cent of GDP in 2007-08 to 7.7 per cent of GDP during 2008-09 (Table 2.75).

Services

II.6.24 Services have shown relative resilience *vis-à-vis* other components of India's BoP in the face of the global economic slowdown, with net services surplus expanding from US $ 37.6 billion during 2007-08 to US $ 49.8 billion during 2008-09, led primarily by software services exports. Services exports, however, declined marginally by 0.5 per cent in the second half of 2008-09, after a long phase of around 20 per cent average growth. India's services receipts are dominated by travel earnings, software and business services, reflecting a strong

Table 2.75: Balance of Payments : Key Indicators

Item/Indicator	1990-91	2001-02	2004-05	2005-06	2006-07	2007-08PR	2008-09P
1	2	3	4	5	6	7	8
Items (US $ billion)							
i) Trade Balance	-9.4	-11.6	-33.7	-51.9	-61.8	-91.6	-119.4
ii) Invisibles, net	-0.2	15.0	31.2	42.0	52.2	74.6	89.6
iii) Current Account Balance	-9.7	3.4	-2.5	-9.9	-9.6	-17.0	-29.8
iv) Capital Account	7.1	8.6	28.0	25.5	45.2	108.0	9.1
v) Foreign Exchange Reserves* (Increase -/Decrease +)	1.3	-11.8	-26.2	-15.1	-36.6	-92.2	20.1
Indicators (in Per cent)							
1. Trade							
i) Exports/GDP	5.8	9.4	12.1	13.0	14.1	14.2	15.1
ii) Imports/GDP	8.8	11.8	16.9	19.4	20.9	22.0	25.5
iii) Trade Balance /GDP	-3.0	-2.4	-4.8	-6.4	-6.8	-7.8	-10.3
iv) Export Volume Growth	11.0	3.9	17.5	11.8	15.8	5.4	..
2. Invisibles							
i) Invisibles Receipts/GDP	2.4	7.7	9.9	11.1	12.5	12.7	14.0
ii) Invisibles Payments/GDP	2.4	4.6	5.5	5.9	6.8	6.3	6.3
iii) Invisibles (Net)/GDP	-0.1	3.1	4.4	5.2	5.7	6.4	7.7
3. Current Account							
i) Current Receipts@/GDP	8.0	16.9	21.9	24.0	26.6	26.8	29.1
ii) Current Payments/GDP	11.2	16.3	22.4	25.3	27.7	28.3	31.8
Iii) Current Receipts Growth@	6.6	4.5	29.3	26.0	25.1	29.3	7.4
iv) Current Account Balance/GDP	-3.1	0.7	-0.4	-1.2	-1.1	-1.5	-2.6
4. Capital Account							
i) Foreign Investment to India(net)/GDP	-	1.7	2.2	2.6	3.3	5.4	1.8
ii) Capital Flows(net)/GDP	2.2	1.8	4.0	3.1	4.9	9.2	0.8
iii) Capital Inflows/GDP	7.2	9.1	14.0	17.9	25.4	36.9	26.1
iv) Capital Outflows/GDP	5.0	7.3	10.0	14.7	20.5	27.7	25.3
5. Others							
i) Debt - GDP Ratio	28.7	21.1	18.5	17.2	18.1	19.0	22.0
ii) Debt - Service Ratio	35.3	13.7	6.1	9.9	4.7	4.8	4.6
iii) Liability - Service Ratio	35.6	14.9	7.1	11.2	6.1	5.9	5.5
iv) Import Cover of Reserves (in months)	2.5	11.5	14.3	11.6	12.5	14.4	10.3

PR: Partially Revised. P : Preliminary. @ : Excluding official transfers. - : Negligible
* : Excluding valuation. .. : Not Available.

international tourist interest in India, rising importance of India's highly skilled workers and comparative advantage in exports of technology enabled services (Table 2.76). Similarly, the services payments have increased on account of robust expansion in domestic economy, rising freight costs, growing outbound tourist traffic, payments related to business and management consultancy, architectural, engineering and other technical services.

II.6.25 Reflecting the positive developments in terms of the comparative advantage in certain segments of services exports, India was ranked 11th in terms of its market share in the World services exports in 2007 with a market share of 2.6 per cent as compared with 0.6 per cent in 1995 (Table 2.77).

II.6.26 The impact of the global economic shocks on the software exports of India was evident during 2008-09, especially in the second half of the year when it registered a marginal growth of 0.9 per cent (Chart II.48). Notwithstanding this, software exports during 2008-09 (US$ 47.0 billion) recorded a growth of 16.6 per cent (28.8 per cent during 2007-08). Despite global slowdown and increasing competitive pressures, India has been able to maintain a steady software export growth in the recent years due to its low cost operations, high quality of services and readily available skilled

Table 2.76: Structure of India's Service Exports

Year	Total Services Exports (US $ billion)	Share in Total Services Exports (Per cent)					
		Travel	Transportation	Insurance	G.N.I.E.	Software	Miscellaneous*
1	2	3	4	5	6	7	8
1970-71	0.3	16.8	49.7	5.5	13.7	0.0	14.4
1980-81	2.8	43.5	16.3	2.3	4.0	0.0	33.9
1990-91	4.6	32.0	21.6	2.4	0.3	0.0	43.6
2000-01	16.3	21.5	12.6	1.7	4.0	39.0	21.3
2005-06	57.7	13.6	11.0	1.8	0.5	40.9	32.1
2006-07	73.8	12.4	10.8	1.6	0.3	42.4	32.4
2007-08	90.1	12.6	11.1	1.8	0.4	44.7	29.4
2008-09	101.2	10.8	10.9	1.4	0.4	46.4	30.1

*: Excluding Software Services. G.N.I.E.: Government not included elsewhere.

manpower (Box II.33). India remained as the leading exporter of computer and information services in the world in 2007 (Table 2.78).

II.6.27 Among other major services, travel receipts were adversely affected by the global economic slowdown during 2008-09 as the growth of tourist arrivals in the country significantly moderated (Table 2.79). This is in contrast to the buoyancy in tourism earnings witnessed during 2003-04 to 2007-08, led by business and leisure travel associated with liberalisation of payments system, growing globalisation and rising services exports. On the other hand, with sustained growth in outbound tourism, travel payments also increased during the period, reflecting rising business and leisure travel in consonance with growing merchandise and services trade, growing disposable incomes of residents and a liberalised payments regime.

II.6.28 Against the backdrop of slowdown in global trade, business services exports declined marginally in 2008-09, with growth remaining volatile over the quarters and exhibiting a significant decline in the second half of the year. While receipts under business and management consultancy services increased, the receipts under trade related services and architectural, engineering and other technical services declined during 2008-09. The payments also declined on account of reduced demand for all the key components of the business services. The receipts relating to financial services increased during 2008-09 while payments registered decline, mainly on account of significant decline during the last quarter of the year (Table 2.80).

Table 2.77: India's Share in World Exports of Goods and Services

(Per cent)

Year	Goods	Services
1	2	3
1995	0.6	0.6
2000	0.7	1.1
2005	1.0	2.2
2007	1.1	2.6

Source : Balance of Payments Statistics Year Book 2008, IMF; and Reserve Bank of India.

Chart II.48: Growth of India's Software Services Exports

Box II.33
Software Exports: Outlook and Prospects

India's information technology and business process outsourcing (IT-BPO) industry, which experienced exceptional growth benefitting from growing globalisation, has emerged over time as a key sector of the economy in terms of contribution to growth, export earnings, investment, employment and overall economic and social development. In view of the significant dependence of this sector on external demand, the global recession emerged as a key concern for this sector. Notwithstanding increasing competitive pressures, India continues to remain as an attractive source due to its low cost of operations, high quality of product and services, and readily available skilled manpower. Furthermore, a favourable time zone difference with North America and Europe helps Indian companies achieve round the clock international operations and customer service. India's software exports have been offsetting trade deficit significantly in recent years, which has helped in containing current account deficit at comfortable level. Despite the global economic and financial crisis and the related pressures on external demand, exports of software and IT-enabled services exhibited a steady growth of around 16 per cent during 2008-09. Out of total software exports, IT services contributed 57.2 per cent, followed by BPO exports (27.4 per cent) and engineering services and product exports (15.3 per cent) during 2008-09. Software exports were supported by increase in fixed price contract, shift from onsite to offshore and end-to-end transformational deals. At the same time, the thrust on diversification saw emerging verticals and geographies grow almost three times than the core markets.

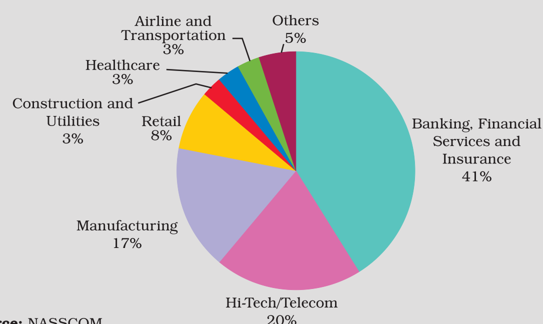
Although India's software exports remained strong over the years, slowdown in global demand due to the crisis did affect the export performance to some extent. Since some of the big global banks, which were severely hit by the current global financial crisis have been large customers of the Indian service providers, it is expected that some of the contracts may be cancelled while others could probably be downsized for keeping the costs under check. Therefore, National Association of Software and Service Companies (NASSCOM) has projected that India's software exports would grow by 4-7 per cent (to about US$ 48-50 billion) in 2009-10 on the back of absence of large deals; vendor consolidation and pricing pressures. According to a Report of NASSCOM entitled '*Perspective 2020: Transform Business, Transform India*', the global economic crisis is likely to result in short-term reduction in client budgets (*e.g.,* discretionary IT investments) and pricing pressures in certain segments, particularly in the core verticals (*e.g.,* banking, financial sector and insurance or BFSI) and geographies (*e.g.,* the US, Western Europe).

According to the NASSCOM, while the US (60 per cent) and the UK (19 per cent) remained India's largest markets for IT-BPO export in 2007-08, the industry has also been steadily expanding to other regions - with exports to continental Europe, in particular, growing at a compound annual rate of more than 51 per cent during 2003-04 to 2007-08. The strategy of geographical diversification along with strong focus on productivity, benchmarking, and enhanced operational efficiencies will help the industry to retain its competitive edge as the global leader in software services exports.

According to the NASSCOM, the industry's vertical market exposure was well diversified across several mature and emerging sectors. Banking, financial services and insurance (BFSI) remained the largest vertical market for Indian IT-BPO exports, followed by high-technology and telecommunications, together accounting for nearly 61 per cent of the Indian IT-BPO exports in 2007-08 (Chart A). From a customers' point of view, the focus has been on consolidation, integration and regulation – all of which are expected to drive newer business opportunities for the Indian IT industry.

The market (total revenue potential) for global technology services exports, according to the NASSCOM, in core geographies (the US, Western Europe and Japan) will continue to grow and is likely to reach US$ 500 billion to US$ 550 billion by 2020. Including total revenue potential for business services of US$ 610 billion to US$ 720 billion, the global megatrends are likely to expand the market from the current level of US$ 500 billion to about US$ 1.5 trillion by 2020. India's IT related exports are expected to expand three-fold and reach US$ 175 billion by 2020, driven by both increase in demand of the customers and supply of large talent pools. According to the NASSCOM, decline in global IT spending due to the global slowdown in the near-term, however, could imply that India's technology and business services exports may remain in the range of US$ 65 billion to US$ 75 billion by 2011-12.

Chart A: Vertical Market for Indian IT-BPO Exports in 2007-08



Source: NASSCOM

References:

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2. _____ (2009), Press Release, July 29.
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Table 2.78: Computer & Information Services Exports

(US$ billion)

Rank	Country	2000	2005	2007
1	2	3	4	5
1	**India**	**6.3**	**22.0**	**37.0**
2	Ireland	7.5	19.6	26.1
3	U.K.	4.3	11.2	14.1
4	U.S.A.	5.6	7.3	12.7
5	Germany	3.8	8.4	12.2
6	Sweden	1.2	2.7	6.5
7	Israel	4.2	4.5	5.8
8	Spain	2.0	3.6	5.3
9	Canada	2.4	3.6	4.4
10	China	0.4	1.8	4.3

Source: Balance of Payments Statistics Year Book 2008 and Reserve Bank of India.

Table 2.79 : Foreign Tourists Arrival in India and Outbound Tourist Traffic

Year (Calendar)	Arrivals (millions)	Growth Rate (%)	Departure (millions)	Growth Rate (%)
1	2	3	4	5
2000	2.65	6.7	4.42	7.3
2001	2.54	-4.2	4.56	3.4
2002	2.38	-6.0	4.94	8.2
2003	2.73	14.3	5.35	8.3
2004	3.46	26.8	6.21	16.1
2005	3.92	13.3	7.18	15.6
2006	4.45	13.5	8.34	16.1
2007	5.08	14.3	9.78	17.3
2008	5.37	5.6	..	..

.. : Not available.
Source: Ministry of Tourism, Government of India.

Private Transfers

II.6.29 Private transfers include inward remittances from Indian workers abroad for family maintenance, local withdrawal from NRI Rupee deposits, Gold and silver brought through passenger baggage, and personal gifts/donations to charitable/religious institutions. Private transfer receipts, comprising mainly remittances from Indians working overseas, increased in 2008-09 over the previous year (Table 2.81). The quarterly movement in remittances, however, reveals moderation in the second half of 2008-09, with deepening global financial crisis affecting the employment prospects and sharp decline in oil prices affecting the demand for expatriate labour in the oil exporting Gulf countries from where a major share of remittances to India originates (Chart II.49).

II.6.30 A major part of outflows from NRI deposits is in the form of local withdrawals, which are not actually repatriated out of the country but utilised domestically, making them equivalent of unilateral transfers without any *quid pro quo*. Such local withdrawals/redemptions cease to exist as external liability in the capital account. India maintained its position as the leading remittance receiving country in the world during 2008 with relative stability in such inflows (Table 2.82). In the context of the recent global financial crisis and its impact on

Table 2.80: Non-Software Miscellaneous Receipts & Payments

(US$ billion)

	Receipts			Payments		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
1	2	3	4	5	6	7
1. Communication	2.3	2.4	2.2	0.8	0.9	1.0
2. Construction	0.7	0.8	0.9	0.7	0.8	0.9
3. Financial	3.1	3.2	3.9	3.0	3.1	3.0
4. News Agency	0.3	0.5	0.8	0.2	0.3	0.4
5. Royalties, Copyrights & Licence Fees	0.1	0.2	0.1	1.0	1.1	1.8
6. Business Services	14.5	16.8	16.3	15.9	16.7	15.3
7. Personal, Cultural, Recreational	0.2	0.6	0.7	0.1	0.2	0.3
8. Others	2.6	2.1	5.6	4.5	4.2	1.9
Total (1 to 8)	**23.9**	**26.4**	**30.5**	**26.2**	**27.3**	**24.5**

Table 2.81: Composition of Private Transfers to India

(US$ billion)

Year	Total Private Transfers	*of which*			
		Inward Remittances for Family Maintenance	Local Withdrawals/ Redemptions from NRI Deposits	Local Withdrawals/Redemptions from NRI Deposits	
				As % of Total Private Transfers	As % of Total NRI Deposit Redemptions
1	2	3	4	5	6
2005-06	25.0	10.5	12.5	49.9	82.8
2006-07	30.8	14.7	13.2	42.8	84.7
2007-08 PR	43.5	21.9	18.9	43.5	64.7
2008-09 P	46.4	23.1	20.6	44.5	62.9

PR : Partially Revised. P : Preliminary.

remittance inflows to developing countries, concerns have been raised that given the developments in the host countries, there could be a significant slowdown in remittance inflows to India. The evidence so far, however, indicates that the global financial crisis did not have much adverse impact on the remittance inflows to India (Box II.34).

Current Account Balance

II.6.31 The global economic shocks impacted the current account of India's BoP mainly through the trade channel. A swifter response of exports to the slowdown in global demand and relatively lagged response of imports to domestic demand slowdown tended to widen the trade deficit, notwithstanding the sharp decline in international crude oil prices in the second half of 2008-09. Some of the adverse impact of large widening of the trade deficit on the overall current account during the year was, however, partly contained by the relative resilience of software services exports and remittances from the overseas Indians. A notable feature in the last quarter of 2008-09, however, was a narrowing down of trade deficit on account of larger decline in imports relative to exports, which along with sustained invisibles surplus led to a modest current account surplus during the quarter. Despite increase in invisibles surplus to 7.7 per cent of the

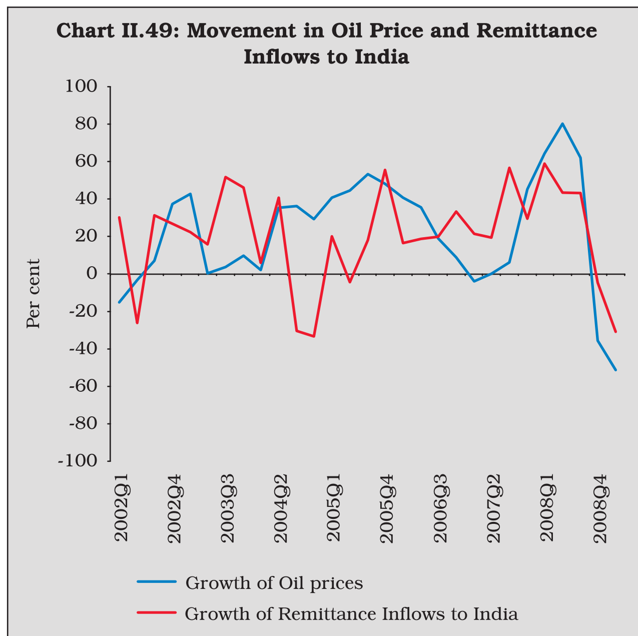

Table 2.82: Migrant Remittances: Top Recipients

(US$ billion)

Country	2000	2005	2006	2007	2008#
1	2	3	4	5	6
1 India	**12.9**	**21.3**	**25.4**	**38.7**	**52.0**
2 China	6.2	20.3	23.3	32.8	40.6
3 Mexico	7.5	23.1	26.9	27.1	26.3
4 Philippines	6.2	13.6	15.3	16.3	18.6
5 France	8.6	11.9	12.3	13.7	15.1
6 Spain	4.5	8.0	8.9	10.7	11.8
7 Germany	3.6	6.9	7.6	9.8	11.1
8 Poland	1.7	6.5	8.5	10.5	10.7
9 Nigeria	1.4	3.3	5.4	9.2	10.0
10 Egypt	2.9	5.0	5.3	7.7	9.5

#: Estimates
Source: World Bank.

Box II.34
Impact of the Global Slowdown on Remittances

Workers' remittances to India have imparted significant resilience and strength to India's balance of payments in the past, particularly in conditions of notable capital outflows or adverse external shocks. There is a perception that global recession and the weakening employment prospects in the host countries could affect India's inward remittance flows. According to the World Bank estimates (July 2009), remittance flows to developing countries, which increased to US$ 328 billion in 2008 from US$ 285 billion in 2007, are projected to decline by 7.3 per cent in 2009. India, China and Mexico retain their position as the top recipients of migrant remittances among developing countries. According to the World Bank's revised outlook, the slowdown in remittance flows that became evident in the last quarter of 2008 has continued into the first half of 2009. As the US job market weakness continues, officially recorded remittance flows to the Latin America and the Caribbean region have dropped significantly in the first half of 2009. In contrast, remittance flows to South Asia and East Asia have continued to post strong growth in 2009. This is in part due to the fact that the Gulf Cooperation Council (GCC) countries, a major destination for Asian migrants, have not significantly reduced hiring migrants. GCC countries are following a long-term strategy of infrastructure development funded by accumulated reserves and are unlikely to slow down such investments and lay off migrant workers in large numbers. A second reason for the growth of remittances to South Asia and East Asia appears to be a switch in the motivation for remittances from consumption to investment: falling asset prices, rising interest rate differentials and a depreciation of the local currency have attracted investments from migrants. This is the dominant reason for the sharp increase in remittances to India in 2008. Remittance flows to all the developing regions are expected to decline in 2009. Europe and Central Asia is expected to experience the largest decline (15 per cent) among all developing regions in 2009. However, remittance flows to South Asia are expected to decline more modestly by 4 per cent. These flows are expected to return to positive growth territory in 2010 and 2011.

The surge in workers' remittances to India, responding to oil boom in the Middle East during the 1980s and the information technology revolution in the 1990s, has put India among the top remittance receiving countries in the World. Remittances have helped in offsetting India's merchandise trade deficit to a large extent. The relative stability in such transfers, compared to other capital account items, such as NRI deposits, foreign direct investment and portfolio investment, has also enabled the containment of the current account deficits at modest levels in the face of pressures on other accounts. In the aftermath of the global meltdown, however, it is feared that recession induced rising job losses in the US and Europe could impact migrant workers more severely. Even if there is no lay-off, workers may often have to accept lower wages as employers worldwide are seeking to cut costs in an attempt to cope with the financial crisis. Fears have also been expressed about reverse migration of Indian labourers working in Gulf countries, which could result in a decline in inflows of remittances and NRI deposits to India. The construction industry in the Gulf region, especially in the UAE, is facing a difficult time due to global meltdown and has left millions of construction workers with uncertain future. Furthermore, declining oil prices, by reducing incomes of workers in the Gulf countries, could also lead to reduced remittances flows to India.

Available information indicates that inward remittances to India have not been impacted significantly by the global economic crisis. According to the World Bank estimates, India received significantly higher remittances to the tune of US$ 52 billion in 2008 as compared with US$ 38.7 billion in 2007. This could be attributed to a number of factors, such as, depreciation of the rupee, hike in interest rate ceilings on NRI deposits since September 2008 and uncertainties in oil-prices, which might have induced the workers to remit their money to India as a hedging mechanism due to its relatively better growth prospects. According to an earlier study by the Reserve Bank of India, region-wise, North America accounts for nearly 44 per cent of the total remittances to India, followed by the Middle East (24 per cent) and Europe (13 per cent). In view of the recessionary conditions in the advanced economies and sharp moderation in growth in the Middle East, some slowdown in remittances could be experienced in the near term.

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GDP, the current account deficit (CAD) increased to 2.6 per cent of GDP in 2008-09, mainly on account of the widening trade deficit. India's current account balance averaged a deficit of 1.0 to 1.5 per cent of GDP during 2005-06 to 2007-08 supported by the steadily rising invisibles surplus.

II.6.32 The global financial crisis led to deterioration in the current account position of most of the EMEs in 2008, except Russia and Malaysia. Some EMEs like China, Indonesia and Argentina experienced reduction in their surpluses, while others like Brazil, Korea and Thailand witnessed their surpluses turning into deficits. Unlike other EMEs, India and Mexico, which were recording current account deficits in the recent past, have witnessed some widening of the deficits (Table 2.83).

Capital Account

II.6.33 The sudden change in the external environment that started around mid-September 2008 led to an adverse situation characterised by global liquidity squeeze and increased risk aversion on the part of international investors. As in the case of other major EMEs, there was some withdrawal of funds from the domestic equity markets by portfolio investors as part of the global deleveraging process as also a significant reduction in access of Indian corporates to overseas financing. Consequently, there were large capital outflows by portfolio investors in the third quarter of 2008-09. While FDI flows exhibited resilience, access to ECBs and trade credits was rendered somewhat difficult. On the whole, the adverse impact of the global financial market turmoil was reflected in lower gross capital inflows during 2008-09 (Table 2.84). In fact, the capital account balance turned negative during the third quarter (October-December) of 2008-09, the first time since the first quarter of 1998-99, mainly due to net outflows under portfolio investment, banking capital and short-term trade credit. This trend continued during Q4 of 2008-09. Notwithstanding these adverse developments, the resilience of FDI inflows reflected the growing perception of India as a long-term investment destination.

II.6.34 In rapidly growing economies such as India, high real GDP growth needs concomitant growth in monetary aggregates, which also needs expansion of base money. To this extent, the capital flows and accretion of unsterilised foreign exchange reserves to the central bank's balance sheet is helpful in expanding base money at the required rate. However, capital flows in excess of such requirements necessitate sterilisation and more active monetary and macroeconomic management. Thus, large inflows of capital, far in excess of the current financing needs, can lead to high domestic credit and monetary growth, boom in equity and

Table 2.83: Trade and Current Account Balances in Select Countries

(Per cent to GDP)

Country	2003	2004	2005	2006	2007	2008	2003	2004	2005	2006	2007	2008
1	2	3	4	5	6	7	8	9	10	11	12	13
	Current Account Balance						Trade Balance					
Argentina	6.3	2.1	1.7	2.3	1.6	1.4	13.2	8.7	7.2	6.6	5.1	4.9
Brazil	0.8	1.8	1.6	1.3	0.1	-1.8	4.5	5.1	5.1	4.3	3.0	1.6
China	2.8	3.6	7.2	9.5	11.0	10.0	2.7	3.1	6.0	8.2	9.3	..
India #	2.3	-0.4	-1.2	-1.1	-1.5	-2.6	-2.3	-4.8	-6.4	-6.8	-7.8	-10.3
Indonesia	3.5	0.6	0.1	3.0	2.4	0.1	10.5	7.8	6.1	8.1	7.6	4.6
Korea	1.9	3.9	1.8	0.6	0.6	-0.7	3.4	5.2	3.9	2.9	2.8	0.6
Malaysia	12.0	12.1	15.0	16.7	15.4	17.4	23.3	22.1	24.0	23.4	20.0	..
Mexico	-1.0	-0.7	-0.5	-0.5	-0.8	-1.4	-0.8	-1.2	-0.9	-0.6	-1.0	-1.6
Russia	8.2	10.1	11.0	9.5	5.9	6.1	13.9	14.5	15.5	14.1	10.1	10.7
Thailand	3.4	1.7	-4.3	1.1	5.7	-0.1	7.8	6.7	1.9	6.7	10.4	..
Turkey	-2.5	-3.7	-4.6	-6.0	-5.8	-5.7	-4.4	-5.8	-6.8	-7.7	-7.2	-7.3

: Data pertain to financial year (April-March). .. : Not available

Note : (-) indicates deficit.

Source : World Economic Outlook and International Financial Statistics, IMF, 2009.

Table 2.84: Gross Capital Inflows and Outflows

(US $ billion)

Item	Inflows			Outflows		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
1	2	3	4	5	6	7
1. Foreign Direct Investment	23.6	36.8	36.3	15.9	21.4	18.8
2. Portfolio Investment	109.6	235.9	128.7	102.6	206.4	142.7
3. External Assistance	3.8	4.2	5.0	2.0	2.1	2.4
4. External Commercial Borrowings	20.9	30.4	15.4	4.8	7.7	7.2
5. NRI Deposits	19.9	29.4	37.1	15.6	29.2	32.8
6. Banking Capital Excluding NRI Deposits	17.3	26.4	27.9	19.7	14.8	35.6
7. Short Term Trade Credits	30.0	48.9	39.7	23.4	31.7	45.5
8. Rupee Debt service	0.0	0.0	0.0	0.2	0.1	0.1
9. Other Capital	8.2	20.9	12.4	4.0	11.4	8.2
Total (1 to 9)	**233.3**	**433.0**	**302.5**	**188.1**	**325.0**	**293.3**

other asset prices, and general excess domestic demand leading to macroeconomic and financial instability. Abrupt reversals in capital flows also lead to significant difficulties in monetary and macroeconomic management. Reversals of capital flows, as shown by the current financial crisis, could be rapid with consequent painful adjustment in bank credit and collapse of asset prices. Thus, the boom and bust pattern of capital flows, unless managed proactively, could lead to macroeconomic and financial instability (Box II.35).

Foreign Investment

II.6.35 Even in the face of severe global financial turmoil, foreign investment in India during 2008-09 was mainly driven by buoyant FDI, though large portfolio outflows took place on account of deleveraging triggered by the crisis (Chart II.50). FDI was largely driven by equity and reinvested earnings during the year (Table 2.85). During 2008-09, further measures taken to support and strengthen the equity route by widening access of foreign firms to local equity markets, had the beneficial effect of helping in reducing the market volatility experienced under the impact of global financial crisis.

II.6.36 FDI was mainly channeled into manufacturing sector with a share of 21.0 per cent, followed by financial services with a share of 19.5 per cent. Investments routed through Mauritius remained the largest, with a share of 44.8 per cent, followed by Singapore with a share of 14.8 per cent (Table 2.86). In a major break from the past, the spurt in FDI flows to India in the recent period has been accompanied by a jump in outward equity investments, as Indian firms tend to establish production, marketing and distribution networks overseas to achieve global scale along with access to new technology and natural resources.

II.6.37 Despite the deepening of the global financial crisis and pressures on the foreign exchange market, the overseas investment by the Indian corporates increased in the second half of 2008-09. Thus, despite the deterioration in global credit markets, Indian companies, particularly in the manufacturing sector continued their overseas expansion by taking recourse to the liquidity from domestic foreign exchange markets (Table 2.87). The specific measures taken during 2008-09 intended to liberalise outbound investment included raising the investment limits of Indian corporates, mutual funds registered with SEBI and permitting registered trusts and societies engaged in manufacturing/ educational/ health sector to make investment in the same sector(s) in a Joint Venture or Wholly Owned Subsidiary outside India.

Box II.35
Global Financial Crisis and Capital Flows

Private capital flows to EMEs have grown rapidly since the 1980s, but with sporadic volatility over time. Large capital flows to the EMEs could be attributed to a variety of push and pull factors. The pull factors that have led to higher capital flows include strong growth in the EMEs over the past decade, reduction in inflation, macroeconomic stability, opening up of capital accounts and buoyant growth prospects. The stance of monetary policy in the advanced economies has been recognised as an important push factor in the sense that periods of loose monetary policy and search for yield in the advanced economies encourages large capital inflows to the EMEs and *vice versa* in periods of tighter monetary policy. Thus, cycles in monetary policy in the advanced economies have affected the cycles and volatility in capital flows to the EMEs. Innovations in information technology have also contributed to the two-way movement in capital flows. Overall, in response to these factors, capital flows to the EMEs since the early 1980s have grown over time, but with large volatility (Committee on Global Financial System, 2009).

Reversals of capital flows from the EMEs, as experienced again following the current financial crisis, as in periods of previous crisis in EMEs, are generally quick, entailing painful adjustment costs in the economy. Such reversals and associated loss of foreign exchange reserves also often give rise to contraction in the central bank's balance sheet, creating challenges for monetary management in the form of offsetting adjustments in domestic assets.

As the historical evidence suggests, extended periods of monetary accommodation in the advanced economies often coincided with large capital flows to EMEs. In response to the ongoing global financial crisis, monetary policies across the advanced economies have again been aggressively eased and policy interest rates have reached levels even lower than those which were witnessed in 2002. Base money in the US has increased substantially in the recent months; similar is the case in many advanced economies. Given such a large monetary expansion and the past experiences, large capital inflows to the EMEs could resume in the foreseeable future, if the unwinding of the current monetary expansion is not made in a timely fashion (Mohan, 2009).

India received large capital inflows in recent years prior to the onset of the global financial crisis. The Reserve Bank had to sterilise the liquidity impact of large foreign exchange purchases through a series of increases in the cash reserve ratio and issuances under the Market Stabilisation Scheme. In the aftermath of the collapse of Lehman brothers, however, and the chain of events that unfolded, portfolio investors sold heavily in domestic equity markets as part of their deleveraging process and repatriated the sales proceeds, as in other major EMEs. On the whole, net capital inflows during 2008-09 were substantially lower than in 2007-08 and there was a depletion of reserves as the capital flows were insufficient to finance current account deficits. This had put pressures in the foreign exchange market as well as domestic money markets prompting the Reserve Bank to undertake various measures to augment forex as well as rupee liquidity. The debt creating flows also reduced reflecting limited availability of credits as well as higher costs of borrowings from the international credit markets. The Reserve Bank and the Government of India took a number of measures to augment capital flows, which yielded positive results in terms of a turnaround in NRI flows as well as net inflows under FIIs, especially from the beginning of the current financial year 2009-10. A positive feature, however, has been the resilience shown by foreign direct investment flows in the face of the deepening of the global financial crisis, which reflect the attractiveness of India as a preferred investment destination. Overall, the adverse impact of the global financial crisis on capital flows was managed through drawdown of reserves and policies to attract inflows without severely disrupting the financial markets. The prudent management of the capital account and the self insurance in the form of adequate foreign exchange reserves has helped India in moderating the impact of any crisis driven capital outflows from India.

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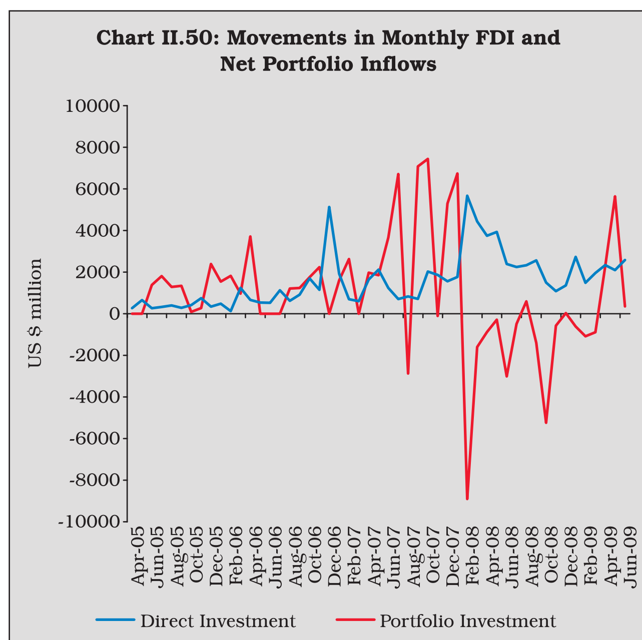
II.6.38 Although India was one of the largest recipients of portfolio inflows among the EMEs in 2007, such flows comprising foreign institutional investors' (FIIs) investments and American Depository Receipts (ADRs)/Global Depository Receipts (GDRs) witnessed large outflows in 2008-09 with the unfolding of global financial crisis (see Table 2.85). On the back of volatility and weaknesses in the major global stock markets and the process of withdrawal of funds from the EMEs, portfolio equity outflows from the Indian markets had started as early as February 2008



(see Chart II.50). The significant outflow under portfolio investment reflected large sales of equities by FIIs in the Indian stock market and drying-up of liquidity in the overseas markets for ADRs/GDRs and FCCBs. During 2008-09, there were net FII outflows in every month, except August and December 2008, with the highest outflows being recorded in the month of October 2008 (US$ 5.3 billion). Inflows under ADRs/GDRs witnessed considerable decline with only negligible inflows recorded during the period September 2008 to February 2009.

Debt Flows

II.6.39 The tightening of global credit market conditions led to a decline in debt inflows to EMEs and also impacted India, particularly through ECB and trade credit flows during 2008-09 (Appendix Table 53). Reflecting the liquidity squeeze in overseas credit markets and rising risk premium on new borrowings, gross ECB disbursements to India declined sharply during 2008-09. Gross ECB repayments by Indian companies also increased marginally during 2008-09.

Table 2.85: Foreign Investment Flows to India

(US $ million)

Item	2005-06	2006-07	2007-08 (P)	2008-09 (P)
1	2	3	4	5
A. Direct Investment (I+II+III)	**8,961**	**22,826**	**34,362**	**35,168**
I. Equity (a+b+c+d)	**5,975**	**16,481**	**26,867**	**27,995**
a) Government (SIA/FIPB)	1,126	2,156	2,298	4,699
b) RBI	2,233	7,151	17,129	17,998
c) Acquisition of shares*	2,181	6,278	5,148	4,632
d) Equity capital of unincorporated bodies	435	896	2,292	666
II. Re-invested earnings	**2,760**	**5,828**	**7,168**	**6,426**
III. Other capital #	**226**	**517**	**327**	**747**
B. Portfolio Investment (a+b+c)	**12,492**	**7,003**	**27,271**	**-13,855**
a) GDRs/ADRs	2,552	3,776	6,645	1,162
b) FIIs @	9,926	3,225	20,328	-15,017
c) Off-shore funds and others	14	2	298	-
C. Total (A+B)	**21,453**	**29,829**	**61,633**	**21,313**

P : Provisional - : Nil/Negligible.
* : Relates to acquisition of shares of Indian companies by non-residents under Section 6 of the FEMA, 1999.
# : Data pertain to inter-company debt transactions of FDI entities.
@ : Data represent net inflow of funds by FIIs.
Note: 1. Data on equity capital of unincorporated bodies and reinvested earnings for 2007-08 and 2008-09 are estimates.
2. Data on foreign investment presented in this table represent inflows into the country and may not tally with the data presented in other tables. They may also differ from data relating to net investment in stock exchanges by FIIs.

Table 2.86: Foreign Direct Investment Flows to India: Country-wise and Industry-wise*

(US $ million)

Source	2006-07	2007-08	2008-09P	Industry	2006-07	2007-08	2008-09P
1	2	3	4	5	6	7	8
Country-wise Inflows (Total)	**9,307**	**19,427**	**22,697**	**Sector-wise Inflows (Total)**	**9,307**	**19,427**	**22,697**
Mauritius	3,780	9,518	10,165	Manufacture	1,641	3,726	4,777
Singapore	582	2,827	3,360	Financial Services	1,330	3,850	4,430
U.S.A	706	950	1,236	Construction	967	2,551	2,237
Cyprus	58	570	1,211	Communication Services	423	66	2,067
United Kingdom	1,809	508	690	Real Estate Activities	431	1,336	1,886
Netherlands	559	601	682	Computer Services	824	1,035	1,647
Germany	116	486	611	Miscellaneous Services **	298	1,901	1,458
France	100	136	437	Electricity and other Energy related	174	829	669
Spain	62	48	363	Business Services	2,425	1,158	643
Russia	25	1	306	Transport	165	816	401
Japan	80	457	266	Trading	82	176	400
Italy	57	21	249	Restaurants & Hotels	153	280	343
UAE	215	226	234	Retail & Wholesale Trade	47	200	294
Hong Kong	60	106	155	Education, Research & Development	43	156	243
Switzerland	57	192	135	Mining	42	461	105
Others	1,041	2,780	2,597	Others	262	886	1,097

* : Data in this table relate to only equity capital under Automatic route and Approval route. Acquisition of shares of Indian Company by non-residents under section 6 of FEMA, 1999 and equity capital of unincorporated bodies are not included.

**: Miscellaneous services include services related to community, cultural activities, personnel, public, sanitation, health, repairing, international and others.

P : Provisional.

II.6.40 The global financial crisis severely affected the access to trade finance for EMEs (Box II.36). According to the IMF's World Economic Outlook (April 2009), the spreads on trade finance increased from 100 -150 basis points to around 400 basis points over LIBOR with increase in country and counterparty risks. As a result of difficult financing conditions prevailing in the international credit markets and increased risk aversion by the lending counterparties, gross disbursement of short-term trade credit to India was lower than that in 2007-08 (see Table 2.84). Repayments of short-term trade credit, however, increased significantly during 2008-09 mainly due to some problems in rollover observed during the second half of 2008-09.

II.6.41 Given their nature, external assistance are not pro-cyclical. The external assistance received by India during 2008-09 was higher than the previous year (Appendix Table 54). The grants and loans extended by India to other countries did not show significant decline (Table 2.88).

Table 2.87: India's Direct Investment Abroad

(US $ million)

Industry	2006-07	2007-08	2008-09*
1	2	3	4
Manufacturing	4,185	5,409	8,096
Financial Services	28	88	143
Non-Financial Services	7,527	1,748	1,154
Trading	659	1,050	937
Others	1,499	10,435	6,450
Total	**13,898**	**18,730**	**16,780**

* : Based on the latest reported revised data. Therefore, these data may differ from the data published under the Balance of Payments.

Note: 1. Data include equity and loan component.

2. Data pertains to proposals for Indian Investment abroad (US $ 5 million and above).

Box II.36
Trade Credit

The global credit squeeze in the second half of 2008-09 affected the exporters and importers in terms of the access to and the cost of trade credit. This necessitated institution of specific policy measures to address the concerns relating to trade credit. Trade finance often takes many forms depending on the extent of trust between counterparties and the degree of financing needed from the banks. When the transaction is purely between the importer and the exporter, it could be done on a *cash-in-advance basis* (payment is received before goods are shipped), or on an *open account basis* (shipment occurs before payment is received). Otherwise, banks play the role as a facilitator for the movements of merchandise around the globe and offer products to mitigate the risk of nonpayment (such as letters of credit), the credit risks (such as through export credit insurance) besides trade lending (also called export working capital) against the security of the actual goods. The developments in the international finance in recent years, however, have blurred the distinction between trade credits and financial credits, which has led to a drop in the confidence of international banks about the payment priority accorded to trade credits over others at times of crisis. Trade finance has also become more vulnerable to capital flight, induced by the dwindling confidence of international investors during the time of financial stress. With trade credit lines usually being short-term and capable of being redeemed quickly at par, they are considered operationally the easiest asset class for a bank to cut at times of heightened risk aversion, often in the form of not rolling over maturing credits, as a part of banks' policy of overall reductions in country exposures during a crisis.

The deteriorating global financial market conditions have led to a dramatic reduction in the total volume of financing flows provided by banks for all activities, including trade finance. The combination of the higher cost of funds, liquidity premiums, and higher risk have resulted in a sharp increase in the price of short-term trade finance, according to the IMF. As the increase in cost alongwith declining availability of finance has the potential to severely undermine the current efforts to stimulate domestic economies, co-ordinated initiatives globally to support trade finance have been undertaken. For instance, the G-20 has agreed to ensure availability of at least US$ 250 billion over the next two years to support trade finance. The proposals include the use of a variety of financing tools to address the general shortages in liquidity, reduction in the risk premiums by extending guarantees as well as to induce the return of private financial flows.

Although the spurt in costs of trade finance is global, the decline in availability of trade credit has been felt more by the emerging market economies (EMEs), especially the Asian EMEs, where much of inter-regional trade is in low-profit margin items that are part of manufacturing supply chain for exports to advanced economies. The IMF-Bankers' Association for Finance and Trade (BAFT)'s survey of advanced, emerging market and developing country banks on the bank-intermediated forms of international trade finance indicated that the price of trade finance increased sharply due to increased cost of funds to the banks, which has outweighed the dampening price effect of less restrictive monetary policies in many advanced economies. Higher capital requirements imposed by regulators and by banks on their own lending also increased the spreads between the banks' costs of funds and the price of trade finance to their customers. Additionally, fear of default/counterparty risk is causing banks to tighten lending guidelines. The Survey expects the current pricing trends to continue in 2009 and suggests that emerging markets and commodities trade are likely to be the hardest hit.

The trade finance problem is also sector-specific, apart from being country/region specific. India has been relatively less affected by the liquidity squeeze in international credit markets. Despite tightness in the overseas markets since September 2008, the disbursement of short-term credit to India has hovered around its monthly trend of over US$ 3 billion in the subsequent months. Although the higher repayments during the second half of 2008-09 suggested some problems in rolling over maturing trade credits, the continuing trend in disbursement indicates no significant problem in servicing short-term debt. This is also indicative of the confidence enjoyed by the Indian importers in the international financial markets. The various policy initiatives taken in this regard, such as hike in the all-in-cost ceiling for raising trade credit, enhancement of limit on overseas borrowings by banks, extending the line of credit as well as swap facility to the EXIM Bank, *etc.*, have also helped in easing the pressure on trade financing.

References:

1. Dorsey, Thomas (2009), "Trade Finance Stumbles", *Finance and Development*, International Monetary Fund, March.
2. Wang, Jian-Ye and Helaway Tadesse (2005), ''An Overview'', in J. Y. Wang and M. Ronci (eds.) *Access to Trade Finance in Times of Crisis*, International Monetary Fund.

Table 2.88: India's Grants and Loans to Foreign Governments

(US $ million)

Item	2007-08			2008-09		
	Grants	Loan	Total	Grants	Loan	Total
1	2	3	4	5	6	7
A. Plan (External Affairs)	**63**	**12**	**75**	**73**	**25**	**98**
B. Non-Plan (i+ii+iii)	**359**	**17**	**376**	**313**	**1**	**314**
i. External Affairs	**349**	**0**	**349**	**304**	**0**	**304**
Bangladesh	15	0	15	1	0	1
Bhutan	132	0	132	121	0	121
Nepal	25	0	25	22	0	22
Aid to African countries	12	0	12	21	0	21
Maldives	5	0	5	1	0	1
Myanmar	5	0	5	7	0	7
Sri Lanka	7	0	7	7	0	7
Central Asia	5	0	5	4	0	4
ITEC Programme	15	0	15	14	0	14
Latin African Countries	0	0	0	0	0	0
Afghanistan	83	0	83	74	0	74
Other Developing Countries	45	0	45	33	0	33
ii. Finance	**10**	**17**	**27**	**8**	**1**	**9**
iii. Shipping	**1**	**0**	**1**	**1**	**0**	**1**
C. Grand Total (A+B)	**422**	**29**	**451**	**386**	**26**	**412**

Source : Union Budgets, Government of India.

II.6.42 There was a turnaround in the flows under the NRI deposit schemes as reflected in significant rise in inflow during 2008-09, responding to the hikes in the ceiling interest rates on NRI deposit schemes by the Reserve Bank (Table 2.89). With the deepening of financial crisis in September 2008, the ceiling interest rates on NRI deposits were revised upwards thrice in order to encourage inflows (Table 2.90).

EXTERNAL DEBT

II.6.43 The outstanding external debt stock of India modestly increased at end-March 2009, mainly on account of increase in long-term debt (Table 2.91 and Appendix Table 55). The increase in long-term debt was mainly due to increase in trade credit and bilateral debt. The outstanding debt under NRI deposits declined over the level at end-March 2008 mainly due to valuation effects as there were positive

Table 2.89: Balances under NRI Deposit Schemes

(US$ million)

Scheme	Outstanding (end-March)		Net Inflows (April-March)	
	2008	2009	2007-08	2008-09
1	2	3	4	5
FCNR(B)	14,168	13,211	-960	-957
NR(E)RA	26,716	23,570	109	2,508
NRO	2,788	4,773	1030	2,738
Total	**43,672**	**41,554**	**179**	**4,289**

Table 2.90: Ceiling Interest Rates on NRI Deposits

Period	NR(E)RA Deposits	FCNR(B) Deposits
1	2	3
	(+)/ (-) LIBOR/SWAP Rate	
April 24, 2007	LIBOR/SWAP rate	-75 basis points
September 16, 2008	+ 50 basis points	- 25 basis points
October 15, 2008	+ 100 basis points	+ 25 basis points
November 15, 2008	+ 175 basis points	+ 100 basis points

Table 2.91: India's External Debt

Item	US $ million		Percentage variation	
	Mar-08	Mar-09P	Mar-08 over Mar-07	Mar-09 over Mar-08
1	2	3	4	5
1. Multilateral	39,490	39,566	11.8	0.2
2. Bilateral	19,701	20,587	22.6	4.5
3. IMF	0	0	0	0
4. Trade Credit	10,358	14,604	44.6	41.0
5. Commercial Borrowings	62,337	62,676	50.4	0.5
6. NRI Deposits	43,672	41,554	5.9	-4.8
7. Rupee Debt	2,016	1,527	3.3	-24.3
8. Short-Term Debt	46,999	49,373	67.1	5.1
Total Debt (1 to 8)	224,573	229,887	31.1	2.4
Memo Items:				
A. Long-term Debt (1 to 7)	177,574	180,514	24.0	1.7
B. Short-term Debt	46,999	49,373	67.1	5.1

P : Provisional.

Source: Ministry of Finance, Government of India and Reserve Bank of India.

inflows under NRI deposits during 2008-09. In terms of original maturity, the shares of long-term debt and short-term debt in the total debt were 78.5 per cent and 21.5 per cent, respectively, at end-March 2009. In terms of currency composition, US dollar denominated debt accounted for 57.1 per cent of total external debt at end-March 2009, followed by Japanese Yen (14.2 per cent), Indian Rupee (13.2 per cent), SDR (9.2 per cent) and Euro (4.1 per cent).

Short-term Debt

II.6.44 Despite apprehensions in the second half of 2008-09 on the availability of short-term trade credits due to tightness in the global credit markets, financing of short-term trade credit did not pose much problem in India. Based on residual maturity, the total short-term debt obligations accounted for 40.6 per cent of the total external debt outstanding at end-March 2009. The total short-term debt in terms of residual maturity (US$ 93.3 billion) at end-March 2009 consists of short term debt based on original maturity of US$ 49.4 billion and long-term external debt due for repayment within one year of US$ 43.9 billion. Out of the US$ 43.9 billion, the NRI deposits constitute the major portion (US$ 32.1 billion), which are more likely to be rolled over going by the past trend.

II.6.45 The short-term debt as ratio to total debt and to foreign exchange reserves increased at end-March 2009 (Table 2.92). The debt service ratio remained stable and reasonably low. The major indicators of external sector vulnerability reflect India's continued resilience in the face of one of the severest global crises.

II.6.46 The data released by the World Bank on external debt for the top ten debtor developing countries for the calendar year 2007 revealed that India continued to be at the fifth position among the countries having the largest external debt stocks

Table 2.92: External Debt Service Payments

Item	2006-07	2007-08	2008-09
1	2	3	4
Components (US$ million)			
1. External Assistance @	2,942	3,241	3,381
2. External Commercial Borrowings*	6,331	9,771	10,401
3. NRI Deposits (Interest Payments)	1,969	1813	1,547
4. Rupee Debt Service	162	121	101
5. Total Debt Servicing	11,404	14,946	15,430
6. Total Current Receipts#	242,811	314,014	337,095
Indicators (Per cent)			
7. External Debt to GDP Ratio	18.1	19.0	22.0
8. Short Term Debt to Total Debt Ratio	16.4	20.9	21.5
9. Short Term Debt to Foreign Exchange Reserves Ratio	14.1	15.2	19.6
10. Foreign Exchange Reserves to External Debt Ratio	116.2	137.9	109.6
11. Debt Service Ratio	4.7	4.8	4.6
12. Interest Payments to Current Receipts Ratio	2.3	2.1	1.9
13. Debt to Current Receipts Ratio	70.6	71.5	68.2
14. Liability Service Ratio	6.1	5.9	5.5

@ : Inclusive of non-Government loans.

* : Inclusive of interest components of trade credits.

: Excluding official transfers.

Note: 1. Debt service payments in this table follow accrual method of accounting consistent with balance of payments compilation and may, therefore, vary from those recorded on cash basis.

2. The liability service represents debt service payments and payments of profits and dividends as a ratio to current receipts.

Table 2.93: International Comparison of Top Ten Debtor Countries, 2007

Country	External Debt (US$ billion)	External Debt to GNI (%)	Debt Service ratio (%)	Forex Reserves to Total Debt (%)	Concessional Debt/Total Debt (%)	Short-term Debt/ Total Debt (%)
1	2	3	4	5	6	7
China	374	11.6	2.2	413.9	10.1	54.5
Russia	370	29.4	9.1	129.1	0.4	21.4
Turkey	252	38.8	32.1	30.4	2.1	16.6
Brazil	238	18.7	27.8	75.9	1.0	16.5
India	**225**	**19.0**	**4.8**	**137.9**	**19.7**	**20.9**
Poland	195	47.7	25.6	33.6	0.4	30.9
Mexico	178	17.7	12.5	49.0	0.6	5.1
Indonesia	141	33.9	10.5	40.4	26.2	24.8
Argentina	128	49.7	13.0	36.1	1.3	29.8
Kazakhstan	96	103.7	49.6	18.4	1.0	12.2

Source : Data for India are as published by national authorities for 2007-08 and those for other countries are at end-December 2007 as available in World Bank's Global Development Finance Online Database.

(Table 2.93). India, however, was the second lowest after China in terms of debt service ratio.

FOREIGN EXCHANGE RESERVES

II.6.47 During 2008-09, the widening of current account deficit coupled with net capital outflows resulted in the drawdown of foreign exchange reserves of US $ 20.1 billion (excluding valuation) as against accretion to reserves of US$ 92.2 billion in 2007-08. Taking into account the valuation losses of US$ 37.7 billion arising out of depreciation of major currencies against the US dollar, India's foreign exchange reserves recorded a decline of US$ 57.7 billion during 2008-09 to US$ 252.0 billion as at end-March 2009 (Appendix Table 56 and Table 2.94). This magnitude of decline in reserves created some pressure on the foreign exchange market. Although both US dollar and Euro are intervention currencies, the foreign exchange reserves are denominated and expressed in US dollar only. Any change in the level of forex reserves is largely the outcome of the Reserve Bank's intervention in the foreign exchange market to smoothen excessive exchange rate volatility and the valuation changes that result from movements in the exchange rate of the US dollar against other currencies.

II.6.48 India continued to be one of the leading holders of foreign exchange reserves among the major EMEs, which helped to deal with severe external shocks (Table 2.95). India's foreign exchange reserves remained at a comfortable level despite the drawdown during the crisis, as reflected by different adequacy indicators such as merchandise import cover (10.3 months at end-March 2009) and reserves to debt ratio (109.6 per cent at end-March 2009).

Table 2.94: Sources of Variation in Foreign Exchange Reserves

(US $ million)

Item	2007-08	2008-09
1	2	3
I. Current Account Balance	**(-) 17,034**	**(-) 29,817**
II. Capital Account (net)*	**109,198**	**9,737**
Of Which:		
(i) Foreign Direct Investment	15,401	17,496
(ii) FIIs	20,327	(-) 15,017
(iii) External Commercial Borrowings	22,633	8,158
III. Valuation Change	**18,380**	**(-) 37,658**
Total (I+II+III)	**110,544**	**(-) 57,738**

*** :** Includes 'errors and omissions'.
Note: Increase in reserves (+) / Decrease in reserves (-).

Table 2.95: Foreign Exchange Reserves of the Major EMEs
(End-March 2009)

(US$ billion)

Country	Forex Reserves*
1	2
1. China	1,953.7
2. Russia	368.1
3. Taiwan	300.1
4. India	**242.4**
5. South Korea	206.3
6. Brazil	189.4
7. Hong Kong	186.2
8. Singapore	166.3
9. Thailand	113.7
10. Mexico	85.5

* : Excluding gold except China.

Note : Foreign exchange reserves of India exclude US$ 250 million invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009.

Source : The International Financial Statistics (IFS), IMF; and Central Bank websites.

II.6.49 The Reserve Bank's holding of reserves in the form of gold was at 357.8 tonnes as on March 31, 2009, which in value terms amounted to about 3.8 percent of the total reserves. Of this, 65 tonnes are held abroad since 1991 with the Bank of England and the Bank for International Settlements (BIS). Holdings of gold have remained unchanged and gold reserves are managed passively. Foreign currency assets (FCAs) of the RBI are held as assets in the Issue Department (foreign securities) as well as in the Banking Department (balances held abroad and investments). Gold is also held in the Issue Department (under Gold coin and bullion) and in the Banking Department as well. Although SDRs and Reserve Tranche Position (RTP) form part of India's official reserves, these are held by the Government of India and are not reflected in the Reserve Bank's balance sheet.

Management of Foreign Exchange Reserves

II.6.50 Movements in the foreign currency reserves occur mainly out of purchase and sale transactions in foreign exchange by the Reserve Bank in the market. In addition, there is income from deployment of FCAs held in the portfolio of the Reserve Bank. External aid receipts of the Government of India also flow into the reserves. In line with international practices in this regard, the Reserve Bank follows the practice of expressing the foreign exchange reserves in US dollar terms and, hence, the periodic currency revaluations also impact the level of reserves.

II.6.51 The guiding objectives of foreign exchange reserves management in India are safety, liquidity and returns in line with the broad international practices in this regard. The demands on country's foreign exchange reserves may vary widely over time, depending on a variety of factors including the exchange rate regime adopted by the country and the extent of openness of the economy.

II.6.52 The RBI Act, 1934 provides the legal framework for deployment of the FCAs as well as gold. The investment universe for the FCAs comprises deposits with other central banks, the Bank for International Settlements (BIS), foreign commercial banks, securities representing debt of sovereigns and supranational institutions with residual maturity not exceeding 10 years and any other instruments or institutions as approved by the Central Board of the Reserve Bank in accordance with the provisions of the Act (Table 2.96). In pursuance of the Act, the investment strategy aims at diversification with regard to currency, markets and instruments. As such, the FCAs are invested in multi-currency and multi-market portfolios. In response to the developments in the global financial markets in 2008-09, the strategy of the Reserve Bank was suitably adjusted in regard to exposure to the foreign commercial banks. Decisions involving the pattern of investments are driven by the broad parameters of portfolio management *viz.*, safety, liquidity and returns. The FCAs are invested in assets of the highest quality with a significant proportion convertible into cash at short notice. The foreign exchange assets have been placed in various portfolio tranches to provide better balancing of the various objectives of liquidity and return.

Table 2.96: Deployment Pattern of Foreign Currency Assets

(US $ million)

As on March 31	Foreign Currency Assets (a+b+c)	(a) Securities	(b) Deposits with other Central Banks, BIS and IMF	(c) Deposits with Foreign Commercial Banks/Funds placed with External Asset Managers
1	2	3	4	5
2004	1,07,448	35,024	45,877	26,547
2005	1,35,571	36,819	65,127	33,625
2006	1,45,108	35,172	65,399	44,537
2007	1,91,924	52,996	92,175	46,753
2008	2,99,230	1,03,569	1,89,645	6,016
2009	2,41,426*	1,34,792	1,01,906	4,728

* : Exclude US$ 250 million invested in foreign currency denominated bonds issued by IIFC (UK).

II.6.53 The Reserve Bank places in public domain data relating to the foreign exchange market and the Reserve Bank's operations in the foreign exchange market. The movements in foreign exchange reserves of the Reserve Bank are published on a weekly basis in the Weekly Statistical Supplement (WSS). Disclosure of the international reserves and foreign currency liquidity position is made under the Special Data Dissemination Standards (SDDS) of the IMF. The Reserve Bank Annual Reports and other publications also cover the subject of reserve management to disseminate appropriate information with analysis. Half-yearly reports on management of foreign exchange reserves are also placed on the Reserve Bank website.

INTERNATIONAL INVESTMENT POSITION

II.6.54 India's net international liabilities increased by US $ 12.5 billion between end-March 2008 and end-March 2009, as the decline in international assets was more than the decline in international liabilities during the period. The decline in international assets was mainly on account of decrease in reserve assets amounting to US $ 57.7 billion. The direct outward investment, however, increased by US$ 17.5 billion between end-March 2008 and end-March 2009. On the other hand, the decline in international liabilities could be mainly attributed to outflow by FIIs leading to fall in the stock of portfolio equity investment and also to the effect of valuation changes (Table 2.97).

Table 2.97: International Investment Position of India

(US $ billion)

Item	End-March			
	2006	2007	2008 PR	2009 P
1	2	3	4	5
A. Assets	**183.9**	**247.3**	**385.6**	**349.9**
1. Direct Investment	15.9	31.0	49.8	67.3
2. Portfolio Investment	1.0	0.9	1.5	0.8
2.1. Equity Securities	0.5	0.5	1.4	0.8
2.2. Debt Securities	0.5	0.4	0.1	0.0
3. Other Investment	15.4	16.2	24.5	29.9
3.1. Trade credits	-0.3	0.7	-0.1	6.8
3.2. Loans	2.4	3.5	11.6	6.2
3.3. Currency and Deposits	10.0	7.8	7.8	10.3
3.4. Other Assets	3.3	4.2	5.2	6.6
4. Reserve Assets	151.6	199.2	309.7	252.0
B. Liabilities	**243.7**	**308.7**	**438.4**	**415.3**
1. Direct Investment	52.4	77.0	118.3	124.8
2. Portfolio Investment	64.2	79.4	120.1	84.9
2.1. Equity Securities	54.7	63.3	98.6	64.8
2.2. Debt Securities	9.5	16.2	21.5	20.2
3. Other Investment	127.1	152.2	200.0	205.6
3.1. Trade credits	21.2	27.7	45.2	48.0
3.2. Loans	68.0	80.8	106.9	114.1
3.3. Currency and Deposits	37.3	41.7	44.8	42.3
3.4. Other Liabilities	0.6	2.1	3.1	1.3
C. Net Position (A-B)	**-59.8**	**-61.4**	**-52.9**	**-65.3**
Memo :				
Debt Liabilities/Total Liabilities (per cent)	56.1	55.5	51.2	55.4

PR : Partially Revised P : Provisional.

II.6.55 The developments during 2008-09 suggest that despite the adverse shocks from the global financial crisis, which led to considerable contraction in India's exports, widening of current account deficit, reversal in capital flows and drawdown of reserves, India's BoP position remained relatively resilient and did not become a source of major disruption in the foreign exchange market. The CAD-GDP ratio continued to remain within manageable limits. Services exports and remittances provided sustained support to India's current account position even in the face of a severe global economic slowdown. Notwithstanding some reversal of capital flows in the second half of the year, inflows under FDI and NRI deposits exhibited resilience, reflecting continuous attractiveness of India as a long-term investment destination and also the impact of various measures to attract capital flows. Various soundness indicators for the external sector relating to current account, external debt and reserve adequacy suggest that because of the continued policy emphasis on external stability, the Indian economy could manage shocks from a severe global crisis and maintained macroeconomic stability.

II.6.56 The regulations governing capital flows in India have been liberalised substantially in the past three years, taking into account the macroeconomic conditions, state of the financial sector development, risk management capabilities of financial institutions and depth of financial markets. At the same time, the Government has followed a hierarchy in the liberalisation of inflows by way of according preference to equity inflows rather than debt, besides the emphasis on a diversified capital account. The macro-level policy focus on sustainable levels of current account deficit and external debt, active capital account management while persisting with gradual liberalisation process consistent with the assessed needs of the country and strengthening self insurance in a globalised world in the form of adequate reserves, have been vindicated in the face of the current global crisis.