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**The Growth Record of the Indian Economy,
1950-2008: A Story of Sustained Savings and
Investment**

by

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THE GROWTH RECORD OF THE INDIAN ECONOMY, 1950-2008:
A STORY OF SUSTAINED SAVINGS AND INVESTMENT

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Abstract

This paper takes its foundation from an address presented at the Ninth Annual Conference on Indian Economic Policy Reform. The theme selected for the conference is befitting in the present context as we grapple with issues and challenges for sustaining the elevated growth momentum that we have now achieved. This has assumed added contemporary significance in the wake of expected moderation in global growth due to a projected slowdown in the US and some other advanced economies. Whereas emerging markets, including India have so far not been greatly affected by the financial turbulence in advanced economies, the increasing global uncertainties need to be watched and guarded against appropriately. Although our growth process continues to be dominated by domestic factors, we need to recognise some changing global patterns, which could have implications for the macroeconomic prospects of the Indian economy. Accordingly, in my paper, I first review the overall macroeconomic performance in India since independence, then draw likely prospects for the coming five years and finally conclude with some issues that need to be addressed for sustaining the growth of the Indian economy.

Keywords: India's macroeconomic performance; growth

JEL Classification No.: E60, E61, E62, E66

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I. A Review of the Indian Growth Process

Consistent Growth Acceleration since Independence

It is widely believed that the Indian economy witnessed near stagnation in real GDP growth from independence till the late 1970s. A closer review of the performance of the Indian economy, however, suggests a somewhat different picture, with continuing increase in real GDP growth over time since Independence, but interspersed with an interregnum during the 1965-1981 period (Table 1). Interestingly, growth of manufacturing production, in terms of period averages, was actually high at around 6-7 per cent in the first four decades after Independence, except for this period (1965-1980). The real acceleration took place in the 1950s. There are two other features of our growth history that are notable. First, agricultural growth has been subject to large variation over the decades. The 1965-81 interregnum is particularly marked by the severe deceleration in agricultural growth, followed by a marked recovery in the 1980s, and a slowdown thereafter. Second, until the 1990s, little note had been taken of growth in the services sector. A glance at the growth record suggests that it is the continuing and consistent acceleration in growth in services over the decades, that had earlier been ignored, that really accounts for the continuous acceleration in overall GDP growth, once again, except for the 1965-81 interregnum. There is nothing particularly special about service sector growth over the last decade except that the acceleration over time has continued.

Table 1 : Macroeconomic Indicators at a Glance

| | | | | | | | (Per cent) |
|---|---------------------------|---------------------------|-----------|-------------|----------------------------------|-------------------------------|--------------------------|
| | 1950-51 to 1964- 65 | 1965-66 to 1980- 81 | 1980 s | 1990 -91 | 1991/ 92 to 1996- 97 | 1997/ 98 to 2002/ 03 | 2003/04 To 2007/08 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. Real GDP Growth | 4.1 | 3.2 | 5.6 | 5.3 | 5.7 | 5.2 | 8.7 |
| Agriculture and Allied | 2.9 | 2.1 | 4.4 | 4.0 | 3.7 | 0.9 | 4.4 |
| Industry | 6.7 | 4.2 | 6.4 | 5.7 | 7.0 | 4.1 | 8.4 |
| <i>Manufacturing</i> | 6.6 | 3.9 | 5.8 | 4.8 | 7.5 | 3.9 | 9.1 |
| Services | 4.9 | 4.2 | 6.3 | 5.9 | 6.4 | 7.8 | 10.3 |
| 2. Real GDCF/GDP | 13.5 | 19.2 | 20.2 | 24.4 | 22.5 | 24.1 | 31.4 £ |
| 3. ICOR | 3.3 | 6.0 | 3.6 | 4.6 | 4.0 | 4.6 | 3.6 £ |
| 4. Nominal GDCF/GDP | 11.8 | 16.7 | 20.8 | 26.0 | 23.9 | 24.5 | 33.0 £ |
| 5. GDS / GDP | 10.3 | 15.9 | 19.0 | 22.8 | 22.7 | 24.1 | 32.7 £ |
| 6. Saving-Investment Gap/GDP (5-4) | -1.5 | -0.7 | -1.8 | -3.2 | -1.2 | -0.4 | -0.3 £ |
| 7. M3 Growth | 6.4 | 15.6 | 17.2 | 15.1 | 17.5 | 15.9 | 17.6 @ |
| 8. SCB's Non-food Credit Growth | Na | 17.8 | 17.8 | 12.4 | 16.2 | 15.3 | 25.7 @ |
| 9. Growth in investments in Govt. Securities | 8.0 | 17.7 | 19.4 | 18.2 | 21.5 | 22.0 | 12.8 @ |
| 10. WPI Inflation (Average) | 3.8 | 9.0 | 8.0 | 10.3 | 9.6 | 4.6 | 5.5 |

AE: Advance Estimates.

@: Adjusted for the mergers and conversions in the banking system. Variation for 2005-06 is taken over April 1, 2005.

£: Data pertain to 2003-04 to 2006-07.

Note: The aggregate saving-investment gap in row 6 of this table differs from the sum of gaps of household, corporate and public sectors in Table 7 due to errors and omissions in investment estimates, which are not allocated sector wise.

The slowdown of growth witnessed during 1965-80 was reversed during the 1980s: the pick-up benefited from the initiation of some reform measures aimed at increasing domestic competitiveness. Since the early 1990s, growth impulses appeared to have gathered further momentum in the aftermath of comprehensive reforms encompassing the various sectors of the economy. There was, however, some loss of the growth momentum in the latter half of the 1990s which coincided with the onset of the East Asian financial crisis, setbacks to the fiscal correction process, quality of fiscal adjustment, slowdown in agriculture growth affected by lower than normal monsoon years, and some slackening in the pace of structural reforms. The

slowdown could also be attributed to the excessive enthusiasm and optimism in regard to investment plans in domestic industry following deregulation, which was followed by significant problems experienced in viability and competitiveness. This last point is of some importance. The initial response of the corporate sector to industrial deregulation was characterised by enhanced investments in traditional sectors, which then led to an increase in nonperforming assets and industrial distress. Moreover, the initial real devaluation also masked the effect of reductions in import restrictions and tariff reductions. Increased external competitive pressures resulting from this phased opening of the economy perhaps started manifesting themselves towards the end of the decade, leading to greater exercise of caution, on the one hand, by the corporate sector along with a greater effort at corporate restructuring, both physical and financial. Monetary tightening in the face of inflationary pressures is also believed by some to have contributed to the slowdown over this period. Nominal interest rates increased, followed by a fall in inflation, thereby resulting in enhanced real interest rates during this period (see Table 10), and lower rates of corporate investment.

Since 2003-04, there has been a distinct strengthening of the growth momentum. Restructuring measures by domestic industry, overall reduction in domestic interest rates, both nominal and real, improved corporate profitability, a benign investment climate amidst strong global demand and commitment rules-based fiscal policy have led to the real GDP growth averaging about 8.7 per cent per annum over the 5-year period ended 2007-08; growth in the last three years has averaged 9.2 per cent per annum.

The analysis of long-term growth in terms of specific periods is not without its criticism. Illustratively, Panagariya (2008) in his recent book views the approach of taking decadal averages as “clearly nonsensical, since the division must be based on economic criterion rather than the calendar”. After careful analysis of policy regime changes over time and statistical testing he settled on the following time period classification: 1951-65, 1965-81, 1981-88, and 1988-2007. He has chosen his cut-off points across various phases “primarily on the basis of the sharpness of differences in the growth rates, tempered by the consideration that an important objective underlying this exercise is to unearth the connection between growth and economic policies.”

(Panagariya, 2008, p. 5). He goes on to clarify that the phases that he identified are not based on differences in growth rates being statistically significant.

Another approach relies solely on statistical analysis of the relevant series to find out structural breaks to see if there exist some year(s), when the growth rate is significantly different across periods. This approach then draws upon economic rationale to justify the statistical finding of a break. In the Indian context, Wallack (2003) examined the data for 1951-52 to 2001-02 for GDP and its major components (agriculture, industry, manufacturing, and services). Statistically significant evidence of a break in growth rate was found for real GDP (1980-81), and two of its components viz., ‘trade, hotels, transport and communication’ and ‘construction’ (1991-92) and ‘financing, insurance, real estate and business services’ (two breaks: 1974-75 and 1979-80). No significant breaks were found in other components of GDP. She found that small variations in the data made significant differences to the identified cut-off points. Balakrishnan and Parameswaran (2007) extended the period of analysis to 2003-04, and employed the Bai-Perron (1998, 2003) methodology. The authors found evidence of a significant break not only in overall GDP but all the disaggregated component series. While only one breakpoint was found for overall GDP (1978-79) and agriculture (1964-64), three breakpoints were, *inter alia*, found for manufacturing, ‘trade, hotels, transport and communication’ and ‘financing, insurance, real estate and business services’.

Employing the Bai-Perron methodology, and extending the analysis up to the year 2006-07, we find evidence of an additional breakpoint in real GDP growth (thus, two breakpoints in all: 1977-78 and 1989-90). Evidence for at least one breakpoint is found in all the key sub-sectors, with a maximum of five breakpoints each in the case of ‘electricity, gas and water supply’ and ‘community, social and personal services’ (Annex 1).

It is apparent that the results of such statistical tests of structural breaks are sensitive to the addition of even 2-3 years of extra data. Moreover, in view of the end-period truncation required for estimation – 15 per cent of the sample period is truncated at either end of the sample – the end-points of the sample are not considered candidate dates for the breakpoints. What may be considered as a significant break date today may not be so when a few years of

additional data are added. Thus, even the statistical approach does not provide a reliable estimate break dates, since it is surrounded by alternative estimates. Moreover, confidence interval estimates around the point estimates could be wide. Sustained growth acceleration or deceleration would inevitably get reflected in decadal averages. Alternative classifications of periods based on some economic criteria are driven by subjectivity and differ across authors* .

Thus, while there may be a debate on the exact timing of the growth acceleration, the various alternative approaches do suggest a move to the higher growth trajectory from the 1980s onwards and further acceleration in recent years. On the whole, the broad evidence emanating from this analysis of growth rates is consistent with more systematic attempts at finding breakpoints in growth rates. In fact, the difficulty in identifying clear breakpoints itself supports my argument that there has been a continuous and consistent acceleration in the growth process over time since independence, except for the lost period of the 1965-1980. Panagariya described the period 1965-66 to 1980-81 as “the darkest in the post independence economic history of India”. He has further documented the various restrictive policy actions that were put in place during this period that effectively closed the Indian economy and slowed down Indian economic growth, just when various East Asian countries were opening up and accelerating. The overall story that emerges from is that the 1951-65 and 1965-80 periods were different in terms of both policy regimes and outcomes and hence provide a good understanding of the kind of economic trends that underlie Indian economic growth. I have also separated the 1997-98 to 2002-03 period since the economic growth slowed significantly at that time. (Annex 2 provides data on decadal growth rates.) The rest of the periodisation that has been provided here would then be broadly consistent with either significant policy changes (early 1950s, early 1980s, early 1990s, and then higher growth in the last 5 years).

Consistent Growth in Savings and Investment

* DeLong (2003) and Rodrik and Subramanian (2004) believe the growth took off in the early 1980s, while most attribute the higher growth path to the period beginning the early 1990s, coinciding with the extensive structural reforms.

In analysing the growth record of the Indian economy, various scholarly attempts, as discussed in the preceding section, have been made to identify the turning point from the “traditional” low growth to the modern high growth since the 1980s. The simple ordering of the data presented here provides a somewhat different picture of continued slow acceleration in growth except for the 1965-80 period. What can explain this continued acceleration? The secular uptrend in domestic growth is clearly associated with the consistent trends of increasing domestic savings and investment over the decades. Gross domestic savings have increased continuously from an average of 10.3 per cent of GDP during 1950-65 to almost 35 per cent of GDP at present; over the same period, the domestic investment rate has also increased continuously from 11.8 per cent to close to 36 per cent by 2006-07. A very significant feature of these trends in savings and investment rates is that Indian economic growth has been financed predominantly by domestic savings. The recourse to foreign savings – equivalently, current account deficit – has been rather modest in the Indian growth process. We may also note that the two decades, 1960s and 1980s, when the current account deficit increased marginally towards 2 per cent of GDP, were followed by significant balance of payments and economic crisis.

The long-term upward trends in savings and investment have, however, been interspersed with phases of stagnation. In particular, during the 1980s, the inability of the Government revenues to keep pace with the growing expenditure resulted in widening of the overall resource gap. Accordingly, the public sector saving-investment gap, which averaged (-)3.7 per cent of GDP during the period 1950-51 to 1979-80, widened sharply during the 1980s culminating in a high of (-)8.2 per cent of GDP in 1990-91. The resultant higher borrowing requirements of the public sector led the Government to tap financial surpluses of the household sector through enhanced statutory pre-emption from financial intermediaries at below market clearing interest rates. As fiscal deficits widened beginning in the 1970s and beyond, periodic increases in the statutory liquidity ratio (SLR) were resorted to finance the rising fiscal gap, indicative of the financial repression regime in place. (SLR refers to the proportion of their net demand and time liabilities that banks have to compulsorily invest in government securities). The SLR

was raised from 20 per cent in the early 1950s to 25 per cent by 1964, and it remained at this level for the rest of the decade. Beginning in the 1970s, the SLR came to be used more actively and it was raised in phases reaching 34 per cent by the late 1970s. The process continued during the 1980s as fiscal deficits expanded further, and the SLR reached a high of 38.5 per cent of net demand and time liabilities (NDTL) of the banking system in September 1990.

The growing fiscal imbalances of the 1980s spilled over to the external sector and were also reflected in inflationary pressures. Along with a repressive and weakening financial system, this rendered the growth process of the 1980s increasingly unsustainable. The external imbalances were reflected in a large and unsustainable current account deficit, which reached 3.2 per cent of GDP in 1990-91. As the financing of such a large current account deficit through normal sources of finance became increasingly difficult, it resulted in an unprecedented external payments crisis in 1991 with the foreign currency assets dwindling to less than US \$ 1 billion. The financing problem was aggravated by the fact that the deficit was largely financed by debt flows up to the late 1980s, reflecting the policies of the time which preferred debt flows to equity flows. Indeed, equity flows were almost negligible till the early 1990s. While overall capital flows (net) rose from an annual average of US \$ 0.6 billion to US \$ 3.9 billion during the 1980s, foreign investment equity flows increased only marginally (from US \$ 37 million to US \$ 140 million). In contrast, recorded debt flows recorded substantial increases led by higher recourse to external commercial borrowings and accretions to non-resident deposits. While medium- and long-term external commercial borrowings (net) jumped from an annual average of US \$ 114 million during the 1970s to US \$ 1.0 billion during the 1980s, non-resident inflows (net) rose multi-fold from an annual average of US \$ 85 million to US \$ 1.1 billion over the same period. Moreover, a significant part of the debt flows during the late 1980s was of short-term nature in the form of bankers' acceptances; such flows could not be renewed easily in view of the loss of confidence following the balance of payments crisis.

Growing Fiscal Imbalance and Correction

With the increase in the SLR being unable to meet fully the fiscal requirements, the burden of financing the Government had also to be borne by the Reserve Bank which led to high levels of monetized deficit. As Reserve Bank financing is inflationary beyond a limit, the increase in the Reserve Bank support to the Central Government was accompanied by an increase in cash reserve requirements (CRR). The CRR was raised from 6.0 per cent of NDTL in 1979 to its peak of 15.0 per cent by 1992 (in fact, 25 per cent if incremental reserve requirements are also taken into account). However, even this order of increase in the CRR to impound liquidity was insufficient and broad money growth continued to remain high and spilled over to inflation. The high order of statutory pre-emption in the forms of SLR and CRR along with the direction of credit to priority sectors at concessional interest rates resulted in higher lending rates for the non-concessional commercial sectors and thereby crowded out credit to the private sector.

As is well known, in response to the balance of payments crisis, a programme of macroeconomic stabilisation and structural adjustment was put in place. Fiscal consolidation constituted a major plank of the policy response to the macroeconomic crisis; however, public sector savings continued to deteriorate during the 1990s, and even turned negative over the 5-year period 1998-2003 owing to sharp deterioration in savings of the Government administration.

The progress on fiscal correction was mixed during the 1990s, both at the Central and State levels (Chart 1 and Tables 2-3). While there was some reduction in the Centre's fiscal deficits upto 1996-97, the process was reversed over the next few years under the impact of the industrial slowdown and the Fifth Pay Commissions' award. Furthermore, fiscal consolidation, which was envisaged to be achieved through revenue enhancement and curtailment in current expenditure growth, was, however, brought about instead through compression of capital expenditures from 5.6 per cent of GDP in 1990-91 to 3.1 per cent in 1996-97, with consequential effects on growth and infrastructure constraints in ensuing years.

A major drag on public finances was the decline in the gross tax-GDP ratio of the Central Government from 10.3 per cent in 1991-92 to 9.4 per cent in 1996-97 and further to 8.2 per cent in 2001-02. The reduction in tax-GDP

ratio over this phase could, inter alia, be attributed to the reduction in tax rates. As a part of the reform of the taxation system, indirect taxes – excise duties as well as customs duties - were cut substantially from their existing very high levels and this had an adverse impact on indirect tax collections. The rationalisation of the direct tax structure also did not lead to any positive impact on revenue collections during this phase. The compliance response to lower tax rates presumably took some time; and lower economic growth also contributed to the lack of growth in direct taxes over this period. It is only in the recent years that we have witnessed the beneficial impact of the rationalisation of the direct tax structure on the revenues.

The process of fiscal correction could also not be sustained due to the pressures from the Fifth Pay Commission award. As a result, by the year 2001-02, all the major fiscal parameters, viz., revenue deficit, fiscal deficit and public debt rose to levels higher than those prevalent at the beginning of the reform process. Capital outlays continued to bear the burden of fiscal adjustment, with the ratio of capital outlays to GDP reaching their lowest levels during the period 1997-98 to 2002-03, both at the Central and State levels. Why did the burden fall on capital outlays? It turns out that they form a significant portion of discretionary spending of the government: other major expenditure items like interest payments and salaries and wages are non discretionary and hence not easily susceptible to reduction. In fact, the government did attempt to address this issue by appointing an Expenditure Commission in 1999-2000 to recommend such reductions, but did not then succeed in implementing most of their recommendations, except for slowing down significantly new recruitment.

Reflecting the worsening of the fiscal situation, the public sector savings rate deteriorated in the second half of the 1990s, culminating into unprecedented dissavings during the period 1998-99 to 2002-03. This also pulled down the aggregate saving and investment rates in the economy. With a slowdown in overall GDP growth and in corporate sector sales and profit growth, other major components of domestic savings – the household financial savings rate (at around 10 per cent) and the private corporate sector savings rate (around 4 per cent) – also stagnated during this period at the levels reached during the mid-1990s. As a result, the investment rate also came down

from the peak of about 26 per cent in 1995-96 to around 23 per cent in 2001-02. Consequently, the growth process suffered a setback with the real GDP growth decelerating to 3.8 per cent by 2002-03.

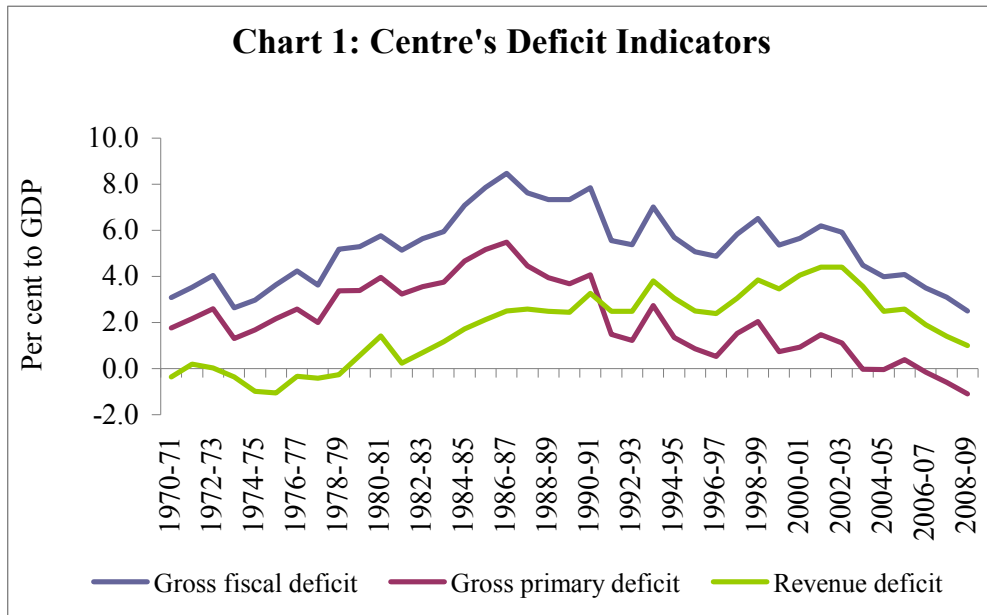


Table 2: Key Fiscal Indicators of the Centre*(Per cent to GDP)*

| Item | 1970s | 1980s | 1990-91 | 1991-92 to 1996-97 | 1997-98 to 2002-03 | 2003-04 to 2007-08 |
|--------------------------|-------|-------|---------|--------------------------|--------------------------|--------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Gross Tax | 8.7 | 9.9 | 10.1 | 9.5 | 8.7 | 10.7 |
| Direct Tax | 2.3 | 2.0 | 1.9 | 2.6 | 3.1 | 4.9 |
| Indirect Tax | 6.4 | 7.9 | 8.2 | 6.9 | 5.6 | 5.8 |
| Non-tax Revenue | 2.0 | 2.4 | 2.1 | 2.5 | 2.7 | 2.3 |
| Revenue Receipts | 8.7 | 9.8 | 9.7 | 9.4 | 9.0 | 10.1 |
| Revenue Expenditure | 8.4 | 11.5 | 12.9 | 12.2 | 12.9 | 12.5 |
| Interest Payments | 1.5 | 2.6 | 3.8 | 4.2 | 4.6 | 3.9 |
| Subsidies | 0.8 | 1.6 | 2.1 | 1.3 | 1.4 | 1.9 |
| Capital Outlay | 2.1 | 2.5 | 2.1 | 1.5 | 1.2 | 1.5 |
| Total Expenditure | 14.4 | 17.7 | 18.5 | 15.9 | 15.8 | 15.2 |
| Gross Fiscal Deficit | 3.8 | 6.8 | 7.9 | 5.6 | 5.9 | 3.8 |
| Primary Deficit | 2.3 | 4.2 | 4.1 | 1.4 | 1.3 | (-) 0.1 |
| Revenue Deficit | -0.3 | 1.7 | 3.3 | 2.8 | 3.9 | 2.4 |
| Net RBI Credit to Centre | 1.0 | 2.1 | 2.6 | 0.6 | 0.0 | (-)0.8 |

Source: Handbook of Statistics on the Indian Economy, RBI, 2006-07.**Table 3: Key Deficit Indicators of State Governments***(Per cent to GDP)*

| Item | 1970s | 1980s | 1990-91 | 1991-92 to 1996-97 | 1997-98 to 2002-03 | 2003-04 to 2007-08 |
|------------------------|-------|-------|---------|--------------------------|--------------------------|--------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Tax Revenues | 5.8 | 7.6 | 7.8 | 7.9 | 7.8 | 8.8 |
| States' Own Taxes | 3.9 | 5.1 | 5.3 | 5.4 | 5.4 | 6.2 |
| Share in Central Taxes | 1.9 | 2.5 | 2.5 | 2.6 | 2.4 | 2.6 |
| Non-tax Revenues | 1.7 | 1.9 | 1.6 | 1.9 | 1.5 | 1.4 |
| Grants from Centre | 1.6 | 2.0 | 2.2 | 2.1 | 1.7 | 2.2 |
| Revenue Receipts | 9.2 | 11.5 | 11.7 | 11.9 | 11.0 | 12.4 |
| Loans from Centre | 2.2 | 2.3 | 2.5 | 1.8 | 1.4 | 0.6 |
| Revenue Expenditure | 8.6 | 11.4 | 12.6 | 12.6 | 13.2 | 13.0 |
| Interest Payments | 0.8 | 1.1 | 1.5 | 1.8 | 2.4 | 2.6 |
| Capital Outlays | 1.6 | 1.9 | 1.6 | 1.5 | 1.4 | 2.2 |
| Total Expenditure | 12.7 | 15.7 | 16.0 | 15.6 | 16.1 | 17.4 |
| Gross Fiscal Deficit | 2.0 | 2.8 | 3.3 | 2.7 | 4.1 | 3.1 |
| Primary Deficit | 1.2 | 1.7 | 1.8 | 0.9 | 1.7 | 0.6 |
| Revenue Deficit | -0.6 | -0.1 | 0.9 | 0.7 | 2.3 | 0.6 |

Source: Handbook of Statistics on the Indian Economy, RBI, 2006-07.

Public Sector Savings

In view of the deterioration in fiscal deficits over the period 1997-98 to 2002-03 and rising public debt, and its adverse impact on public investment and growth, a renewed emphasis was laid on improving the health of public finances on a durable basis. In order to achieve this objective, fiscal consolidation has been guided by the Fiscal Responsibility and Budget Management (FRBM) Act, 2003 at the Centre and similar fiscal responsibility legislations at the State-levels. Since 2002-03, significant gains have been witnessed in the fiscal consolidation process, both at the Centre and the States, partly as a result of the implementation of the rule-based fiscal policies at the Centre and the States.

A major factor contributing to the durability of the fiscal consolidation process underway in India in recent years has been the buoyancy in the revenues accompanied by some reprioritisation of expenditure with a focus on outcomes, unlike the expenditure compression strategy in most other countries as also the experience in India in the 1990s. The revenue augmenting strategy encompassed moderating the tax rates and broadening the tax base through expansion in the scope of taxes, specifically service tax, removal of exemptions, some improvement in tax administration with a focus on arrears recoveries. Reflecting these measures, the tax-GDP ratio of the Centre has steadily risen from 8.2 per cent in 2001-02 to 12.5 per cent in 2007-08 (RE). The entire increase in tax revenues was mainly on account of the buoyancy in direct taxes.

On the expenditure front, while the total expenditure of the Centre declined from its recent peak of 17.0 per cent of GDP in 2003-04 to 14.4 per cent in 2007-08 (RE), the capital outlay rose from 1.2 to 1.6 per cent of GDP. Part of the reduction in total expenditure as a proportion of GDP can be attributed to the cyclical nature of salaries and wages expenditure between Pay Commission awards. Adjustment in public sector salaries and wages between Pay Commission awards is only to the extent of inflation neutralisation: there is no real increase along with real GDP growth. Thus, once the full adjustment takes place after an award, the government wage and pension bill declines as a

proportion of GDP. The movement in key deficit indicators reflects the progress made so far in fiscal consolidation. Fiscal deficit of the Centre and the States taken together has declined from 9.9 per cent of GDP in 2001-02 to 5.5 per cent in 2007-08 led by reduction in revenue deficit from 7.0 per cent of GDP to 1.3 per cent. Apart from the quantitative improvement, a salient feature of the fiscal consolidation underway has been some qualitative progress made as reflected in the reduction in the proportion of revenue deficit to gross fiscal deficit. As a result, the dissavings of Government administration declined from (-)6.0 per cent of GDP in 2001-02 to (-)1.3 per cent in 2006-07. The savings of the departmental enterprises at 0.6 per cent in 2006-07 were unchanged from those in 2001-02.

The major component of public sector savings, i.e., savings of non-departmental undertakings, has, interestingly, exhibited a steady improvement since the 1970s and this process has continued during the reforms period (Table 4). Thus public sector enterprises have exhibited continued and steady improvement in their commercial functioning since the early 1990s. Consequently, since 2003-04 onwards, total public savings have turned positive again. The savings rate of the overall public sector improved from (-) 2.0 per cent of GDP in 2001-02 to 3.2 per cent of GDP in 2006-07. Notwithstanding the striking improvement over the past few years, it may be noted that the public sector savings rate at 3.2 per cent during 2006-07 was still less than the peak of over five per cent touched in 1976-77. Nonetheless, the turnaround of 5.2 percentage points of GDP in public sector savings – from a negative 2.0 per cent of GDP in 2001-02 to a positive 3.2 per cent of GDP in 2006-07 – has been a key factor that has enhanced domestic savings from 23.5 per cent to 34.8 per cent over the same period. The public sector investment rate increased from 6.9 per cent of GDP in 2001-02 to 7.8 per cent in 2006-07, but this level is still significantly lower than the public sector investment rates of the 1970s, 1980s and early 1990s. Despite this increase, this sector's saving-investment gap has narrowed down from 8.9 per cent of GDP to 4.5 per cent during 2001-2007, reflecting a turnaround in the public sector savings (which rose from (-) 2.0 per cent to 3.2 per cent) enabled by the implementation of the fiscal rules.

Table 4: Public Sector Saving and Investment Rates

| | (Per cent of GDP) | | | | | |
|--------------------------------------|-------------------|-------|---------|--------------------------|--------------------------|--------------------------|
| | 1970s | 1980s | 1990-91 | 1991-92 to 1996-97 | 1997-98 to 2002-03 | 2003-04 to 2006-07 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Savings | | | | | | |
| Government Administration | 2.5 | 0.8 | -1.8 | -1.6 | -4.8 | -2.4 |
| Departmental Enterprises | 0.6 | 0.4 | 0.6 | 0.8 | 0.7 | 0.5 |
| Non-Departmental Enterprises | 1.2 | 2.5 | 2.9 | 3.0 | 3.4 | 4.1 |
| Total Public Sector Savings Rate | 4.2 | 3.7 | 1.8 | 2.2 | -0.7 | 2.3 |
| Public Sector Investment Rate | 8.6 | 10.6 | 10.0 | 8.7 | 6.9 | 7.1 |
| S-I Gap | -4.4 | -6.9 | -8.2 | -6.5 | -7.5 | -4.9 |

Performance of the Private Corporate Sector

The reduced requirement by the Centre for meeting budgetary mismatches, and for overall public sector financing has improved the availability of resources for the private sector considerably. Furthermore, the corporate sector has responded to increased global competition by improving its productivity and efficiency through increased application of technology. The economic reform process has helped greatly in making the policy environment more conducive for more efficient entrepreneurial activity. The corporate tax rate was steadily reduced from 45 per cent in 1992-93 to 30 per cent by 2005-06 and was kept stable thereafter. The peak rate of customs duty on non-agricultural goods was reduced gradually from 150 per cent in 1991-92 to 10 per cent in 2007-08. Monetary policy has contributed to the sustained moderation in inflation leading to reduction in nominal interest rates. Financial restructuring of firms has also led to the reduction in overall debt equity ratios in the corporate sector. The substantial reduction in debt servicing costs has thereby added to the corporate sector's competitiveness and profitability.

Profits after tax recorded an annual average growth of around 47 per cent per annum over the 4-year period ended 2006-07 (Table 5). Profit margins have recorded large gains, while the interest burden has witnessed a significant decline. In fact, the ratio of interest expenditure to sales revenues fell from around 6 per cent in the 1990s to about 2 per cent now, thereby contributing greatly to the enhanced profit growth. The profit after tax (PAT)

to net worth ratio, after declining from 14.4 per cent in 1995-96 to 5.1 per cent in 2001-02, increased to 16.6 per cent 2005-06 (Table 6). Another notable feature of performance of the corporate sector in the recent period is the progressive increase in retained profits, which as a share of PAT, increased from 30.9 per cent in 2001-02 to 73.6 per cent in 2005-06. The improved profitability, reflecting improved productivity and lowering of tax rates, enabled corporates to deleverage their balance sheets. This was reflected in the sharp decline in the debt-equity ratio. The improved corporate financial performance resulted in more than doubling of the private corporate sector saving rate (from 3.4 per cent in 2001-02 to 7.8 per cent in 2006-07), which has also contributed to the pick-up in the overall savings rate.

From the long-term perspective, it is interesting to observe that the rate of savings of the private corporate sector has increased from around one per cent in 1950s, 1.7 per cent in 1980s and 3.8 per cent in 1990s, to almost 8 per cent now. Higher retained profits along with availability of resources from the banking sector facilitated by the lower financing requirement of the Government and the increased access to the domestic and international capital markets led to a sharp increase in the investment rate of the corporate sector from 5.4 per cent of GDP in 2001-02 to 14.5 per cent in 2006-07. Thus, despite the increased savings rate, the saving-investment gap of the corporate sector widened from 2.1 per cent of GDP in 2001-02 to 6.8 per cent in 2006-07.

Table 5: Corporate Financial Performance

| Item | 1990/91 | 1991/92 to 1996/97 | 1997/98 to 2002/03 | 2003/04 to 2006/07 | 2006-07 (Apr-Dec) | 2007-08 (Apr-Dec) |
|--------------------------------|---------|--------------------------|-----------------------|--------------------------|----------------------|----------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Growth Rates (per cent) | | | | | | |
| Sales | 15.8 | 16.9 | 7.0 | 20.7 | 29.1 | 17.4 |
| Expenditure | 15.1 | 16.6 | 7.4 | 19.7 | 26.3 | 17.2 |
| Depreciation provision | 10.1 | 16.6 | 12.9 | 10.2 | 17.2 | 17.1 |
| Gross profits | 27.8 | 18.2 | 3.6 | 30.9 | 44.7 | 25.0 |
| Interest Payments | 16.2 | 18.7 | 3.8 | -0.6 | 18.5 | 23.9 |
| Profits after tax (PAT) | 53.3 | 21.1 | 7.8 | 47.3 | 46.6 | 29.8 |

Select Ratios (per cent)

| | | | | | | |
|--|------|------|------|-------|------|------|
| Gross Profits to Sales | 11.2 | 12.4 | 10.6 | 12.7 | 15.9 | 16.8 |
| PAT to Sales | 4.0 | 5.5 | 3.6 | 8.0 | 11.1 | 12.2 |
| Interest Coverage Ratio (Times) | 1.9 | 2.1 | 1.8 | 5.2 | 7.7 | 7.6 |
| Interest to Sales | 5.8 | 6.0 | 6.0 | 2.6 | 2.1 | 2.2 |
| Interest to Gross Profits | 51.6 | 48.5 | 56.6 | 21.0 | 13.0 | 13.1 |
| Interest to Total Expenditure | 5.8 | 6.0 | 6.0 | 2.8 | 2.5 | 2.3 |
| Debt to Equity | 99.0 | 75.1 | 67.0 | 51.4 | NA | NA |
| Internal Sources of Funds to Total Sources of Funds | 35.8 | 30.6 | 50.4 | 50.9@ | NA | NA |
| Bank Borrowings to Total Borrowings | 35.6 | 31.6 | 35.5 | 52.6@ | NA | NA |

Note: 1. Data up to 2005-06 are based on audited balance sheet, while those for 2006-07 and 2007-08 are based on abridged financial results of the select non-Government non-financial public limited companies.

2. Growth rates are per cent changes in the level for the period under reference over the corresponding period of the previous year for common set of companies.

3. Interest coverage ratio is ratio of gross profits to interest payments.

@: Data are up to 2004-05.

Sources: RBI Studies on Company Finances.

Table 6: Impact of Fiscal Policy on Corporate Performance

| Year | (Per cent) | | | |
|---------|--|--------------------------------|-------------------------|------------------------|
| | Profit After Tax (PAT)/Net Worth | Provision/Profit Before Tax | Retained Profits/PAT | Dividends/Net Worth |
| 1 | 2 | 3 | 4 | 5 |
| 1980-81 | 14.2 | 43.8 | 61.8 | 5.4 |
| 1990-91 | 13.5 | 32.4 | 62.8 | 5.0 |
| 1991-92 | 12.0 | 36.5 | 62.2 | 4.5 |
| 1992-93 | 8.7 | 33.3 | 53.9 | 4.0 |
| 1993-94 | 12.0 | 23.7 | 67.6 | 3.9 |
| 1994-95 | 14.0 | 20.2 | 72.2 | 3.9 |
| 1995-96 | 14.4 | 19.7 | 73.6 | 3.8 |
| 1996-97 | 9.5 | 27.8 | 64.0 | 3.4 |
| 1997-98 | 7.6 | 26.3 | 63.0 | 2.8 |
| 1998-99 | 5.6 | 31.4 | 52.3 | 2.7 |
| 1999-00 | 6.3 | 33.2 | 47.6 | 3.3 |
| 2000-01 | 6.5 | 32.3 | 48.8 | 3.3 |
| 2001-02 | 5.1 | 36.7 | 30.9 | 3.5 |
| 2002-03 | 8.7 | 31.3 | 56.3 | 3.8 |
| 2003-04 | 12.3 | 28.7 | 64.7 | 4.6 |
| 2004-05 | 15.9 | 25.9 | 73.1 | 4.5 |
| 2005-06 | 16.6 | 25.4 | 73.6 | 4.6 |

Source: Study of Company Finances, Reserve Bank of India.

Household Savings

A remarkable feature of the Indian macroeconomic story since independence has been the continuous rise in household savings over the decades (Table 7). As might be expected, this rise has been characterised by continuing increases in financial savings as a proportion of GDP. The spread of the financial sector, of bank branches in particular, post office savings and the like, helped in mobilising household financial savings. Their financial liabilities did not grow correspondingly since there were few financial products available for household credit. This situation has changed in recent years with the introduction of new private sector banks, who introduced retail credit for housing and for consumer durables in large measure. The public sector banks have followed suit.

Hence, while gross financial savings of the household sector have continued their upward trajectory in the recent few years, households' financial liabilities have also been increasing rapidly, albeit from a low base. Illustratively, gross financial savings grew from 13.8 per cent of GDP in 2004-05 to 18.3 per cent in 2006-07, while their financial liabilities rose from 2.5 per cent of GDP during 2003-04 to 6.8 per cent during 2006-07. The ongoing financial deepening is facilitating larger access of bank credit for the households. As a result, household financial savings (net) have increased only marginally in the current decade - from 10.9 per cent of GDP to 11.3 per cent during 2001-2007. On the other hand, with increased availability of housing finance, household sector's investment rate (physical savings) increased from 10.5 per cent in 1997-2003 to 12.7 per cent in 2003-07. Thus, the widening of S-I gaps of the public and private corporate sectors combined was partly financed from household financial savings and partly by foreign savings. This is reflected in a widening of the current account deficit from 0.4 per cent of GDP in 2003-04 to 1.1 per cent of GDP in 2006-07. Among the major sources of finance from abroad for the corporate sector, external commercial borrowings witnessed a turnaround from (-) 0.3 per cent of GDP in 2001-02 to around 1.7 per cent of GDP in 2006-07.

Table 7: Savings and Investment Rates of the Private Sector

| Item | (Per cent of GDP) | | | | | | |
|---------------------------------|--------------------------|-------------------------------|-----------|-------------|----------------------------------|----------------------------------|--------------------------|
| | 1951-52 to 1964-65 | 1965- 66 to 1980- 81 | 1980 s | 1990- 91 | 1991- 92 to 1996- 97 | 1997- 98 to 2002- 03 | 2003-04 to 2006-07 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Household Savings | 6.6 | 10.7 | 13.5 | 18.4 | 16.8 | 20.8 | 23.8 |
| Financial Savings | 2.2 | 4.0 | 6.7 | 8.7 | 10.0 | 10.3 | 11.1 |
| Physical Savings | 4.4 | 6.7 | 6.8 | 9.7 | 6.8 | 10.5 | 12.7 |
| Private Corporate Savings | 1.2 | 1.5 | 1.7 | 2.7 | 3.7 | 4.0 | 6.6 |
| Private Corporate Investment | 2.5 | 2.4 | 4.5 | 4.5 | 7.7 | 6.6 | 11.2 |
| <i>Memo:</i> | | | | | | | |
| Saving-Investment Gap | | | | | | | |
| Household Sector | 2.2 | 4.0 | 6.7 | 8.7 | 10.0 | 10.3 | 11.1 |
| Private Corporate Sector | -1.3 | -1.0 | -2.8 | -1.8 | -4.0 | -2.6 | -4.7 |
| Public Sector | -3.1 | -4.3 | -6.9 | -8.2 | -6.5 | -7.5 | -4.9 |

Reflecting the improved finances at the sectoral levels, the gross domestic saving rate, after varying in the range of around 21-24 per cent of GDP during the 1990s, has steadily risen to 34.8 per cent in 2006-07. The investment rate also picked-up significantly from 22.9 per cent of GDP in 2001-02 to 35.9 per cent in 2006-07. With the ICOR hovering around 4, the real GDP growth accelerated from 3.8 per cent in 2002-03 to an average of 8.7 per cent during 2003-08.

Estimation of Savings and Investment

In view of the key role played by investment in the growth process, it is important to have reliable and timely estimates of domestic savings and investment. In India, methodologies to estimate savings and investment have evolved over the years in tune with the international guidelines and improvements in the domestic statistical system in India; nonetheless, there is a need to critically review the available estimates of savings and investment in the Indian economy with respect to data base, methods of estimation, reliability and interpretational significance. The compilation of savings of the

household sector continues to pose a challenge in view of the heterogeneity and residual character of this sector in the national accounts. In respect of the household financial savings, there is a need to assess whether current state of financial deepening is being accurately reflected in the data across the various financial instruments. In this regard, the timely compilation of the flow of funds accounts would go a long way in accurately estimating household financial savings. The feasibility of directly estimating household savings through integrated income and expenditure surveys also merits consideration. In respect of the private corporate sector, there is a need to examine whether it would be appropriate to make their savings estimates on marked to market basis or the present value book method. In respect of the public sector, the savings and investment estimates can be further strengthened by improving the coverage to include municipalities, city corporations, gram panchayats and other local governments on the one hand and increased private participation in public investments on the other. In recognition of these issues, the Government has recently appointed a High Level Committee on Estimation of Savings and Investment (Chairman: Dr. C. Rangarajan). The Committee, set up in December 2007, is expected to critically review the existing methodologies to review estimates of saving and investment for the Indian economy.

Efficiency in the Use of Resources

Not only has there been a consistent upward trend in India's investment rate since the 1950s, there is evidence that capital has been employed productively. Barring the period 1965-80, the incremental capital output ratio (ICOR) has hovered around 4. There are some signs of improvement in domestic productivity in the post-reforms period. Cross-country comparison indicates that ICOR has been amongst the lowest in India. This is especially true of the period since the 1980s onwards (Table 8). Various reform measures aimed at increasing the competitiveness appear to be having the desired impact on the productivity of the Indian economy. ICOR measures are at best only indicative measures of productivity change over time in an economy. Getting a more detailed understanding of productivity change requires much more careful and systematic work than is possible here. There

have, however, been some recent attempts to compare productivity change between different countries in Asia, which I report below. The results are broadly consistent with the indications given by a simple ICOR story.

Table 8: Growth, Investment and ICOR - Select Countries

| Country | 1960s | 1970s | 1980s | 1990s | 2000-2006 |
|---|--------------|--------------|--------------|--------------|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Real GDP Growth (Per cent) | | | | | |
| Brazil | 5.9 | 8.5 | 3.0 | 1.7 | 3.1 |
| China | 3.0 | 7.4 | 9.8 | 10.0 | 9.5 |
| India | 4.0 | 2.9 | 5.6 | 5.7 | 7.0 |
| Indonesia | 3.7 | 7.8 | 6.4 | 4.8 | 4.9 |
| Korea | 8.3 | 8.3 | 7.7 | 6.3 | 5.2 |
| Mexico | 6.8 | 6.4 | 2.3 | 3.4 | 2.9 |
| Philippines | 5.1 | 5.8 | 2.0 | 2.8 | 4.8 |
| South Africa | 6.1 | 3.3 | 2.2 | 1.4 | 4.1 |
| Thailand | 7.8 | 7.5 | 7.3 | 5.3 | 5.0 |
| Real Investment Rate (Per cent of GDP) | | | | | |
| Brazil | 15.3 | 18.1 | 16.4 | 16.9 | 15.8 |
| China | 23.7 | 35.9 | 37.4 | 40.1 | 41.4 |
| India | 16.9 | 19.4 | 20.2 | 23.3 | 28.1 |
| Indonesia | 8.9 | 17.9 | 29.6 | 33.1 | 22.7 |
| Korea | 12.8 | 21.0 | 27.4 | 35.6 | 29.4 |
| Mexico | 25.9 | 26.2 | 20.1 | 20.4 | 22.1 |
| Philippines | 19.9 | 23.3 | 21.6 | 22.9 | 20.7 |
| South Africa | 16.0 | 20.0 | 17.8 | 14.9 | 17.2 |
| Thailand | 26.8 | 31.5 | 30.2 | 36.4 | 22.6 |
| ICOR | | | | | |
| Brazil | 2.6 | 2.1 | 5.5 | 9.9 | 5.1 |
| China | 7.9 | 4.8 | 3.8 | 4.0 | 4.3 |
| India | 4.3 | 6.6 | 3.6 | 4.1 | 4.0 |
| Indonesia | 2.4 | 2.3 | 4.6 | 6.9 | 4.7 |
| Korea | 1.5 | 2.5 | 3.6 | 5.7 | 5.7 |
| Mexico | 3.8 | 4.1 | 8.8 | 6.0 | 7.6 |
| Philippines | 3.9 | 4.0 | 10.7 | 8.2 | 4.3 |
| South Africa | 2.6 | 6.2 | 8.0 | 10.7 | 4.2 |
| Thailand | 3.4 | 4.2 | 4.1 | 6.9 | 4.5 |

Source: World Development Indicators, World Bank.

Direct evidence of productivity growth is available from studies that have attempted to measure total factor productivity growth for the Indian economy. Bosworth and Collins (2008) who study the period 1978-2004 find a pick-up in productivity growth in the latter part of their sample (Table 9). Annual real GDP growth rose by 2 percentage points between the period 1978-1993 and the period 1993-2004; according to estimates by Bosworth and

Collins (op cit), this pick-up was almost evenly divided between higher capital deepening and productivity growth. The sample period covered by Bosworth and Collins (op cit) ends in the year 2003-04, whereas the acceleration in real GDP growth has occurred in the subsequent years. The same period has also exhibited a surge in domestic savings and investment. With the step up in growth since 2003-04, it will be interesting to study the growth accounting analysis for the period since 2003-04 onwards to find out the comparative contributions of capital deepening and productivity to the acceleration in real GDP growth: but for this we will now have to wait for a few years.

Table 9: Sources of Growth: India, China and East Asia 1978-2004

| Period | Country/Region | <u>Growth (per cent per annum)</u> | | | <u>Contribution to growth (percentage points)</u> | | |
|-----------|----------------|------------------------------------|------------|---------------|---|-----------|---------------------|
| | | Output | Employment | Output/worker | Physical capital | Education | Factor productivity |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1978-2004 | China | 9.3 | 2.0 | 7.3 | 3.2 | 0.2 | 3.8 |
| | India | 5.4 | 2.0 | 3.3 | 1.3 | 0.4 | 1.6 |
| 1978-1993 | China | 8.9 | 2.5 | 6.4 | 2.5 | 0.2 | 3.6 |
| | India | 4.5 | 2.1 | 2.4 | 1.0 | 0.3 | 1.1 |
| 1993-2004 | China | 9.7 | 1.2 | 8.5 | 4.2 | 0.2 | 4.0 |
| | India | 6.5 | 1.9 | 4.6 | 1.8 | 0.4 | 2.3 |
| 1960-1980 | East Asia | 7.0 | 3.0 | 4.0 | 2.2 | 0.5 | 1.2 |
| 1980-2003 | Asia | 6.1 | 2.4 | 3.7 | 2.2 | 0.5 | 0.9 |
| 1980-1993 | (excl. China) | 7.3 | 2.7 | 4.6 | 2.6 | 0.6 | 1.4 |
| 1993-2003 | China) | 4.5 | 2.0 | 2.5 | 1.8 | 0.5 | 0.3 |

Source: Bosworth and Collins (2008).

Turning to sectoral analysis of productivity growth for the Indian economy, estimates suggest that productivity gains were recorded in both industry and in the services sectors in the post-reform period (Table 10). The gains were relatively modest in industry vis-a-vis the services sector, which recorded a significant pick-up in productivity growth, which is consistent with the sketchy micro evidence available. According to estimates by Bosworth and Collins (op cit), productivity gains accounted for almost 70

per cent of the growth in output per worker of the services sector during the period 1993-2004. The significantly higher order of productivity growth in the services sector could be attributed to the fact that the delivery of services has changed tremendously (Mohan, 2008). The introduction of information technology has changed the face of service delivery. Financial services are the most obvious illustration of this revolution. In fact, it is difficult to imagine the delivery of financial services without the use of information technology. Trading in capital markets is now totally electronic, which has also helped greatly in expanding the access to capital markets across the country. Now access to the capital market is, in principle, equalized regardless of the person's physical location. The introduction of mobile banking has just begun: now that there almost 300 million cell phones in the country we can expect a huge transformation in the delivery of banking services as this technology takes root. Travel services are another area where the use of information technology has changed the form of service delivery. Air, train, bus and hotel bookings can be made from the comfort of the home without the use of intermediaries. This has also resulted in great cost savings, hence an increase in productivity. The delivery of government services is also beginning to take advantage of information technology in a myriad of ways, from land titling to bill payments, information dissemination and the like. Thus innovation is pervasive in our daily lives.

As noted earlier, improvement in public finances and public sector savings has contributed significantly to the step-up in domestic savings and investment rates since 2002-03 onwards. Higher savings and investment rates, in turn, have led to a higher growth trajectory of the Indian economy. It is apparent that fiscal consolidation in the Indian context has led to acceleration of growth. The conventional view holds that fiscal prudence might lead to contraction of domestic demand and growth. However, as the Indian experience suggests, fiscal prudence can lead to higher domestic savings and this could increase resources for domestic investment. Accordingly, it is of utmost importance to adhere to the fiscal consolidation process of the past few years so as to sustain current savings/investment rates and the ongoing growth momentum.

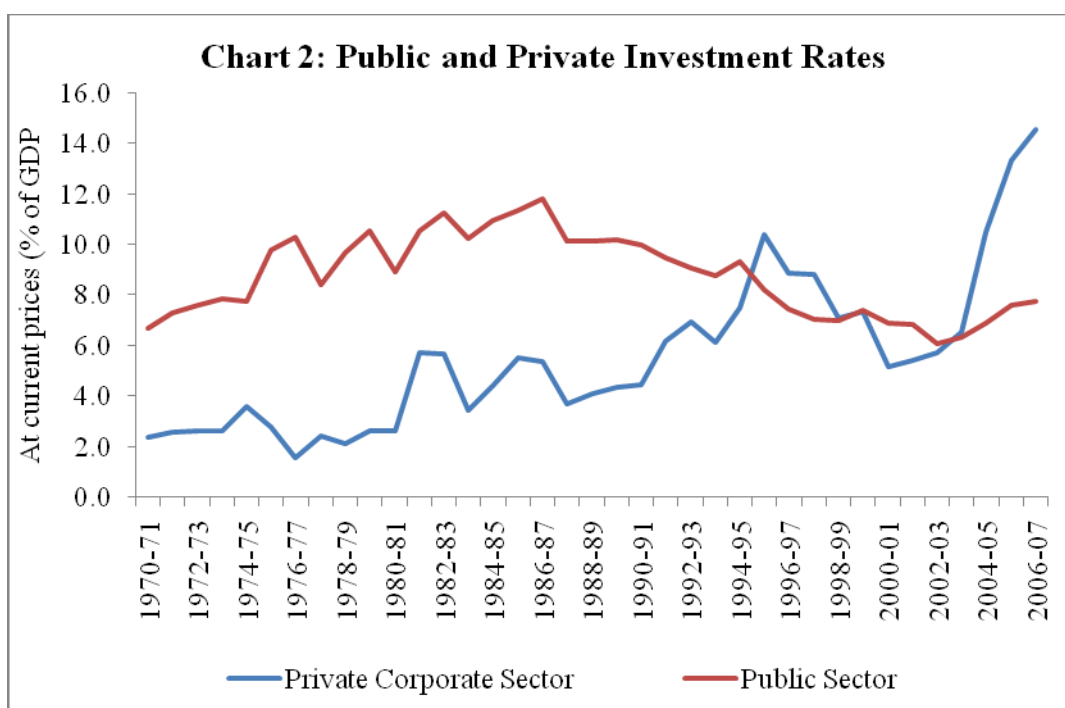
While containment of fiscal deficits is important, the quality of fiscal adjustment is also critical. It is necessary to persevere with the process of reprioritising public expenditures towards public investment vis-à-vis subsidies. While subsidies may provide short-term benefits, they tend to hinder long-term investments as well as encourage inefficiency in the use of resources. These issues are important in the context of agricultural development, especially in the context of domestic demand-supply gaps of major crops, and elevated international prices. Public investment in agriculture declined from 3.4 per cent of agricultural GDP during 1976-80 to 2.6 per cent during 2005-06, while budgetary subsidies to agriculture increased from three per cent (1976-80) to seven per cent of agricultural GDP (2001-03). Therefore, greater emphasis on stepping up public investment and containment of subsidies, while adhering to the fiscal consolidation, is likely to pay rich dividends. It would not only engender current growth impulses but also contribute to food security and domestic price stability.

Financial Sector Reforms and Performance

The higher order of investment activity in the country over the past few years has also been mirrored in strong demand for credit from the banking sector since 2003-04 onwards. In this context, reforms in the financial sector have played a key role (Mohan, 2006a; 2007b). Financial sector reforms, initiated in the early 1990s, encompassed introduction of auctions in Government securities, deregulation of interest rates and reduction in statutory pre-emption of institutional resources by the Government was carried forward with the phasing out of the system of automatic monetisation of fiscal deficits from 1997-98. These measures along with developments in the Government securities market, by making the yield market-determined, formed the backbone of financial market reforms. Apart from making the interest rates largely market determined, reforms included a market-determined exchange rate (though accompanied by RBI forex intervention), current account convertibility, substantial capital account liberalisation and deregulation of the equity market. The financial sector reforms designed to improve cost efficiency through price signals, in turn, facilitated the conduct of monetary policy through indirect market-based instruments through improved fiscal-

monetary coordination. This process was further strengthened through the implementation of the FRBM Act, 2003, under which the Central Government targets to eliminate the revenue deficit and reduce its fiscal deficit to 3 per cent of GDP by 2008-09 and the Reserve Bank was prohibited from participating in the primary government securities market from April 2006. Overall, these reforms have led to better price discovery in both interest rates and exchange rate, thereby contributing to overall efficiency in financial intermediation. The increase in financial deepening in recent years and the attainment of overall efficiency in the use of resources suggest that financial intermediation in India has been relatively efficient.

Public investment has started increasing since 2003-04, reversing a long-period of declining trend that began in mid-1980s. Since 2003-04, private investment has also witnessed a large rise (Chart 2). Thus, it is apparent that higher public investment may crowd-in private investment, leading to a virtuous circle. In view of this, it is important that the current fiscal consolidation process needs to be persevered with so that higher public investment is possible, which may further attract larger private investment.



As a part of the financial sector reforms and in order to reduce financial repression, the minimum required SLR was reduced to the then statutory minimum of 25 per cent in 1997. This change, along with an increasing recourse to market auctions for government borrowing, was expected to facilitate the transition to government borrowing at market related rates of interest. Although the envisaged reduction in the required SLR was expected to enable banks to expand credit to the private sector, banks continued to make investments in Government securities much in excess of the statutory minimum stipulated requirements. The SLR holdings of commercial banks reached almost 42.7 per cent by April 2004. The relatively lower order of growth in credit flow observed during this period, in retrospect, could be partly attributed to reduction in demand on account of increase in real interest rates, and in part to turn down in the business cycle. In view of the various factors, extension of credit was perhaps perceived as risky by the banking system; risk-adjusted returns appeared to favour excess holdings investments in Government securities vis-à-vis bank credit. Significant business restructuring and corporate deleveraging could have also reduced the need for bank credit to some extent.

Since 2003-04, there has been a significant jump in bank credit growth, which could be partly attributed to the step-up in real GDP growth, decline in interest rates, intensive policy initiatives to improve flow of credit to sectors like agriculture and, finally, strong demand for retail credit, particularly housing (Table 10). The ratio of outstanding bank credit to GDP initially declined from 29.0 per cent at end-March 1991 to 26.8 per cent at end-March 1997; over the next decade, the ratio of bank credit to GDP more than doubled to reach 54.5 per cent by end-March 2008 (Chart 3). Annual flow of bank credit, which was averaging only 4 per cent of GDP between 1980-81 and 2003-04, jumped to an average of almost 10 per cent of GDP over the next four years. The jump in bank credit more than offset the decline in flow of credit from development finance institutions as well as the sluggishness in amounts raised through the domestic capital market. Apart from the large recourse to bank credit, the corporate sector has also drawn upon foreign sources of funds such as ADRs, GDRS, foreign direct investment and external commercial borrowings. Large external flows have been facilitated by the

liberal policy regime in regard to such investments on the one hand and growing investor attractive investment of India on the other hand. Indeed, overall capital flows (net), despite large capital outflows, rose from an average of 2.2 per cent of GDP during the 1990s to 4.9 per cent in 2006-07 and are estimated to be significantly higher during 2007-08.

| Table 10: Trends in Key Sources of Funds for the Indian Economy | | | | | |
|---|--|--------------|---------------------------|---------------------------|---------------------------|
| S. No | Item | 1980s | 1991-92 to 1996-97 | 1997-98 to 2002-03 | 2003-04 to 2007-08 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Bank Credit # (per cent to GDP) | 4.0 | 3.5 | 4.3 | 8.6 |
| 2 | Development Finance Institutions * (per cent to GDP) | | 1.0 | 0.6 | 0.2 # |
| 3 | New Capital Issues by Non-government Public Limited Companies (per cent to GDP) | 0.6 | 1.8 | 0.2 | 0.6 |
| 4 | Foreign Sources @ (per cent to GDP) | 0.4 | 0.9 | 1.4 | 2.3 # |
| Memo: | | | | | |
| 1 | Real GDP Growth | 5.6 | 5.7 | 5.2 | 8.7 |
| 2 | Growth of Bank Credit (per cent) | 17.3 | 14.5 | 15.9 | |
| 3 | Outstanding Bank Credit (per cent to GDP) (end-period) | 29.8 | 26.8 | 36.5 | 54.5 |
| 3 | Outstanding Credit extended by Development Finance Institutions (per cent to GDP) (end-period) | 8.5& | 7.7 | 5.6 | 3.2 # |
| 4 | Weighted average lending rate of scheduled commercial banks (WALR) | 14.6 | 16.9 | 14.8 | 12.4 # |
| 5 | Real Weighted average lending rate of scheduled commercial banks | | | | |
| | (a) WALR less WPI Inflation | 6.7 | 7.4 | 10.1 | 7.0 # |
| | (b) WALR less CPI Inflation | 5.6 | 6.9 | 8.8 | 7.7 # |
| | (c) WALR less GDP Deflator | 5.9 | 7.0 | 10.0 | 7.8 # |
| Note: | | | | | |
| Data on bank credit include scheduled commercial banks and cooperative banks. | | | | | |
| @: Defined to include ADRs/GDRs, Foreign Direct Investment inflows, External Commercial Borrowings (disbursements net of principal repayments). | | | | | |
| *: Adjusted for mergers and acquisitions. | | | | | |
| #: Data pertain to 2003-04 to 2006-07. | | | | | |
| &: end-March 1991. | | | | | |

One of the reasons for the sharp growth in bank credit in the recent years has been the emergence of retail business for the banks, especially housing loans. Loans for housing have risen in scheduled commercial bank's portfolio from relatively negligible levels in the 1990s to a sizable 12 per cent

of outstanding credit now (Table 11). This increase has mainly come at the cost of a reduction in the shares of the industry and trade sectors. The declining share of industry in bank credit, however, needs to be juxtaposed with the growing reliance on sources of funds from non-residents such as foreign investment and foreign borrowings. Furthermore, sustained profit growth, higher retained earnings and improvement in corporate savings (see Tables 5 and 7) have also emerged as important sources of funding for the domestic corporate sector. Indeed, as the analysis of corporate balance sheets indicates, their reliance on internal sources of funds has increased in the current decade: the proportion of internal sources of funds in total sources increased from 30.6 per cent during 1991-97 to over 50 per cent in the subsequent decade (see Table 5). At the same time, it needs to be recognised that corporate sector investment needs have also risen sharply over the past few years. Thus, in view of the simultaneous increase in corporates' internal accruals and investment requirements as well as greater demand for bank credit from new customers (such as the retail segment), the corporates have been able to successfully diversify their funding requirements towards non-banks as well as the non-resident sector. This movement has also been driven by the desire to raise funds at competitive costs, especially funds from abroad.

Table 11: Outstanding Credit of Scheduled Commercial Banks According to Occupation
(Per cent to Total Outstanding Credit; end-March)

| Item | 1985 | 1990 | 1995 | 2000 | 2005 | 2006 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I. Agriculture | 17.6 | 15.9 | 11.8 | 9.9 | 10.8 | 11.4 |
| 1. Direct Finance | 14.7 | 13.8 | 10.2 | 8.4 | 8.2 | 8.2 |
| 2. Indirect Finance | 3.0 | 2.1 | 1.7 | 1.5 | 2.6 | 3.2 |
| II. Industry | 41.3 | 48.7 | 45.6 | 46.5 | 38.8 | 37.4 |
| III. Transport Operators | 4.8 | 3.2 | 1.9 | 1.8 | 1.2 | 1.6 |
| IV. Professional and Other Services | 3.1 | 3.0 | 2.3 | 3.2 | 4.8 | 5.4 |
| V. Personal Loans | 3.3 | 6.4 | 9.0 | 11.2 | 22.2 | 23.3 |
| 1. Purchase of Consumer Durables | 0.2 | 0.4 | 0.3 | 0.6 | 0.6 | 0.4 |
| 2. Housing | Na | 2.4 | 2.8 | 4.0 | 11.0 | 12.0 |
| 3. Rest of the Personal Loans | 3.2 | 3.6 | 5.8 | 6.6 | 10.7 | 10.9 |
| VI. Trade | 23.4 | 13.9 | 17.1 | 15.6 | 11.2 | 9.9 |
| VII. Finance | Na | 2.1 | 3.8 | 4.8 | 6.4 | 6.3 |
| VIII. All Others | 6.4 | 6.8 | 8.5 | 7.1 | 4.6 | 4.7 |
| Total Bank Credit | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source : Basic Statistical Returns of Scheduled Commercial Banks in India (various volumes),

Reserve Bank of India.

n.a: break-up not available separately.

Amongst the other key categories of banks' borrowers, the share of agricultural loans has recovered since the turn of this decade, reflecting sustained policy initiatives to increase the flow of credit to this sector (see Table 11). The recovery in the share of agriculture in total bank credit needs is noteworthy, since the share of agriculture in overall output of the Indian economy has continued with its downward trajectory.

As noted earlier, the share of industry in total credit extended by SCBs has declined over the years. However, within the bank credit going to industry, there is switch in favour of longer-term loans (Table 12). This would suggest that banks are perhaps filling the space vacated by the conversion of key DFIs into banks.

Table 12: Bank Credit to Industry

| As end March | at of | Short- term | Medium- term | Long- term | Total | Memo: Outstanding credit to industry (Rupees crore) |
|--------------------|----------|----------------|-----------------|---------------|-------|---|
| Per cent to total | | | | | | |
| 1 | | 2 | 3 | 4 | 5 | 6 |
| 1995 | | 82.5 | 5.8 | 11.6 | 100.0 | 93,446 |
| 2000 | | 74.3 | 6.8 | 18.9 | 100.0 | 2,05,074 |
| 2001 | | 74.8 | 7.1 | 18.2 | 100.0 | 2,27,522 |
| 2002 | | 63.0 | 8.5 | 28.5 | 100.0 | 2,63,051 |
| 2003 | | 59.5 | 7.4 | 33.1 | 100.0 | 3,01,906 |
| 2004 | | 57.9 | 9.8 | 32.3 | 100.0 | 3,28,189 |
| 2005 | | 52.4 | 10.6 | 37.0 | 100.0 | 4,38,503 |
| 2006 | | 48.2 | 10.4 | 41.4 | 100.0 | 5,56,357 |

Source : Basic Statistical Returns of Scheduled Commercial Banks in India (various volumes), Reserve Bank of India.

Notwithstanding the sustained high growth in the past four years, cross-country analysis indicates that credit-GDP ratio in India is still lower than major advanced economies as well as most East Asian economies such as Korea, Malaysia, and Thailand. On the other hand, the ratio in India is higher than that of some EMEs such as Indonesia, Brazil, Mexico, Philippines, Russia, Turkey and Sri Lanka (Table 13).

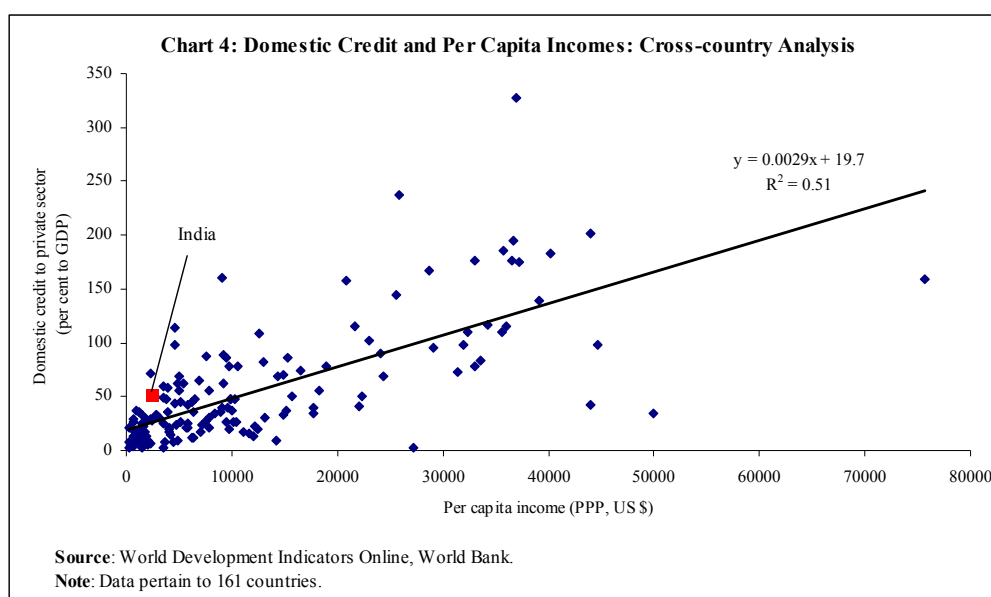
Table 13: Domestic Credit to Private Sector

| Countries/ Regions | (per cent to GDP) | | | | | | | | |
|---------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1980 | 1990 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| | 2 | 4 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Argentina | 25.4 | 15.6 | 23.9 | 20.8 | 15.3 | 10.8 | 10.5 | 11.7 | 13.0 |
| Australia | 25.1 | 59.9 | 84.2 | 85.0 | 88.4 | 94.9 | 98.9 | 103.9 | 109.6 |
| Bangladesh | 5.8 | 16.7 | 24.7 | 27.8 | 30.1 | 30.2 | 32.1 | 33.8 | 36.2 |
| Brazil | 42.5 | 42.1 | 33.0 | 30.4 | 30.7 | 28.7 | 29.0 | 31.4 | 36.5 |
| Chile | 46.9 | 50.6 | 73.6 | 76.2 | 77.7 | 78.4 | 79.4 | 79.8 | 82.4 |
| China | 53.4 | 87.7 | 112.3 | 111.3 | 118.9 | 127.2 | 120.1 | 113.9 | 113.6 |
| France | 100.8 | 93.9 | 85.0 | 87.8 | 85.6 | 88.3 | 90.4 | 92.7 | 98.7 |
| Germany | 76.0 | 88.3 | 118.6 | 118.2 | 116.9 | 115.5 | 112.3 | 111.8 | 109.8 |
| Hong Kong, China | .. | 160.6 | 152.6 | 151.5 | 148.0 | 148.8 | 147.6 | 146.1 | 139.5 |
| India | 24.0 | 29.0 | 31.7 | 33.1 | 36.5 | 36.8 | 40.6 | 47.2 | 51.2 |
| Indonesia | 9.0 | 48.1 | 19.9 | 20.3 | 21.3 | 22.9 | 26.4 | 26.3 | 24.6 |
| Japan | 133.3 | 197.4 | 222.3 | 192.8 | 182.7 | 180.9 | 174.6 | 184.0 | 182.0 |
| Korea, Rep. | 50.7 | 62.8 | 91.1 | 94.6 | 100.8 | 103.4 | 98.1 | 101.6 | 102.0 |
| Malaysia | 60.5 | 69.4 | 177.9 | 176.4 | 168.4 | 164.3 | 130.9 | 122.3 | 108.1 |
| Mexico | 19.4 | 17.5 | 18.3 | 15.7 | 17.7 | 17.5 | 16.9 | 18.2 | 22.1 |
| Netherlands | 63.3 | 79.9 | 134.2 | 135.3 | 141.2 | 148.0 | 158.3 | 171.7 | 176.2 |
| Pakistan | 23.4 | 24.2 | 22.3 | 21.8 | 21.7 | 24.6 | 28.7 | 28.6 | 29.0 |
| Philippines | 42.2 | 22.3 | 43.8 | 40.2 | 36.9 | 34.9 | 33.9 | 30.4 | 30.0 |
| Poland | .. | 21.1 | 26.6 | 27.3 | 27.5 | 28.1 | 28.2 | 29.0 | 33.6 |
| Russian Federation | .. | .. | 13.3 | 16.5 | 17.7 | 21.0 | 24.1 | 25.7 | 30.8 |
| Saudi Arabia | 21.7 | 54.7 | 52.5 | 55.9 | 58.1 | 55.3 | 56.0 | 52.9 | 50.7 |
| Singapore | 81.0 | 97.0 | 109.5 | 128.6 | 114.0 | 114.9 | 106.3 | 101.7 | 98.6 |
| South Africa | 55.6 | 81.0 | 133.7 | 142.6 | 115.2 | 120.0 | 130.2 | 141.6 | 160.8 |
| Sri Lanka | 17.2 | 19.6 | 28.8 | 28.1 | 28.6 | 29.9 | 31.5 | 32.8 | .. |
| Switzerland | 106.9 | 162.6 | 161.0 | 156.4 | 154.0 | 158.0 | 160.2 | 167.3 | 174.3 |
| Thailand | 40.8 | 83.4 | 108.3 | 96.9 | 102.5 | 93.2 | 94.6 | 93.3 | 88.0 |
| Turkey | 14.6 | 17.8 | 24.6 | 21.7 | 19.2 | 19.2 | 23.1 | 28.7 | 34.1 |
| United Kingdom | 27.6 | 115.6 | 132.5 | 137.7 | 141.8 | 146.9 | 154.1 | 163.3 | 175.8 |
| United States | 97.4 | 118.9 | 170.7 | 178.9 | 169.1 | 184.2 | 190.8 | 194.1 | 201.1 |
| Memo: | | | | | | | | | |
| East Asia & Pacific | 41.8 | 73.9 | 101.3 | 100.7 | 105.4 | 110.5 | 105.3 | 100.5 | 98.7 |
| Euro area | 73.7 | 77.6 | 97.7 | 99.4 | 99.7 | 101.8 | 104.0 | 109.8 | 115.9 |
| Latin America & Caribbean | 32.7 | 29.9 | 27.9 | 25.3 | 25.8 | 24.7 | 25.0 | 26.9 | 30.9 |

Source: World Development Indicators Online Database, World Bank; and Reserve Bank of India.

The existence of a relatively low credit/GDP ratio in India has been seen by many observers as an indicator of the inefficiency of the banking system, and particularly of it not serving adequately the needs of the less well

off and the unorganised sector. However, a simple plot of credit/GDP ratio and per capita income levels suggests that the prevailing credit/GDP ratio in India is actually above the trend line: credit penetration is then somewhat higher than what might be expected given its current income levels (Chart 4). While the cross-country regression line would suggest that, given India's per capita income levels, credit/GDP ratio should be around 27 per cent at end-March 2007, the actual credit/GDP ratio was almost double at 51 per cent. An a priori view that the Indian banking system is underperforming in this respect is therefore not supported by international data.



The buffer of excess SLR securities built up by banks during the period 1997-2003 provided the banks an opportunity to run down these excess investments in the period 2003-04 onwards to fund the step-up in credit growth. Thus, even though overall M3 growth in the current decade has been broadly unchanged compared to the 1990s, growth of bank credit has been significantly higher. Accordingly, looking at M3 growth in isolation can be misleading; it is equally important to look at the underlying dynamics of money supply through an analysis of the components as well as sources of money supply.

Now, with actual SLR holdings close to the stipulated, growth of bank credit as well as banks' SLR investments, in future, will have to be in line with their deposit growth. Thus, high credit growth is likely to be accompanied by

high growth in money supply. As the accumulated empirical evidence clearly suggests, sustained periods of high money supply growth are eventually associated with higher inflation, even though in the short-run, the association between money supply and inflation may be weaker. Against this backdrop, we need to be cautious of the fact that M3 growth over the past two years has been running above 20 per cent per annum. Continued high growth could turn out to be inflationary in due course of time; hence, the Reserve Bank has been putting greater emphasis on analysis of monetary and credit developments in the recent past. It needs to be reiterated that the reduction in inflation over the past decade and the lowering of inflationary expectations enabled some reduction in the overall interest rate structure, which enabled both the Government and the private corporate sector to reduce their debt servicing burdens, contributing to a step-up in the sectoral savings.

As I noted earlier, the prevailing credit/GDP ratios in India in the international context does not support the hypothesis that the Indian banking system is underperforming. The Indian banking sector is resilient and is contributing to growth along with stability (Mohan, 2007). The commercial banks are well-capitalised, with CRAR well-above international norms. A steady improvement in the productivity of the banking system can be seen over the past decade (Table 14). The performance of the banking sector, especially nationalised banks, worsened in the initial years of reforms as they took time to adjust to the new environment. However, a distinct improvement was discernable thereafter, especially beginning 2001-02. As a result, various efficiency/productivity and soundness parameters have moved closer to the global levels. The most significant improvement has taken place in the performance of public sector banks, as a result of which the performance of various bank groups has now converged with that of foreign banks and new private sector banks in respect of most of the parameters. The intermediation cost as also the net interest margin declined across the bank groups. Despite this, however, the profitability of the banking sector improved. Thus, it is not the higher interest rate spreads but rather increased efficiency that led to higher profitability. A more detailed empirical analysis of efficiency and productivity, undertaken in the Reserve Bank's forthcoming *Report on Currency and Finance*, corroborates the findings of the accounting measures

or financial ratios. The analysis shows that efficiency has improved across all bank groups when measured from a grand frontier for all banks for the period 1991-92 to 2006-07 and most of these efficiency gains have emanated after few years of reforms, *i.e.*, from 1997-98 onwards. The analysis also reveals no relationship between ownership and efficiency, with most efficient banks being from all the three segments, *i.e.*, public, private and foreign.

Table 14: Commercial Banks: Productivity Trends

| Ratio | Year | Public Sector Banks | New Private Banks | Foreign Banks | <i>(Per cent)</i> |
|------------------------------|-------------|----------------------------|--------------------------|----------------------|---------------------------------------|
| | | | | | All Scheduled Commercial Banks |
| Cost to Income Ratio @ | 1991-92 | 58.7 | * | 31.2 | 55.6 |
| | 1998-99 | 65.9 | 49.5 | 60.8 | 64.7 |
| | 2006-07 | 50.9 | 52.9 | 44.6 | 50.2 |
| Intermediation Cost # | 1991-92 | 2.60 | * | 2.26 | 2.59 |
| | 1998-99 | 2.65 | 1.74 | 3.59 | 2.65 |
| | 2006-07 | 1.77 | 2.11 | 2.78 | 1.91 |
| Net Interest Margin (spread) | 1991-92 | 3.22 | * | 3.90 | 3.30 |
| | 1998-99 | 2.81 | 1.98 | 3.47 | 2.79 |
| | 2006-07 | 2.65 | 2.34 | 3.74 | 2.69 |
| Return on Assets | 1991-92 | 0.27 | * | 1.56 | 0.39 |
| | 1998-99 | 0.42 | 1.03 | 0.69 | 0.47 |
| | 2006-07 | 0.83 | 0.91 | 1.65 | 0.90 |

*: not available.

@: Ratio of operating expenses to total income less interest expenses.

#: Operating expenses as ratio to total assets.

The macroeconomic review of the Indian economy does suggest a strengthening of the fundamentals in terms of movement to a higher growth path in recent years, supported by investment, savings and improvement in productivity. Moving forward, there is a need to delineate the likely prospects for savings and investment in the coming five years and address some critical issues to sustain the growth momentum.

II. Prospects for the Next Five Years

Early indications on the growth prospects in the coming five years were set out by the Approach Paper of the Eleventh Five Year Plan in terms of indicative projections on sustaining real GDP growth in the range of 8-9 per cent. Subsequently, this was reassessed by the Working Group on Savings for the Eleventh Five Year Plan (2007-08 to 2011-12) (Chairman: Dr. Rakesh Mohan) (May 2007). This Group projected that sustaining a real GDP growth in the range of 8-9 per cent would require investment rate to accelerate to 36-38 per cent of GDP and gross domestic savings (GDS) rate to a range of 34-35 per cent of GDP based on the then prevailing GDS rate of 29.1 per cent and investment rate of 30.1 per cent for 2004-05. The saving-investment gap was projected to be financed through an increase in household financial savings rate by around 1 percentage point, *i.e.*, to 11.4 per cent of GDP from 10.3 per cent in 2004-05. The remaining portion of the saving-investment gap was projected to be financed from the rest of the world sector through a widening of current account deficit by around 1-2 percentage points, *i.e.*, to a range of 2.1-2.8 per cent of GDP from 1 per cent in 2004-05.

Against this backdrop, there is a need to factor in the latest available information to assess as to what holds for future prospects. According to the Quick Estimates released by the Central Statistical Organisation (CSO) in January 2008, the real GDP growth is estimated to have accelerated to 9.6 per cent in 2006-07 from 9.4 per cent in 2005-06 and 7.5 per cent in 2004-05. The acceleration in growth has been supported by rise in investment rate from 32.2 per cent in 2004-05 to 35.9 per cent in 2006-07, in turn, supported by the rise in domestic saving rate from 31.8 per cent to 34.8 per cent. Accordingly, the S-I gap widened from (-) 0.4 per cent of GDP in 2004-05 to (-) 1.1 per cent in 2006-07.

As the previous analysis shows, sustenance of the growth momentum would hinge upon continued progress in public finance, enhanced role of the private corporate sector and further deepening of the financial sector to boost household financial savings. Apart from domestic factors, it is increasingly being recognized that global factors would play a far greater role than before in view of progressive opening up of the Indian economy resulting in greater financial integration over and above the traditional trade integration.

The factors which would merit attention in drawing prospects for the public sector include the progress in public finance in the remaining period under the FRBM Act and beyond, the scope and scale of the likely impact of the Sixth Pay Commission award and streamlining of expenditures. Assuming that the Central Government meets its FRBM targets for 2008-09 and the States also adhere to their fiscal responsibility legislations targets, supported by the on-going tax buoyancy and appropriate expenditure management, the dissavings of Government administration could be expected to reduce further from Rs.55,811 crore (1.3 per cent of GDP) in 2006-07 to levels consistent with the achievement of the target of zero per cent of GDP in respect of the revenue deficits for both the Centre and the States. As noted earlier, the saving rates of the non-departmental undertakings which were maintained at around 4 per cent of GDP and that of departmental enterprises at around 0.6 per cent during 2002-2007 are likely to prevail in the coming five years.

Some risks to these prospects, however, can be perceived from the implementation of the Sixth Pay Commission (SPC) award. According to the SPC report, gross implications of its various recommendations are estimated at Rs.12,561 crore (about 0.27 per cent of GDP for 2007-08). At the same time, some of the recommendations will lead to savings of Rs.4,586 crore. The net additional impact is, thus, estimated at Rs.7,975 crore (about 0.17 per cent of GDP for 2007-08). Arrears for 2006 and 2007 are expected to amount to Rs. 18,060 crore (0.38 per cent of GDP in 2007-08), which the SPC has recommended could be paid over a period of two years. Based on these data, the annual impact (gross) of the SPC award could be around 0.5 per cent of GDP in the first two years (inclusive of the arrears), which would reduce to below 0.3 per cent from the third year onwards. However, an assessment of the impact of the Report requires a more detailed assessment of the

implications of the Commission's recommendations and of the final decisions that the Government takes. In this context, it is also instructive to examine the experience of the Fifth Pay Commission (FPC) award, which was implemented from 1997-98. The liability of the Central Government as a result of implementing the FPC award was estimated at Rs.18,500 crore up to the end of February 1998. The impact was spread over the period from 1997-98 to 2000-01, rather than being a mere one off impact in 1997-98 (Table 15). The proportion of wages, salaries and pensions of the Central Government, as a proportion of GDP, which had increased from 2.7 per cent in 1996-97 to 3.3 per cent for three years up to 2000-01, tapered-off back to about 2.7 per cent by 2003-04. Thus, the impact of the FPC approximately amounted to about 0.6 per cent of GDP per annum over a four-year period – a cumulative impact of 2.4 per cent - for the Central Government. The impact of SPC recommendations, prima facie, appears to be somewhat lower than that the actual FPC impact, but a full assessment will have to be done on a detailed examination of its implementation.

Table 15: Impact of the Fifth Pay Commission

| (Rupees crore) | | | | | | | | | | |
|------------------------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Wages, Salaries and Pension | | | | | | | | | | |
| Central Government | 37,050 | 50,016 | 57,205 | 64,828 | 66,109 | 64,040 | 70,646 | 73,477 | 80,825 | 90,628 |
| | (2.7) | (3.3) | (3.3) | (3.3) | (3.1) | (2.8) | (2.9) | (2.7) | (2.6) | (2.5) |
| State Governments (Consolidated)* | 91,178 | 99,568 | 1,15,576 | 1,35,732 | 1,50,776 | 1,52,530 | 1,58,812 | 1,84,718 | 1,84,730 | 2,06,889 |
| | (6.7) | (6.5) | (6.6) | (7.0) | (7.2) | (6.7) | (6.5) | (6.7) | (5.9) | (5.8) |

* : Non-plan revenue expenditure of the States going to social, economic and administrative services.

Note: Figures in parentheses indicate percentages to GDP.

Sources: 1. An Economic and Functional Classification of the Central Government Budget, Government of India.

2. Various Issues of the articles, 'State Finances: A Study of Budgets', RBI.

In respect of the State Governments, in the absence of budgetary data on salary expenditure, the impact of FPC can be ascertained from its proxy taken as the non-plan revenue expenditure in social, economic and administrative services. The impact was visible from the year 1999-2000 when the proxy indicator as a proportion to GDP rose from 6.6 per cent in 1998-99 to 7.0 per cent in 1999-2000 and 7.2 per cent in 2000-01, before declining back to 6.7 per cent in 2001-02. Thus, the impact of FPC for the States amounted to approximately 0.4-0.6 per cent of GDP (a cumulative impact of 1.0 per cent over the two-year period). The combined impact of the Centre and States, thus, approximated to around 1.0 per cent of GDP (a cumulative impact of 3.4 per cent). In order to absorb the impact of FPC, the Government envisaged to bear it through a combination of additional resource mobilisation and expenditure reducing measures. However, as alluded to above, there was a decline in the tax-GDP ratio in the late 1990s, which exacerbated impact on the Government finances.

Looking forward, and taking into account the SPC report, the pressures on expenditures may amount to slightly less than 1.0 per cent of GDP per annum for the Centre and States combined, spread over a 3-4 year period. Unlike the prevailing situation during the FPC, the SPC implementation would be undertaken when the economy is witnessing high tax buoyancy - the tax-GDP ratio of the Centre has increased by 3.7 percentage points to 12.5 per cent in 2007-08 (RE) from 8.8 per cent in 2002-03. In the interest of continuing with the growth momentum, it is essential that the impact of the SPC be absorbed without impairing the process of fiscal consolidation. In view of the buoyancy of direct taxes and service taxes at the Central level, and of VAT at the State level, there is an opportunity this time to accomplish this at both Central and State levels.

Apart from the impact of the SPC, the Union Budget for 2008-09 would have to bear the impact of the debt waiver and debt relief scheme for farmers. According to the provisional estimates, the total budgetary impact will be Rs.60,314 crore (around 1.1 per cent of GDP for the year 2008-09)[†].

[†] In view of the expanded coverage of the scheme (Ministry of Finance's Press Release dated May 23, 2008), the total budgetary impact has now been revised upwards to Rs.71,680 crore (around 1.4 per cent of GDP for the year 2008-09).

The impact on the budget is proposed to be phased out over a period of four years beginning 2008-09, with some frontloading: the impact is expected to be 0.25 per cent of GDP in 2008-09, which will decline to 0.1 per cent of GDP by 2011-12. Thus, the combined impact of the SPC and the farm waiver scheme on the Central Government finances, *ceteris paribus*, could be around 0.8 per cent of GDP in 2008-09 (over and above the budgeted 2.5 per cent of GDP), and this is likely to fall to around 0.3 per cent of GDP by 2011-12. As noted subsequently, expenditure pressures from subsidies could exacerbate in view of the persistent increase in international food and oil prices. Continuation of efforts at improving tax compliance, renewed efforts at containing subsidies, and levy of appropriate user charges to augment non tax revenues, would all need to be used to comply with the FRBM.

As regards the prospects for the private corporate sector, there are incipient signs of some deceleration in the growth of net profits from the strong pace of the past four years; nonetheless, growth in corporate profitability still remains buoyant and is well above the nominal GDP growth. At the same time, cognisance needs to be taken of growing competition, both internal and external, in the domestic economy. Furthermore, the early benefits of reforms reaped by the corporate sector, especially by deleveraging of balance sheets, may not be available at the same scale in future. Thus, it may be reasonable to assume that the corporate savings rate, which had doubled to 7.8 per cent of GDP during the period 2002-2007, may exhibit some plateauing in the coming few years but should not be expected to fall.

Regarding the household sector, the quick estimates indicate that financial savings stagnated at around 11.3 per cent of GDP during 2006-07, while physical saving rate moderated somewhat, but remained higher than financial savings at 12.5 per cent of GDP in 2006-07. Bank deposits constitute the largest proportion of household financial savings and their share in total, which fell during the 1980s, has been recovering since the 1990s (Table 16). The buoyancy in bank deposits over the past year – growth of around 23.8 per cent, year-on-year, as of January 2008- partly reflects some migration from small savings; as this signifies only a shift in the asset portfolio composition of households, the recent buoyancy in bank deposits is not suggestive of an uptrend in overall household financial savings. Looking forward, improvement

in financial savings would depend on the further deepening of the financial sector, particularly through the continuation of insurance and pension reforms. Assuming the tax structure to remain stable over the coming five years, the growth of financial savings is likely to maintain its pace with the growth in nominal income.

| Table 16: Shares of Components of Household Financial Savings | | | | | | |
|--|--------------|--------------|--------------|--------------------------|--------------------------|--------------------------|
| | (Per cent) | | | | | |
| | 1970s | 1980s | 1990-91 | 1991-92 to 1996-97 | 1997-98 to 2002-03 | 2003-04 to 2006-07 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Currency | 13.9 | 11.9 | 10.6 | 10.9 | 8.6 | 9.3 |
| Bank deposits | 45.6 | 40.3 | 31.9 | 33.1 | 38.5 | 44.0 |
| Non- banking deposits | 3.0 | 4.6 | 2.2 | 9.4 | 2.9 | 0.7 |
| Life Insurance Fund | 9.0 | 7.5 | 9.5 | 9.5 | 13.1 | 14.6 |
| Provident and Pension Fund | 19.6 | 17.5 | 18.9 | 17.6 | 19.0 | 11.4 |
| Claims on Government | 4.2 | 11.1 | 13.4 | 7.1 | 14.9 | 16.9 |
| Shares and Debentures | 1.5 | 3.9 | 8.4 | 8.3 | 3.7 | 3.9 |
| Units of UTI | 0.5 | 2.2 | 5.8 | 5.0 | 0.1 | -0.8 |
| Trade Debt (Net) | 2.7 | 0.9 | -0.8 | -0.8 | -0.7 | 0.0 |
| Total Financial Saving (Gross) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Handbook of Statistics on the Indian Economy, RBI, 2006-07.

Thus, based on the emerging trends, it is reasonable to expect that both household financial savings rate and corporate saving rate would be broadly maintained at around their current rates of around 11 per cent and 8 per cent, respectively. On the other hand, improvement in the public sector savings rate may be hampered by the impact of the SPC, but it should not be expected to fall. On balance, the overall GDS rate may improve somewhat in 2008-09, i.e., the terminal year of FRBM, led by the public sector and remain around that level in the next three years.

III. Issues and Challenges

What have we learned from this review of Indian economic growth and macroeconomic management over the past 50-60 years? How do we go forward to ensure the continuation of the growth momentum achieved in recent years?

First, Indian economic growth has been largely enabled by the availability of domestic savings. The continuous acceleration of its growth over the decades has been accompanied by a sustained increase in the level of domestic savings, expressed as a proportion of GDP. Moreover, interestingly,

despite all the shortcomings and distortions that have existed in the evolving financial sector in India, the efficiency of resource use has been high with a long term ICOR of around 4, which is comparable to the best achieving countries in the world. Hence, in order to achieve 10 per cent+ growth, we will need to encourage the continuation of growth in savings in each of the sectors: households, private corporate sector, public corporate sector and the government.

Second, the recent acceleration in growth has been enabled by a surge in private sector investment and corporate growth. This, in turn, has become possible with the improvement in fiscal performance reducing the public sector's draft on private savings, thereby releasing resources to be utilised by the private sector. For the growth momentum to be sustained, it will therefore be necessary to continue the drive for fiscal prudence at both the central and state government levels.

Third, the generation of resources by the private corporate sector through enhancement of their own savings has been assisted greatly by the reduction in nominal interest rates in recent years relative to the previous periods, which has become possible through a sustained reduction in inflation brought about by prudent monetary policy. Indian inflation, though low on average over the past 10 years by our own historical standards, is still higher than world inflation, and hence needs to be brought down further. It is only when there is a further secular reduction in inflation and inflation expectations over the medium term that Indian interest rates can approach international levels on a consistent basis. However, the current upsurge in inflation worldwide, and in India, gives pause for thought. Hence, it is necessary for us to improve our understanding of the structure of inflation in India: how much can be done by monetary policy and how much through other actions in the real economy so that leads and lags in supply and demand in critical sectors can be removed, particularly in infrastructure. Sustainance of high levels of corporate investment are crucially conditioned by the existence of low and stable inflation enabling low and stable nominal and real interest rates.

Fourth, whereas fiscal correction has gained a credible momentum in recent years, some of it has been achieved by reduction in public investment. Whereas a desirable shift has taken place from public to private investment in

sectors essentially producing private goods and services, and there is a move toward public private partnerships in those which have both public good and private good aspects, it is necessary to recognise that public investment is essential in sectors producing public services. Continued fiscal correction through the restructuring and reduction in subsidies, and continued attention to the mobilisation of tax revenues is necessary to enhance public sector savings that can then finance increase in levels of public investment. If this is not done, private corporate sector investment would be hampered, and the leads and lags in the availability of necessary public infrastructure would also lead to inflationary pressures, and lack of competitiveness. Efficiency in the allocation and use of resources would be helped greatly by better basic infrastructure in both rural and urban infrastructure: much of it would need enhanced levels of public investment. The current increase in international food, energy and commodity prices has placed additional pressures on food and energy related subsidies: the extent of this new threat on fiscal correction will only become apparent over time.

Fifth, a major success story in the Indian reforms process has been the gradual opening of the economy. On the one hand, trade liberalisation and tariff reforms have provided increased access to Indian companies to the best inputs available globally at almost world prices. On the other hand, the gradual opening has enabled Indian companies to adjust adequately to be able to compete in world markets and with imports in the domestic economy. The performance of the corporate sector in both output growth and profit growth in recent years is testimony to this. It is therefore necessary to continue with our tariff reforms until we reach world levels, beyond the current stated aim of reaching ASEAN levels.

As has been mentioned, the India current account deficit has been maintained at around 1 to 1.5 per cent historically and in recent years. The current level of capital flows suggests that some widening of the CAD could be financed without great difficulty: in fact, the Eleventh Plan envisages a widening to levels approaching 2.5 to 3.0 per cent. This would need to be watched carefully if it emerges: we will need to ensure that such a widening does not lead to softening of international confidence, which would then reduce the capital flows.

It is interesting to note that some empirical studies do not find evidence that greater openness and higher capital flows lead to higher growth (Prasad, Rajan and Subramanian, 2007). These authors find that there is a positive correlation between current account balances and growth among nonindustrial countries, implying that a reduced reliance on foreign capital is associated with higher growth. Alternative specifications do not find any evidence of an increase in foreign capital inflows directly boosting growth. The results could be attributed to the fact that even successful developing countries have limited absorptive capacity for foreign resources, either because their financial markets are underdeveloped, or because their economies are prone to overvaluation caused by rapid capital inflows. Thus, a cautious approach to capital account liberalization would be useful for macroeconomic and financial stability.

On the other hand, Henry (2007) argues that the empirical methodology of most of the existing studies is flawed since these studies attempt to look for permanent effects of capital account liberalisation on growth, whereas the theory posits only a temporary impact on the growth rate. Once such a distinction is recognised, empirical evidence suggests that opening the capital account within a given country consistently generates economically large and statistically significant effects, not only on economic growth, but also on the cost of capital and investment. The beneficial impact is, however, dependent upon the approach to the opening of the capital account, in particular, on the policies in regard to liberalisation of debt and equity flows. Recent research demonstrates that liberalization of debt flows—particularly short-term, dollar-denominated debt flows—may cause problems. On the other hand, the evidence indicates that countries derive substantial benefits from opening their equity markets to foreign investors (Henry, *op cit*).

Our approach in regard to the capital account has made a distinction between debt and equity, with greater preference for liberalisation of equity markets vis-a-vis debt markets (Mohan, 2007a). Equity markets provide risk capital and this can be beneficial for growth. On the other hand, opening up of the domestic debt markets to foreign investors in the face of inflation and interest differentials, as is the case in India at present, can lead to large amount of arbitrage capital. In view of higher domestic nominal interest

rates, open debt markets can attract a large amount of capital flows and add further to the existing volume of capital flows, which are in any case well-above the financing requirement of the country. If the debt markets were open, such excess capital flows would have to be necessarily sterilised by the Reserve Bank in order to maintain domestic macroeconomic and financial stability. This would further add to the sterilisation costs already being borne by the country's financial sector and the Government. Thus, debt flows into India are subject to ceilings and such ceilings would be appropriate till wedges on account of higher inflation and interest rates narrow significantly.

Finally, we need to recognise that enhanced levels of savings and investments, and enhanced levels of capital flows and trade, all necessitate an efficient system of financial intermediation. For household savings to grow further, households will need to see the continuation of adequate nominal and real returns. The efficiency of financial intermediation is then of the essence so that financial savings are indeed intermediated to their best uses.

As in the past, domestic savings are expected to finance the bulk of the investment requirements. In this context, the banking system will continue to be an important source of financing and there would be strong demand for bank credit. Although bank credit has witnessed sharp growth since 2003-04 onwards, it needs to be recognised that the credit-GDP ratio still remains relatively low. Moreover, a significant segment of the population remains excluded from banking services. As the growth process strengthens and becomes more inclusive, it is expected that demand for financial products could continue to witness high growth in the coming years. Thus, it is likely that growth in bank credit and monetary aggregates could be higher than what might be expected from historical relationships and estimated elasticities in view of ongoing structural changes. This, however, raises critical issues for the central bank such as the appropriate order of monetary/credit expansion. In the absence of a yardstick, excessive growth in money supply could potentially show up in inflationary pressures over course of time, given the monetary lags. Indeed, recent inflationary pressures across the globe are attributable, in part, to the global liquidity overhang. In the absence of inflationary pressures as conventionally measured, excessive money and credit growth could also lead to asset price bubbles, with adverse implications for banking sector stability

and lagged conventional inflation. Thus, the Reserve Bank will have to face ongoing challenges to provide appropriate liquidity to the system so as to ensure growth in non-inflationary environment. This raises the critical issues of clarity in reading signs of inflation, asset prices and systemic liquidity from monetary/credit expansion.

From the sectoral viewpoint, a key issue is that of agricultural growth. In fact, the historical review suggests strongly that the periods of slow overall growth have invariably been characterised by slow agricultural growth, even in recent years when the weight of agriculture in GDP has reduced considerably.

The Eleventh Five Year Plan projects the sectoral growth rates at around 4 per cent for agriculture, 10 per cent for the services sector and 10.5 per cent for industry (with manufacturing growth at 12 per cent). While the targets for industry and services sectors are achievable, sustaining agricultural growth at around 4 per cent for achieving the growth target of 9 per cent during the Eleventh Plan would be a major challenge, particularly because this sector is constrained by several structural bottlenecks such as technology gaps, timely availability of factor inputs, lack of efficient markets for both inputs and outputs as well as continued policy distortions. Notwithstanding some improvement in agricultural performance in recent years, production and productivity of major crops continue to be influenced by rainfall during the sowing seasons. Therefore, apart from institutional support, the immediate requirement is to improve irrigation facilities through higher public investment and augment the cropped area as well as yields through various other methods. This will need public investment and better management (Mohan, 2006b).

Improved agricultural performance is not only important for sustaining growth but also for maintaining low and stable inflation. Volatile agricultural production and lower food stocks internationally are beginning to raise growing concerns about rising food prices influencing overall inflation both globally and in India. In the medium term, therefore, efforts would have to be directed towards not only improving the crop yields but also putting in place a market driven incentive system for agricultural crops for a durable solution to address the demand-supply mismatches and tackle food inflation.

Sustained improvement in crop yields requires an enhanced focus on the revitalisation of agricultural research, developmental extension.

Coming to infrastructure, the Planning Commission has estimated that infrastructure investment ought to grow from the current levels of around 4.6 per cent of GDP to 8 per cent for sustaining the 9 per cent real GDP growth as envisioned in the Eleventh Plan. Thus, investment in infrastructure is expected to rise by over three percentage points of GDP over the Plan period; over the same period, the Planning Commission anticipates that overall investment rate of the Indian economy should grow by six percentage points. In other words, almost one half of the total increase in overall investments is expected to be on account of the infrastructure requirements. For such an increase in infrastructure investment to take place over the Plan period, both public sector and private sector investment will need to grow much faster than in any previous period.

Sustained growth in private sector infrastructure investment can take place in only those sectors that exhibit adequate return, either on their own or through public private partnerships. The performance of the telecom sector has exhibited this convincingly. A renewed focus on the levy of adequate user charges is therefore necessary, and policy measures that provide stability to the flow of infrastructure revenues (Mohan, 2004).

In this context, it needs to be recognised that the use of foreign currency denominated borrowings to fund domestic infrastructure projects runs the risk of currency mismatches in view of the fact that earnings of such projects are in domestic currency. Thus, large, unanticipated currency movements can render unviable such projects, thereby endangering future investments. Caution therefore needs to be exercised in the foreign funding of infrastructure projects, unless appropriately hedged.

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Annex 1

Break Dates in Real GDP Growth and Components

| Item | First Break | Second Break | Third Break | Fourth Break | Fifth Break |
|---|----------------|-----------------|----------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| GDP | 1977-78 | 1989-90 | | | |
| Agriculture | 1963-64 | | | | |
| Industry | 1964-65 | 1978-79 | | | |
| Mining and Quarrying | 1958-59 | 1968-69 | 1978-79 | 1986-87 | |
| Manufacturing | 1964-65 | 1992-93 | | | |
| Electricity, Gas and Water Supply | 1956-57 | 1966-67 | 1974-75 | 1982-83 | 1994-95 |
| Services | 1961-62 | 1971-72 | 1983-84 | 1992-93 | |
| Construction | 1968-69 | 1980-81 | 1997-98 | | |
| Trade, Hotels, Transport and Communication | 1961-62 | 1973-74 | 1989-90 | 1997-98 | |
| Financing, Insurance, Real Estate and Business Services | 1965-66 | 1978-79 | 1992-93 | | |
| Community, Social and Personal Services | 1956-57 | 1967-68 | 1980-81 | 1988-89 | 1996-97 |

Note: Breakdates are estimated using Bai-Perron (1998, 2003) methodology and BIC information criterion to the specification " $\log x = \text{constant} + b \cdot \text{trend}$ ", where "x" is the series under reference.

Macroeconomic Indicators at a Glance

| | (Per cent) | | | | | | | | |
|--|------------|-------|-------|-------|------------------------------|--------------------------|--------------------------|--------------------------|---------------------|
| | | | | | 1991/92 to 1996- 97 | 1997/98 to 2002/03 | 2003/04 To 2006/07 | 2007- 08 (AE) | |
| | 1950s* | 1960s | 1970s | 1980s | 1990- 91 | 1996- 97 | 1997/98 to 2002/03 | 2003/04 To 2006/07 | 2007- 08 (AE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. Real GDP Growth | 3.6 | 4.0 | 2.9 | 5.6 | 5.3 | 5.7 | 5.2 | 8.7 | 8.7 |
| Agriculture and Allied | 2.7 | 2.5 | 1.3 | 4.4 | 4.0 | 3.7 | 0.9 | 4.9 | 2.6 |
| Industry | 5.8 | 6.2 | 4.4 | 6.4 | 5.7 | 7.0 | 4.1 | 8.3 | 8.6 |
| <i>Manufacturing</i> | 5.8 | 5.9 | 4.3 | 5.8 | 4.8 | 7.5 | 3.9 | 9.1 | 9.4 |
| Services | 4.2 | 5.2 | 4.0 | 6.3 | 5.9 | 6.4 | 7.8 | 10.2 | 10.6 |
| 2. Real GDCF/GDP | 12.5 | 16.9 | 19.4 | 20.2 | 24.4 | 22.5 | 24.1 | 31.4 | NA |
| 3. ICOR | 3.5 | 4.3 | 6.6 | 3.6 | 4.6 | 4.0 | 4.6 | 3.6 | NA |
| 4. Nominal GDCF/GDP | 10.8 | 14.3 | 17.3 | 20.8 | 26.0 | 23.9 | 24.5 | 33.0 | NA |
| 5. GDS / GDP | 9.6 | 12.3 | 17.2 | 19.0 | 22.8 | 22.7 | 24.1 | 32.7 | NA |
| 6. Saving-Investment Gap/GDP (5-4) | -1.2 | -2.0 | -0.1 | -1.8 | -3.2 | -1.2 | -0.4 | -0.3 | NA 23.8 |
| 7. M3 Growth | 5.9 | 9.6 | 17.3 | 17.2 | 15.1 | 17.5 | 15.9 | 16.8@ | # |
| 8. SCB's Non-food Credit Growth | - | - | 17.5 | 17.8 | 12.4 | 16.2 | 15.3 | 26.5@ | 23.1# |
| 9. Growth in investments in Govt. Securities | 12.4^ | 5.6 | 20.8 | 19.4 | 18.2 | 21.5 | 22.0 | 10.2@ | 26.7# 4.1 |
| 10. WPI Inflation (Average) | 1.2 | 6.4 | 9.0 | 8.0 | 10.3 | 9.6 | 4.6 | 5.5 | ## |

AE: Advance Estimates.

@: Adjusted for the mergers and conversions in the banking system. Variation for 2005-06 is taken over April 1, 2005.

*: Average for the growth rates of the various indicators for 1950s is the average of nine years, *i.e.*, from 1951-52 to 1959-60.

^: Average of 1952-53 to 1959-60. #: As on January 18, 2008(year-on-year). ## : As on January 26, 2008 (year-on-year).

Annex 2