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

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I deem it a real privilege to visit the Institute of Economic Growth to deliver the keynote address at this prestigious conference on growth and macroeconomic issues and challenges in India. I am particularly happy that this Conference is being organised by the Institute as a part of its Golden Jubilee celebrations. The Institute has established a long and creditable track record of contributing to economic research consistently over its 50 years history. Its research has greatly enriched the debate on the conduct and formulation of economic policy over the years.

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 address, I would 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.

I. A Review of the Indian Growth Process

Growth Acceleration over the Decades

It is widely believed that the Indian economy witnessed near stagnation in real GDP growth till the late 1970s. A closer review of the performance of the Indian economy, however, suggests a continuing increase in real GDP growth over each decade since Independence, interspersed with an interregnum during the 1970s (Table 1). Interestingly, growth of manufacturing production, in terms of decadal averages, was roughly constant at around 5.6-5.9 per cent in the first five decades after Independence, except for the 1970s. 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 1970s 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 1970s interregnum. There is nothing particularly special about service sector growth over the last decade.

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The slowdown of growth witnessed during the 1970s 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 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. Monetary tightening in the face of inflationary pressures is also believed by some to have contributed to the slowdown over this period.

Table 1 : Macroeconomic Indicators at a Glance

(Per cent)

	1950s*	1960s	1970s	1980s	1990-91	1991/92 to 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
Manufacturing	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
7. M3 Growth	5.9	9.6	17.3	17.2	15.1	17.5	15.9	16.8@	23.8 #
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#
10. WPI Inflation (Average)	1.2	6.4	9.0	8.0	10.3	9.6	4.6	5.5	4.1 ##

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).

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, benign investment climate amidst strong global demand and commitment rules-based fiscal policy have led to the real GDP growth averaging close to 9 per cent per annum over the 4-year period ended 2006-07; growth in the last two years has averaged 9.5 per cent per annum.

Consistent Growth in Savings and Investment

In analysing the growth record of the Indian economy, various scholarly attempts[†] 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 1970s decade. 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 9.6 per cent of GDP during the 1950s to almost 35 per cent of GDP at present; over the same period, the domestic investment rate has also increased continuously from 10.8 per cent in the 1950s 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-emptions from financial intermediaries at below market clearing interest rates. As fiscal deficits widened beginning in the 1970s, periodic increases in the statutory liquidity ratio (SLR) were resorted to to finance the rising fiscal gap, indicative of the financial repression regime in place. 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. 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.

[†] See, for instance, DeLong (2003), Panagariya (2004), Rodrik and Subramanian (2004), and Virmani (2004).

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 preemptions 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 we all know, 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. 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. 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. Consequently, 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. Concomitantly, the growth process suffered a setback with the real GDP growth decelerating to 3.8 per cent by 2002-03.

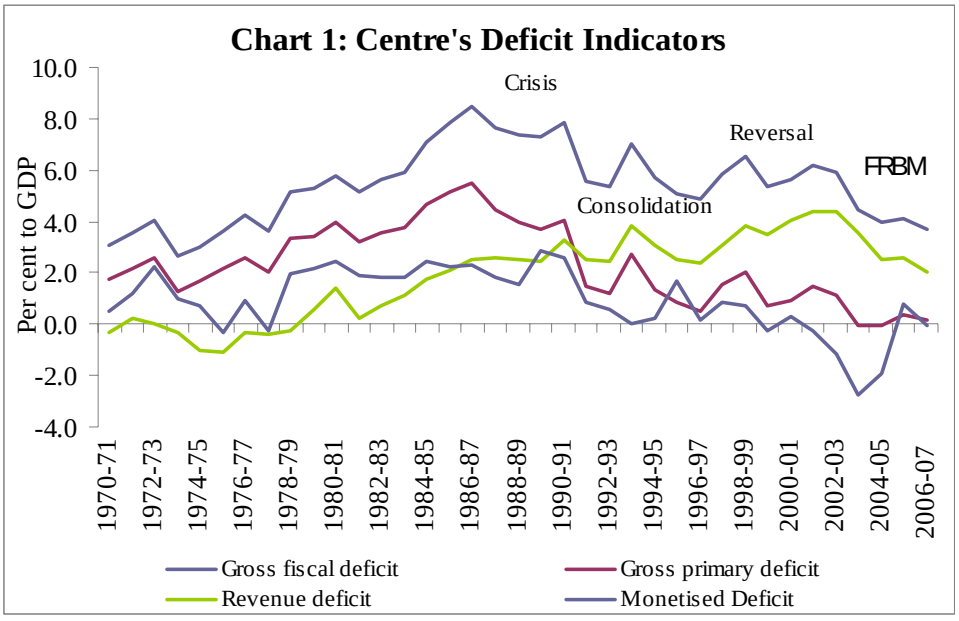


Table 2: Key Fiscal Indicators of the Centre

(Per cent to GDP)

Item	1970s	1980s	1990-91	1991-92 to 1996-97	1997-98 to 2002-03	2003-04 to 2006-07
1	2	3	4	5	6	7
Direct Tax	2.3	2.0	1.9	2.6	3.1	4.6
Indirect Tax	6.4	7.9	8.2	6.9	5.6	5.6
Gross Tax	8.7	9.9	10.1	9.5	8.7	10.1
Non-tax Revenue	2.0	2.4	2.1	2.5	2.7	2.4
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	4.0
Subsidies	0.8	1.6	2.1	1.3	1.4	1.4
Capital Outlay	2.1	2.5	2.1	1.5	1.2	1.5
Gross Fiscal Deficit	3.8	6.8	7.9	5.6	5.9	4.1
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	2.7
Net RBI Credit to Centre	1.0	2.1	2.6	0.6	0.0	-1.0

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 2006-07
1	2	3	4	5	6	7
States' Own Taxes	3.9	5.1	5.3	5.4	5.4	6.1
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	2.1
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	13.1
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
Gross Fiscal Deficit	2.0	2.8	3.3	2.7	4.1	3.3
Primary Deficit	1.2	1.7	1.8	0.9	1.7	0.7
Revenue Deficit	-0.6	-0.1	0.9	0.7	2.3	0.9

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 11.3 per cent in 2006-07(RE) and 11.8 per cent in 2007-08 (BE). 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 14.1 per cent in 2006-07 (RE), the capital outlay rose from 1.2 per cent to 1.6 per cent 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 6.4 per cent in 2006-07 led by reduction in revenue deficit from 7.0 per cent of GDP to 2.1 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-Sept)	2007-08 (Apr-Sept)
1	2	3	4	5	6	7
Growth Rates (per cent)						
Sales	15.8	16.9	7.0	20.7	27.4	17.4
Expenditure	15.1	16.6	7.4	19.7	25.6	16.9
Depreciation provision	10.1	16.6	12.9	10.2	16.1	15.1
Gross profits	27.8	18.2	3.6	30.9	39.8	28.1
Interest Payments	16.2	18.7	3.8	-0.6	20.8	10.1
Profits after tax (PAT)	53.3	21.1	7.8	47.3	41.6	31.1
Select Ratios (per cent)						
Gross Profits to Sales	11.2	12.4	10.6	12.7	15.6	16.9
PAT to Sales	4.0	5.5	3.6	8.0	10.6	11.7
Interest Coverage Ratio (Times)	1.9	2.1	1.8	5.2	7.1	8.4
Interest to Sales	5.8	6.0	6.0	2.6	2.2	2.0
Interest to Gross Profits	51.6	48.5	56.6	21.0	14.1	11.9
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.

Sources: RBI Studies on Company Finances and Performance of Private Corporate Business Sector during First Half of 2007-08 (RBI Bulletin, January 2008).

Table 6: Impact of Fiscal Policy on Corporate Performance				(Per cent)
Year	Profit After Tax (PAT)/Net Worth	Tax 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 3.8 per cent of GDP during 2004-05 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
(Per cent of GDP)

Item	1950s	1960s	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	8	9
Household Savings	6.6	7.6	11.4	13.5	18.4	16.8	20.8	23.8
Financial Savings	1.9	2.7	4.5	6.7	8.7	10.0	10.3	11.1
Physical Savings	4.7	4.9	6.9	6.8	9.7	6.8	10.5	12.7
Private Corporate Savings	1.0	1.5	1.5	1.7	2.7	3.7	4.0	6.6
Private Corporate Investment	1.9	2.9	2.6	4.5	4.5	7.7	6.6	11.2
Memo:								
Saving-Investment Gap								
Household Sector	1.9	2.7	4.5	6.7	8.7	10.0	10.3	11.1
Private Corporate Sector	-0.9	-1.5	-1.0	-2.8	-1.8	-4.0	-2.6	-4.7
Public Sector	-2.6	-4.1	-4.4	-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 9.6 per cent in 2006-07.

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 of estimates of 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 decade of the 1970s, 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.

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.					

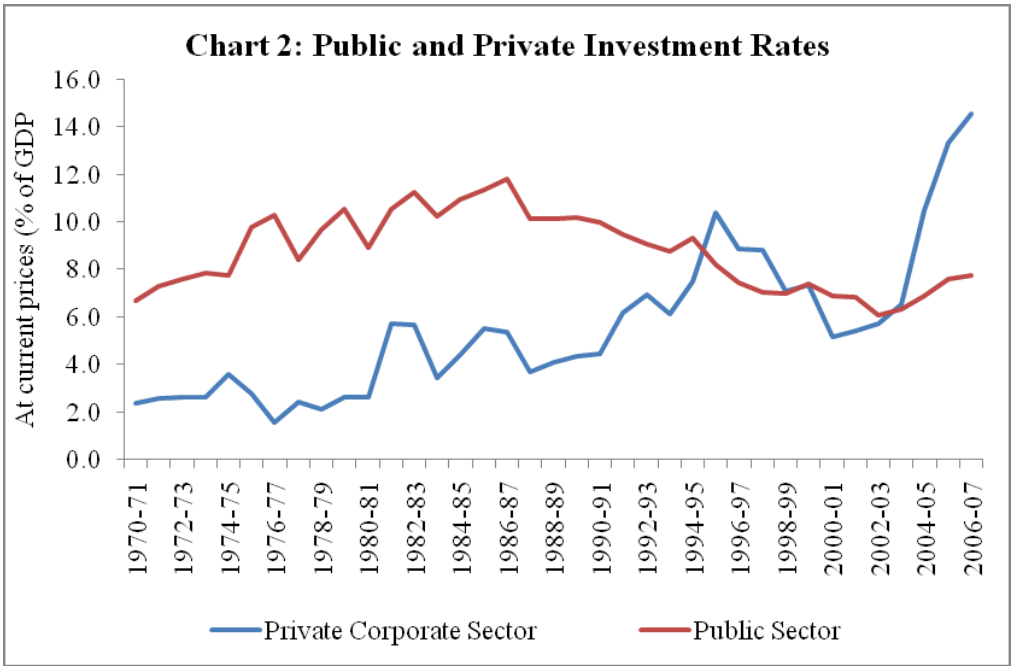
As noted above, improvement in public finances and public sector savings has contributed significantly to the step-up in domestic savings and investment rates since 2002-03 onwards. Higher savings and investment rates, in turn, have led to a higher growth trajectory of the Indian economy. It is apparent 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

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 required SLR was reduced to the then statutory minimum of 25 per cent in 1997. The reduction in the required SLR, in the presence of an auction system for the Central Government's market borrowings, was expected to facilitate an increasing proportion of the fiscal deficit through borrowings 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 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 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. 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.

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.

I. 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 the continued progress in public finances, 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 finances 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. Available information for 2007-08 shows continued buoyancy in taxes with impressive growth shown in respect of income tax, corporation tax, customs duty, service tax and new taxes. Assuming that the Central Government meets its FRBM targets by 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. While recommendations of the SPC have not yet been finalised, a likely impact of SPC can be ascertained from 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 9). 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. 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.

Table 9: 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.

Looking forward, assuming that the scale of the impact of the SPC to be similar to FPC in proportionate terms, the pressures on expenditures may amount to about 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 2.6 percentage points to 11.3 per cent in 2006-07(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. 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 10). 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 10: 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.

II. 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, which has become possible through a sustained reduction in inflation brought about by prudent monetary policy. Indian inflation, though low now 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. 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. Sustenance 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.

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 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 interest rates, open debt markets can attract 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 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 global liquidity glut. 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.

On the sectoral phase, 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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