

Fiscal Sustainability in India : An Assessment and Implications^ā

Introduction

In the aftermath of the macroeconomic and balance of payments crisis of 1991, a comprehensive reform programme was launched in India. Metamorphic changes have been brought about in the economy since which have seen India emerging as one of the fastest growing countries in the world. On the flip side, one of the most embarrassing disappointment during the reform period has been our inability to contain the fiscal deficit. Indeed, the combined gross fiscal deficit of the Centre and States in 2003-04 (RE) at 9.4 per cent was precisely at the same level as it was in the crisis year of 1990-91. Not surprisingly, serious questions are being voiced about fiscal sustainability. In some quarters, in India and abroad, questions are being asked as to why India is *not* having a crisis yet again. Is it a magic or miracle or some innovative financial accounting? At a broader level, in the absence of perceptible fiscal correction, there is a shadow of doubt being cast on the feasibility and desirability of continuation of the overall reform process itself.

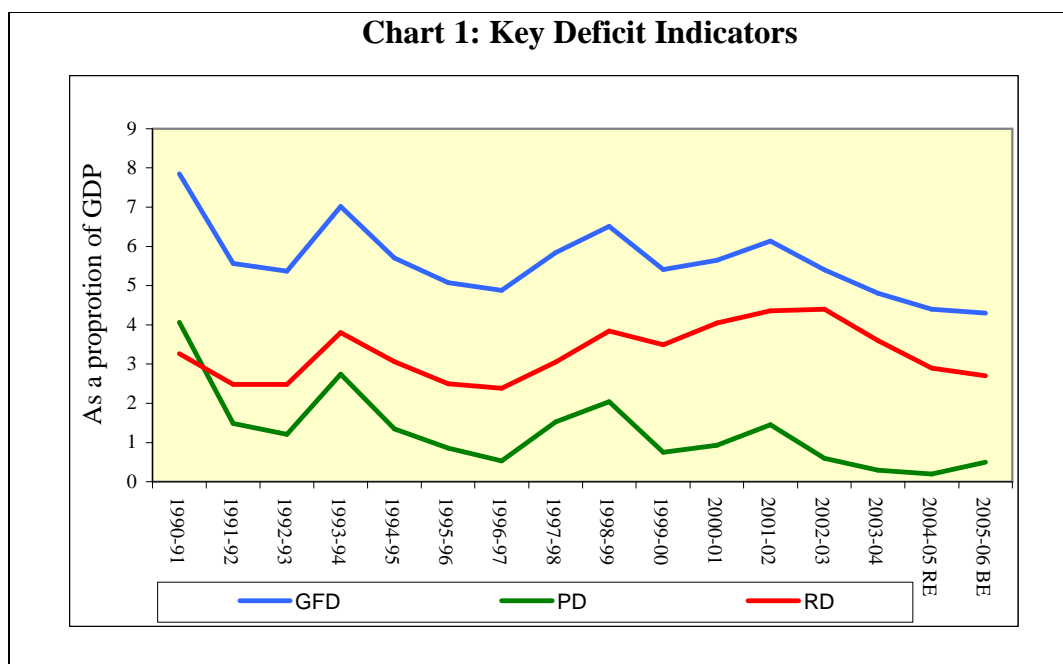
Against this backdrop, this paper aims at a closer examination of the fiscal problem in India today. In particular, the paper makes an assessment of fiscal sustainability and discusses its implications. The rest of the paper is organised as follows: Section II presents the magnitude and dimensions of the fiscal problem. Section III provides a resume of the available studies on India's public finances. Section IV, then deals comprehensively with the assessment of fiscal sustainability in India. Section V is devoted to implications of the unsustainable fisc. Finally, Section VI offers concluding remarks.

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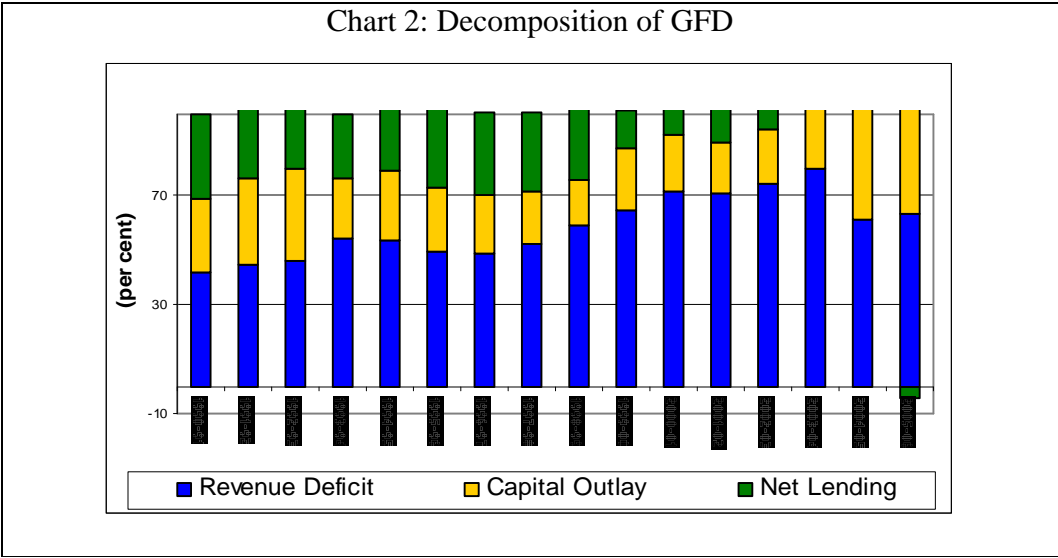
II. Magnitude and Dimension of the Fiscal Problem

Key Deficit Indicators

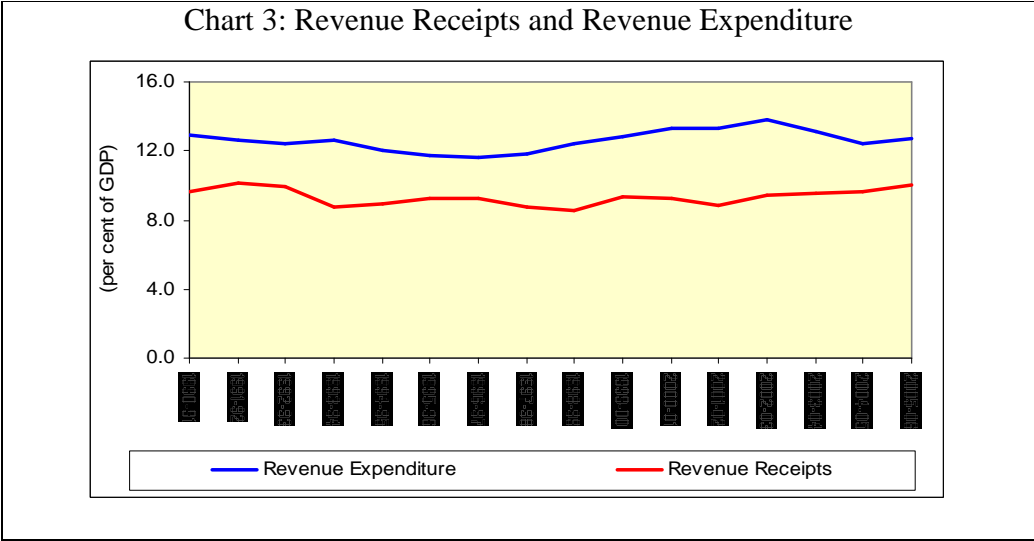
Fiscal developments during the past decade and a half in terms of movements in the key deficit indicators *viz.*; revenue deficit (RD), gross fiscal deficit (GFD) and primary deficit (PD) reveal a grim fiscal situation (Chart 1, Appendix Table 1). The distinct worsening of fiscal situation is reflected in large fiscal deficits and a sharp deterioration in the revenue deficit that has become endemic and has contributed to the dissavings of the Government sector to the extent of 3.6 per cent during the period 2001-06. Primary surplus has not been achieved during the entire fiscal consolidation period, except in the year 2003-04.



The persistence of large revenue deficit (3.6 per cent on an average during 2001-06) has limited the manoeuvrability to reduce fiscal deficit (on an average 5.1 per cent during the period 2001-06) even though the authorities undertook fiscal retrenchment in terms of cutbacks in capital outlay. Revenue deficit pre-empted nearly 70 per cent of the net borrowed resources during the period 2001-06 (Chart 2 and Appendix Table 2).



The imbalances in the revenue account persisted on account of downward rigidity in the revenue expenditure which has hovered around 12-13 per cent of GDP and stagnation in revenue receipts relative to GDP at around 9 per cent during the past decade and half (Chart 3).



The stagnation in revenue receipts was account of a sluggishness both in tax-GDP ratio (net to Centre) and well non-tax revenue which, in turn, reflected the vulnerability of tax revenue to industrial performance (Appendix Table 3).

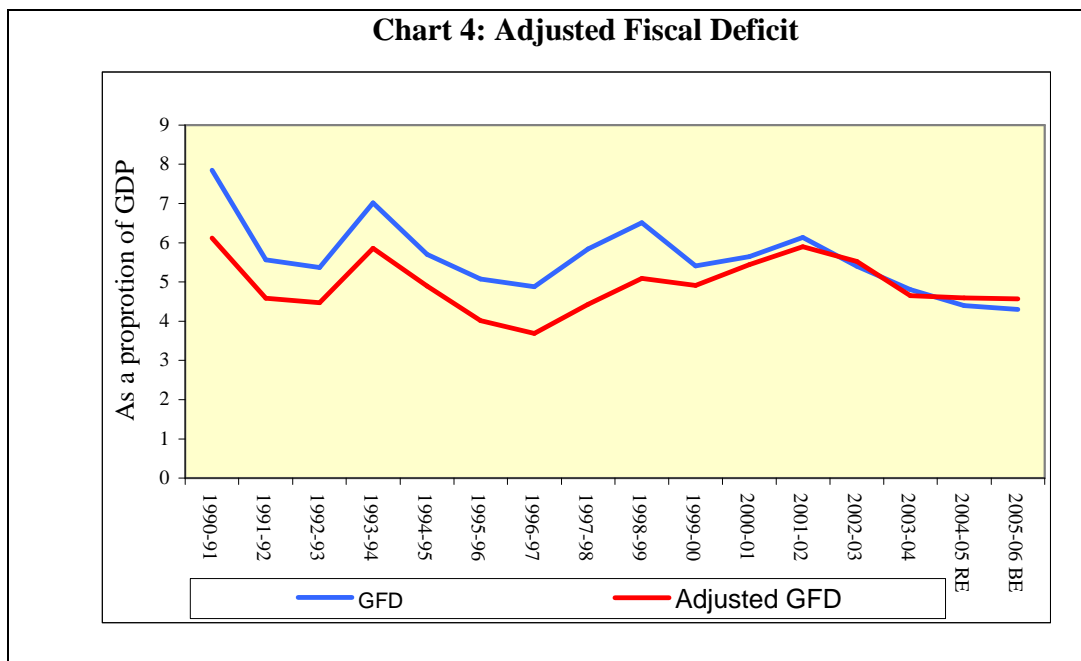
The downward rigidity in revenue expenditure further contributed to the worsening fiscal situation (Appendix Table 4).

The renewed focus on fiscal consolidation consequent upon the enactment of the FRBM legislation has enabled reduction in the key deficit indicators in recent years. The apparent improvement in the gross fiscal deficit (GFD) of the Centre in the revised estimates for 2004-05 at 4.5 per cent of GDP from 7.8 per cent in 1990-91 is often seen as an impressive indicator of the extent of fiscal consolidation achieved since the onset of economic reforms in the beginning of 1990s. While this level of consolidation appears to be considerable, an assessment of the *actual* fiscal consolidation achieved needs to be made comparing like with the like.

This requires taking into account three major policy decisions that have had an impact on the magnitude of the Central Government's fiscal deficit. First, the change in the accounting treatment of small savings consequent upon the creation of National Small Savings Fund (NSSF) in April 1999. As a result of this policy decision, loans extended to States against Small Savings collections no longer formed a part of Centre's expenditure and hence were not taken into consideration for calculating the Centre's fiscal deficit. Second, the withdrawal of budgetary support in the form of Plan Loans for the States from 2005-06 on the basis of the recommendation of the Twelfth Finance Commission. This amounted to shifting the burden of raising resources from the market to the State Governments. Third, the non-recognition of disinvestment proceeds as budgetary receipts since 2005-06 would also affect the magnitude of GFD. The real progress in fiscal consolidation would have to be evaluated only after adjusting for these developments.

In order to make the GFD series consistent, the adjusted GFD has been computed, the results of which are presented in Chart 4. As can be seen, the magnitude of fiscal consolidation turns out to be far less significant. Illustratively, the fiscal correction works out to be 1.5 percentage points of

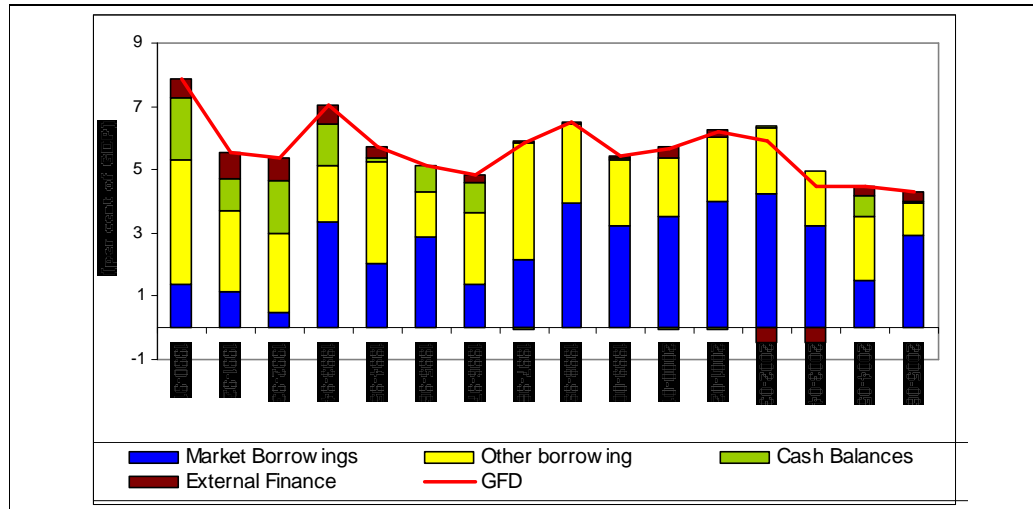
GDP in respect of adjusted GFD as compared with 3.6 percentage points in respect of GFD between 1990-91 and 2005-06.



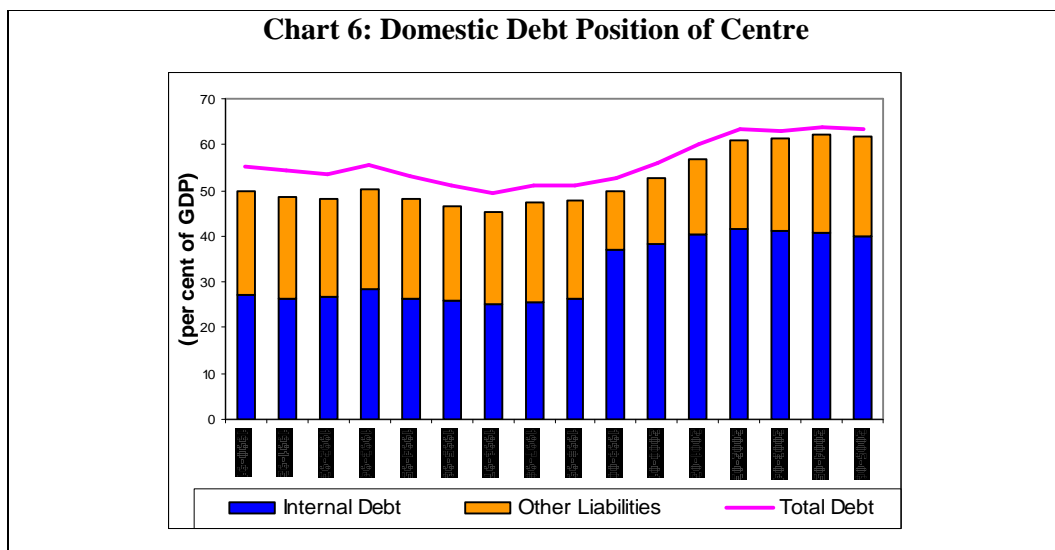
Magnitude of Debt

The worsening of the key deficit indicators has led to a large accumulation of debt. It is pertinent to note that the GFD was financed mainly through domestic borrowings (Chart 5). The total domestic debt in this study includes `internal debt' and `other liabilities' of the Government of India. The internal debt reflects borrowings from the Consolidated Fund of India whereas other liabilities include the borrowings from the Public Account.

Chart 5: Financing of GFD



The domestic debt of Government of India, as percentage of GDP, which had shown an improvement during the early 1990s worsened in the latter half of the decade reflecting the deterioration in the fiscal position. The level of debt, however, has tended to stabilise at around 60 per cent of GDP over the past four years beginning 2002-03 (Chart 6, Appendix Table 5).

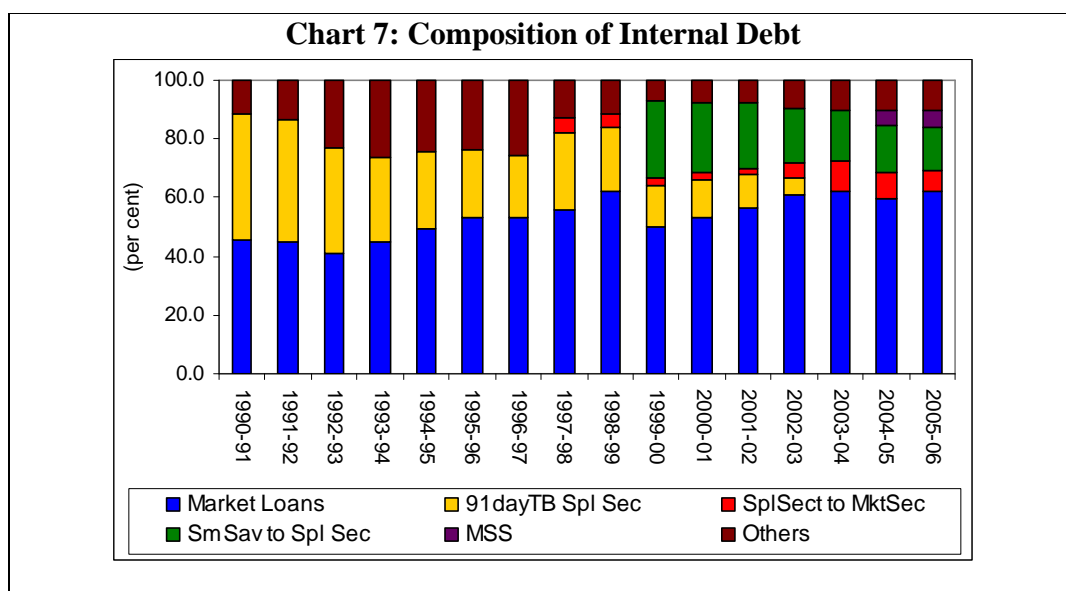


Composition of Debt

There has been a compositional change in the Central Government's debt due to a policy shift in the Union Government's access to funds through

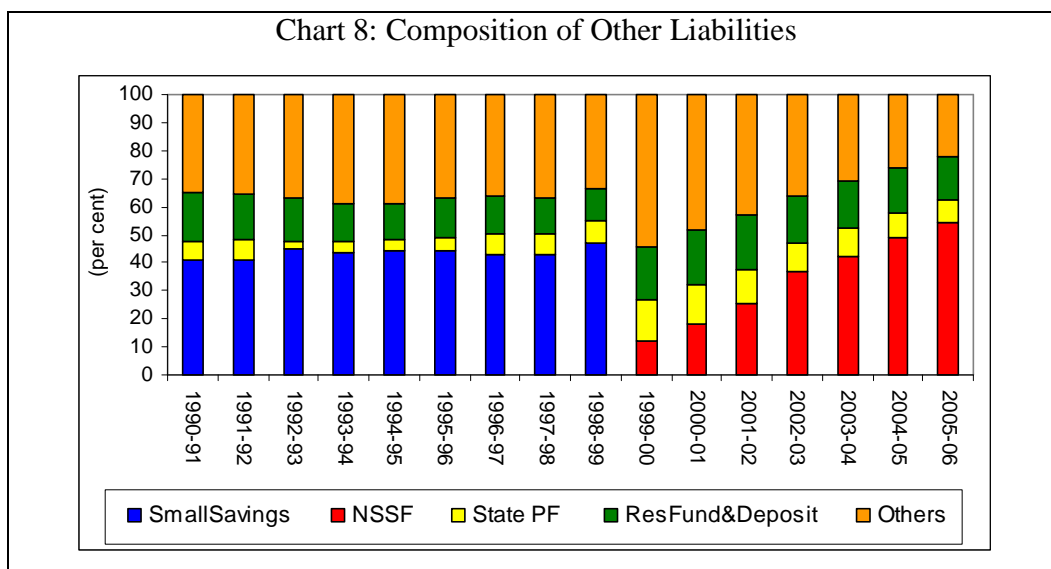
various instruments. There has been a shift towards internal debt in the total debt of the Centre (Chart-7, Appendix Table 6). On an average, the total internal debt during the period 2001-06 is placed at around 41 per cent of GDP- 10 percentage point higher than the previous quinquennium (1995-2000 at around 31 per cent).

Within the internal debt, the composition has changed during the 1990s in favour of market borrowings (Chart 8). With the discontinuance of *ad hoc* Treasury bills financing deficit effective April 1997 and the introduction of Ways and Means Advances to accommodate temporary mismatches in Government finances, the outstanding *ad hoc* Treasury bills as on March 31, 1997, were funded into Special Securities and issued to the Reserve Bank at an interest rate of 4.6 per cent. Furthermore, the Special Securities were converted to marketable securities from time to time since June 1997 at the prevailing interest rates. All such Special Securities were converted to marketable securities in 2003-04. Consequent upon this development, market borrowings as a proportion to GDP more than doubled to around 25 per cent during 2001-06 from the average level prevalent during 1991-96.



In 1999-2000, Government also issued Special Securities for outstanding Small Saving balances consequent to the creation of the National

Small Savings Fund (NSSF). Prior to April 1999, Small Savings collections were reflected in the Public Account of the Union Budget and formed part of 'other liabilities' of the Centre. Interest payments to subscribers and interest receipts from the States were recorded in the revenue account of the Union Budget. Disbursement of loans against Small Savings made to the States and repayment of such loans were recorded in the capital account of the Union Budget. Under the changed accounting system, since April 1999, all Small Savings collections are credited to the National Small Savings Fund (NSSF) and the net amount is invested in Special Securities of the Central and State Governments according to the norms decided by the Central Government from time to time. The interest receipts from the Centre and the States form the income of the Fund, while the interest payments and cost of management of Small Savings are the expenditure of the Fund. The investment made in Central Government securities (against the outstanding balances on March 31, 1999 and from subsequent collections) form a part of the Centre's internal debt from 1999-2000 onwards (Chart 7). Investments made in State Government securities together with the net income/expenditure of the NSSF form part of 'other liabilities' of the Centre since the NSSF remains the liability of the Centre. This is reflected in the changes in the components of 'other liabilities' as a new item since 1999-2000 (Chart 8, Appendix Table 7).



The Central Government and the Reserve Bank have signed a Memorandum of Understanding on Market Stabilisation Scheme on March 25, 2004 which entail issue of dated securities/Treasury bills, up to specified ceiling, in addition to normal market borrowing, to sterilise excess liquidity. These receipts are held in a separate identifiable cash account with the Reserve Bank and not utilised for any purpose other than redemption of dated securities/Treasury bills. The securities also form a part of the internal debt of the Centre.

The shift in the composition debt seen in conjunction with adjustment made for low cost debt (conversion of *ad hoc* Treasury Bills, Treasury Bills, securities issued to international financial institutions and reserve funds and deposits) reveal that during the period 2001-06 the high cost debt on an average would be 54 per cent as against 37 per cent during 1995-2000 (Appendix Table 8).

Fortunately, in India, debt is primarily domestically held, thus ruling out the probability of default or restructuring which would have been required for debt denominated in foreign currency in the eventuality of an external sector crisis. The high level of domestic debt, however, does not rule out the possibility of higher future interest rates. Since financial markets are forward looking it is possible that they may respond to the risk of high levels of borrowings by insisting on higher interest rates to induce investors to hold Government bonds which, in turn, would invariably cause the debt to grow even faster. High debt ratios can, therefore, become unstable even without an increase in the primary deficit.

India's Fiscal Position in a Global Perspective

India today has a dubious distinction of recoding exceptionally high fiscal deficits for the longest period of time than anywhere else in the world (except probably Sri Lanka). A cross-country snapshot provided in Table 1 and Appendix Table 9 bears this out.

According to the latest World Economic Outlook (April 2005) during 2006 India's fiscal deficit for the Centre is estimated at 4.7 per cent as against the average level for developing Asia (2.6 per cent) and for other emerging market and developing countries (1.5 per cent).

In recent years only Turkey, Russia and Japan seem to have had fiscal deficits larger than India. Among other emerging market economies, China (1.7 per cent), Mexico (1.3 per cent) and Brazil (2.7 per cent) are expected to have much lower fiscal deficits than India in 2006. Over the longer haul, however, India seems to be the exception (besides Sri Lanka) in maintaining significantly high deficits for nearly a quarter century.

Table 1: Country wise Overall Budget Deficit

	(per cent of GDP)				
Country	1980	1990	1994	2000	2001
Argentina	-2.6	-0.4	..	-2.3	-3.3
Australia	-1.5	2.0	-2.8	1.4	1.4
Bangladesh	2.5	..	..	-2.8	-2.8
Brazil	-2.2	-5.8	-3.9	-7.8	..
Canada	-3.5	-4.8	-4.4	1.3	1.3
Chile	5.4	0.8	1.6	0.1	-0.3
China	..	-1.9	-1.9	-2.9	-2.9
France	-0.1	-2.1	-5.5	..	..
Germany	..	-1.5	-2.5	-0.9	..
India	-6.5	-7.6	-6.5	-5.2	-4.7
Indonesia	-2.3	0.4	0.6	-1.1	-1.2
Italy	-10.7	-10.2	-10.5	-1.6	-1.6
Japan	-7.0	-1.5	-1.5	-6.9	-6.3
Korea Rep.	-2.2	-0.7	0.3	..	..
Malaysia	-6.0	-2.0	3.9	..	..
Mexico	-3.0	-2.5	..	-1.3	-1.3
Myanmar	1.2	-5.1	-3.6	-3.4	-3.4
New Zealand	-6.7	4.0	0.8	-0.3	0.3
Pakistan	-5.7	-5.4	-6.9	-5.5	-4.7
Peru	-2.4	-8.1	3.0	-1.8	-1.8

Philippines	-1.4	-3.5	-1.5	-4.1	-4
Russian Federation	..	..	-10.5	3.9	3.4
South Africa	-2.3	-4.1	-6.2	-2.2	-1
Sri Lanka	-18.3	-7.8	-8.5	-9.5	-9.8
Thailand	-4.9	4.6	1.8	-3.0	-2.8
Turkey	-3.1	-3.0	-3.9	-11.4	-19.6
United Kingdom	-4.6	0.6	-6.6	0.0	0.0
United States	-2.8	-3.8	-3.0	2.4	1.3
Average	-3.6	-2.7	-3.1	-1.9	-2.6

Source : World Development Indicators, World Bank.

High fiscal deficits in India have spilled over to domestic debt. In terms of debt to GDP ratio, India's position is higher than most of the countries. Table 2 provides some cross country data on debt-GDP ratio which show, as expected, India as having one of the highest debt-GDP ratio.

Table 2: Country wise Debt-GDP Ratio of the Central Government

(per cent of GDP)

Country	1990	1995	2000	2001	2002	2003
1	2	3	4	5	6	7
Australia	..	..	29.2	27.1	25.6	24.7
Bangladesh	..	..	..	36.2	36.7	36.2
Canada	66.4	79.5	60.9	58.7	55.4	56.4
Chile	47.2	19.5	13.9	15.6	15.7	..
China	6.5	6.5	..	..	..	..
Germany	43.4	71.6	..	..	..	..
India	51.4	48.2	56.3	66.3	63.2	64.5
Indonesia	42.4	30.8	..	..	..	..
Japan	54.5	..	..	..	..	..
Korea Rep.	8.0	7.9	..	..	..	..
Malaysia	79.5	41.1	..	..	..	..
Mexico	46.4	40.8	23.2	..	..	..
Myanmar	46.4	40.8	23.2	..	..	..
New Zealand	..	..	..	..	34.2	50.5
Pakistan	78.8	..	74.7	..	..	..
Peru	190.1	51.0	..	..	..	..
Philippines	51.3	61.1	52.9	59.0	59.3	70.8
Russian Federation	..	..	..	49.0	41.3	..
South Africa	36.5	51.0	47.0	46.8	41.3	39.1
Sri Lanka	96.6	94.6	96.9	103.2	105.5	..
Thailand	..	..	..	..	..	28.8
Turkey	30.2	35.8	..	..	..	..
United Kingdom	..	..	48.9	..	..	..
United States	..	..	..	33.0	34.9	36.9

III. Fiscal Sustainability: A Survey of Literature

Sustainability is a term that has been used with increasing frequency in the academic literature and recent multilateral policy discussions, but with different connotations under different circumstances (Balassone and Franco, 2000, Chalk and Hemming, 2000). Traditionally, fiscal sustainability has been assessed in terms of indicator analysis. A large and growing research effort has been directed towards developing indicators or summary measures of sustainability and assessing the fiscal policy with the help of these indicators. This framework, first developed by Domar (1944), states that a necessary condition for sustainability is that growth rate of income must exceed the interest rate. More recently, Buitier (1985) suggested sustainable policy as one, which is capable of keeping the ratio of public sector net worth to output at its current level. Subsequently, Blanchard (1990) provided two conditions for sustainability: a) ratio of debt to GNP should eventually converge back to its initial level; and b) the present discounted value of the ratio of primary deficits to GNP should be equal to the negative of the current level of debt to GNP.

The rules for sustainability are assumed to convey the same connotation if one examines sustainable level of public debt in terms of stable long run equilibrium path. Government solvency is a necessary but not sufficient condition for fiscal sustainability. In the absence of accompanying assumption of private sector savings and investment behaviour, the application of sustainability condition assumes that the projected paths of primary fiscal balance, interest rate and economic growth are independent. Furthermore, the achievement of fiscal sustainability need not imply optimality of fiscal balances. Some of the important research efforts relating to sustainability of deficit and debt are: Bispham (1987), Blanchard (1990), Chouraqui *et al.* (1990), Horne (1991), Hamilton and Flavin (1986), Haque and Montiel (1992), Masson (1985), Spaventa (1987) and Zee (1988).

Of late, theoretical literature has focused on whether current fiscal policy can be continued into the future without jeopardising stability and growth,

which does not necessarily imply that debt has to be non-increasing. In this context, the literature emphasises that in order to avoid ambiguity and confusion, the rules for *sustainability, stability, solvency and optimality* should be clearly defined. The Government's *inter-temporal or the present value budget constraint* is the central theme of the research on sustainability. According to the inter-temporal budget constraint, the present value of revenues must be equal to the present value of spending including interest on the public debt *plus* repayment of the debt itself.

In order to work out the sustainable level of deficit, a sustainability rule was defined and developed by Blanchard (1990) and by Chouraqui *et al.* (1990). According to Blanchard-Chouraqui sustainability condition, the sustainable rate of revenues (non-interest) should be equal to the annuity value of non-interest expenditure plus the interest rate net of growth times the initial level of debt. Subsequently, this approach has been termed as Tax Gap indicator approach (Chalk and Hemming, 2000).

The sustainability indicators may be backward looking or forward looking depending on the translation and operationalisation of inter-temporal budget constraint in the *ex ante* and *ex post* sense (Blanchard, 1990). The *ex post* analysis explains the indicators of sustainability with a backward looking approach while the analysis on the *ex ante* basis pertains to forward looking indicators. The backward looking indicators help to evaluate a fiscal consolidation programme, while the forward looking indicators are useful in assessing the sustainability over medium term and long-term, relative to a chosen base year. Sometimes a distinction is made between *strong and weak condition of sustainability* (Quintos, 1995 and Fernandez *et al.*, 2000). The strong condition corresponds to stationarity of the debt process while weak condition requires that the growth rate of debt to be lower than the growth rate of the economy.

Studies in Indian Context

In the Indian context, analysis of fiscal sustainability assumed importance during the late 1980s, with sharp fiscal deterioration both at national as well as sub-national levels. Accordingly, a large body of literature has emerged on the subject.

The existing literature on Government finances in India broadly discusses three aspects, viz., a) concept, definition and measurement of deficit and debt, b) assessment of sustainability, and macroeconomic impact. It is pertinent to note that apart from the contributions from the individual researchers, there has also been substantial research work contributed by the Reserve Bank of India on the subject.

Concept, definition and measurement of deficit and debt

Researchers and analysts differ with the official definition of debt on the ground that this definition is not meaningful in economic sense. Some of the contributions in this regard are Seshan (1987), Rangarajan, Basu, Jadhav (1989), Rajaraman and Mukhopadhyay (2000), Rangarajan and Srivastava (2003). Seshan (1987) suggested a concept of net debt which excluded certain items like, non-interest and non-negotiable securities issued to IMF and reserve funds which are only inter-governmental debts from the gross debt as presented in the budget documents. Rangarajan, Basu and Jadhav (1989) suggested netting out of all deposits, in addition to the adjustments suggested by Seshan (1987) to derive the net debt of the Government. According to the authors, the net debt thus derived conceptually corresponds to the net primary deficit and is more meaningful in the context of fiscal sustainability. Rajaraman and Mukhopadhyay (2000) defined public debt as the deemed face value of the accumulated stock of government non-monetary financial liabilities. In other words, they emphasised on the public debt not owned by the Reserve Bank.

The concept and measurement of deficit in Indian context has evolved over a period of time. The use of a single measure of budget deficit to assess the impact of fiscal policy has been in vogue till the late 1980s. Rangarajan, Basu and Jadhav (1989) for the first time conceptualized multiple deficit

indicators. Pattnaik (1996 and 2000) developed a time series data since 1950-51 extending Rangarajan *et al.* (1989). Rangarajan *et al.* (2003) have recently pointed out that the official figures of fiscal deficit show discrepancies, as the non-cash transactions are not included.

Assessment of sustainability

Seshan (1987) was (probably) the first one to draw a pointed attention to the possibility of domestic debt in India reaching an unacceptably high level in the none too distant future. Subsequently, the Report of the Comptroller and Auditor General (CAG) of India (1988) also warned against “the alarming growth in domestic debt”. These early studies, based on simple trend analysis, were criticised by Rangarajan, Basu and Jadhav (1989), on the grounds that they lacked “analytical constructs” behind their findings. That study which is truly a “*locus classicus*” on debt sustainability analysis in the Indian context called for a comprehensive and much deeper analysis on measurement of budget deficit and debt. In their pioneering work, the authors examined the dynamic nexus between the two. Using data for the 1970s and the 1980s, the authors simulated two alternative scenarios for financing the deficit: a debt-financing scenario and a monetary-financing scenario. Under the debt-financing scenario, they concluded that “the higher interest burden may invariably lead to a squeeze on budgetary capital outlays, thereby stifling economic growth”. Under the monetary-financing scenario they concluded, “resorting to monetary financing is likely to set in motion a vicious circle of large deficit, higher monetary financing, greater inflation leading again to a larger deficit”.

Chelliah (1991) in his paper demonstrated that maintaining the primary deficit even at a level of 3.5 per cent then was unsustainable because this would raise the debt-to-GDP ratio to 77.4 per cent in 2000/01 from 60.2 per cent in 1989-90 and deficit to GDP ratio to nearly 10 per cent. Interest payments would then absorb 6.4 per cent of GDP, casting an unbearable burden on the budget.

Buiter and Patel (1992), using annual data for 18 years (1970-71 to 1987-88), demonstrated with four alternative interest rates that discounted public debt in India is non-stationary. They pointed out that without a sharp reversal of the primary deficit to a primary surplus, avoiding repudiation or default would require the mobilization of large seignorage or inflation tax.

Following the Tax Gap approach developed by Blanchard (1990), Chouraqui *et al.* (1990), an attempt was made in Pattnaik (1996) to assess the sustainability of Central Government finances. The empirical findings in this paper reveal that under a medium-term perspective, the fiscal sustainability requires that the debt/GDP ratio be brought down to 50 per cent by the end of fiscal 2000 from the 1996-97 level of 54 per cent. This was possible by gradual scaling down of the GFD to about 3.9 per cent of GDP by 2002.

Khundrakpam (1998) and Moorthy *et al.* (2000) also found that the Indian public debt was sustainable in terms of Domar's stability condition. This was, however, questioned since the GDP growth rate was compared with call money rate and commercial bank lending rate, which was inappropriate (Jha, 1999). Lahiri and Kanan (2000), Acharya (2001, 2002) and Ahluwalia (2002) also commented upon the unsustainable level of deficit and debt. A recent study by Pinto and Zahir (2004) has observed that without fiscal adjustment, debt/GDP ratio for the General Government Sector would increase to the level of 110 per cent in 2006-07 and with adjustment, this ratio would increase to 92.5 per cent. Correspondingly, the fiscal deficit would rise to 11.4 per cent but with adjustment it would decline to 7 per cent. Pattnaik *et al.* (2004) assessed the sustainability in the context of fiscal rules and concludes that there are evidence of only weak sustainability in India.

Several studies have questioned the efficacy of expansionary fiscal policy (Lahiri and Kannan, 2000, Acharya, 2001, and Srinivasan 2001). In this context, both the size and quality of fiscal adjustment assume critical importance (Reddy, 2001). The Report of the Economic Advisory Council (EAC, 2001) stressed that high fiscal deficits, by raising real interest rates,

crowd out private investment, especially in the context of the Government borrowing being predominantly used to finance revenue deficits. The EAC observed that the existing level of public debt is “too high... and clearly unsustainable”. Ahluwalia (2002) observed that India’s fiscal and debt indicators are comparable to or worse than that of Argentina, Brazil and Turkey - countries which have actually experienced a serious recent macroeconomic crisis. The study, nevertheless, concludes that India is not vulnerable to a repeat of its 1991 fiscal and balance-of-payments (BoP) crisis because of the build up of foreign exchange reserves, capital controls, flexible exchange rate system and widespread public ownership of banks. Pinto and Zahir (2004) argue for further fiscal adjustment to eliminate the threat to sustained growth stemming from the crowding out of public and private investment, and constraints imposed on the domestic financial system by the financing needs of the government budget. While commenting upon India’s recent deficit on capital formation and growth, Feldstein (2004) has observed that if India did not have its current Central Government deficit of some 6 per cent of GDP, the gross rate of capital formation could rise from 24 per cent of GDP to 30 per cent.

Recognising that unsustainable public debt is likely to have a major adverse impact on monetary policy objectives, financial stability and public debt management, Reserve Bank of India in its successive Annual Reports has been advocating fiscal prudence since 1991. The research conducted in the Department of Economic Analysis and Policy (DEAP), and published in their Report on Currency and Finance (RCF), particularly, for the years 1998-99, 2000-01 and 2001-02 has highlighted the issues relating to sustainability of public debt and deficit. The thrust of this analysis was to set out a methodology, to assess sustainability and to recommend policy for achieving fiscal correction. Illustratively, the RCF 1998-99 assessed sustainability of deficit and debt with the help of an indicator analysis. This Report observed that persistence of significant primary and revenue deficits of the Government sectors over the years is a major concern and would lead to an unsustainable accumulation of Government debt. According to the Report, growth in nominal

GDP was lower than the growth in the domestic debt of the Government sector, which may exert pressure on the interest rate and crowd out private investment. In view of this, the Report concluded that the reduction in combined Government debt to a sustainable level in the medium-term horizon, therefore had gained immense relevance. The RCF 2000-01 assessed sustainability of Government debt with the help of unit root tests. These tests showed that discounted series of nominal stock of Government debt remained non-stationary, implying that Government debt continues to be unsustainable. Sustainability of public debt was assessed in terms of Domar stability condition and present-value budget-constraint approach (RCF 2001-02). The Report observed that during the 1990s, except for few occasions, the Domar stability condition was fulfilled. The present value budget constraint approach was tested by the Augmented Dicky-Fuller and Phillips-Perron Unit root tests. Both the unit root tests showed that the discounted series of nominal public debt was non-stationary. The Report therefore, concluded that continuation of current fiscal stance could make public debt of both the Central and State Governments unsustainable unless, corrective measures were undertaken to rein in the fiscal deterioration.

In the above context, it may be mentioned that the RBI Annual Reports 2000-01 and 2001-02 have set out a policy prescription for further fiscal consolidation. According to these Reports, the path of durable fiscal consolidation is through fiscal empowerment, *i.e.*, by expanding the scope and size strategy based on revenue maximization would also provide the necessary flexibility to shift the pattern of expenditures and redirect them productively. Revenue maximization requires that the tax system be reformed through widening the tax base, simplification of tax rules, review of exemptions/incentives and strict tax compliance.

IV. Assessment of Fiscal Sustainability

Sustainability of budget deficit is essentially about good house keeping by the Government. It gives a correct picture whether Government is in a position to continue the on going fiscal policy or not, and if it continues the prevailing fiscal stance, what is the extent of fiscal malaise it would possibly generate in the economy; and if it does'nt, what is the extent of fiscal correction that would be necessary. An important precondition for sustainability of fiscal policy is that Governments should have their revenues cover expenditures and where they do not, returns from investment should cover amortisation costs. The sustainability of Government deficits and domestic debt primarily depends upon the size and nature of resource mobilisation as well as the disposition of public expenditure.

Against the above backdrop, following the conventional wisdom, as alluded to earlier, three distinct approaches *viz.*, Domar Stability Condition, Sustainability Indicators and Present Value Budget Constraint to assess the sustainability of fiscal policy have been framed and are set out in Appendix I.

IV.1 Domar debt stability condition

According to the Domar stability condition, if the rate of growth of the economy is higher than the rate of interest the debt to GDP ratio stabilises. Domar stability condition has been tested and the results are set out in Table 3.

Table 3: Domar Condition of Debt Sustainability

Year	Y	R	$R(ML)$
1990-91	16.65	9.64	11.41
1991-92	14.85	10.03	11.78
1992-93	14.58	10.44	12.46
1993-94	14.81	10.99	12.63
1994-95	17.87	11.03	11.90
1995-96	17.30	10.98	13.75
1996-97	15.17	11.47	13.69
1997-98	11.28	13.98	12.01
1998-99	14.35	14.24	11.86
1999-00	11.25	14.51	11.77
2000-01	7.88	11.14	10.95
2001-02	8.73	10.80	9.44
2002-03	8.42	10.41	7.34
2003-04	12.04	9.87	5.71
2004-05 RE	12.63	9.06	6.11
2005-06 BE	13.07	8.71	7.32*

* - Central Government market Borrowings raised upto May 24, 2005.

Note: Average interest rate for the total debt (R) is calculated as a ratio of interest payments to the previous year's total outstanding liability. $R(ML)$ is the weighted average rate on current loans. The series Y gives the growth rate of GDP at current prices

The movements in the average interest rates *vis-à-vis* nominal GDP growth reflect that the Domar stability condition was not fulfilled for five years since 1991. In recent years, however, the rates on market related borrowings have come down and are lower than the nominal GDP growth rate. These developments confirm weak sustainability condition in terms of stability of debt to GDP ratio.

It is pertinent to note that mere stabilization of the debt-GDP ratio is not a sufficient condition for fiscal stability if the level at which the ratio is stabilised is already high. It implies that to stabilise debt-GDP ratio, *inter alia*, adequate primary surplus both at aggregate level as well as in revenue account should be generated.

Sustainability indicators

As mentioned earlier, the contemporary literature defines sustainability in terms of necessary and sufficient conditions. The necessary condition is akin to the Domar stability condition explained above. The sufficient condition explains that the debt/GDP ratio stability may not serve as an appropriate indicator of sustainability. If rate of interest exceeds growth rate of the economy, even with primary balance the interest burden on the existing debt may be translated into a perpetual enlargement in debt/GDP ratio. In such a scenario adequate primary surplus is required to offset the gap between rate of interest and rate of growth of the economy and to stabilise debt/GDP ratio. Taking into account the above necessary and sufficient conditions as also a few other budgetary parameters, a host of alternate indicators have been designed to assess fiscal sustainability of the Central Government (Appendix 1). The empirical results are presented in Table 4.

Table 4: Fiscal Sustainability of Centre: Indicator Analysis

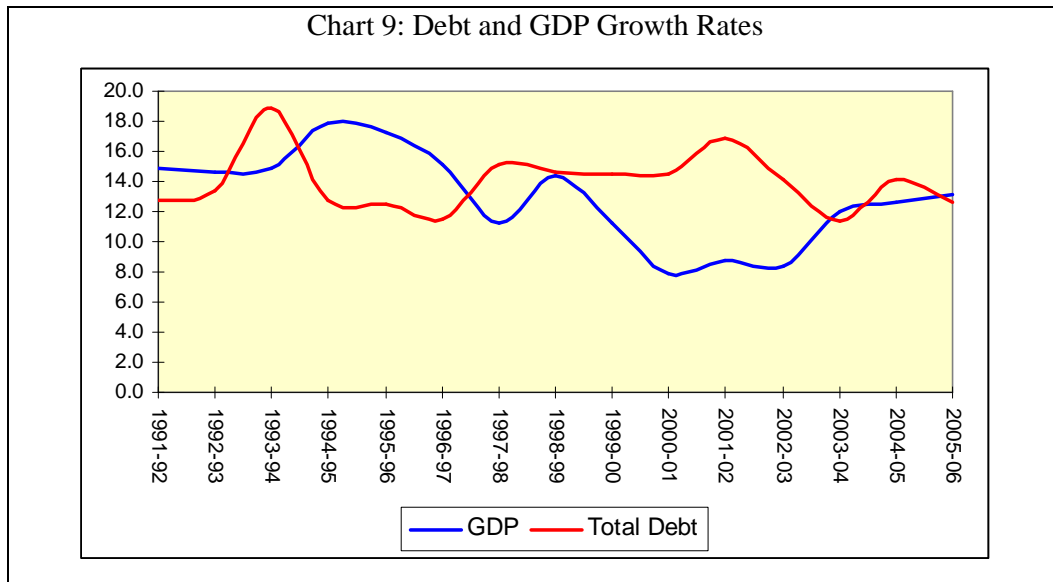
(per cent)

	Indicators	Symbolic representation	1991-92 to 1995-96	1996-97 to 2000-01	2001-02 to 2005-06
	1	2	3	4	5
1	Rate of nominal growth of GDP (Y) should be more than rate of growth of debt (D)	\underline{Y}	15.88	11.99	10.98
		D	14.39	15.14	11.04
		$Y - D > 0$	1.49	-3.15	-0.06
2	Real output growth (y) should be higher than real interest rate (r)	y	5.38	5.92	6.29*
		r	2.92	8.60	5.33
		$y - r > 0$	2.46	-2.68	0.96
3 (a)	Primary balance (PB) should be in surplus	$PB / GDP > 0$	-1.53	-1.16	-0.69
3 (b)	Net Primary balance (NPB) should be in surplus	$NPB / GDP > 0$	-1.57	-1.54	-1.66
3 (c)	Primary revenue balance (PRB) should be in surplus and adequate enough to meet interest payments (IP)	$PRB / GDP > 0$	1.34	1.14	0.81
		$PRB / IP = 100$	31.8	25.3	18.5
4 (a)	Proportion of repayments (REP) to Gross Borrowings (TGB) should be falling over time	$REP / TGB \downarrow \downarrow$	16.93	19.62	27.43
4 (b)	Interest payments (IP) and repayments (REP) adjusted for primary revenue surplus (PRS) should not exceed total gross borrowings (TGB)	$\{(IP + REP - PRS) / TGB\} < 1$	1.00	1.02	1.03
4 (c)	Interest Burden defined by interest payments (IP) to GDP ratio should decline over time	$IP / GDP \downarrow \downarrow$	4.21	4.51	4.37
4 (d)	Interest payment as a proportion of revenue expenditure should decline overtime	$IP / RE \downarrow \downarrow$	34.33	36.36	33.44
4 (e)	Interest payment as a proportion of revenue receipts should fall over time	$IP / RR \downarrow \downarrow$	44.94	49.90	46.24
5	Liability (L) should equal Asset (A)	$L - A = 0$	16.3	20.5	28.6
6	Return on Assets (ROA) should equal Cost of Borrowing (COB)	ROA	7.4	9.1	8.9
		COB	10.7	13.1	9.8
		$ROA - COB = 0$	-3.3	-4.0	-0.9

* - Average for 2001-02 to 2004-05.

Indicator 1: Cross Over of GDP and Debt Growth rates

The pressure on sustainability was distinctly evident from the fact the difference between the rate of growth of GDP and that of debt was negative during the period 2001-06 and also during 1996-2001. The continuing increase in debt levels resulted in the phenomenon of cross over of debt growth over GDP growth during the latter part of the 1990s and the present decade so far, except for 2003-04 (Chart 9).



Indicator 2: Stability Condition – Necessary Condition of Sustainability

During the period 1996-2001 on an average the real output growth was lower than the real interest rate reflecting that even the weak sustainability condition was not satisfied. Even during the recent period 2001-06, although the real GDP growth – real interest rate differential was positive, it was marginal at 0.96 per cent. In this context it is important to note that the Public Account borrowings consisting of small savings and provident funds involves additional fiscal burden over and above the interest cost as investors are allowed tax rebate on such investments. If these costs are taken into account the effective cost of borrowing would be higher, thereby negating the achievement of weak sustainability condition.

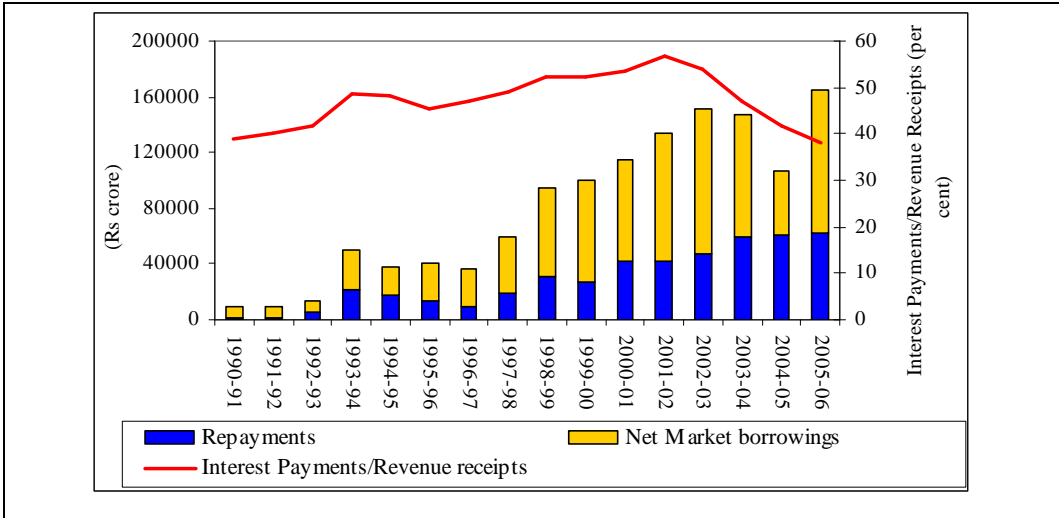
Indicator 3: Sufficient Condition of Sustainability- Adequate primary surplus

The persistence of primary deficit and net primary deficit indicates that the sufficient condition of debt sustainability *i.e.*, generation of adequate primary surplus has not been met throughout the past one decade and half. The primary revenue surplus (PRB) was not only inadequate to meet interest obligations but was also shrinking. For example, during the period 2001-06 less than 20 per cent of the interest payments were financed by such surpluses.

Indicator 4: Debt Service Burden

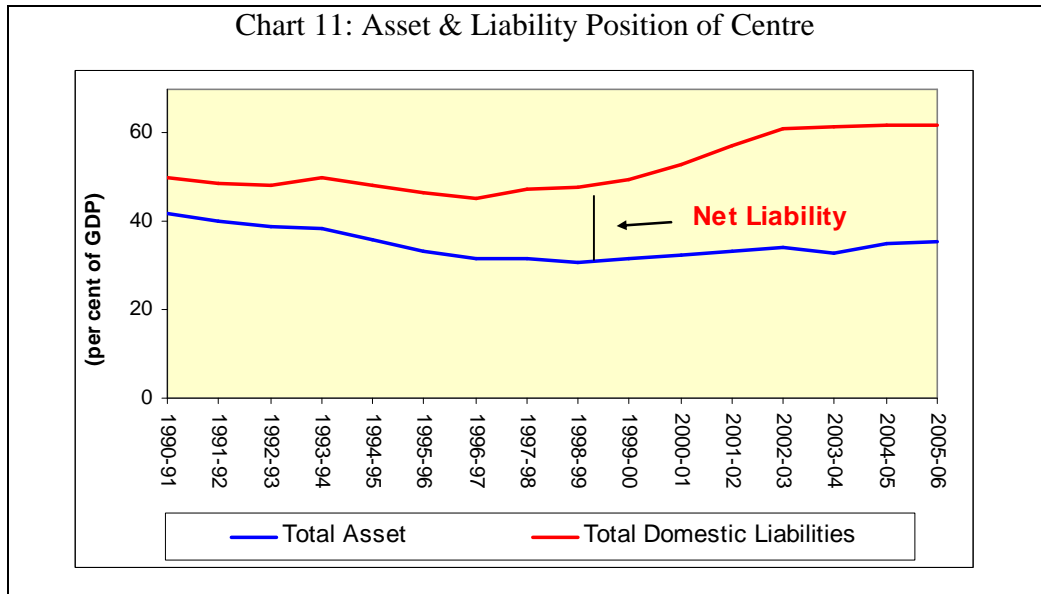
The debt sustainability when assessed in terms of debt service burden presents a serious concern. The repayment obligation to total gross borrowings has shown a rising trend. For example, during the period 2001-06 this ratio has been placed at 27 per cent as against 20 per cent during the period 1996-2001. The debt service burden measured as a ratio of interest payments to revenue receipts during the second half of 1990s had reached as high as 50 per cent. However, in the recent years there has been a decline in interest payments as a proportion of revenue receipts reflecting mainly a steady reduction in the interest cost of the Central Government's market borrowings and improved revenue buoyancy in the recent years. Nevertheless, the proportion remains high at over 46 per cent (Chart 10, Appendix Table 10). The composition of interest payments is set out in Appendix Table 11.

Chart 10: Debt Service Burden of the Centre



Indicator 5: Asset-Liability Position

Debt sustainability needs to be examined from the stand point of end use of resources raised through debt. If the debt is used to create income generating assets, it would enhance debt servicing capabilities. However, in India, there has been an increase in liabilities without matching assets. The average net liabilities (as proportion of GDP) increased to 29 per cent during 2001-06 from 16 per cent in 1991-96 (Chart 11, Appendix Table 12). This signifies there is an increasing use of borrowed funds for current consumption.



Indicator 6: Cost of Borrowing vis-à-vis Return on Assets

An important pre-condition for sustainability of fiscal policy is that revenues should cover expenditures and returns from investment should cover borrowing costs. The borrowing cost in India, however, has been higher than the rate of return on assets. For example, during the past one decade and a half the cost of borrowing ranged between 9.8 per cent (2001-06) and 13.1 per cent (1996-2001) whereas the return on asset ranged between 7.4 per cent (1991-96) and 9.1 (1996-2001) (Appendix Table 13). This implies that even borrowing for capital expenditure may have an impact on the revenue budget if the Government cannot earn adequately on the capital invested.

IV.3 Present Value of Budget Constraint Approach

The present value of budget constraint is one of the measures employed to assess the sustainability by extending the conventional sustainability indicator. Solvency requires that the future primary surpluses should be sufficient to repay the current stock of public debt. According to this approach, the present value (*PV*) of the sum of future primary surpluses should not be less than the current outstanding liabilities of the Government. Testing of the sustainability under this approach involves discounting of nominal stock of government debt retrospectively to a given date with an appropriate discount rate. Thereafter the discounted series is tested for stationarity. If the series is non-stationary it implies the insolvency of the debt.

An attempt has been made to examine the sustainability of domestic debt of the Central Government by performing the unit root tests on the present discounted value of Central Government domestic liabilities (*PVDL*) for the period 1990-91 to 2005-06 for which data are available. The measure of domestic liabilities of the Centre is adjusted for NSSF for the period 1999-2000 to 2005-06. The data are obtained from the Handbook of Statistics on Indian Economy, 2003-04 published by the RBI and Union Budget Documents. The results are presented in Table 5.

Table 5: Unit Root Test Results of PVDL

<u>Variables</u>	<i>ADF</i>	<i>PP</i>
PVDL (Intercept and trend)	- 2.45	-2.27
Δ PVDL (Only intercept)	- 1.40	-1.55

Note: 1. ADF – Augmented Dicky-Fuller Test and PP – Phillips-Perron Test
2. '*' indicates significance at 5 per cent level.

The results of the unit root tests indicate that the null hypothesis of a unit root could not be rejected at 5 per cent level of significance. Compared with the MacKinnon critical value which is most suited to test for unit root in the present context, the null hypothesis of unit root cannot be rejected. Since the series is found to be non-stationary, it may be inferred that the Central Government's domestic debt position may is not sustainable going by this criteria.

V. Implications of Unsustainable Fisc

V.1 Macroeconomic Impact of High Fiscal Deficits

Large fiscal deficit affects economic growth through multiple channels. The effect of high fiscal deficit through interest rate had its theoretical foundations in the neoclassical tradition. This theory propounds that with increase in fiscal deficit there is an increase in aggregate demand which exerts upward pressure on the interest rate. This dampens investment, particularly private investment and economic growth. Another explanation is through savings. The other side of increase in fiscal deficit is fall in Government savings. It may be noted in Indian context that the public sector savings have turned negative since 1998-99. The average public sector saving rate as a proportion of GDP is roughly – 1.4 per cent for the period 1998-99 to 2003-04. These negative savings by the public sector have been holding down the aggregate savings and thus impeding aggregate investment.

Higher fiscal deficit is expected to put upward pressure on the inflation. If the economy is at full-employment level, any increase in fiscal deficit through increase in aggregate demand is bound to be inflationary. Particularly, if the fiscal deficit is to be financed through monetisation, its inflationary impact becomes direct and prominent. In Indian context, the process of monetisation of fiscal deficit was phased out in 1997 with the elimination of issuance of *ad hoc* Treasury bills and activation of the Government securities market through a number of measures including introduction of the auction system and creation of a secondary market. This has weakened the link between fiscal deficit and inflation in recent period.

V.2 Why India did not have a Crisis?

The high fiscal deficit and sharp increase in the size of outstanding liabilities of the Government during past decade and a half did not have any adverse macroeconomic impact as it was witnessed in the late 1980s resulting in a macroeconomic crisis. This has led to the revival of the view that higher

fiscal deficits should not be a matter of much concern. It is argued that fiscal deficits would be inflationary only if the system is at full employment or is characterised by supply bottlenecks in certain sectors. Given the fact that there is excess industrial capacity along with large food stocks, large foreign exchange reserves and low inflation, a monetised deficit is not only non-inflationary, but virtuous from the point of view of growth.

At the first look, the argument appears plausible as it could be observed that the spill-over effect of the high fiscal deficit in the external sector did not occur. However, the period was marked by dampened investment demand from the private sector with recessionary conditions. The overall saving-investment gap was narrowed as a result and this was reflected in low current account deficit. Furthermore, the recessionary conditions coupled with the availability of sizeable forex reserves, large food stocks and downward trend in global prices helped in containing inflationary pressures in the Indian economy. Continuing foreign exchange inflows and the recessionary conditions enabled the Reserve Bank to move to a softer interest rate regime in spite of a rising fiscal deficit. The softer interest rate conditions were also enabled by the efficient coordination of monetary operations with fiscal policy. With a view to enhancing efficiency in the debt management operations, the RBI introduced auction system for the Government market borrowings, eliminated automatic monetisation of the Centre's fiscal deficit by gradually phasing out *ad hoc* Treasury Bills by April 1997 substituted by Ways and Means Advances (WMA) scheme, and judicious management of the Government borrowing programme by undertaking a mix of private placement and open market operations on the basis of the prevailing liquidity conditions. These factors together facilitated the Government raising resources through market at lower cost and in a smooth manner.

The dampened investment demand from the private sector during the second half of the 1990s released pressure on the liquidity in the market. The pressure on liquidity was also moderated by the continuous capital inflows from abroad. The confluence of these factors has enabled a softer interest rate

regime and stability on the external front despite prevalence of high fiscal deficits.

Although it has been possible to avoid adverse macroeconomic impact of high fiscal deficit so far, the favourable supply and demand side conditions prevalent hitherto might reverse. Inflation is returning worldwide, oil prices are soaring high, and interest rates are firming up in most of the economies. These factors are likely to affect the stability on external front prevailing so far. The rising interest rate worldwide may taper capital inflows to India. In addition, the credit pick up from the private sector may build further pressures on liquidity. In such a situation, it becomes imperative that the Government reduce its borrowings requirements so as to avoid any macroeconomic exigencies. Moreover, in the FRBM regime, the RBI would cease to subscribe the primary issuances of the Government securities from April 2006 implying more pressure on liquidity in the market if GFD remains high.

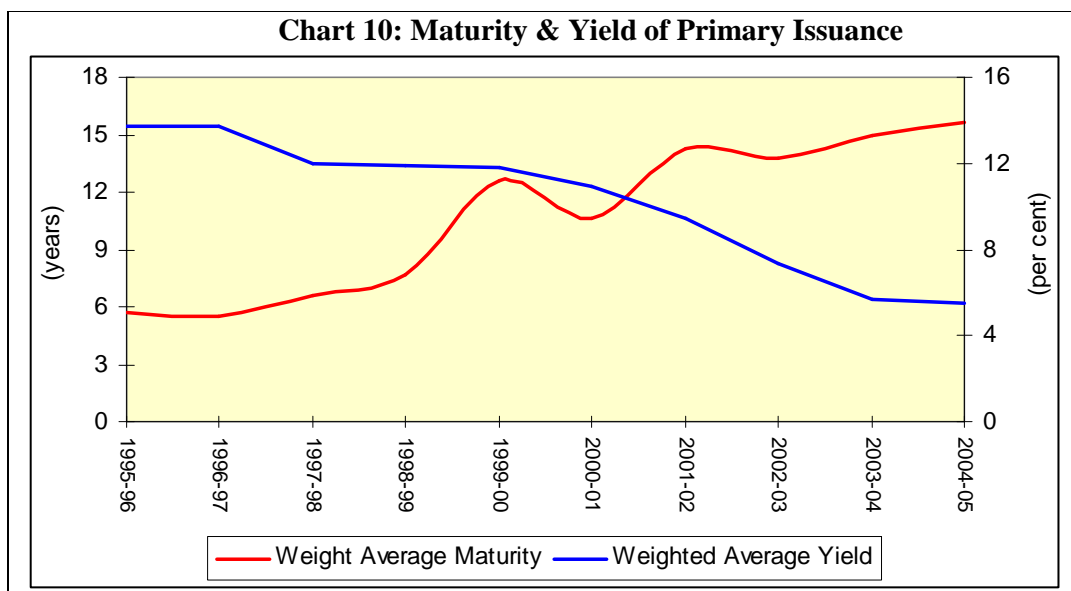
V.3 Debt Management Issues

With high and persistent fiscal deficits, the borrowing requirements of the Centre have remained significantly large. Consequently, the net market borrowings of the Centre which was 1.1 per cent of GDP in 1991-92 increased over the years to 3.0 per cent of GDP in 2005-06. Taking into the increasing order of repayments (Appendix Table 14), gross market borrowings increased 1.4 per cent of GDP in 1991-92 to 4.7 per cent in 2005-06. The short-term component of debt (less than 5 years) as at end-March 2005 accounted for about 27 per cent of total debt (Appendix Table 15).

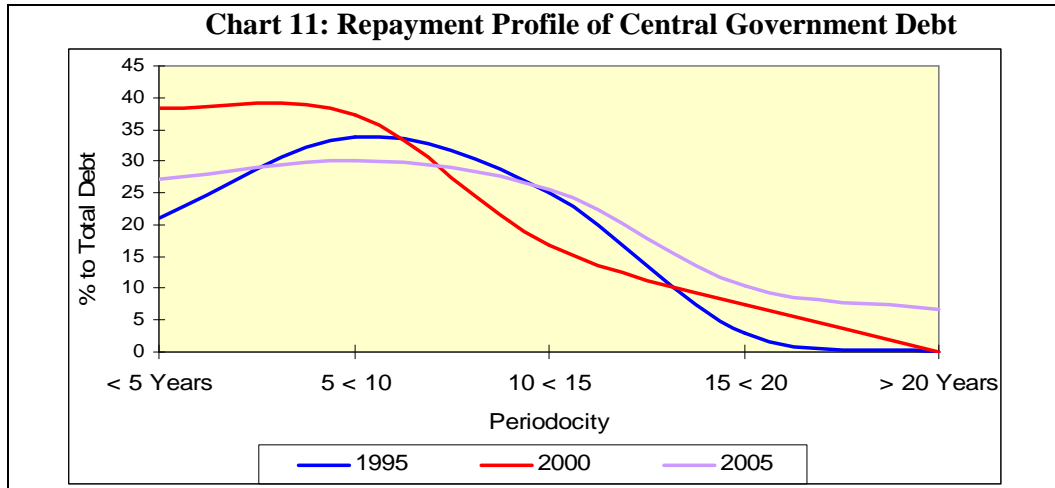
An important aspect of the debt management operations in India has been to minimise the interest cost of market borrowings by devising a suitable maturity structure.

Recognising the problem of frequent roll-over arising due to greater share of short term debt in total debt, debt management operations since 1998-99 have been aimed at lengthening the maturity structure of market debt so as to balance the objectives of interest cost and roll-over. This exercise has

resulted in a gradual reduction in average yield while elongating the average maturity of Central Governments' market loans over time (Chart 10).



The rise in the maturity coupled with the falling yield of the Centre's primary issues points towards the comfort level in the market borrowings of the Centre. The present comfort level provided by the elongation of maturity, however, does not preclude the problem of the bunching of repayments by the Centre in the foreseeable future (Chart 11).



The present level of comfort in putting through the Government's borrowing programme runs the moral hazard risk of complacency. In the emerging global interest rate scenario, this ease in putting through the borrowing programme should not be taken for granted.

Consequent to the FRBM statute of the Reserve Bank withdrawing from the primary issuance of Government securities effective from April 1, 2006 and given that gilt-edged papers have firmed up with Reserve Bank stopping support to the Government borrowing programmes in 2004-05 "chances are (i) that the government loan rates determined by the market forces will reach unreasonably high levels, and (ii) that they will in turn set the pattern for commercial deposits and loan rates which will not be conducive for a healthy growth in the real sector". Moreover, after April 2006, "the Government and the Reserve Bank will be left with no effective devices to contain the financial markets proclivity to push up primary yield rates on Government securities to unrealistically high levels". (EPW, 2005).

V.4 Alignment of Administered and Market Interest Rates

Interest rate deregulation has formed a key component of financial sector reforms. In the money and government securities markets, market forces now determine interest rates to a large extent. However, a substantial portion of the Government's liabilities is in the form of 'other liabilities' where the

interest rate is still administered. The Government has been aiming at aligning administered interest rates progressively with market rates since January 1999. Further, in the Union Budget for 2002-03, the Finance Minister has proposed to implement the recommendation of the Expert Committee to review the system of administered interest rates and other related issues (Chairman: Dr.Y.V.Reddy) relating to benchmarking the administered rate on small savings to secondary market yields of Government securities of corresponding maturity so as to impart flexibility to the interest rate structure of small saving and provident funds. Despite these rationalisation proposals, the administered interest rates on small savings schemes offered by the Government remain higher than the long-term deposit rates of commercial banks.

Apart from the issues relating to the level of nominal interest rates, the tax concessions on these schemes involve sizeable costs to the fisc in the form of foregone revenue. Furthermore, such concessions have an adverse impact on market efficiency in terms of appropriate price discovery. The effective tax-adjusted returns on various schemes do not have systematic relation to the tenor and the risk-free nature of these instruments owing to the sovereign guarantee associated with them. This has had an impact on emergence of an appropriate benchmark in the financial markets. In view of this the Expert Committee recommended the abolition of income tax provisions on small saving schemes to ensure a level playing field in the financial market. The Advisory Committee to Advise on the Administered Interest Rates and Rationalisation of Saving Instruments (Chairman: Dr.Rakesh Mohan) also recommended the market alignment of administered interest rates. The Committee noted that unless the interest rates on small savings are linked to the interest rate on market borrowings of the Central Government, the operations of the National Small Savings Fund (NSSF) will not be sustainable; and the States will have to bear the fiscal stress on account of higher interest rate paid by them to the Central Government. Hence, it becomes imperative to link the interest rates on the small savings to market related rates. In this context, the Committee suggested for a fixed illiquidity premium of 50 basis points over the average benchmark.

The average benchmark will be the two-year weighted average of government securities yield of the corresponding maturity on a calendar year basis, with 0.67 weight to the more recent year and 0.33 weight to the year before. Such a formula would reflect a balance between stability of the benchmark and the current market conditions.

The road ahead would require alignment of the administered interest rates with the evolving market conditions. The societal concerns for senior citizens would need to be addressed separately as is being presently initiated. In this context the Advisory Committee (Chariman: Dr. Rakesh Mohan) recommended that interest rate on small savings instruments could be based on a weighted average yield on the Government securities of the previous two year rather than on the previous year alone.

V.5 Liquidity in Financial Markets

Under the stipulation of the Fiscal Responsibility and Budget Management (FRBM) Act, the Reserve Bank will not subscribe to the primary issues of the Central Government securities from April 2006 onwards. With the absence of the Reserve Bank from the primary market, the option of private placement with the Reserve Bank to contain interest rate expectations would not be available. The Medium Term Fiscal Policy Statement of the Union Budget 2005-06 projects a fiscal deficit of 3.8 per cent of GDP for the year 2006-07 and 3.1 per cent for the year 2007-08. It may be mentioned that the fiscal deficit target set out in the Medium Term Fiscal Policy Statement of the Union Budget for 2004-05 was lower at 3.6 per cent for 2006-07. Inability to meet the revised fiscal targets for 2006-07 would result in a higher borrowing requirement for the Centre, fulfilling of which would depend on the availability of liquidity. Based on internal estimates of supply and demand for funds, the resource gap indicates that there may be pressure on interest rates if the demand for funds from the Government as well as the private sector continues to be buoyant, especially if no further fiscal consolidation takes place (Annex 1). The emphasis, therefore, needs to be in attaining the annual fiscal deficit

target set out under the FRBM to ensure the smooth off-take of the Government's market borrowing programme.

5. Sequencing of Reforms

Country experiences with financial sector reforms exhibit significant diversity, both over time and across countries. The guiding objectives of financial sector reforms has been to improve financial sector efficiency while strengthening financial stability. Stable and efficient financial systems provide the foundation for implementing effective stabilisation policies, successfully stepping up savings, and improving the efficiency of investment allocation, all of which can help in achieving sustainable and higher rates of economic growth.

The rationale for fiscal reforms has been underscored by the general consensus that large and unsustainable budgetary deficits in many developing and transition economies during the 1980s and 1990s contributed to vitiate the overall macroeconomic environment. The persistence of large fiscal deficits and the increasing recourse to market borrowings exerted upward pressures on interest rates and also tended to 'crowd out' private investment, both of which potentially weakened the growth prospects and constrained the benefits of financial reforms. When funding of fiscal deficits is through the creation of primary liquidity, inflationary pressures emerge, again restricting the potential benefit of the reform process. Fiscal correction, on the other hand, by a contraction in government spending, if perceived to be durable, implies a permanent reduction in the future tax burden and thus, generates positive expectations and a more than offsetting increase in private consumption and investment. Effective fiscal policy, thus is crucial to the financial sector reform process.

In several countries, financial sector crises were precipitated by inadequate preparation for financial liberalisation as witnessed in Chile, Indonesia and Mexico. The move towards external sector reforms was rendered fragile and the fisc operated as a drag on the process of liberalisation. On the other hand, some countries, like Bolivia, Chile, Yugoslavia and Poland demonstrate the benefits that can be obtained from co-ordinated fiscal and financial sector reforms. These countries experienced very high rates of inflation during the 1970s and 1980s, primarily emanating from large budget deficits, mounting debt burden and a failed response to external shocks. Adoption of stabilisation measures entailing sharp fiscal and monetary reforms proved successful in containing the inflation rate in these countries.

Fiscal adjustment has also received importance in advanced countries. Fiscal positions of advanced countries have witnessed a perceptible improvement over the 1990s, with many of them attaining a sizable fiscal surplus after nearly fifty years. In fact, Italy achieved a fiscal contraction of as much as 8.6 per cent of GDP during 1990-2001. Even the US achieved a fiscal contraction of 5.1 per cent of GDP during the same period. This improvement has been primarily led by reduction of expenditure, especially in respect of wages, transfers and interest payments. The expenditure adjustment was facilitated, *inter alia*, by reforms in public expenditure management, larger role of the private sector in the provision of public goods, introduction of user charges, liberalising public procurement and voucher-based distribution of merit goods and services. The declining fiscal deficits have made a perceptible impact on the levels of public debt in advanced countries, and consequently on improving their fundamentals.

It follows from this cross-country experience that apart from the direct adverse effect of large fiscal deficit and domestic debt, there are serious issues regarding the sequencing of overall reforms in India. The persistence of large fiscal deficit is a drag – a serious impediment, to other reforms especially the financial sector reforms. The need for refocusing on the fiscal correction thus needs no further emphasis.

