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# Fiscal Sustainability of Debt of States

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**Report**  
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## Executive Summary

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1. We were asked by the Twelfth Finance Commission to examine the debt position of the states of India and the question of its sustainability against the background of growing concern over the fiscal performance of the states. The terms of reference of the study are annexed to this summary.
2. In addressing the question of debt sustainability, we address two fundamental questions: (i) How do we define debt? and (ii) How do we measure the fiscal stress? A state government resorts to different sources of capital receipts to bridge its fiscal gap. We notice that there is a disparity in the items included under 'debt' even among important government bodies like Reserve Bank of India, Comptroller and Accountant General of India and the state governments. We emerge with our own definition of debt grounded on the basis that the debt so defined should satisfy the Domar equation i.e. the increase in debt in a particular year should equal the difference between fiscal deficit and liquidity-creating sources of finance. Debt series so generated (see Appendix- A) has been the basis of our analyses and recommendations.
3. Regarding the fiscal stress, the most common indicator of fiscal sustainability at the national level is the behaviour of debt-income ratio. Extending this measure to the state level, we first attempt to convert the tolerable Debt-GDP target given by the 11<sup>th</sup> Finance Commission to a comparable uniform target at the state level. We suggest that such a uniform target for the Debt-GSDP ratio should be 35 percent.
4. In addressing the question of debt sustainability, we have followed two approaches, each of which is contained in a separate chapter. In the first approach, outlined in *Chapter 1*, we follow the conventional measure of using the debt to GSDP ratio and assessing sustainability in relation to a uniform target for the ratio for all states. We use a target debt to GSDP ratio of 35 per cent, the basis for which has been explained in *Chapter 1*. In the second approach, spelt out in *Chapter 2*, we use the ratio of debt to state's own revenue (D/SOR) and

sustainability is judged by whether this ratio can show a declining trend based on plausible assumptions about fiscal parameters. We also suggest a tolerable limit on interest payment to revenue receipts (IP/RR) ratio of 20% for all states implying state-specific and not a uniform D/SOR ratio.

5. As spelt out in Chapter 1, the states' debt position shows a deterioration in recent years judged by a variety of parameters. Using a model that decomposes the changes in fiscal deficit into growth and fiscal behaviour components, we find that recent fiscal behaviour is unsustainable. This implies that, if such behaviour were to continue, debt sustainability would call for growth rates that are not within the realm of feasibility. Next, using optimistic and pessimistic assumptions about future growth, we estimate the degree of fiscal adjustment required in various states. We find that in roughly half of the 25 states covered in this study, the adjustment required is not significant and hence possible. In other words, based on the traditional measure, our finding is that there is a debt problem of credible magnitude only in about half the states.
6. In Chapter 2, using a more refined and theoretically acceptable measure of D/SOR ratio, we examine whether a given state can correct its problem of fiscal debt in relation to the performance it has itself achieved in the recent past. Taking optimistic and trend values of parameters that impinge on the D/SOR ratio, we are able to determine whether the ratio in a given state is poised to decline or increase. Where the ratio shows a declining trend, we believe the fiscal problem is amenable to correction over time with minimal intervention. Going by this approach, under optimistic scenario, no state would have the problem of unsustainable debt, but there could be a serious problem of intolerable debt in the long-run equilibrium in two states where the IP/RR ratio remains above the tolerable limit. In these calculations, we have assumed interest rates to remain constant over time.
7. In *Chapter 3*, we examine cases of 6 selected states. The cases and our discussions with state officials have brought out some relevant issues needing attention and action. We consider fiscal projections for these states upto the year 2009-10 on some realistically optimistic assumptions. We see that although all

states have sustainable debt, Gujarat and Kerala will need restructuring of their debt in order to be within tolerable limits by 2009-10. The problem of servicing the off-budget borrowings through SPVs may be pertinent for Gujarat, Maharashtra and Orissa. Even for UP, contingent liabilities fall in the high-risk category. Thus, reduction in effective interest rates is important and relevant for all the states.

8. In *Chapter 4*, based on our findings in the previous analyses, including state-specific factors noticed for the selected six states, we then generate four scenarios for all the 15 states in the non special category (NSC) states and two scenarios for the 10 states in the special category (SC) states. We find that under optimistic assumptions, problem of intolerable debt would exist in 2009-10 only in Gujarat, Kerala, Rajasthan and West Bengal among NSC states and HP and Tripura among the SC states. In Bihar, Maharashtra, Punjab and U.P, we expect the problem to be solved in normal course when the effective interest rates decline marginally by around 40 basis points from the current year.
9. Our suggestions for correcting fiscal situation in these states in particular, and all other states in general, are as follows:
  - i. At the outset, we suggest linking of the transfer of resources (tax and grants) from the centre to states' own revenue generation, subject to their own account primary deficit (PDOA). It will go a long way towards solving the problem of fiscal profligacy and indiscipline at the state level and hence alleviating their debt situation in the medium to long term. Once the Finance Commission determines the level of transfers to state on whatever basis, the ratio to SOR stands determined and must form the basis of an incentive scheme. This ratio can be broken up into a fixed number and a variable component varying negatively with the growth of the state's primary expenditure ( $g_{PE}$ ) and positively with growth of SOR ( $g_{SOR}$ ). A suggested formula for the  $j^{\text{th}}$  state is:

$$(TrC / SOR)_j = \alpha_j + \beta_j \left( g_{SOR} - \bar{g}_{SOR} \right)_j - \gamma_j \left( g_{PE} - \bar{g}_{PE} \right)_j$$

where  $\gamma_j > \beta_j > 0$  for all  $j$ (i.e. states); and  $\alpha_j$  would be decided by the F.C. based on its horizontal distribution criteria. As per our exercise in *Chapter 3*, we suggest the targets as  $\bar{g}_{SOR} = 13.5\%$  for NSC states and 12% for SC states, and  $\bar{g}_{PE} = 10\%$  for NSC states and 11% for SC states. *Chapter 4* gives further details about the formula and its implications.

- ii. States need to find some judicious combinations of the money financed deficit (MFD), miscellaneous capital receipts (MCR) and recoveries of loans & advances (RLA), to generate critical resources on a regular basis at least in the medium term to emerge from a fiscally bad condition.
- iii. We recommend considering all high interest loans given for calamity/disaster relief separately and either write them off fully or partially or give a five-year moratorium, apart from reducing interest rates on them.
- iv. Four states – Gujarat, Kerala, Rajasthan and Tripura need restructuring of about 15% of their debt through five-year moratorium on interest payments. For West Bengal and Himachal Pradesh, the proportion of debt has to be 30% and 50 % respectively. All this should be subject to strict adherence to the achievement of  $G_{SOR}$  and  $G_{PE}$  targets of 13.5% and 10% p.a. respectively, failing which, the interest should be added back with penal interest of additional 2%.
- v. Since loans from the centre have the highest effective interest rate compared to other sources of funds in a state, we recommend at least 200 basis points reduction in the effective interest rate charged by the centre. Over a five-year period, it should be brought in line with the market rate of interest.
- vi. We recommend that the existing cap on market borrowing by states should be reviewed and more freedom should be given to states based on their credit rating and overall economic performance.
- vii. Regarding the small savings at higher interest cost, primarily to encourage savings, the centre should give the option to states whether or not to retain these savings. The centre can, moreover, supply excess of small savings

from one state to the other state demanding such savings. Alternatively, the centre should bear the difference in the interest cost on these savings and the market rate of interest.

- viii. We recommend that the central government should facilitate the prepayment negotiations of loans by state governments to the public sector financial institutions since they carry a very high effective interest rate due to their loan vintage.
  - ix. The Cabinet Committee on Economic Affairs had approved a proposal for rolling over loans for important projects. We recommend an immediate decision to implement it since it will reduce the interest cost for states.
  - x. We recommend creation of a VRS fund with contributions from the centre and states so that the contributing states can get some relief in meeting their requirements to implement the VRS schemes that would reduce their expenditure.
  - xi. The debt problem of states can be alleviated by increasing vertical distribution of resources. This can be partially achieved by avoiding the huge duplication of resources between the centre and the states on various schemes.
10. Finally, we must make it explicit that all our scenario calculations and hence specific recommendations depend critically on our assumption about transfers from the centre (TrC). If the 12<sup>th</sup> FC alters the horizontal distribution (which it will), the scenarios will have to be recalculated, and accordingly our specific recommendations would also change. What we have been able to show here is that the problem of fiscal debt of states in the country is not intractable and can be satisfactorily resolved by 2009-10 if our general recommendations are implemented with the specific cases identified and tackled the way we have suggested

**ANNEX TO  
EXECUTIVE SUMMARY**

**Terms of Reference for the Study on  
Fiscal Sustainability of Debt of States**

The study will

1. Develop a suitable methodology for assessing the fiscal sustainability of debt of the States in India and identifying major factors that have led to the deterioration of the debt and profile of fiscal imbalance in the recent past.
2. Undertake case studies of six states by way of illustration: The six states are Maharashtra, Gujarat, Uttar Pradesh, Assam, Orissa and Kerala. In each case, the fiscal sustainability of debt is examined and state specific factors leading to the fiscal deterioration identified.
3. The study will also make projections for each of the six States, over a medium term horizon of five-years:
  - a. First for a 'base line' scenario assuming that current policies are maintained. The base line scenario will provide details for key variables, real as well as fiscal such as output growth, investment, government revenue, government expenditure etc.
  - b. Next, the base line projections of the debt and possible financing of the fiscal deficit are used for assessing the debt sustainability along with other criteria.
  - c. If the debt dynamics look unfavourable, then an alternative adjustment scenario is prepared that typically defines a path for the debt ratio resulting in stability over the medium-term and favourable development in macroeconomic indicators.
4. Using the case studies, the study will suggest a model programme of reforms and policy inventions for resolving the debt related issues in the light of the case studies.

# CHAPTER 1

## Overview of Trends in State Finances

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### I. Introduction

- 1.1 India's fiscal deficit has been a source of considerable concern throughout the period of accelerated economic reforms from 1991. The literature is replete with references to the combined fiscal deficit of the centre and the states, said to be over 10 per cent of GDP at present. The failure to rein in the fiscal deficit is seen as one of the major failures of the reform process. Indeed, much of the past decade or so has been characterized by 'deficit pessimism', or the belief of the intractable fiscal deficit (see, RBI, 2003).
- 1.2 One of the features of the fiscal situation is the steep deterioration in state finances. While the centre's public debt to GDP ratio rose from 61.4 per cent in 1990-91 to only 62 per cent in 2000-01, it rose for the states from 19.4 per cent to 23.7 per cent. In fact, there was an improvement in the ratio in the initial reform years up to 1996-97 at both the centre and the states, but deteriorated thereafter.
- 1.3 There are broadly two, quite different ways of looking at the country's fiscal situation under stress. When a fiscal collapse is expected, governments at both the centre and the states would default on their obligations; and investors would stop buying government debt even before this point is reached. The cost of borrowing would also spiral out of control and the fiscal situation becomes unsustainable. The other way is to consider high levels of fiscal deficit as lost growth opportunities, because scarce government resources go towards servicing interest obligations when they could otherwise have been used for productive purposes. In this study, we focus on the first issue, namely, whether debt levels at the states are at all sustainable. Our analysis in this report covers a total of 25 states. The states of Delhi, Uttaranchal, Jharkhand and Chhattisgarh are not included.
- 1.4 To start with we need to be clear about the notion of sustainability of debt for a nation or for a state. Absolute debt figure is often less relevant for any practical

or policy purposes. The ability to repay the debt and pay interest on it comes from the magnitude of the flow of income. Debt in relation to the flow of income is, therefore, a very popular measure of the degree of indebtedness of an entity. If the degree is high, first question is: whether it is within a “tolerable” or “manageable” limit? (see, Reinhart et. Al., 2003). This question requires us to adopt some *ad hoc* and arbitrary rules of thumb about “tolerable” debt that can be “managed” in terms of a certain proportion of the current income going for servicing the debt. On the other hand, we can raise the second question viz., if the fiscal behaviour of the government is given, would it result in a “sustainable” debt? Sustainability here implies a stable finite debt-income ratio over time resulting from continuation of the given fiscal behaviour of the government. In the present chapter, we examine the first of these questions and in the next chapter we take up the second question. In order to find the required policy interventions, we will have to consider sustainability of debt of states in the context of “tolerability” of debt ratio on one hand, and “plausibility” of the fiscal behaviour considered.

1.5 The rest of this chapter is divided as follows. In section II, we document trends in the fiscal situation in the states, using various commonly used measures. In section III, we attempt to understand which of the two factors is primarily responsible for the fiscal deterioration: lower growth or fiscal behaviour of the states. Section IV seeks to estimate the growth rates required in order for the debt level to be manageable or tolerable if recent fiscal behaviour continues. In section V, we estimate the fiscal adjustment required, given two different growth scenarios for debt levels to be tolerable in each state. Following from this, we assess how serious the debt problem is and in which states. Section VI concludes.

## **II. Trends in State Finances**

1.6 Before we attempt an analysis of the states’ debt position, we would like to address a key issue: what is the appropriate measure of debt at the state level? This is a key issue because how we define debt will determine what the debt levels are in the various states. The RBI defines debt as:

Debt = internal debt + loans from the centre + small savings (including PF).

The problem with this definition is that the debt, so defined, does not satisfy the basic condition used in the Domar equation, namely,

$D_1 - D_0 =$  debt financed fiscal deficit, where  $D_1$  and  $D_0$  are the debt levels in periods one and zero respectively.

As we employ the Domar equation for estimating the growth rate required for sustainability of debt, it is imperative that the debt figures that we use satisfy the above condition. We find that the debt definition required for the purpose is:

Total Outstanding Liabilities – WMA & Overdrafts – Cash Balance

= internal debt+ loans from the centre + small savings.+ deposits and advances+ contingency fund + reserve fund+ remittances+ suspense and miscellaneous.

The two items, WMA & Overdrafts and Cash Balance constitute money finance and should be subtracted from the total outstanding liabilities to get a consistent measure of debt at the state level. *Appendix - A* contains a fuller exposition of the definitions of fiscal deficit and debt at the state level.

- 1.7 *Table 1.1* presents comparison of debt / GSDP and debt of states according to our definition with the RBI definition. How good or bad are these ratios? Here we touch upon the question of what level of debt is tolerable for the Indian states. While there is no firm theoretical basis for determining an absolute tolerable level (see, Reinhart et al, 2003), we may consider some norms prevailing elsewhere. The debt level that European Union states are committed to under the Maastricht treaty is 60 per cent of GDP. The Eleventh Finance Commission (11<sup>th</sup> FC), while acknowledging that a higher level of debt than that of the EU “may be permissible”, argued, nevertheless, in favour of a total debt to GDP ratio of 55 per cent (para 3.20, p.21). One of the reasons it cited was the interest burden likely to emanate from higher interest rates occasioned by a higher level of government debt. We do know that the interest rate scenario has changed quite dramatically in recent years with interest rates declining considerably. The growth imperative, which the 11<sup>th</sup> FC acknowledged as an important criterion, meanwhile remains as strong as ever. It is possible to derive debt / GDP ratio consistent with the recommendation of the 11<sup>th</sup> FC considering these changes. Assuming the same

**Table 1.1: Debt and Debt / GSDP Ratio-Comparison of RBI Definition and Our Definition for Different States, 2001-02**

Sr. No.	Non Special Category States	Debt (Rs. Crores)		Debt / GSDP (%)	
		RBI Definition	Our Definition	RBI Definition	Our Definition
1	Andhra Pradesh	42492	47317	28.31	31.52
2	Bihar	36253	26223	71.10	51.43
3	Goa	2623	3248	33.75	41.79
4	Gujarat	35700	46078	28.58	36.89
5	Haryana	15982	16819	26.75	28.15
6	Karnataka	27165	32749	24.82	29.92
7	Kerala	26951	28003	35.38	36.76
8	Madhya Pradesh	29446	26732	36.23	32.89
9	Maharashtra	52795	73394	19.45	27.04
10	Orissa	25278	26436	58.39	61.06
11	Punjab	32495	33386	45.93	47.19
12	Rajasthan	36574	38857	40.76	43.31
13	Tamil Nadu	32692	38590	22.00	25.97
14	Uttar Pradesh	75152	89952	39.83	47.67
15	West Bengal	58275	63824	37.35	40.91
	<b>Special Category States</b>				
1	Arunachal Pradesh	1122	1065	57.67	54.77
2	Assam	11832	9851	36.49	30.38
3	Himachal Pradesh	9502	9975	64.56	67.78
4	Jammu Kashmir	9661	11113	63.90	73.50
5	Manipur	1779	1583	49.54	44.09
6	Meghalaya	1200	1463	30.16	36.79
7	Mizoram	1345	1654	75.16	92.43
8	Nagaland	298	2118	9.86	70.03
9	Sikkim	808	864	82.67	88.46
10	Tripura	2771	2476	45.71	40.84

growth of GDP in nominal terms of 13.4%, but a fall in the interest rate to 9% level would yield a debt / GDP ratio of 62% and fiscal deficit of 8%. If we assume a decline in the effective interest rate by to 8.5% the debt / GDP ratio can be 68% and fiscal deficit at 8.7% for the centre and the states together. Considering the likely movement of interest rates, the debt / GDP ratio of 55% as recommended by the 11<sup>th</sup> FC would become 68% for the future<sup>1</sup>. Of this, 43 per cent could be accounted for by the centre, leaving an acceptable debt to GDP ratio of 25 per cent for the states. The 10<sup>th</sup> Plan (2002) also argues for a level of

<sup>1</sup> This is derived from the equation for the stable debt / GDP ratio (D/Y): Stable (D/Y)\* =  $(PD_1 / Y_1) / ((1 + g_{ny}) / (g_{ny} - i))$ , where PD is primary deficit; i is interest rate; and  $g_{ny}$  is nominal growth rate.

- 25% for states (see, p.56 para 2.99)
- 1.8 The aggregate level of 68 per cent represents net liabilities of the central and state governments and would exclude loans from the centre to the states of about 20.5% of the combined (net) liability (see, RBI, 2001, p.150). Thus, the composite figure of 68 per cent would translate into a total gross debt burden of 82 for the centre and the states without netting out central loans to the states. Apportioning these 14 per cent equally between the centre and the states, we get figures of 50 per cent and 32 per cent as the debt / GDP targets for the centre and the states respectively. A further refinement of the debt / GDP target for the states is required. The debt / GDP target that we are talking about represents debt and GDP measured at market prices. The figures for GSDP available for the states are all at factor costs, which are on average about 0.9 times the ones at market prices (see, CSO, annual). Hence, the debt / GSDP target for states at factor costs would be  $\text{debt} / (\text{GSDP} \times 0.9)$ . On this basis, the target Debt / GSDP for states of 32 per cent at market prices works out to about 35 per cent at factor costs. Thus, the tolerable debt / GSDP ratio for the states is 35 per cent with consistent measurement and concepts.
- 1.9 A variety of measures are used to judge the fiscal position of governments. In this study, we have opted to use the following:
- i. State Debt (our definition) to GSDP
  - ii. Fiscal Deficit to GSDP
  - iii. Primary Deficit to GSDP
  - iv. Interest Payments to Revenue Receipts
  - v. Interest Payments to State's Own Revenues
  - vi. Interest Payments to Total Expenditure
  - vii. State's Own Revenues to Revenue Receipts
  - viii. Revenue Deficit to Gross Fiscal Deficit
- 1.10 While there is scope for using a variety of other measures, we believe the above ratios are an adequate representation of the fiscal situation in its totality. The first ratio, the debt to GSDP, is the outcome of the behaviour of all ratios and is considered, in some sense, the ultimate measure of fiscal health. The second

ratio, the fiscal deficit to GSDP, captures the overall underlying cause for the deterioration in the first. The other ratios contribute in varying degrees to the behaviour of the fiscal deficit to GSDP ratio. Primary deficit is central to debt sustainability. State's own revenues (SOR) indicate the degree of the state's autonomy and independence (see, Kannan et al, 2004) while the proportion of revenue deficit in fiscal deficit reflects the quality of fiscal deficit (see, 11<sup>th</sup> F.C.; 2000, ch.3).

1.11 We shall now analyse the trends in each of the above eight ratios in the different states. We divide states into two categories: special category (SC) states, and non-special category (NSC) states. The SC states come in for special treatment with transfers from the centre augmenting their revenues to a larger extent and hence, their fiscal position is not strictly comparable to those of NSC states. Similarly, we have considered the period from 1989-90 to 2003-04. The mid-nineties from 1992-93 to 1997-98 was the period of rapid growth in nominal income and the subsequent period of 1998-99 to 2001-02 was characterised by slow down in most of the states. We have considered these two sub-periods explicitly to examine fiscal indicators for states.

**(i) Debt to GSDP (D/GSDP) Ratio**

1.12 When we consider the tolerable debt to GSDP ratio of 35 per cent, out of the 14 NSC states covered by this study. Orissa seems to have a very acute problem, and Rajasthan, Punjab, Bihar, U.P., Goa and West Bengal have credible magnitude of the problem (see *Table 1.2*). Among the SC states, on the other hand, debt of only Assam and Meghalaya appears to be manageable. Moreover, there is a general deterioration in the debt-GSDP ratio in all NSC states except Goa and in all the SC states, except J & K and Tripura during the recent slow growth period compared to the rapid growth period.

**Table 1.2: Debt/GSDP Ratio in Indian States, 1989 to 2003-04 ( in %)**

Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.) 03-04
			92-97	98-02*												
1	Andhra Pradesh	23.4	22.1	27.8	22.7	21.5	21.4	21.8	21.9	23.6	24.3	26.5	28.9	31.5		
2	Bihar <sup>†</sup>	31.9	33.3	41.5	35.2	33.9	33.1	34.8	31.5	31.4	31.9	38.9	43.8	51.4		
3	Goa	56.7	38.5	34.4	49.9	43.8	39.0	35.9	33.1	29.1	28.0	32.7	35.0	41.8		
4	Gujarat	22.3	21.3	33.1	24.0	22.9	19.6	19.9	19.4	21.8	24.1	29.7	35.9	36.9	39.0	37.7
5	Haryana	21.2	19.5	25.6	20.3	19.1	18.4	19.6	19.3	20.6	23.2	24.9	26.3	28.1		
6	Karnataka	22.0	21.3	25.1	21.4	21.4	21.6	21.0	21.2	21.6	21.1	23.9	25.7	29.9		
7	Kerala	27.8	26.6	34.3	27.0	27.8	26.6	25.1	25.3	27.9	29.4	33.7	35.5	36.8	36.3	38.3
8	Madhya Pradesh <sup>†</sup>	22.8	20.6	26.5	21.6	19.5	20.2	20.3	20.7	21.4	22.8	24.4	25.8	32.9		
9	Maharashtra	11.4	14.1	24.9	13.2	12.9	13.2	13.8	14.7	17.1	18.9	22.3	26.6	27.0	29.7	32.4
10	Orissa	36.7	40.8	57.0	41.7	40.8	39.7	37.1	43.4	42.2	44.9	51.8	59.0	61.1	67.9	73.9
11	Punjab	36.1	35.6	42.0	36.1	35.2	35.9	35.3	34.9	36.4	37.2	40.1	43.4	47.2		
12	Rajasthan	33.1	28.8	38.6	27.3	30.0	28.2	29.4	28.2	29.9	31.7	37.0	42.4	43.3	52.0	
13	Tamil Nadu	18.2	19.0	23.1	20.6	19.8	18.6	18.1	18.6	18.1	19.8	22.6	24.0	26.0	28.3	
14	Uttar Pradesh <sup>†</sup>	29.4	32.2	42.2	31.9	31.8	31.7	32.2	31.0	34.3	35.4	37.9	46.6	48.0	43.0	43.4
15	West Bengal	20.0	23.7	34.8	22.7	22.7	23.1	23.2	25.1	25.2	27.5	33.0	37.8	40.9		
<b>Special Category States</b>																
1	Arunachal	46.2	24.8	41.5	31.3	20.5	21.7	20.8	23.0	31.7	29.7	35.7	45.6	54.8		
2	Assam	21.5	25.8	28.5	22.9	19.5	28.4	30.0	27.9	26.2	24.9	25.5	29.0	30.4	32.6	33.7
3	Himachal Pradesh	49.0	46.3	60.2	48.5	50.2	46.4	39.9	42.9	49.7	53.3	55.1	64.6	67.8		
4	Jammu & Kashmir	125.5	73.0	61.0	101.9	83.1	75.2	66.0	59.4	52.2	50.5	56.1	64.0	73.5		
5	Manipur	37.2	33.8	42.1	36.2	31.1	32.5	32.3	35.9	34.6	31.1	40.7	52.6	44.1		
6	Meghalaya	10.1	21.7	32.0	19.9	21.8	22.0	21.4	21.0	24.1	25.8	30.5	34.8	36.8		
7	Mizoram	94.8	48.0	74.3	50.2	43.8	48.0	42.6	43.8	59.6	56.2	72.7	75.8	92.4		
8	Nagaland	37.1	40.6	59.7	32.5	38.5	41.5	44.5	42.6	44.0	48.5	59.0	61.4	70.0		
9	Sikkim	44.5	64.1	82.1	73.0	59.5	67.4	63.8	61.1	59.6	70.1	86.2	83.5	88.5		
10	Tripura	45.1	45.7	36.9	48.8	48.0	52.3	46.0	41.0	37.9	33.8	35.2	37.8	40.8		

Note: \*98-99 to 2002-03 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh; †For J & K and Nagaland, the GSDP figures for 2001-02 and 2000-01 & 2001-02 respectively are based on past trend values; ‡ These states have been bifurcated since Nov. 2001 and the figures are accordingly adjusted.

**(ii) Gross Fiscal Deficit to GSDP (GFD / GSDP) Ratio**

1.13 While the debt to GSDP ratios tell us the position of the various states up to the present, the movement of the fiscal deficit to GSDP ratio would give us an idea of what we might expect if the present trends were to continue. States with a high debt to GSDP ratio could conceivably improve their position if the fiscal deficit to GSDP ratio showed a declining trend; on the other hand, states with a low debt to GSDP ratio might find themselves worse off if the fiscal deficit to GSDP ratio showed a rising trend. *Table 1.3* reveals that the fiscal deficit to GSDP ratio has significantly worsened for all the NSC states except Goa in the recent years compared to early nineties. The ratio, however, does not show such a clear trend in all the SC states. But, when we compare the averages over the two sub-periods, we find that the GFD/GSDP ratio has deteriorated in all the states, except Nagaland during the period of slower growth compared to rapid growth. In recent years, a combination of the two factors-slower growth and a widening fiscal deficit- has led to states' debt reaching its high levels. The deterioration in the fiscal deficit has been particularly severe in Bihar, Goa, Gujarat, M.P., and West Bengal among the NSC states and five out of the ten SC states. Moreover, H.P. and Sikkim have sustained a very high GFD / GSDP ratio throughout the period. Thus, continuation of recent trends can lend most of the states into serious debt problems.

**(iii) Primary Deficit to GSDP (PD / GSDP) Ratio**

1.14 The primary deficit reveals the real fiscal pressure experienced by a state on account of either special factors like natural calamities or political will and processes. Generally, the improvement in the PD/GSDP ratio is a precondition for improvement in GFD/GSDP ratio. *Table 1.4* shows that all NSC states except Punjab and Goa experienced a sharp deterioration in the PD/GSDP ratio in the recent period compared to the early nineties. Among the SC states, however, the ratio showed improvement in Sikkim, Manipur, Tripura, J & K, Arunachal Pradesh and Nagaland. When we compare the averages over the

**Table 1.3: GFD/GSDP Ratio in Indian States, 1989 to 2003-04 ( in %)**

Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.) 03-04
			92-97	98-02*												
1	Andhra Pradesh	3.2	3.1	4.7	3.1	3.2	3.4	3.0	3.1	2.5	5.0	4.0	5.3	4.5		
2	Bihar	4.2	3.4	5.4	3.9	3.4	3.0	3.6	2.5	3.6	5.3	8.2	6.7	1.2		
3	Goa	8.0	2.7	5.1	4.0	2.5	1.6	2.9	2.6	2.5	4.4	5.0	5.5	5.4		
4	Gujarat	3.5	2.4	5.7	2.6	1.1	2.0	2.4	2.7	3.3	5.3	6.2	7.2	5.2	4.5	6.0
5	Haryana	3.3	2.6	4.6	2.4	2.2	2.0	3.3	3.1	2.9	5.1	4.4	4.1	4.6		
6	Karnataka	2.9	3.0	4.4	3.9	3.1	3.2	2.6	3.0	2.2	3.5	4.5	4.0	5.4		
7	Kerala	4.2	3.6	5.6	3.1	3.6	3.5	3.4	3.5	4.9	5.4	7.3	5.6	4.3	5.5	5.6
8	Madhya Pradesh	2.5	2.2	4.2	2.1	1.6	2.4	2.5	2.6	2.2	4.4	3.8	4.1	4.5		
9	Maharashtra	3.2	2.6	4.2	2.9	2.0	2.2	2.6	2.8	3.3	3.5	4.7	3.8	4.0	4.8	5.9
10	Orissa	5.0	5.3	8.4	4.7	4.9	5.2	5.2	6.0	5.6	8.2	9.7	8.6	9.2	6.4	11.8
11	Punjab	5.5	4.5	6.2	4.9	4.9	5.2	3.5	3.3	5.1	6.8	5.2	5.9	7.0		
12	Rajasthan	3.2	4.2	6.4	2.6	4.4	4.2	5.4	4.4	4.0	7.0	6.8	5.4	6.4	7.6	
13	Tamil Nadu	3.1	2.4	3.8	3.7	2.4	2.2	1.6	2.7	2.0	4.0	4.3	3.6	3.2	3.9	
14	Uttar Pradesh	4.8	4.4	5.7	4.8	3.6	4.7	3.8	4.3	5.1	6.8	6.0	5.9	5.3	4.7	9.7
15	West Bengal	3.2	3.4	7.7	2.2	3.1	3.2	3.7	4.1	4.1	6.2	9.2	7.8	7.6		
<b>Special Category States</b>																
1	Arunachal	18.6	4.4	8.9	-1.3	1.8	7.5	3.4	5.9	9.2	3.7	4.4	14.9	12.7		
2	Assam	5.6	1.6	3.8	1.5	-0.1	4.1	3.4	0.3	0.6	1.3	5.5	5.0	4.5	2.6	9.7
3	Himachal Pradesh	8.2	8.3	10.3	7.2	3.2	10.7	7.8	7.4	13.6	15.5	1.5	13.8	10.3		
4	Jammu & Kashmir	13.8	1.9	10.1	3.9	1.1	-0.3	1.2	1.8	3.9	8.4	9.6	12.7	9.7		
5	Manipur	9.8	4.6	10.1	1.7	-1.6	4.4	6.4	8.2	8.5	4.0	20.2	6.8	9.5		
6	Meghalaya	3.5	3.9	5.9	7.1	5.8	2.1	2.6	1.0	5.0	5.0	6.4	6.7	5.6		
7	Mizoram	-0.8	8.7	17.0	11.4	1.1	5.2	7.5	12.5	14.4	7.9	15.2	21.3	23.6		
8	Nagaland	22.1	11.8	9.1	12.9	12.7	15.0	12.7	6.6	11.3	8.1	7.5	9.7	11.1		
9	Sikkim	13.7	9.6	10.4	12.3	5.8	11.3	8.3	10.0	9.9	18.7	10.8	5.4	6.8		
10	Tripura	7.5	4.2	6.6	1.5	6.2	5.9	1.5	4.4	5.9	3.1	6.4	8.4	8.6		

Note: \*98-99 to 2002-03 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh; †For J & K and Nagaland, the GSDP figures for 2001-02 and 2000-01 & 2001-02 respectively are based on past trend values; ‡ These states have been bifurcated since Nov. 2001 and the figures are accordingly adjusted.

**Table 1.4: Primary Deficit/GSDP Ratio in Indian States, 1989 to 2003-04 ( in %)**

Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.)	
			92-97	98-02*												03-04	
1	Andhra Pradesh	1.7	1.1	2.0	1.4	1.4	1.6	1.1	1.1	0.3	2.7	1.5	2.5	1.4			
2	Bihar	1.7	-0.2	1.3	0.3	0.0	-0.5	-0.2	-1.1	0.3	1.8	4.3	1.5	-2.4			
3	Goa	5.9	0.0	2.3	1.0	-0.4	-0.9	0.2	0.1	0.1	2.1	2.4	2.7	2.1			
4	Gujarat	1.8	0.4	2.8	0.5	-1.1	0.2	0.6	0.9	1.2	3.2	3.6	4.4	1.8	0.8	2.6	
5	Haryana	1.5	0.7	1.9	0.5	0.3	0.2	1.4	1.1	0.8	2.8	1.6	1.4	1.8			
6	Karnataka	1.3	1.2	2.2	2.2	1.3	1.3	0.7	1.1	0.3	1.7	2.4	1.7	2.9			
7	Kerala	2.2	1.1	2.5	0.8	0.9	0.9	1.0	1.0	2.3	2.8	4.1	2.3	1.0	2.3	2.3	
8	Madhya Pradesh	1.0	0.4	1.8	0.3	-0.1	0.5	0.7	0.7	0.2	2.5	1.7	1.3	1.7			
9	Maharashtra	1.9	1.1	2.0	1.4	0.3	0.5	1.3	1.4	1.8	1.8	2.7	1.6	1.6	2.4	3.3	
10	Orissa	2.3	1.6	2.8	1.3	1.2	1.7	1.7	2.0	1.6	4.0	4.9	2.7	2.6	-0.2	4.7	
11	Punjab	4.1	1.2	2.1	3.3	1.5	1.6	-0.3	-0.4	1.3	2.6	0.9	2.4	2.5			
12	Rajasthan	0.8	1.5	2.6	0.2	1.8	1.8	2.8	1.7	1.0	4.0	3.2	1.2	2.1	2.6		
13	Tamil Nadu	1.8	0.8	1.6	2.2	0.7	0.6	0.0	1.1	0.3	2.2	2.1	1.4	0.8	1.2		
14	Uttar Pradesh	2.8	1.4	1.9	2.1	1.2	1.7	0.9	1.4	1.3	3.6	2.5	1.6	0.9	1.2	4.6	
15	West Bengal	1.6	1.2	4.3	0.1	0.9	1.0	1.5	1.8	1.6	3.6	5.9	4.1	3.5			
	<b>Special Category States</b>																
1	Arunachal	14.4	0.7	3.5	-4.3	-1.3	4.0	-0.2	1.5	4.7	-0.9	-0.5	8.5	7.1			
2	Assam	2.8	-1.3	0.8	-1.5	-3.4	0.7	0.9	-2.3	-2.2	-0.7	2.2	2.2	1.2	-0.9	5.0	
3	Himachal Pradesh	5.0	4.2	4.6	3.1	-1.2	6.8	3.5	3.3	9.4	10.9	-3.3	7.9	3.2			
4	Jammu & Kashmir	8.2	-3.9	4.2	-3.0	-3.3	-8.6	-4.2	-0.5	-4.0	3.1	3.5	7.5	2.8			
5	Manipur	7.2	0.9	5.6	-2.4	-5.3	0.7	2.9	4.8	5.0	0.6	16.1	1.5	4.1			
6	Meghalaya	2.1	1.6	3.0	5.2	3.6	-0.6	0.1	-1.5	2.6	2.7	3.4	3.6	2.2			
7	Mizoram	-1.1	4.4	10.3	6.8	-2.1	1.2	3.8	8.1	8.5	1.9	8.5	15.6	15.3			
8	Nagaland	16.5	7.1	3.0	7.4	8.2	10.0	8.4	2.1	6.4	2.5	1.6	3.4	4.5			
9	Sikkim	10.2	3.4	2.4	5.5	0.0	4.9	2.3	4.0	3.6	12.0	2.7	-3.2	-1.8			
10	Tripura	5.1	0.4	2.6	-2.3	2.4	1.8	-2.4	0.4	2.3	-0.6	2.3	4.1	4.5			

Note: \*98-99 to 2002-03 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh; †For J & K and Nagaland, the GSDP figures for 2001-02 and 2000-01 & 2001-02 respectively are based on past trend values; ‡ These states have been bifurcated since Nov. 2001 and the figures are accordingly adjusted.

two sub-periods representing high growth and low growth, all states except Nagaland and Sikkim show deterioration during recent period of slow growth. This is consistent with the trends in the earlier two ratios.

**(iv) Interest to Revenue Receipts (I/RR) Ratio**

1.15 Governments need scarce revenues for investment in social and physical infrastructure. To the extent that debt obligations devour revenues, productive investment suffers. A rise in I/RR ratio would indicate that revenues of the state government are not adequate either because of its inability to raise more revenues by tax and non-tax measures, or because transfers from the centre to the states are not sufficiently large. *Table 1.5* shows that four NSC states had a ratio of interest to revenue receipts in 2002-03 that was under 20% which is considered within broadly acceptable limits. Five states had a ratio ranging from 20 to 27 while two states had ratios in excess of 30<sup>2</sup>. All the SC states except Himachal Pradesh lie well within the satisfactory limit of 20% largely on account of the large quantum of transfers to these states. As with the previous ratios, I/RR ratio also shows a clear deterioration in all states except Sikkim during the period of slow growth compared to the period of rapid growth.

**(v) Interest to State's Own Revenue (I/SOR) Ratio**

1.16 Interest as a proportion of SOR reflects the ability of a state to discharge its obligations out of its own resources. The higher this ratio, the greater would be the dependence of a state either on central transfers or on borrowings to meet its other current expenditure. Thus, we would expect that states with a high I/SOR ratio to have a relatively high debt to GSDP ratio or experience lack of financial autonomy through substantial transfers from the centre to the state. This hypothesis broadly holds true for the states considered here. We have roughly broken up the states into three categories for this ratio: those with a ratio of up to

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<sup>2</sup> However, even at the higher end, the ratio is below the average of over 50 per cent that the centre has been running in recent years. This, of course, reflects the greater degree of indebtedness at the centre relative to most states.

<b>Table 1.5: Interest Payments / Revenue Receipts Ratio (in %)</b>																
Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.) 03-04
			92-97	98-03*												
1	Andhra Pradesh	10.5	14.3	20.6	11.6	12.4	14.3	15.5	16.4	15.6	18.5	18.5	19.5	21.0	25.7	24.6
2	Bihar	14.8	21.9	25.5	20.8	20.4	23.0	22.6	23.1	21.8	25.9	26.9	28.1	18.5	27.8	26.2
3	Goa	11.8	12.7	13.5	14.6	14.7	13.0	11.0	12.5	10.6	12.6	14.5	14.3	13.7	12.3	12.2
4	Gujarat	13.0	15.8	22.3	15.7	14.9	15.3	15.5	16.7	16.9	17.8	20.1	19.9	26.3	27.7	28.0
5	Haryana	12.8	11.9	21.7	14.4	12.1	8.3	11.1	11.8	13.9	18.2	23.5	22.7	21.6	22.5	
6	Karnataka	10.5	12.1	15.8	11.0	11.4	12.5	12.3	12.6	13.1	14.4	15.6	16.1	17.5	15.1	
7	Kerala	14.3	17.4	25.1	16.4	17.5	17.6	17.0	17.9	18.1	20.1	24.6	25.9	27.5	27.7	26.6
8	Madhya Pradesh	11.2	13.3	18.0	11.5	12.3	14.4	13.4	13.7	14.7	16.2	16.2	18.8	20.1	18.5	18.9
9	Maharashtra	10.1	13.5	19.6	12.5	14.6	14.5	12.4	12.7	14.3	16.9	19.1	17.7	21.4	22.9	22.9
10	Orissa	17.8	23.1	34.3	18.2	21.3	22.0	23.9	25.2	27.9	32.7	31.2	33.1	40.2	34.2	33.9
11	Punjab	13.0	26.2	33.0	14.7	31.8	23.5	28.7	29.4	29.1	40.3	35.3	25.0	35.6	28.9	25.6
12	Rajasthan	16.4	17.8	29.2	15.2	15.8	16.4	16.2	20.5	22.6	26.1	28.9	26.9	31.9	32.0	31.1
13	Tamil Nadu	8.6	11.8	17.4	9.8	11.9	11.8	12.2	12.3	13.0	14.9	16.6	17.1	18.7	19.8	20.1
14	Uttar Pradesh	15.7	22.9	30.0	17.5	17.4	23.1	21.9	25.3	32.4	31.7	30.5	30.1	32.1	25.4	32.8
15	West Bengal	15.2	21.6	38.1	18.5	19.7	19.3	21.9	23.6	26.7	31.4	40.8	36.1	43.9		
	<b>Special Category States</b>															
1	Arunachal	5.8	5.7	9.5	4.3	5.0	5.7	5.6	6.6	7.2	7.7	7.9	12.6	10.0	9.3	11.4
2	Assam	17.3	15.7	16.6	15.7	14.8	19.9	14.5	14.5	14.8	11.6	20.1	15.3	17.8	18.3	18.9
3	Himachal Pradesh	12.2	16.2	27.0	16.8	14.3	17.0	16.3	15.7	17.1	21.5	16.1	26.2	28.0	43.0	46.5
4	Jammu & Kashmir	22.2	14.4	15.2	17.5	12.3	19.1	13.5	6.5	17.2	14.7	15.3	13.6	16.1	16.4	15.1
5	Manipur	5.6	8.7	13.7	9.3	8.4	8.7	8.3	8.0	9.1	10.1	12.3	16.9	16.3	12.8	14.2
6	Meghalaya	3.7	7.4	10.5	5.9	6.7	8.5	7.4	7.7	8.6	8.3	10.2	10.1	11.8	12.0	11.1
7	Mizoram	0.3	6.6	12.6	6.8	4.5	5.5	5.6	7.3	9.7	9.6	10.9	12.2	17.1	13.4	16.8
8	Nagaland	10.3	11.3	14.4	11.3	9.7	12.7	10.2	10.5	13.1	13.7	13.4	14.1	15.1	15.6	14.4
9	Sikkim	5.5	5.4	5.2	9.0	9.3	4.8	3.1	2.9	3.2	3.6	4.5	9.2	4.7	4.1	4.5
10	Tripura	6.5	10.3	13.3	9.7	10.6	10.2	9.5	10.7	11.1	11.1	12.9	13.8	13.6	15.4	14.8

Note: \*98-99 to 2003-04 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh and 2001-02 for West Bengal

**Table 1.6: Interest Payments / State's Own Revenue Ratio (in %)**

Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.)	
			92-97	98-03*												03-04	04
1	Andhra Pradesh	15.2	23.2	30.5	18.6	19.8	21.8	26.7	28.3	24.2	27.0	27.1	28.5	31.7	38.3	37.9	37.9
2	Bihar	30.4	55.6	78.0	53.0	51.3	55.5	57.7	59.1	56.9	63.0	67.4	89.2	66.3	104.1	88.6	88.6
3	Goa	19.6	17.2	15.2	22.5	21.1	18.4	13.4	15.5	12.5	14.3	16.3	16.2	15.0	14.3	13.3	13.3
4	Gujarat	15.8	20.1	28.3	20.1	19.6	19.1	19.2	21.1	21.4	21.8	25.2	25.3	32.5	36.7	33.8	33.8
5	Haryana	15.2	14.0	25.4	18.0	14.4	9.1	12.8	13.6	16.4	21.5	28.4	25.9	24.7	26.4		
6	Karnataka	14.3	16.5	21.5	15.2	15.8	17.0	16.1	17.0	18.2	19.2	21.5	22.3	24.5	20.1		
7	Kerala	20.8	25.1	34.4	25.1	25.7	25.7	23.6	25.0	25.5	27.8	34.1	34.6	38.5	36.9	35.5	35.5
8	Madhya Pradesh	18.2	22.5	35.7	19.6	21.3	24.4	21.9	22.6	25.2	26.6	25.9	32.7	44.8	48.4	53.7	53.7
9	Maharashtra	12.7	16.6	23.0	15.7	18.8	17.7	15.0	15.8	16.7	20.7	22.7	20.6	24.8	26.1	28.5	28.5
10	Orissa	42.8	54.9	78.7	47.1	53.6	50.5	52.9	59.2	65.8	72.7	75.9	79.7	89.8	75.3	80.4	80.4
11	Punjab	15.9	31.7	39.3	19.7	40.7	27.0	33.6	34.9	34.2	48.6	41.8	29.9	40.8	35.5	31.0	31.0
12	Rajasthan	28.3	30.3	48.7	27.1	28.3	28.8	24.7	34.6	38.1	42.4	46.3	47.8	54.0	53.3	52.9	52.9
13	Tamil Nadu	12.7	16.5	21.9	14.4	17.4	16.5	16.1	16.6	18.0	19.7	22.1	22.3	22.1	23.4	23.9	23.9
14	Uttar Pradesh	31.8	47.4	58.0	38.5	36.1	45.6	42.3	53.3	68.6	58.8	57.4	57.7	67.8	48.1	69.2	69.2
15	West Bengal	24.6	38.2	72.3	33.8	36.3	32.6	36.2	41.5	48.5	57.2	73.3	72.7	86.2			
	<b>Special Category States</b>																
1	Arunachal Pradesh	43.9	52.7	103.7	37.5	31.0	40.1	47.7	70.7	89.6	93.4	98.8	142.4	107.1	77.0	99.8	99.8
2	Assam	48.2	50.6	47.5	42.0	50.9	61.5	47.0	51.4	50.6	36.3	58.1	44.7	50.8	47.4	65.0	65.0
3	Himachal Pradesh	39.2	56.7	78.2	61.4	55.7	51.5	62.2	56.0	53.3	64.0	35.6	88.1	79.1	124.1	131.9	131.9
4	Jammu & Kashmir	96.8	101.5	82.8	112.2	76.6	144.4	99.5	44.2	132.3	92.4	86.0	64.6	82.7	88.5	77.6	77.6
5	Manipur	55.7	92.5	180.0	119.9	105.1	70.1	78.4	78.6	102.6	144.4	159.0	194.5	240.9	160.9	120.7	120.7
6	Meghalaya	22.2	45.4	55.1	40.5	43.7	47.4	37.9	44.8	58.3	49.3	51.3	55.3	57.5	62.1	59.8	59.8
7	Mizoram	4.8	82.9	186.6	78.2	62.8	76.2	67.5	90.6	122.2	164.4	180.8	187.0	231.6	169.4	192.0	192.0
8	Nagaland	111.0	139.5	202.7	130.3	145.9	91.8	144.7	136.4	188.3	180.0	192.4	208.2	204.3	228.4	182.7	182.7
9	Sikkim	23.1	19.4	9.4	44.5	51.9	7.6	4.5	3.8	4.2	4.9	6.2	22.3	7.1	6.5	6.8	6.8
10	Tripura	74.5	107.9	105.1	106.6	109.3	109.1	102.5	107.8	112.1	109.3	103.9	102.3	98.9	111.1	110.4	110.4

Note: \*98-99 to 2003-04 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh and 2001-02 for West Bengal

26, those with a ratio of 27-35 and those with ratios of more than 35. Of the top six NSC states with the lowest D/GSDP ratio in 2002-03, five states fall in the first category with the lowest I/SOR ratio. Similar results hold for the other two categories, too. The special category states, which appeared quite comfortable in terms of I/RR ratio, present an entirely different picture here (*Table 1.6*). Except for Sikkim, the other nine states in this category are in a bad shape and would fall in the worst category, going by our classification for NSC states. The situation is particularly alarming in Manipur, Nagaland and Mizoram where interest payments are double the states' own resources. Tripura and Arunachal Pradesh also have less own-resources than their interest obligations. Comparison of averages over the two sub-periods reveals that except Goa among the NSC states and Sikkim, Assam, J & K, and Tripura among the SC states, all states have experienced a deterioration in the I/SOR ratio during the period of slow growth.

**(vi) Interest to Total Expenditure (I/TE) Ratio**

1.17 A rise in the interest to total expenditure could indicate either a relative rise in interest payments or a relative decline in total expenditure. While the former is clearly detrimental to the state in question, the latter could be welcome if it comes from a decline in other non-productive expenses. Similarly, if a decline in this ratio is largely due to a rise in non-productive expenditure, it would not be desirable. *Table 1.7* reveals that I/TE ratio has increased in all states except J&K and Sikkim in recent years compared to the early nineties. The average of I /TE ratio increased during the period of slower growth in all NSC states except Goa and Karnataka; and in all SC states except Sikkim, J & K and Assam. The interest burden on states has certainly increased relatively to their expenditure over time.

**(vii) State's Own Revenue to Revenue Receipts (SOR /RR) Ratio**

1.18 SOR/RR ratio shows the extent to which a state enjoys financial autonomy and independence (see, Kannan et al., 2004). A high SOR/RR ratio in a state implies effective control of the state on financial resources and hence less dependence

<b>Table 1.7: Interest Payments to Total Expenditure Ratio (in %)</b>																
Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.) 03-04
			92-97	98-03*												
1	Andhra Pradesh	8.5	10.9	15.1	9.5	10.0	10.3	11.0	11.9	12.5	13.0	14.1	14.0	15.5	19.1	19.0
2	Bihar	11.7	18.2	18.7	16.9	16.9	19.1	18.6	19.9	17.6	18.6	17.2	20.6	17.4	19.5	19.7
3	Goa	8.1	11.2	10.8	12.1	12.9	11.9	9.8	11.0	9.5	10.1	11.3	11.1	11.2	10.4	10.4
4	Gujarat	10.1	12.9	15.0	12.3	13.1	12.9	12.7	13.2	13.1	12.1	13.5	12.1	17.0	20.5	18.7
5	Haryana	10.2	9.9	16.1	12.0	10.6	7.1	9.2	9.4	10.9	12.1	16.7	16.7	15.8	19.0	
6	Karnataka	8.3	10.0	12.0	8.6	9.1	10.0	10.3	10.3	11.3	11.2	11.6	12.5	12.6	12.0	
7	Kerala	11.0	13.8	17.3	13.3	14.0	14.1	13.7	14.2	13.4	14.1	15.6	17.7	20.1	18.8	18.3
8	Madhya Pradesh	9.4	11.1	13.3	10.1	10.3	12.1	11.2	10.7	12.0	11.8	12.3	14.7	13.7	13.8	15.0
9	Maharashtra	8.0	10.7	13.9	9.9	12.2	11.2	9.8	10.0	10.8	12.5	13.1	12.7	15.6	15.5	14.9
10	Orissa	13.3	17.0	22.0	14.3	16.4	16.5	17.4	17.7	19.7	18.4	18.9	22.2	25.4	25.2	21.5
11	Punjab	8.5	19.2	21.6	10.1	21.6	17.4	22.6	23.0	20.7	24.0	24.5	17.5	21.5	20.6	18.3
12	Rajasthan	13.2	13.3	19.5	12.1	12.3	12.6	11.6	15.0	16.0	16.2	18.5	19.8	21.6	21.5	20.9
13	Tamil Nadu	6.7	9.6	13.2	7.3	9.8	9.7	10.5	9.8	10.4	11.0	12.3	13.2	14.7	14.8	15.3
14	Uttar Pradesh	11.4	16.8	20.3	13.2	13.7	16.2	16.8	18.3	22.3	18.5	19.9	21.2	22.9	18.8	16.3
15	West Bengal	11.5	15.9	20.4	15.4	15.3	14.8	15.9	15.4	18.4	17.8	19.0	20.6	24.0		
<b>Special Category States</b>																
1	Arunachal Pradesh	4.6	5.3	8.2	4.4	4.9	5.1	5.3	6.0	6.3	7.2	7.4	9.7	8.2	8.3	10.8
2	Assam	12.8	14.3	13.6	14.5	14.8	16.0	12.1	14.2	14.3	10.7	15.0	12.0	14.3	16.1	13.6
3	Himachal Pradesh	9.1	12.1	17.7	12.8	12.9	11.4	12.4	12.1	11.0	12.4	13.5	16.2	19.8	26.7	28.6
4	Jammu & Kashmir	14.3	13.7	12.7	15.9	11.9	19.2	13.1	6.2	15.8	11.9	12.3	10.2	12.9	15.9	13.9
5	Manipur	4.6	7.8	10.6	8.9	8.7	7.9	7.2	6.7	7.5	9.1	7.7	13.9	12.6	9.9	11.8
6	Meghalaya	3.3	6.6	8.5	4.7	5.6	7.8	6.8	7.4	7.3	7.0	8.3	8.2	9.7	9.4	9.4
7	Mizoram	0.3	5.7	9.4	5.8	4.4	5.1	5.0	6.0	7.8	8.4	8.7	8.3	11.4	10.1	12.8
8	Nagaland	7.2	8.7	11.8	8.8	7.6	9.1	7.8	9.0	10.0	11.4	11.4	11.6	12.0	12.5	12.3
9	Sikkim	4.5	4.9	4.9	7.7	8.5	4.4	2.9	2.7	3.0	3.3	4.2	8.6	4.5	4.0	4.4
10	Tripura	5.4	9.2	10.7	9.4	9.0	8.9	9.1	9.5	9.4	10.2	10.7	10.8	10.6	11.2	11.6

Note: \*98-99 to 2003-04 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh and 2001-02 for West Bengal

<b>Table 1.8: State's Own Revenue/ Revenue Receipts Ratio (in %)</b>																	
Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.)	
			92-97	98-03*												03-04	
1	Andhra Pradesh	69.2	61.9	67.7	62.5	62.8	65.5	58.0	58.1	64.3	68.8	68.1	68.3	66.2	67.1	65.0	65.0
2	Bihar	48.6	39.5	33.4	39.3	39.8	41.3	39.1	39.1	38.2	41.2	39.9	31.5	27.9	26.7	29.6	29.6
3	Goa	60.2	75.5	88.5	65.0	69.8	70.4	82.4	80.2	85.5	87.9	88.9	88.4	91.1	86.1	91.7	91.7
4	Gujarat	82.5	78.9	79.3	78.1	76.0	79.8	81.0	79.0	79.2	81.5	79.8	78.8	80.9	75.5	82.8	82.8
5	Haryana	84.4	85.7	85.5	80.2	84.1	91.1	86.9	87.2	84.8	84.7	82.8	87.5	87.4	85.0	N.A.	N.A.
6	Karnataka	73.0	73.3	73.3	71.9	71.9	73.7	76.2	73.9	72.3	74.9	72.5	72.2	71.4	75.4	76.9	76.9
7	Kerala	68.7	69.5	73.1	65.3	68.0	68.5	72.2	71.8	71.0	72.4	72.1	74.8	71.4	75.0	74.9	74.9
8	Madhya Pradesh	61.4	59.3	52.8	58.6	57.7	58.9	61.2	60.7	58.5	60.7	62.6	57.4	44.9	38.2	35.2	35.2
9	Maharashtra	79.3	81.2	85.1	79.2	77.6	81.9	82.8	80.3	85.4	81.8	84.1	85.6	86.2	87.8	80.3	80.3
10	Orissa	41.6	42.0	43.6	38.5	39.7	43.5	45.1	42.5	42.4	45.0	41.1	41.6	44.8	45.4	42.2	42.2
11	Punjab	81.7	82.4	83.9	74.9	78.2	86.8	85.4	84.0	85.0	82.9	84.5	83.6	87.2	81.3	82.6	82.6
12	Rajasthan	57.8	58.8	59.9	56.0	56.0	57.0	65.4	59.3	59.2	61.7	62.4	56.3	59.1	60.1	58.7	58.7
13	Tamil Nadu	67.8	71.6	79.3	68.1	68.3	71.7	75.6	74.1	72.2	75.6	75.2	76.4	84.5	84.8	83.8	83.8
14	Uttar Pradesh	49.4	48.4	51.9	45.5	48.2	50.5	51.7	47.6	47.2	54.0	53.1	52.2	47.3	52.8	47.4	47.4
15	West Bengal	61.6	56.8	52.8	54.7	54.4	59.3	60.5	56.8	55.0	55.0	55.7	49.7	50.9	N.A.	N.A.	N.A.
<b>Special Category States</b>																	
1	Arunachal	13.1	11.9	9.3	11.6	16.3	14.2	11.8	9.3	8.0	8.2	8.0	8.8	9.4	12.0	11.4	11.4
2	Assam	35.9	31.2	34.9	37.5	29.0	32.4	30.8	28.2	29.2	31.8	34.5	34.4	35.0	38.7	29.1	29.1
3	Himachal Pradesh	31.1	28.8	35.7	27.4	25.7	33.1	26.2	28.1	32.2	33.7	45.1	29.7	35.5	34.7	35.3	35.3
4	Jammu & Kashmir	22.9	14.4	18.6	15.6	16.0	13.2	13.6	14.8	13.0	16.0	17.8	21.0	19.5	18.5	19.4	19.4
5	Manipur	10.1	9.7	7.6	7.7	8.0	12.5	10.6	10.2	8.9	7.0	7.8	8.7	6.8	8.0	11.7	11.7
6	Meghalaya	16.6	16.5	18.9	14.5	15.2	17.9	19.5	17.1	14.8	16.8	19.8	18.2	20.5	19.3	18.6	18.6
7	Mizoram	5.8	7.9	6.7	8.7	7.1	7.3	8.2	8.0	7.9	5.8	6.0	6.5	7.4	7.9	8.7	8.7
8	Nagaland	9.3	8.5	7.1	8.7	6.7	13.8	7.0	7.7	7.0	7.6	7.0	6.8	7.4	6.8	7.9	7.9
9	Sikkim	24.0	53.2	63.3	20.3	17.9	63.3	68.8	74.2	74.4	74.1	72.2	41.1	65.6	63.3	66.0	66.0
10	Tripura	8.7	9.5	12.7	9.1	9.7	9.4	9.2	9.9	9.9	10.2	12.4	13.5	13.7	13.9	13.4	13.4

Note: \*98-99 to 2003-04 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh and 2001-02 for West Bengal

on the centre. This is the critical fiscal parameter that distinguishes the NSC states from the SC states as can be seen from *Table 1.8*. Orissa, M.P. and Bihar from NSC states and Sikkim from SC states have emerged as exceptions to this general rule. The table reveals that there is a substantial decline in this ratio in recent years compared to early nineties in M.P., Bihar and West Bengal among the NSC states; and in Arunachal Pradesh, J & K and Nagaland among the SC states. When we compare the averages over the two sub-periods, the ratio has declined in the same three states among the NSC states; and Arunachal Pradesh, Mizoram, Manipur and Nagaland among the SC states during the slower growth period. Thus, the recent period of slower growth has coincided with greater revenue effort by most of the states on one hand and reduced extent of central transfers to states on the other hand.

### **(viii) Revenue Deficit to Gross Fiscal Deficit (RD/GFD) Ratio**

1.19 RD/GFD ratio reflects the quality of fiscal deficit in a state (see, 11<sup>th</sup> F.C., 2000, ch.3). If a state is running revenue deficit, it uses its costly borrowing to finance its current or consumption expenditures. To that extent, the state is unable to use its borrowing for productive investment. The higher is the RD/GFD ratio, the greater are the chances of the state getting into the debt-trap (see, 11<sup>th</sup> F.C., 2000, ch.3). *Table 1.9* shows that the quality of fiscal deficit in all the NSC states has deteriorated in recent years compared to the early nineties. Averages during the two sub-periods clearly reveal a considerable deterioration in the quality of fiscal deficit in all NSC states; and in H.P., Manipur and Mizoram among the SC states during the period of slower growth. Transfers from the centre have a critical role to play in deciding this ratio particularly among the SC states.

### **III. Explaining Fiscal Trends in the States: Decomposition Model**

1.20 The discussion of fiscal performance of states through all the eight ratios in the previous section clearly points to the hypothesis that the fiscal performance of states on various dimensions gets adversely affected during the period of slow growth preceded by the phase of rapid growth. There are two possible

Table 1.9: Revenue Deficit/Gross Fiscal Deficit Ratio (in %)																
Sr. No.	Non Special Category States	89-90	Average		92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	(B.E.) 03-04
			92-97	98-03*												
1	Andhra Pradesh	24.5	32.4	42.9	2.6	-12.7	31.0	30.6	113.8	29.0	47.0	24.8	56.8	42.9	43.2	32.0
2	Bihar	3.4	54.7	43.6	45.6	51.5	69.5	68.7	46.0	47.0	61.9	61.8	57.2	-12.9	50.0	34.2
3	Goa	11.6	-41.9	49.5	-24.6	-55.7	-126.3	-33.8	-22.1	11.2	52.4	61.3	54.8	54.5	24.5	12.5
4	Gujarat	13.2	9.8	69.1	26.0	-18.5	-20.4	12.7	25.1	33.9	51.0	52.9	79.1	103.4	59.1	35.0
5	Haryana	24.1	36.8	47.2	0.4	-16.8	73.1	35.2	65.3	63.8	68.7	55.6	26.8	38.5	46.6	
6	Karnataka	23.1	10.9	43.4	12.3	-9.3	19.6	-4.3	29.8	17.2	39.1	54.4	44.1	56.0	23.7	3.6
7	Kerala	41.4	40.2	78.2	46.1	39.8	36.1	30.9	41.7	46.6	67.5	79.9	81.2	79.7	82.5	65.0
8	Madhya Pradesh	-13.5	24.6	65.0	-32.6	36.3	13.8	29.2	75.2	25.7	69.6	75.0	60.6	86.8	33.1	14.9
9	Maharashtra	20.2	21.0	63.1	30.8	18.1	-9.7	14.7	32.1	40.1	52.6	34.8	87.3	75.1	65.6	46.4
10	Orissa	18.2	39.8	66.4	8.5	30.5	39.7	57.8	51.8	50.1	77.7	68.7	58.1	71.4	56.0	53.9
11	Punjab	24.3	54.9	72.1	50.8	51.4	41.6	33.0	92.6	59.9	69.6	85.4	59.8	76.2	69.4	58.5
12	Rajasthan	5.2	23.8	63.0	13.4	20.5	24.1	27.3	34.5	22.8	58.2	67.9	61.1	66.0	61.9	48.9
13	Tamil Nadu	52.1	50.0	72.1	87.3	51.0	27.8	24.8	45.1	64.3	71.9	81.8	67.9	58.3	80.5	56.6
14	Uttar Pradesh	41.5	45.6	63.7	27.3	36.3	42.4	53.4	53.4	61.0	74.8	65.3	61.8	62.5	53.9	97.7
15	West Bengal	45.2	51.2	74.8	43.1	58.9	39.0	46.4	62.9	57.2	68.3	79.6	69.4	75.0	81.7	70.4
	<b>Special Category States</b>															
1	Arunachal Pradesh	-41.9	-73.5	-153.0	1747.6	-915.3	-227.6	-619.7	-285.8	-140.2	-312.6	-264.0	6.0	-22.4	-171.7	-368.9
2	Assam	25.8	290.0	36.4	-78.5	2335.8	43.6	30.8	-391.3	-200.2	-26.6	62.6	50.6	60.9	34.4	61.6
3	Himachal Pradesh	27.0	17.5	63.7	29.9	-74.7	49.6	28.8	27.1	44.0	61.5	56.0	69.6	57.0	74.3	71.5
4	Jammu & Kashmir	23.5	122.2	-69.9	-131.2	-707.6	3005.9	-766.6	-530.0	-136.9	38.0	40.4	51.3	22.7	-501.6	-192.1
5	Manipur	-46.5	-12.3	5.0	-450.7	690.5	-134.8	-69.6	-71.9	-37.5	-102.3	43.1	34.6	47.4	2.2	1.9
6	Meghalaya	-167.8	-159.9	-2.9	-19.5	-20.5	-208.2	-199.4	-502.2	-9.6	-11.5	-7.7	-21.3	15.2	10.8	-37.2
7	Mizoram	2161.2	-247.2	16.5	-53.6	-1106.6	-194.8	-88.2	-27.5	-12.4	-79.7	14.5	51.5	61.7	34.7	46.1
8	Nagaland	32.5	24.1	7.0	9.4	27.1	38.0	27.8	-6.0	48.6	11.9	4.2	13.5	30.4	-25.0	-73.3
9	Sikkim	-65.3	-103.5	-165.5	-86.6	-207.1	-43.4	-149.7	-68.8	-65.3	37.7	-2.2	-201.9	-213.8	-447.2	-438.4
10	Tripura	-8.4	-137.5	-9.8	-234.8	0.2	-32.3	-444.4	-102.3	-11.3	-77.4	7.6	21.4	-10.4	9.9	-27.9

Note: \*98-99 to 2003-04 for six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh and 2001-02 for West Bengal

explanations – not mutually exclusive – for the deterioration in the fiscal performance. First, the primary expenditures continue to grow at very high rate or even accelerate when the government does not raise sufficient revenues. Second, the slower growth of the economy results in lower growth of SOR making it difficult for the state to maintain the level of expenditure. The first one can be attributed to the fiscal behaviour of the state, and the second one to the economic growth. It is useful to decompose the change in fiscal performance into these two components. We consider the change in GFD/GSDP (for short, GFD/Y) ratio as a comprehensive measure of fiscal performance.

1.21 That is,

$$\Delta(\text{GFD}/\text{Y})_{\text{total}} = \Delta(\text{GFD}/\text{Y})_{\text{growth}} + \Delta(\text{GFD}/\text{Y})_{\text{govt. behaviour}} \dots\dots\dots(1)$$

In order to estimate  $\Delta(\text{GFD}/\text{Y})_{\text{growth}}$ , i.e. contribution of economic growth to the change in the GFD to GSDP ratio, we have to assume that the government behaviour does not change. We consider the government behaviour in terms of expenditure and revenues. If government behaviour did not change, its real expenditure would remain the same, or the expenditure (TE) would grow at the rate of inflation. Similarly, if government behaviour remained unchanged, its revenues (RR) would grow at the nominal growth rate of GSDP ( $G_{ny}$ ) i.e. the real growth rate of the economy ( $G_y$ ) plus the inflation rate ( $\pi$ ).

Thus, for a given growth rate,  $G_{ny}$ , the growth component of the change in the GFD/ GSDP ratio may be computed as:

$$\begin{aligned} \Delta(\text{GFD}/\text{Y})_{\text{growth}} &= [\text{TE}_0(1+\pi) - \text{RR}_0(1+G_{ny})] / \text{Y}_0(1+G_{ny}) - [\text{TE}_0 - \text{RR}_0] / \text{Y}_0 \\ &= - [G_y / (1+G_{ny})] * [\text{TE}_0 / \text{Y}_0] \dots\dots\dots(2) \end{aligned}$$

Subscripts 0 and 1 indicate the two periods over which we take the change in GFD/GSDP ratio.

The change in the GFD/GSDP ratio due to government’s fiscal behaviour is simply the residual, i.e.

$$\Delta (\text{GFD}/\text{Y})_{\text{govt. behaviour}} = \Delta (\text{GFD}/\text{Y})_{\text{total}} - \Delta(\text{GFD}/\text{Y})_{\text{growth}} \dots\dots\dots(3)$$

It is worth emphasising that the government behaviour component is not synonymous with commonly used indicators such as the primary deficit, because the primary deficit in a given year would incorporate the growth contribution through the effect on revenues. An intuitive way of explaining government behaviour would be to say that it represents efforts to increase revenues either through widening the tax base or by improving efficiency of tax collection; it would also include attempts to keep growth in real expenditure in check.

- 1.22 *Table 1.10* presents the summary of the decomposition exercise described above for all the states over the period 1992-93 to 2001-02. As usual, we have considered the averages of the total change (TC) and the two components ( $C_{Gr}$  and  $C_{Govt.}$ ) over the two sub-periods. It is clear from the table that the negative effect of government behaviour has overwhelmed the positive contribution of economic growth in all states except Kerala, H.P., Nagaland and Sikkim during the slow growth period of recent years resulting in deterioration in the GFD/GSDP ratio over time<sup>3</sup>. However, during the period of rapid growth (1992-98), several states experienced an improvement in their fiscal deficit ratio. In all such states (8 in NSC and 5 in SC states), the favourable contribution of economic growth overwhelmed the unfavourable government behaviour. Thus, economic growth *per se* can lead to substantial improvement in the GFD /GSDP ratio if the government's fiscal behaviour does not correspondingly deteriorate.
- 1.23 It is also worth noting from our detailed annual exercise of decomposition that sustained high growth is not necessary for an improvement in the ratio over a period. Even a few years of high growth can help keep the ratio within acceptable bounds over a period, whether or not fiscal behaviour worsens. Similarly, the government's fiscal behaviour can also favourably contribute to the reduction in the fiscal deficit ratio although the average figures for all states in *Table 1.10* do not show any such instance in both the sub-periods. However, when we compare the behaviour of averages in the two sub-periods we do find instances

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<sup>3</sup> The situation is totally reversed for Bihar, where the government behaviour contributed favourably to overwhelm the negative contribution of growth. This could be due to the bifurcation of the state and related issues.

<b>Table 1.10: Decomposition Model</b>									
Sr. No.	States	Average (1992-93 to 1997-98)			Average(1998-99 to 2001-02)			Average Real Growth	
		TC	CGov	Cgov	TC	CGr	CGov	92-93 to 97-98	98-99 to 01-02(3)
<b>Non Special Category States</b>									
1	Andhra Pradesh	-0.01	-0.65	0.64	0.49	-1.11	1.59	4.31	6.99
2	Bihar	-0.26	-0.51	0.25	-0.61	2.67	-3.28	3.15	-8.48
3	Goa	-0.84	-1.68	0.84	0.71	-2.02	2.73	7.98	9.51
4	Gujarat	-0.35	-1.50	1.16	0.48	-0.73	1.21	11.08	4.09
5	Haryana	0.13	-0.76	0.89	0.42	-0.98	1.39	4.60	6.08
6	Karnataka	-0.10	-0.97	0.87	0.78	-1.15	1.93	6.00	7.63
7	Kerala	0.16	-0.91	1.07	-0.14	-1.04	0.90	5.93	6.12
8	Madhya Pradesh	-0.06	-0.85	0.79	0.57	1.03	-0.47	5.90	-3.24
9	Maharashtra	0.19	-1.00	1.18	0.17	-0.52	0.70	8.15	4.11
10	Orissa	-0.11	-0.83	0.73	0.89	-0.92	1.82	4.42	4.17
11	Punjab	0.30	-0.70	1.00	0.48	-0.72	1.20	4.53	4.36
12	Rajasthan	0.17	-1.48	1.65	0.61	-0.66	1.27	8.53	3.69
13	Tamil Nadu	-0.19	-1.10	0.91	0.28	-0.80	1.08	7.15	5.26
14	Uttar Pradesh	0.19	-0.61	0.80	0.05	-0.35	0.39	3.95	2.34
15	West Bengal	0.24	-0.82	1.06	0.87	-0.95	1.82	6.66	6.70
<b>Special Category States</b>									
1	Assam	-0.24	-0.48	0.23	0.96	-0.44	1.40	2.52	2.20
2	Arunachal	2.07	-2.85	4.92	0.88	-2.50	3.39	5.03	4.31
3	Himachal Pradesh	1.09	-1.88	2.97	-0.83	-2.06	1.23	6.50	6.29
4	Jammu & Kashmir	-0.93	-1.82	0.89	1.46	-1.68	3.14	5.09	3.85
5	Manipur	0.26	-2.34	2.60	0.23	-2.47	2.71	5.46	7.17
6	Meghalaya	-0.18	-1.36	1.18	0.14	-2.18	2.32	4.37	7.17
7	Mizoram	2.24	-3.15	5.40	2.31	-3.39	5.70	5.04	5.60
8	Nagaland	0.14	-4.24	4.39	-0.03	-1.08	1.05	8.75	2.23
9	Sikkim	-0.89	-11.27	10.38	-0.76	-7.45	6.69	8.60	4.47
10	Tripura	-0.08	-2.63	2.55	0.68	-3.74	4.42	7.27	11.34
Note:									
1. Positive change indicates deterioration									
2. GSDP figures for most of the states are not available beyond 2001-02, hence the averages are accordingly taken.									
3. Real GSDP figures for Mizoram are estimated from the corresponding nominal values by taking the annual inflation rates prevailing in Assam.									

of improved government behaviour at the margin. Thus, while, in general, we notice a greater worsening of the GFD/GSDP ratio across states in the second period, the underlying components exhibit varying behaviour. In Rajasthan, for instance, the growth component fell considerably in the second period but the effect of this was somewhat mitigated by improved government behaviour shown by a less unfavourable figure for this component. In Haryana, the growth component improved in the second period but was outstripped by an even greater worsening of government behaviour. The same is true of Andhra Pradesh, Goa, Karnataka, Rajasthan, Orissa and West Bengal.

1.24 We now proceeded to use the decomposition of  $\Delta(\text{GFD}/Y)$  to derive implications about the required economic growth or the required fiscal compression if the states were to attempt reducing their Debt/GSDP ratio to the tolerable limit of 35 per cent<sup>4</sup>. First, let us estimate the required economic growth rate by assuming constant government behaviour. We assume that future government behaviour will be the average of the values for this component over the last three years. To derive the required growth rate, we proceed as follows:

Let us suppose that the reduction in  $D/Y$  is achieved through equal annual reductions in the ratio up to the year 2009-10.

$$\Delta(\text{GFD}/Y)_{\text{total}} = x \text{ (say)} = \Delta(\text{GFD}/Y)_{\text{growth}} + \Delta(\text{GFD}/Y)_{\text{govt. behaviour}} \dots\dots\dots(4)$$

$$\text{Let } \Delta(\text{GFD}/Y)_{\text{govt. behaviour}} = a \dots\dots\dots(5)$$

We know from (2) above,

$$\Delta(\text{GFD}/Y)_{\text{growth}} = - [G_y / (1 + G_{ny})]^* [TE_0 / Y_0]$$

$$\text{Therefore, } x = - [G_y / (1 + G_{ny})]^* [TE_0 / Y_0] + a \dots\dots\dots(6)$$

$$\text{and } D_1/Y_1 - D_0/Y_0 = D_0/Y_1 - D_0/Y_0 + (\text{GFD}_0/Y_0 + x)$$

Now, let us suppose that we proceed from the present  $D/Y$  to the target  $D/Y$  by 2009-10 through equal reductions in  $D/Y$  each year, say,  $d$ .

Then the required nominal growth ( $G_{ny}$ ) is given by<sup>5</sup>:

<sup>4</sup> For states whose  $D/Y$  is below 35%, we posit that they must achieve a growth rate that would enable them to maintain their  $D/Y$  at current levels given the fiscal behaviour of their government.

<sup>5</sup>  $d = D_0/Y_1 - D_0/Y_0 + (\text{GFD}_0/Y_0 + x)$   
 $\Rightarrow d = D_0/[Y_0(1 + G_{ny})] - D_0/Y_0 + (\text{GFD}_0/Y_0 + x)$

$$\therefore G_{ny} = \frac{GFD_0/Y_0 + \Pi^*[TE_0/Y_0] + a - d}{(d + D_0/Y_0 - GFD_0/Y_0 + TE_0/Y_0 - a)} \dots\dots\dots(7)$$

1.25 The growth rate required for each state over the next five years in order to reduce the D/Y to the tolerable limit of 35% is shown in *Table 1.11*. It may be noted that we report the real growth rates in *Table 1.11* by assuming the inflation rate ( $\pi$ ) of 5% p.a. in future. We also juxtapose in the table the highest real growth rates achieved by each state in the five consecutive years during the last decade. The table shows that 19 states out of 25 require growth rates higher than the best they achieved in the recent past in order to either reduce their D/Y to 35% or to stay where they are if their D/Y happens to be below 35%. As many as 3 states require growth rates of more than 10 percentage points above their best growth and 9 states an acceleration in growth rate of 5-10 percentage points in order for the D/Y to come down to 35%. This establishes conclusively that the current government behaviour in the vast majority of states is clearly problematic. Growth by itself cannot solve the problem and bring down the fiscal debt to the tolerable limit in states. A combination of high growth and improvement in government behaviour will be required.

1.26 Since growth by itself cannot solve the debt problem in states, we now turn to the next question: what combination of growth and fiscal adjustment would be required in order for the states to bring down D/Y to 35% limit where the present level is above this figure? <sup>6</sup> To determine the fiscal adjustment needed to reach the tolerable D/Y by 2009-10, we proceed as follows:

Let us suppose that the total reduction in D/Y over the time period is achieved in equal instalments of 'd' each year. We can then write

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$$\Rightarrow d = D_0/Y_0 [1/(1 + G_{ny}) - 1] + (GFD_0/Y_0 + x)$$

Simplifying and substituting the value of x from (A) above,

$$d = D_0/Y_0 [ - G_{ny} / (1 + G_{ny}) ] + GFD_0/Y_0 - [G_y / (1 + G_{ny})]^* [TE_0 / Y_0] + a$$

$$\Rightarrow d(1 + G_{ny}) = - D_0/Y_0 \cdot G_{ny} + GFD_0/Y_0 \cdot (1 + G_{ny}) - [G_y [TE_0 / Y_0] + a^* (1 + G_{ny})]$$

$$\Rightarrow G_{ny}(d + D_0/Y_0 - GFD_0/Y_0 + TE_0 / Y_0 - a) = GFD_0/Y_0 + \pi^*[TE_0 / Y_0] + a - d$$

Rearranging the terms, we have the result in the text.

<sup>6</sup> Again for states with D/Y below 35%, the question changes to: what combination of growth and fiscal adjustment is needed to maintain the status quo?

$$D_1 / Y_1 - D_0 / Y_0 = d \dots\dots\dots(8)$$

$$\text{and } GFD_1 = D_1 - D_0 = Y_0 \cdot d + (D_0 + Y_0 \cdot d) \cdot G_{ny} \dots\dots\dots(9)$$

where  $G_{ny}$  is nominal growth in GSDP.

Table 1.11: Growth rate required to achieve the tolerable Debt/GSDP ratio					
Sr. No.	Non Special Category States	D/Y 2001-02	Target D/Y 2009-10	Annual Real Growth Required	Highest Real Growth Achieved
1	Andhra Pradesh	31.5	31.5	8.4	6.1
2	Bihar <sup>†</sup>	51.4	35.0	5.7	6.8
3	Goa	41.8	35.0	9.5	10.4
4	Gujarat	36.9	35.0	8.9	12.4
5	Haryana	28.1	28.1	10.6	6.4
6	Karnataka	67.8	35.0	13.3	8.3
7	Kerala	29.9	29.9	7.4	8.7
8	Madhya Pradesh <sup>†</sup>	36.8	35.0	9.4	6.9
9	Maharashtra	24.0	24.0	9.6	9.0
10	Orissa	27.0	27.0	15.7	5.9
11	Punjab	61.1	35.0	12.6	5.0
12	Rajasthan	47.2	35.0	11.2	9.3
13	Tamil Nadu	43.3	35.0	6.7	7.5
14	Uttar Pradesh <sup>†</sup>	26.0	26.0	10.3	4.9
15	West Bengal	48.0	35.0	17.1	7.4
<b>Special Category</b>					
1	Arunachal Pradesh	54.8	35.0	18.7	4.3
2	Assam	30.4	30.4	10.4	10.1
3	Himachal Pradesh	73.5	35.0	13.4	7.3
4	Jammu & Kashmir	44.1	35.0	12.5	5.2
5	Manipur	36.8	35.0	18.7	9.9
6	Meghalaya	92.4	35.0	10.3	7.6
7	Mizoram	70.0	35.0	22.5	9.9
8	Nagaland	88.5	35.0	15.0	4.9
9	Sikkim	40.8	35.0	3.4	9.9
10	Tripura	54.8	35.0	21.1	11.2
<sup>†</sup> For these states the average government behaviour is taken as the average over the years 1997-2000.					

$$\text{Now, } PD_1 = GFD_1 - \text{Interest payments} = GFD_1 - i_1 \cdot D_0$$

where  $i_1$  = interest in period 1 and  $D_0$  is debt in the previous period

$$\therefore PD_1 = (G_{ny} - i_1)D_0 + Y_0 \cdot d \cdot (1 + G_{ny}) \dots\dots\dots(10)$$

$$\text{and } PD_1 / Y_1 = \frac{(G_{ny} - i_1)D_0}{(1 + G_{ny})Y_0} + d \dots\dots\dots(11)$$

1.27  $G_{ny}$  on the right hand side in the equation C above is the growth rate that we assume. Here we consider an optimistic and a pessimistic scenario. For the optimistic case, we have taken the maximum real growth rate achieved in 5 consecutive years during 1989-02 in each state<sup>7</sup>. For pessimistic scenario, we have reduced these optimistic growth rates by 1 percentage point in each state. We also need to make some assumption about the effective interest rate,  $i$ . We assume that up to 2005-06, the rate drops by 0.5 percentage points each year. For the remaining years thereafter, we conservatively assume the interest rate to remain constant<sup>8</sup>.  $D_0$  and  $Y_0$  are known, and so is  $d$ , the desired reduction in the  $D/Y$  each year. Hence the primary deficit to GSDP ratio for a given year in each state can be determined. The primary deficit is the difference of non-interest (or primary) expenditures and revenues of the state government. If we assume that the state's revenue would grow at the same rate as the nominal GSDP, we can estimate the required implicit growth in the primary expenditures over years. This would result in the required rate of expenditure compression in each state to achieve the level of tolerable Debt / GSDP ratio of 35% from the present level by the year 2009-10. *Table 1.12* presents the results for both optimistic and pessimistic growth series.

1.28 We can see from *Table 1.12* that under the optimistic growth scenario, in as many as 14 out of 25 states the compression required is less than 3% p.a. from the trend rate of growth in the nominal primary expenditure. Since rate of inflation has significantly fallen by 2.5% to 3% p.a. of late, in all these 14 states, practically no compression in expenditures is required in real terms. Even under

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<sup>7</sup> For Bihar, M.P. and U.P., we have considered the maximum growth rate achieved during 5 consecutive years from 1993-94 to 2001-02. This is because GSDP for these bifurcated states are available only for this period.

<sup>8</sup> Constancy of effective interest rate after 2005-06 implies that the downward pull on the interest cost on account of maturing or swapping of the high cost debt would be counterbalanced by marginally increasing interest rates on fresh debt. We are, thus, providing for marginally increasing interest rates in future for conservatism (c.f. DeLong, 2004).

Table 1.12: Expected Growth Rate and Fiscal Compression Required

Sr. No.	State	D/Y in Base Year*	Target D/Y in 2009-10	Average Revenue growth in the last 5 years	Maximum Revenue growth achieved in any 5-year period	Optimistic Scenario						Pessimistic Scenario					
						Expected Revenue Growth Rate	Expected GSDP Growth Rate (Real)	Required reduction in PE growth from the average of the last 5 years	Required reduction in PE growth from trend value	Required reduction in PE growth from min achieved in any 5 year period	Expected Revenue Growth Rate	Expected GSDP Growth Rate (Real)	Required reduction in PE growth from the average of the last 5 years	Required reduction in PE growth from trend value	Required reduction in PE growth from min achieved in any 5 year period		
1	AP	33.0	33.0	11.5	14.5	11.1	6.1	2.0	3.5	2.0	3.3	10.1	5.1	3.3	4.8	3.3	
2	Arunachal	54.9	35.0	11.0	16.0	15.1	10.1	0.0	0.0	0.0	0.0	14.1	9.1	0.0	0.0	0.0	
3	Assam	33.7	33.7	16.5	16.5	9.3	4.3	17.2	6.3	0.8	18.4	8.3	3.3	18.4	7.5	2.0	
4	Bihar	72.4	35.0	9.4	11.7	11.8	6.8	8.1	2.2	0.0	9.4	10.8	5.8	9.4	3.5	0.5	
5	Goa	40.8	35.0	16.1	23.7	15.4	10.4	1.8	1.3	0.0	3.0	14.4	9.4	3.0	2.5	0.0	
6	Gujarat	37.7	35.0	9.6	20.4	17.4	12.4	0	0	0	0.0	16.4	11.4	0.0	0.0	0.0	
7	Haryana	28.1	28.1	8.0	29.6	11.4	6.4	0.0	0.1	0.0	0.0	10.4	5.4	0.0	1.4	0.0	
8	HP	72.4	35.0	12.3	23.2	12.3	7.3	4.1	9.4	4.1	5.4	11.3	6.3	5.4	10.7	5.4	
9	JK	68.8	35.0	8.3	25.9	10.2	5.2	0.0	3.3	0.0	0.0	9.2	4.2	0.0	4.5	0.0	
10	Karnataka	30.5	30.5	15.4	17.0	13.3	8.3	4.5	0.4	0.0	5.7	12.3	7.3	5.7	1.7	0.1	
11	Kerala	38.3	35.0	11.8	17.9	11.7	6.7	2.3	4.1	0.0	3.7	10.7	5.7	3.7	5.5	0.9	
12	Maharashtra	32.4	32.4	11.3	14.9	14.0	9.0	2.4	1.1	0.0	3.8	13.0	8.0	3.8	2.5	0.0	
13	Manipur	49.3	35.0	12.3	12.8	14.9	9.9	1.0	0.0	0.0	1.5	13.9	8.9	1.5	0.3	0.0	
14	Meghalaya	41.0	35.0	15.0	15.0	12.6	7.6	6.1	1.2	0.0	7.3	11.6	6.6	7.3	2.4	0.0	
15	Mizoram	100.0	35.0	8.5	12.1	14.9	9.9	0.0	1.1	0.0	0.4	13.9	8.9	0.4	2.2	0.2	
16	MP	33.8	33.8	11.6	14.5	11.9	6.9	3.4	2.1	1.8	4.6	10.9	5.9	4.6	3.4	3.1	
17	Nagaland	72.3	35.0	13.6	13.6	9.9	4.9	5.1	3.3	0.3	6.3	8.9	3.9	6.3	4.4	1.4	
18	Orissa	73.9	35.0	16.3	16.3	10.9	5.9	12.0	10.8	9.3	13.3	9.9	4.9	13.3	12.1	10.6	
19	Punjab	48.6	35.0	13.8	24.1	10.0	5.0	7.2	5.6	0.0	8.6	9.0	4.0	8.6	7.0	0.6	
20	Rajasthan	52.0	35.0	9.9	18.8	14.3	9.3	0.0	1.5	0.0	0.3	13.3	8.3	0.3	2.9	0.0	
21	Sikkim	81.6	35.0	10.7	44.7	14.9	9.9	0.0	6.7	0.0	0.0	13.9	8.9	0.0	7.8	0.0	
22	TN	28.3	28.3	8.9	16.7	12.5	7.5	0.0	0.2	0.0	0.0	11.5	6.5	0.0	1.5	0.0	
23	Tripura	45.1	35.0	12.4	14.6	16.2	11.2	2.6	0.0	0.0	3.7	15.2	10.2	3.7	0.7	0.0	
24	UP	43.4	35.0	9.9	15.1	10.4	5.4	11.4	11.6	8.9	13.3	9.4	4.4	13.3	13.5	10.9	
25	WB	42.5	35.0	10.0	14.5	12.4	7.4	15.9	11.2	7.8	17.5	11.4	6.4	17.5	12.8	9.4	

the pessimistic growth assumption, 12 out of these 14 states would not require any compression in real expenditures to achieve 35% Debt / GSDP target by 2009-10. However, when we compare the content of expenditure compression required in comparison to the best performance of respective states in 5 consecutive years in recent past, only 4 states, viz. Orissa, U.P., West Bengal and H.P., require stringent compression in their primary expenditures under the optimistic growth assumption. To this list only Andhra Pradesh and M.P. are added when we consider the pessimistic growth assumption. Thus, the problem of debt tolerance does not happen to be so intractable as it is made out to be for most of the states.

- 1.29 These conclusions might seem somewhat startling, given that the D/Y ratios for all states turn out to be higher as per our definition of debt relative to the RBI definition, so that the debt burden for states is higher than is generally supposed. However, this higher burden is offset by two factors. One, the tolerable level of debt to GSDP ratio is higher than what is generally prescribed erroneously on account of the measurement problems discussed in Section II above. Two, the effective interest rate on state debt goes down drastically once we posit a higher level of debt as the present level of interest payments relates to a higher denominator than before. Domar equation clearly shows the importance and sensitivity to interest rate of the movements in Debt/GSDP ratio on one hand and growth rate and primary deficit on the other hand.

#### **IV. Summary**

- 1.30 In this chapter, we examine the debt in 25 states in light of the trends since 1989-90. We define debt more comprehensively than the RBI and arrive at debt to GSDP ratios on a new basis. We do so because the RBI definition does not fit the Domar equation based on the definition that growth in debt between two years equals the debt-financed deficit. We set the acceptable or tolerable ratio of debt to GSDP (debt as defined by us) at 35%. This is consistent with and comparable to the 55% Debt /GDP ratio of 55% prescribed by 11<sup>th</sup> F.C. for the whole nation and the D/GSDP ratio of 25% suggested by 10<sup>th</sup> Plan for states. We then analyse

trends in various ratios relating to fiscal performance and find a deterioration in ratios over the period covered by us (1991-92 to 2001-02). This, of course, is no news to those monitoring the fiscal situation of the states. Next, we examine the causes underlying the behaviour of states regarding fiscal deficit to GSDP by examining the ratio in two different periods: 1992-1998 and 1998-02. We decompose the effects of growth and what we call 'fiscal behaviour' of states. We find that in the first period, in some states, growth was good enough to overwhelm any deterioration in the fiscal behaviour of states. The fiscal deficit to GSDP ratio, accordingly, improved in these states. In the second period, however, decelerating growth combined with worsening fiscal behaviour to produce deterioration in the fiscal deficit in most states.

- 1.31 We then enquire into the required growth rate to achieve the tolerable debt to GSDP ratio of 35% if recent fiscal behaviour continued in each state, and find that the growth rates required would not be within the realm of feasibility in most states. Similarly, making assumptions about the growth rates of states, we examine the fiscal adjustment or primarily the expenditure compression required in states, and find that all states except Orissa, U.P., West Bengal and H.P., do not have a serious fiscal problem. It does appear that 'deficit pessimism' is misplaced in relation to the growth rates we can reasonably expect in the coming years.

## CHAPTER 2

### Fiscal Sustainability of Debt – Measurement and Responsible Factors

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#### I. Introduction

- 2.1 In the previous chapter we have seen that the fiscal position has considerably deteriorated in most of the states in the country in the recent past. Since this period had slower growth and higher interest rates (at least for some of the period), we also attempted to estimate the extent to which the situation would improve if the economic growth in states revived and the present low interest rate environment continued. We found that the growth rate required to achieve tolerable level of debt if the state continues with its fiscal behaviour observed in the immediate past is unrealistically high in most cases. Thus, the majority of the states will have to go in for restraint and fiscal contraction, albeit of varying magnitudes. In order to estimate the dimension and the magnitude of fiscal contraction required in each of the states, we considered a **uniform debt–GSDP target ratio** for all states consistent with the nationally acceptable limit on debt–GDP ratio. In short, we were guided by the traditional parameter of the debt–income ratio and the fiscal discipline defined by the target set by us. In the present chapter, we critically examine the measurement issues involved and redefine the parameter to consider fiscal sustainability of different states on one hand and help identifying another set of underlying factors on the other hand.
- 2.2. We begin, in the second section of this chapter, by discussing the practical problems in using debt-income ratio to reflect fiscal sustainability at the state level in India and go on to provide an alternative measure. The third section decomposes the new measure into different factors and examines their behaviour over time in each state. In the fourth section, we derive plausible values of the crucial fiscal parameters in each state based on their behaviour in recent past to check whether the debt situation in states can improve on its own if the states achieve certain targets. In the next chapter, we consider case studies of the six

selected states and present our suggestions in *Chapter 4* for collecting the fiscal situation in states.

## **II. Indicator for Fiscal Sustainability**

- 2.3. The most common indicator of the fiscal sustainability, as noted in *Chapter 1* is the debt-income ratio and its behaviour over time. Since fiscal deficit systematically leads to an increase in debt, it is possible to link the behaviour of the debt-income ratio to the fiscal deficit as a proportion of income in the economy. Fiscal sustainability requires the economy to find a finite debt-income ratio that can stabilise given all other parameters (like growth rate of income, interest rate and primary deficit as a proportion of income) at their current level. This becomes a very effective policy framework when we replace the current levels of the parameters with desirable targets that themselves entail required policy changes. We had a flavour of this in the previous chapter where we considered exogenously decided uniform limit on the government debt in terms of tolerable debt / GSDP ratio for all states and then went on to ascertain the growth rate and fiscal adjustment required in order to attain the target debt / income ratio in each state. Here, we would like to argue why neither the debt-income ratio nor a uniform tolerable limit on debt is a valid indicator of fiscal sustainability at the state level in India.
- 2.4 It is clear that debt is always at market prices and, therefore, income should also be only at market prices to make sense. However, given the current practices, traditions and routines of preparing estimates of state domestic product (SDP) and regional accounts, state income estimates are not available at market prices for any state in the country<sup>9</sup>. The debt-income ratio at the state level is, therefore, debt-GSDP ratio when the GSDP is at factor cost and not market prices. As shown by Dholakia et al. (2002), neither the indirect taxes and direct subsidies are distributed uniformly across the states, nor are they in proportion to the income at factor cost. The ratio of indirect taxes to the GSDP at factor cost may be very high in some states like Gujarat, Maharashtra and Tamil Nadu

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<sup>9</sup> As an exception, some preliminary estimates are available for Gujarat for the years 1990-91 to 2000-01 (see, Dholakia, Trivedi and Shah, 2002).

whereas it may be very low in several other states and the ratio of direct subsidies to GSDP at factor cost is likely to be negatively correlated to the other ratio. Thus, we should expect significant divergence in the relative positions of states between two measures, GSDP at factor cost and GSDP at market prices. The “correct” debt-income ratio for various states based on a uniform norm would be very different when its translation to the debt-GSDP ratio at factor cost is considered. This problem is further complicated because even in a given state, the ratio between the GSDP at market prices and at factor cost may move considerably in the same direction over time as observed in the case of Gujarat for which preliminary estimates are available (see, Dholakia, et al., 2002). We, therefore, cannot consider debt-income ratio at the state level as a reliable indicator of fiscal sustainability or even the uniform tolerable limit of debt in India. We need an alternative indicator.

- 2.5 The concept of fiscal sustainability should ultimately be in terms of the ability of the state government to generate tax and non-tax revenues to meet expenditures and retire debt. Instead of taking the debt-income ratio for the whole economy, we need to consider the relevant portion of income in the denominator. The income of a state government consists of state’s own revenue in the form of tax and non-tax revenues and transfers from the centre in the form of state’s share in the tax revenues and grants<sup>10</sup>. Since Finance Commissions have largely been deciding the transfers to states, we should link fiscal sustainability of a state to its own capacity and ability to generate revenues. Hence, we propose to replace debt-GSDP ratio by the ratio of debt to state’s own revenues (D/SOR) as the critical indicator for fiscal sustainability of states. If continuation of the current (or target) fiscal behaviour of a state can result in a stable finite D/SOR ratio, the state’s fiscal position is technically sustainable. However, if such a stable ratio turns out to be intolerably high (in the sense of imposing very high interest burden), the state should correct its fiscal behaviour to ensure the stability of the

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<sup>10</sup> One may argue that in the debt / GSDP ratio, GSDP is a surrogate measure of state revenues. We do know, however, that variations in GSDP do not go hand in hand with variations in state revenues partly due to inefficiency of the tax administration of states and partly due to the tax sharing awards by Finance Commissions.

D/SOR ratio at a plausible or tolerable level. We first need to analyse this ratio.

From the definition of debt, we have,

$$\Delta D_t = DFD_t = GFD_t - MFD_t \dots\dots\dots (12)$$

$$\text{Now, } \Delta (D / \text{SOR})_t = (D_t / \text{SOR}_t) - (D_{t-1} / \text{SOR}_{t-1}) \dots\dots\dots (13)$$

$$\text{and } \text{SOR}_t = (1 + g) \text{SOR}_{t-1} \dots\dots\dots (14)$$

where g is the annual rate of growth in SOR. Then,

$$\Delta (D/\text{SOR})_t = (DFD_t / \text{SOR}_t) - (D_{t-1} / \text{SOR}_{t-1}) (g / (1+g)) \dots\dots\dots(15)$$

$$\text{But } DFD_t = IP_t + PD_t - MFD_t \dots\dots\dots(16)$$

where  $IP_t$  and  $PD_t$  are interest payment and primary deficit in year t; and

$$PD_t = \text{NIEX}_t - \text{SOR}_t - \text{TrC}_t - \text{NDCR}_t \dots\dots\dots(17)$$

$$\text{and } IP_t = i(D_{t-1}) \dots\dots\dots(18)$$

where  $\text{NIEX}_t$  is non-interest (or primary) expenditure,  $\text{TrC}_t$  is transfers from the centre, and  $\text{NDCR}_t$  is non-debt creating capital receipt in the year t; and i is the effective interest rate on the debt.

Taking equations (15) to (18) together, we have,

$$\Delta (D/\text{SOR})_t = (\text{PDOA}_t / \text{SOR}_t) - (\text{TrC}_t / \text{SOR}_t) - (\text{NDCR}_t / \text{SOR}_t) - (MFD_t / \text{SOR}_t) - (D_{t-1} / \text{SOR}_{t-1}) ((g - i) / (1 + g)) \dots\dots\dots (19)$$

where  $\text{PDOA}_t$  is the primary deficit on own account in a state budget and basically reflects the fiscal behaviour of the state government. Assuming that the state government's fiscal parameters contained in equation (19) remain the same as in the current period, we can derive the stable D / SOR ratio as:

$$\text{stable } (D/\text{SOR})^* = ((1 + g) / (g - i)) [X_1 - X_2 - X_3 - X_4] \dots\dots\dots (20)$$

where  $X_1$  to  $X_4$  are the first four ratios on the right hand side of equation (19) and together represent the primary deficit to SOR ratio in equation (20).

### III. Debt Sustainability and Decomposition of Change in D/SOR Ratio

2.6 Table 2.1 presents the expected sustainable D/SOR ratios for all the states

consistent with their fiscal parameters during the award period of 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> Finance Commissions. We can readily see that these ratios vary considerably across states and even for each state over periods of award of different FCs. Thus, fiscal behaviour of states and awards of the Finance Commissions have significant impact on the debt situation of states. All the states, except Bihar, Assam and Meghalaya, meet the technical condition of fiscal sustainability of their debt during the award period of 9<sup>th</sup> FC. We can, moreover, see that the sustainable debt ratio in most of the states was very low and in the plausible range during the award period of the 9<sup>th</sup> FC but deteriorated substantially during the award period of the 10<sup>th</sup> FC in all the states except Andhra Pradesh, Assam, Himachal Pradesh, Sikkim and Tripura. Since we have the actual data for only three years of the award period of the 11<sup>th</sup> FC, we cannot strictly compare it with earlier ones, but it seems that the ratio may improve in some states and deteriorate in others. Even between the 9<sup>th</sup> and 11<sup>th</sup> FC award periods, all states except Karnataka, Assam, Meghalaya and Sikkim experienced an increase in the sustainable D/SOR ratio. The 10<sup>th</sup> FC award period saw Haryana, Orissa, Punjab and West Bengal join Bihar with unsustainable debt among the NSC states. Among the SC states Arunachal Pradesh, Manipur, Nagaland and Mizoram slipped into the problem of debt unsustainability during the same period. This happened because, for most of the states, interest rates were higher and the growth rates of the states' own revenues were lower during the 10<sup>th</sup> FC award period than the 9<sup>th</sup> FC period. Moreover, the ratio of the primary deficit to the SOR also worsened during the same period in all NSC states except Tamil Nadu, Punjab and Goa. Thus, the fiscal behaviour of states coupled with the award pattern of the 10<sup>th</sup> and 11<sup>th</sup> FCs and the exogenous economic environment resulted in the serious debt problem of states. But, as argued very often, awards of FCs have direct bearing on the fiscal behaviour of several states (see, Kannan et al; 2004). Therefore, the FC has to consider likely changes in economic environment while devising the scheme of transfer of resources to states so as to provide proper incentives to states for tackling their debt problems.

**Table 2.1: Expected Sustainable D/SOR Ratios Consistent with Fiscal Parameters During Last Three Finance Commission Award Periods**

Sr. No.	States	90-91 to 94-95						95-96 to 99-00						99-00 to 2002-03#					
		Avg. interest rate	Avg. annual growth in SOR	a	b= (PDOA-TrC-Misc)/SOR	b*a	Avg. interest rate	Avg. annual growth in SOR	a	b= (PDOA-TrC-Misc)/SOR	b*a	Avg. interest rate	Avg. annual growth in SOR	a	b= (PDOA-TrC-Misc)/SOR				
		i	Gsor	(1+g)/(g-i)	Primary Deficit Component	(D/SOR)*	i	Gsor	(1+g)/(g-i)	Primary Deficit Component	(D/SOR)*	i	Gsor	(1+g)/(g-i)	Primary Deficit Component				
<b>Non Special Category States</b>																			
1	Andhra Pradesh	0.091	0.13	27.74	0.14	3.90	0.109	0.15	26.04	0.16	4.26	0.119	0.12	-1740.56	0.17	-298.24			
2	Bihar	0.112	0.09	-41.98	0.12	-4.91	0.123	0.09	-29.83	0.10	-3.13	0.123	0.11	-73.17	0.22	-15.77			
3	Goa	0.063	0.24	7.14	0.17	1.18	0.092	0.27	7.06	0.09	0.64	0.094	0.23	9.19	0.14	1.32			
4	Gujarat	0.097	0.17	15.99	0.13	2.07	0.111	0.12	88.37	0.19	17.16	0.105	0.11	273.06	0.23	62.49			
5	Haryana	0.106	0.35	5.60	0.04	0.25	0.123	-0.01	-7.17	0.12	-0.88	0.117	0.16	30.38	0.08	2.39			
6	Karnataka	0.095	0.16	17.40	0.12	2.07	0.104	0.13	43.71	0.12	5.45	0.102	0.22	10.21	0.19	1.92			
7	Kerala	0.101	0.18	15.12	0.15	2.33	0.112	0.13	81.31	0.23	18.33	0.103	0.14	34.31	0.21	7.22			
8	Madhya Pradesh	0.090	0.14	24.65	0.08	1.97	0.103	0.13	40.12	0.15	6.13	0.098	0.08	-53.25	0.25	-13.13			
9	Maharashtra	0.143	0.16	81.23	0.08	6.42	0.115	0.12	280.40	0.23	64.89	0.098	0.09	-96.66	0.22	-21.73			
10	Orissa	0.096	0.17	16.48	0.31	5.17	0.110	0.09	-67.84	0.43	-28.91	0.114	0.14	42.25	0.22	9.41			
11	Punjab	0.077	0.36	4.83	0.27	1.30	0.124	0.08	-22.42	0.08	-1.86	0.104	0.17	18.48	0.17	3.21			
12	Rajasthan	0.097	0.19	13.18	0.12	1.64	0.115	0.12	150.80	0.28	42.40	0.112	0.10	-155.32	0.24	-37.14			
13	Tamil Nadu	0.090	0.19	12.14	0.14	1.73	0.108	0.13	45.88	0.12	5.38	0.107	0.13	50.74	0.09	4.79			
14	Uttar Pradesh	0.094	0.16	18.34	0.28	5.16	0.112	0.11	984.62	0.30	299.44	0.101	0.14	32.32	-0.55	-17.88			
15	West Bengal	0.103	0.14	32.68	0.19	6.30	0.119	0.07	-21.79	0.56	-12.10	0.123	0.15	49.89	0.70	35.15			
<b>Special Category States</b>																			
1	Arunachal	0.119	0.19	16.39	-0.23	-3.71	0.195	-0.01	-4.93	0.13	-0.65	0.153	0.31	8.57	1.02	8.77			
2	Assam	0.134	0.12	-117.98	0.27	-31.86	0.109	0.12	113.43	-0.11	-12.70	0.130	0.14	95.26	0.08	7.95			
3	HP	0.091	0.15	21.05	0.35	7.42	0.111	0.36	5.46	0.47	2.55	0.136	0.01	-7.71	0.56	-4.30			
4	JK	0.070	0.13	19.52	-0.72	-14.03	0.106	0.20	12.51	-0.30	-3.70	0.104	0.10	-834.61	0.13	-107.55			
5	Mizoram	0.115	0.19	15.06	-0.07	-1.01	0.129	0.04	-11.38	1.07	-12.18	0.124	0.17	23.30	-4.19	-97.55			
6	Meghalaya	0.158	0.14	-52.68	0.42	-22.12	0.128	0.17	26.58	0.42	11.17	0.110	0.13	51.28	0.59	30.17			
7	Mizoram	0.088	1.22	1.96	-0.03	-0.07	0.121	0.07	-21.64	1.31	-28.34	0.097	0.16	18.22	3.29	60.00			
8	Nagaland	0.172	0.28	11.91	0.49	5.90	0.125	0.01	-8.67	0.80	-6.97	0.118	0.12	386.11	0.78	301.88			
9	Sikkim	0.114	1.51	1.80	0.33	0.59	0.119	0.29	7.52	0.04	0.32	0.108	0.61	3.22	-0.04	-0.14			
10	Tripura	0.083	0.13	22.58	0.59	13.29	0.111	0.21	12.05	-0.13	-1.54	0.130	0.15	52.61	1.05	55.02			

Note: (1) PDOA: Primary Deficit on Own Account; TrC: Transfers from Centre; Misc: includes WMA, Cash withdrawal, Recovery of loans and advances, and Amount Closed to the Government Account  
(2) Negative (D/SOR)\* ratio indicates generally the unsustainable debt unless the value of 'b' is negative, in which case it indicates a long term surplus rather than debt in the states.  
(3) # For Assam, Gujarat, Kerala, Maharashtra, Orissa & Uttar Pradesh the data upto 2003-04 (RE) are considered. For the 3 bifurcated states years 2000-02 are dropped.

- 2.7 We use equation (8) to decompose the observed change in D/SOR ratio during the award period of 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> FCs for each of the states. *Table 2.2* presents the results in terms of average annual changes. We can see that the ratio of primary deficit on own account (PDOA) to state's own revenues (SOR) is the major unfavourable factor and the ratio of transfers from the centre (TrC) to SOR is the major counterbalancing force in almost all the cases. The differential between the SOR growth (g) and effective interest rate (i) also plays a significant role on margin in several states. Similarly, the recovery of loans & advances (RLA) as a proportion of SOR also plays an important counterbalancing role in several states because it constitutes a major non-debt creating capital receipt. However, the miscellaneous capital receipts (MCR) which largely reflect disinvestment proceeds have not played any significant role during the past. The money (or quasi-money) financed deficit (MFD) as a proportion of SOR has hardly been a substantial influence except in Assam, Orissa, U.P., Kerala, J & K, Rajasthan, West Bengal, and several of the special category states. In short, the factors we have identified are relevant and important in explaining the changes in fiscal position of states over time. *Table 2.2* shows that there is a considerable variation in the contribution of each factor across states during a given period and within a state over time.
- 2.8 It is clear from *Tables 2.1 & 2.2* that the crucial fiscal parameters of states have been extremely volatile during the past decade and a half or so. The "plausibility" of the D/SOR ratio for each of the states is a difficult concept when we do not have dynamic and interactive macro-econometric models at state level. In such a situation, we need to arrive at plausible values for crucial fiscal parameters from the recent history in each state. The advantage of taking such actual values is that they become credible, plausible and feasible from the implementation angle.
- 2.9 In our view, the two most critical fiscal parameters under the control of a state are the annual growth rates of state's own tax & non-tax revenue, and its non-interest (or primary) expenditure. Again, these parameters can vary considerably from year to year depending on the growth of the economy, tax and non-tax policies of the state government, the efficiency of the revenue collection administration,

<b>Table 2.2: Decomposition of Changes in D/SOR Ratio in States Over Award Period of 9th, 10th &amp; 11th Finance Commissions</b>									
	9th FC	10th FC	11th FC	9th FC	10th FC	11th FC	9th FC	10th FC	11th FC
	90-95	95-00	00-04	90-95	95-00	00-04	90-95	95-00	00-03*
	<b>ANDHRA PRADESH</b>			<b>BIHAR</b>			<b>GOA</b>		
$\Delta$ (D/SOR)	0.058	0.068	0.179	0.235	0.300	0.344	-0.455	-0.184	-0.069
PDOA/SOR	0.763	0.879	0.701	1.634	1.715	3.307	0.729	0.244	0.218
TrC/SOR	0.567	0.584	0.488	1.474	1.533	2.746	0.567	0.179	0.109
Misc/SOR	0.055	0.131	0.041	0.043	0.077	0.345	-0.004	-0.025	-0.035
Do/SORo x [(g-i)/(1+g)]	0.083	0.096	-0.007	-0.118	-0.184	-0.129	0.621	0.275	0.213
(g-i)/(1+g)	0.036	0.038	-0.001	-0.024	-0.034	-0.014	0.140	0.142	0.109
Av. (D/SOR)	2.396	2.871	3.242	5.144	5.653	9.749	3.923	1.803	1.911
	<b>GUJARAT</b>			<b>HARYANA</b>			<b>KARNATAKA</b>		
$\Delta$ (D/SOR)	-0.004	0.173	0.221	-0.197	0.330	-0.002	0.010	0.083	-0.040
PDOA/SOR	0.438	0.466	0.580	0.258	0.379	0.246	0.565	0.494	0.577
TrC/SOR	0.243	0.248	0.259	0.191	0.173	0.155	0.372	0.353	0.370
Misc/SOR	0.066	0.023	0.091	0.023	0.083	0.013	0.074	0.016	0.018
Do/SORo x [(g-i)/(1+g)]	0.134	0.022	-0.029	0.241	-0.206	0.081	0.108	0.040	0.229
(g-i)/(1+g)	0.063	0.011	0.004	0.179	-0.139	0.033	0.057	0.023	0.098
Av. (D/SOR)	2.301	2.361	3.802	1.610	1.794	2.525	1.911	2.080	2.605
	<b>KERALA</b>			<b>MADHYA PRADESH</b>			<b>MAHARASHTRA</b>		
$\Delta$ (D/SOR)	-0.034	0.205	0.109	-0.025	0.088	0.346	0.060	0.225	0.262
PDOA/SOR	0.659	0.636	0.580	0.836	0.861	2.017	0.385	0.427	0.453
TrC/SOR	0.501	0.391	0.351	0.718	0.647	1.615	0.258	0.207	0.178
Misc/SOR	0.003	0.019	0.019	0.038	0.061	0.156	0.048	-0.012	0.050
Do/SORo x [(g-i)/(1+g)]	0.188	0.020	0.113	0.106	0.065	-0.100	0.017	0.007	-0.017
(g-i)/(1+g)	0.066	0.012	0.028	0.041	0.025	-0.019	0.012	0.004	-0.010
Av. (D/SOR)	2.851	2.925	4.088	2.607	2.764	5.660	1.350	1.998	3.149
	<b>ORISSA</b>			<b>PUNJAB</b>			<b>RAJASTHAN</b>		
$\Delta$ (D/SOR)	-0.035	0.519	0.042	-0.279	0.244	-0.016	-0.134	0.302	0.275
PDOA/SOR	1.816	1.888	1.649	0.542	0.292	0.422	1.001	1.014	0.962
TrC/SOR	1.505	1.316	1.302	0.242	0.185	0.191	0.786	0.626	0.709
Misc/SOR	-0.003	0.146	0.125	0.031	0.024	0.057	0.091	0.107	0.014
Do/SORo x [(g-i)/(1+g)]	0.349	-0.094	0.129	0.548	-0.161	0.190	0.258	-0.020	-0.036
(g-i)/(1+g)	0.061	-0.015	0.024	0.207	-0.045	0.054	0.076	0.007	-0.006
Av. (D/SOR)	5.876	7.011	8.245	3.692	3.579	3.928	3.203	3.879	5.425

**Table 2.2: Decomposition of Changes in D/SOR Ratio in States Over Award Period of 9th, 10th & 11th Finance Commissions (Concl.)**

	9th FC	10th FC	11th FC	9th FC	10th FC	11th FC	9th FC	10th FC	11th FC
	90-95	95-00	00-04	90-95	95-00	00-04	90-95	95-00	00-03*
	<b>TAMIL NADU</b>			<b>UTTAR PRADESH</b>			<b>WEST BENGAL</b>		
Δ (D/SOR)	0.008	0.077	0.048	0.030	0.267	-0.785	0.091	0.767	0.635
PDOA/SOR	0.693	0.524	0.369	1.442	1.349	1.818	0.958	1.420	1.766
TrC/SOR	0.436	0.342	0.224	1.095	0.978	1.003	0.767	0.769	0.989
Misc/SOR	0.114	0.065	0.051	0.066	0.066	1.368	-0.003	0.096	0.073
Do/SORo x [(g-i)/(1+g)]	0.144	0.040	0.047	0.251	0.005	-0.075	0.103	-0.212	0.070
(g-i)/(1+g)	0.082	0.022	0.020	0.055	0.001	0.031	0.031	-0.046	0.020
Av. (D/SOR)	1.911	2.011	2.439	4.712	5.808	5.898	3.607	5.343	7.976
	<b>ARUNACHAL PRADESH</b>			<b>ASSAM</b>			<b>HIMACHAL PRADESH</b>		
Δ (D/SOR)	-0.497	0.931	0.042	0.309	-0.144	0.050	0.046	-0.448	1.626
PDOA/SOR	6.544	10.464	10.272	1.990	2.174	2.234	3.112	2.914	2.718
TrC/SOR	6.683	10.274	9.096	1.975	2.251	1.947	2.588	2.137	2.022
Misc/SOR	0.088	0.058	0.153	-0.255	0.034	0.203	0.171	0.311	0.138
Do/SORo x [(g-i)/(1+g)]	0.271	-0.754	0.981	-0.039	0.032	0.421	0.306	0.891	-1.069
(g-i)/(1+g)	0.061	-0.203	0.117	-0.008	0.009	0.010	0.048	0.183	-0.130
Av. (D/SOR)	3.512	5.171	9.291	3.766	4.925	4.201	6.919	5.882	8.657
	<b>JAMMU &amp; KASHMIR</b>			<b>MANIPUR</b>			<b>MEGHALAYA</b>		
Δ (D/SOR)	-1.700	-1.034	0.256	-0.361	1.893	-4.095	0.427	0.303	0.466
PDOA/SOR	5.124	5.643	4.311	9.992	12.440	13.427	6.022	5.100	4.854
TrC/SOR	5.199	5.736	4.090	10.115	10.518	11.938	5.335	4.750	4.185
Misc/SOR	0.644	0.202	0.092	-0.056	0.852	5.675	0.267	-0.069	0.081
Do/SORo x [(g-i)/(1+g)]	0.981	0.758	-0.066	0.290	-0.922	-0.087	-0.007	0.120	0.122
(g-i)/(1+g)	0.051	0.080	-0.001	0.066	-0.088	0.043	-0.019	0.038	0.019
Av. (D/SOR)	16.988	9.788	8.481	8.898	10.777	14.129	3.460	4.706	6.479
	<b>MIZORAM</b>			<b>NAGALAND</b>			<b>SIKKIM</b>		
Δ (D/SOR)	-1.994	2.122	1.943	0.050	2.285	0.867	-0.428	-0.024	0.002
PDOA/SOR	9.964	14.687	16.945	11.643	14.345	14.642	3.455	0.412	0.805
TrC/SOR	9.938	13.182	12.851	9.810	12.813	13.310	3.169	0.376	0.845
Misc/SOR	0.060	0.196	0.801	1.338	0.728	0.550	-0.045	-0.006	0.005
Do/SORo x [(g-i)/(1+g)]	1.960	-0.812	1.350	0.445	-1.505	0.056	0.759	0.068	-0.046
(g-i)/(1+g)	0.510	-0.046	0.055	0.084	-0.115	0.003	0.556	0.133	0.310
Av. (D/SOR)	7.049	12.845	25.401	8.466	15.847	21.186	3.660	0.489	1.180
	<b>TRIPURA</b>			Note: (1) The averages for the 11th Finance Commission periods are calculated for the years 2000-01 to 2002-03. For the six states mentioned in Table 2.1, it is upto 2003-04(RE). For West Bengal the averages are for 2 years viz. 2000-01 and 2001-02. (2) Other notes are as per Table 2.1.					
Δ (D/SOR)	-0.016	-1.034	0.926						
PDOA/SOR	10.593	8.928	7.542						
TrC/SOR	10.046	8.794	6.305						
Misc/SOR	-0.041	0.262	0.191						
Do/SORo x [(g-i)/(1+g)]	0.605	0.911	0.122						
(g-i)/(1+g)	0.044	0.083	0.019						
Av. (D/SOR)	14.067	10.791	10.148						

expenditure policies, efficiency of the delivery system, external exigencies, etc. In order to iron out short term fluctuations, we take a relatively long period of 5 years and compare the performance of consecutive 5 years (quinquennium) during the period 1989-90 to 2002-03 to identify the maximum achieved growth of SOR and minimum achieved growth of primary expenditure in a state. We carry out this exercise for all states and report the results in *Table 2.3* where the best growth number is highlighted for every state to indicate the 5 year period when it was achieved. These best performance numbers should be compared with the trend rates of growth for the last 14 years in each state to consider the “plausibility” aspect. *Table 2.4* reports the results of the log-linear time trend regressions for SOR and PE for each state. For every state the trend rate of growth in the primary expenditure as well as SOR turned out highly significant statistically.

- 2.10 Moreover, comparison of *Table 2.3* with *Table 2.4* reveals that the best performance of all the states differs substantially from their respective trend rates of growth. This is somewhat surprising because we have considered their best performance over a longer period of 5 years and the trend rate is for 14 years. It only shows that if states decide to achieve better fiscal performance in the short term, it is possible to have significant departures from their long-term trend. Secondly, *Table 2.3* also reveals that except West Bengal no other state achieved the best values of trend rates of growth in SOR as well as PE during the same 5 year period. In fact, barring a few special category states, no state achieved its maximum revenue growth over 5 consecutive years during 1991 to 2000. However, during the same decade most of the states registered their minimum primary expenditure growth over 5 consecutive years. Thus, while there was a serious effort at expenditure compression in states, the corresponding effort at revenue generation lacked during the last decade and hence there arises some concern now about the fiscal health in most of the states.

Table 2.3(a): Annual Growth Rates of States' Own Revenue for Consecutive Quinquenniums													
Sr. No	Non Special Category States	89-95	90-96	91-97	92-98	93-99	94-00	95-01	96-02	97-03	98-04	GSOR (Max)	
1	Andhra Pradesh	13.2	10.8	10.0	14.8	13.6	14.7	18.4	17.3	12.5		18.4	
2	Bihar	8.1	8.7	12.1	9.1	7.8	8.6	4.0	-3.2	-3.2		12.1	
3	Goa	23.5	34.3	26.6	29.5	25.5	23.8	14.2	21.3	16.3		34.3	
4	Gujarat	16.0	19.8	13.6	13.8	14.2	12.3	12.4	11.1	8.9	10.0	19.8	
5	Haryana	31.6	22.5	23.4	21.3	9.6	-2.3	5.7	4.7	8.0		31.6	
6	Karnataka	16.1	18.0	15.1	14.5	13.1	12.7	10.5	9.0	16.4		18.0	
7	Kerala	17.8	20.4	18.2	18.5	14.3	12.4	10.8	7.9	9.6	12.5	20.4	
8	Madhya Pradesh	13.5	15.3	14.0	11.8	11.0	13.0	6.8	-3.7	-3.8		15.3	
9	Maharashtra	15.7	14.7	14.8	15.4	12.0	11.7	13.1	10.9	9.5	10.9	15.7	
10	Orissa	16.5	15.1	14.3	11.3	9.9	9.2	10.3	11.6	14.3	14.9	16.5	
11	Punjab	25.6	23.4	8.0	20.9	13.2	6.5	12.1	10.7	12.8		25.6	
12	Rajasthan	18.5	19.6	14.5	12.7	11.1	11.1	7.0	9.9	10.3		19.6	
13	Tamil Nadu	18.0	18.0	12.8	15.5	14.4	13.2	11.8	12.4	12.5		18.0	
14	Uttar Pradesh	15.6	14.8	10.7	9.3	9.9	11.0	10.4	9.7	12.1	10.7	15.6	
15	West Bengal	13.6	13.6	11.7	11.7	9.9	6.9	10.1	9.6			13.6	
<b>Special Category States</b>													
1	Arunachal	17.8	15.3	7.1	2.8	-3.1	-1.2	-0.9	6.3	20.5		20.5	
2	Assam	11.7	8.3	7.0	5.2	8.3	11.8	13.3	13.9	15.8	14.4	15.8	
3	Himachal Pradesh	14.0	15.8	15.9	19.3	15.6	31.1	14.6	18.7	14.0		31.1	
4	Jammu & Kashmir	12.7	13.7	11.2	14.0	14.9	19.7	21.9	21.6	16.3		21.9	
5	Manipur	17.1	12.5	18.4	15.7	6.3	2.4	4.4	-1.1	9.9		18.4	
6	Meghalaya	13.1	19.5	13.9	10.6	12.9	14.5	9.1	13.0	21.4		21.4	
7	Mizoram	17.1	-17.6	9.7	8.6	4.6	5.9	0.9	3.8	8.3		17.1	
8	Nagaland	22.0	4.4	7.7	6.1	12.2	-1.9	9.1	8.2	13.1		22.0	
9	Sikkim	60.7	76.3	84.7	86.8	91.2	25.8	-11.3	6.7	7.2		91.2	
10	Tripura	13.2	14.3	17.0	14.2	15.7	20.7	20.6	20.2	20.3		20.7	

Table 2.3(b): Annual Growth Rates of Primary Expenditure for Consecutive Quinquenniums														
Sr. No	Non Special Category States	89-95	90-96	91-97	92-98	93-99	94-00	95-01	96-02	97-03	98-04	GPE (Min)		
1	Andhra Pradesh	16.7	16.4	14.7	13.8	14.0	11.6	13.6	12.9	11.5		11.5		
2	Bihar	8.7	7.0	7.3	9.7	9.7	15.8	10.7	2.3	6.6		7.0		
3	Goa	12.1	18.8	15.8	21.5	22.8	22.2	15.4	20.0	17.2		12.1		
4	Gujarat	14.0	14.0	12.4	13.7	18.6	17.6	20.0	14.1	8.9	8.5	8.5		
5	Haryana	28.3	21.3	24.3	21.8	15.3	1.4	6.3	5.0	4.3		1.4		
6	Karnataka	15.3	15.8	13.6	11.6	12.5	14.4	12.9	12.0	17.2		11.6		
7	Kerala	15.9	15.2	15.8	18.6	16.0	16.3	12.4	8.3	9.0	11.1	8.3		
8	Madhya Pradesh	13.8	12.4	14.5	13.1	12.7	13.9	8.8	4.4	6.0		12.4		
9	Maharashtra	14.9	14.5	15.9	14.5	13.7	13.2	13.8	9.7	10.0	13.6	9.7		
10	Orissa	14.6	12.4	11.4	10.1	13.7	14.6	12.7	10.6	10.2		10.1		
11	Punjab	18.5	11.8	5.8	14.0	14.1	6.7	16.7	16.1	13.7		5.8		
12	Rajasthan	20.1	20.1	12.0	13.0	13.0	11.6	7.6	9.8	9.7		7.6		
13	Tamil Nadu	14.8	13.3	9.0	11.5	14.4	13.8	13.5	8.4	9.5		8.4		
14	Uttar Pradesh	14.5	9.4	10.6	8.1	12.8	10.5	11.1	8.8	9.0	18.0	8.1		
15	West Bengal	13.4	10.7	16.1	15.1	16.1	18.4	18.8	13.6	18.8		10.7		
<b>Special Category States</b>														
1	Arunachal	13.1	15.3	15.4	13.7	11.2	9.2	8.4	8.1	10.0		8.1		
2	Assam	11.4	11.2	5.5	9.7	9.0	12.2	12.3	13.6	11.1	21.9	5.5		
3	Himachal Pradesh	14.5	15.5	15.2	20.1	19.9	17.4	15.4	13.2	8.7		8.7		
4	Jammu & Kashmir	13.8	12.7	13.4	18.0	19.1	19.9	18.4	17.2	7.2		7.2		
5	Manipur	9.5	12.7	13.3	16.5	12.3	21.3	8.1	7.7	13.0		7.7		
6	Meghalaya	9.9	12.7	8.8	8.7	10.3	14.9	13.2	11.8	16.3		8.7		
7	Mizoram	12.8	14.6	13.7	11.4	10.4	12.4	10.8	9.1	9.3		9.1		
8	Nagaland	11.7	14.3	10.8	11.2	6.9	8.1	7.6	10.2	11.8		6.9		
9	Sikkim	29.5	41.3	41.4	42.3	45.6	22.0	-2.6	8.7	9.9		-2.6		
10	Tripura	9.7	10.0	11.5	15.3	12.7	14.8	16.0	15.5	15.5		9.7		

Table 2.4: Log-linear Time Trend Regression for SOR and PE for States														
Sr. No.	States	State's Own Revenue (SOR)					State's Primary (Non-Interest) Expenditure							
		A	b	PV (a)	PV (b)	R2	F Stat	a	b	PV (a)	PV (b)	R2	F Stat	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Non Special Category States</b>														
1	Andhra Pradesh	7.876	0.130	0.00	0.00	0.99	973.58	8.454	0.129	0.00	0.00	0.99	1459.60	
2	Bihar	7.392	0.087	0.00	0.00	0.97	20.91	8.288	0.099	0.00	0.00	0.98	757	
3	Goa	4.713	0.214	0.00	0.00	0.98	646.05	5.432	0.167	0.00	0.00	0.98	719.37	
4	Gujarat	7.910	0.124	0.00	0.00	0.98	530.88	8.249	0.131	0.00	0.00	0.97	405.47	
5	Haryana	7.277	0.125	0.00	0.00	0.84	62.38	7.536	0.125	0.00	0.00	0.86	71.60	
6	Karnataka	7.739	0.132	0.00	0.00	0.98	666.28	8.173	0.132	0.00	0.00	0.99	1660.75	
7	Kerala	7.197	0.133	0.00	0.00	0.97	490.41	7.716	0.129	0.00	0.00	0.98	558.71	
8	Madhya Pradesh	7.679	0.123	0.00	0.00	0.99	27.89	8.266	0.127	0.00	0.00	0.99	230.63	
9	Maharashtra	8.632	0.118	0.00	0.00	0.99	1186.28	8.947	0.123	0.00	0.00	0.99	1239.30	
10	Orissa	6.534	0.119	0.00	0.00	0.99	1087.42	7.584	0.116	0.00	0.00	0.98	752.97	
11	Punjab	7.294	0.136	0.00	0.00	0.91	114.90	7.758	0.121	0.00	0.00	0.96	280.09	
12	Rajasthan	7.407	0.120	0.00	0.00	0.96	294.86	8.077	0.122	0.00	0.00	0.96	256.19	
13	Tamil Nadu	7.957	0.134	0.00	0.00	0.99	886.45	8.553	0.114	0.00	0.00	0.97	339.25	
14	Uttar Pradesh	8.071	0.114	0.00	0.00	0.98	663.70	8.983	0.108	0.00	0.00	0.95	228.85	
15	West Bengal	7.588	0.103	0.00	0.00	0.98	542.46	8.121	0.141	0.00	0.00	0.98	582.03	
<b>Special Category States</b>														
1	Arunachal	3.755	0.074	0.00	0.00	0.69	26.23	5.746	0.110	0.00	0.00	0.98	698.48	
2	Assam	6.279	0.106	0.00	0.00	0.97	381.24	7.378	0.111	0.00	0.00	0.94	218.20	
3	Himachal Pradesh	5.131	0.157	0.00	0.00	0.93	160.47	6.617	0.140	0.00	0.00	0.99	881.84	
4	Jammu & Kashmir	5.149	0.148	0.00	0.00	0.98	604.32	7.022	0.139	0.00	0.00	0.97	366.21	
5	Manipur	3.476	0.088	0.00	0.00	0.82	53.10	5.766	0.118	0.00	0.00	0.94	172.80	
6	Meghalaya	3.748	0.129	0.00	0.00	0.95	253.33	5.714	0.113	0.00	0.00	0.98	561.23	
7	Mizoram	3.542	0.045	0.00	0.04	0.16	5.63	5.651	0.110	0.00	0.00	0.99	1451.58	
8	Nagaland	3.529	0.080	0.00	0.00	0.82	54.89	6.033	0.099	0.00	0.00	0.98	622.05	
9	Sikkim	3.151	0.326	0.00	0.00	0.77	40.38	4.846	0.215	0.00	0.00	0.86	72.50	
10	Tripura	3.377	0.159	0.00	0.00	0.99	826.47	5.965	0.125	0.00	0.00	0.98	597.38	
<p>Note: (1) The basic regression is <math>\ln Y = a + bt</math>; where Y is SOR or PE, t is time, and in stands for natural logarithm</p> <p>(2) PV is the p-value or statistical significance level for parameters a and b</p> <p>(3) Assam, Gujarat, Kerala, Maharashtra, Orissa &amp; Uttar Pradesh have 15 obs., i.e. 1989-04 while the rest have 14 obs, i.e. 1989- 03 except for SOR of WB where it is 13</p>														

2.11 We now examine the decomposition of the change in D/SOR ratio for each state under three alternative scenarios of crucial fiscal parameters and their implied sustainable D/SOR solution by applying equations (19) and (20) above. The three alternative scenarios considered are:

1. Fiscal parameters assumed at the level of the most recent data point for which “Revised Estimates (RE)” are available (*i.e.*, year 2002-03);
2. Fiscal parameters assumed at their respective trend and average values<sup>11</sup> over the 14 year period from 1989-90 to 2002-03; and
3. Fiscal parameters assumed at the most optimistic values by considering their best-observed values<sup>12</sup>.

Thus, we have constructed the components of the change in D/SOR ratio as given on the right hand side of equation (19) first and then worked backward to find the implied change in D/SOR ratio on one hand and the implied sustainable D/SOR ratio on the other hand<sup>13</sup>. These results are reported in *Table 2.5*.

2.12 The table provides very interesting results. At the outset we should note that a negative (D/SOR)\* ratio together with positive  $\Delta(D/SOR)$  implies non-sustainability of debt in the long run if the underlying fiscal parameters do not change. In short, the state would be in debt-trap. On the contrary, a negative (D/SOR)\* ratio together with negative  $\Delta(D/SOR)$  implies a fiscal surplus in the long run if the underlying fiscal parameters continue to hold. The table reveals that among the SC states, the current fiscal situation in Himachal Pradesh and Tripura is not sustainable in the long run. They are caught in debt-trap. Both these states have a hope to come out of the debt-trap if their fiscal parameters revert to their past trend values. However, the trend values of fiscal parameters in Assam, Manipur, Mizoram, and Nagaland result in unsustainable debt. But in

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<sup>11</sup> We have used the time trend rates from the estimated log-linear equations for SOR and PE from *Table 2.4* to calculate PDOA/SOR ratio by applying them to the observed values of SOR and PE in the base year.

<sup>12</sup> We have used the best values of growth rates of SOR and PE from *Table 2.3* to calculate PDOA/SOR by applying them to the observed values of SOR and PE in the base year 2002-03.

<sup>13</sup> This way of calculating the sustainable (D/SOR)\* ratio requires that the PDOA is taken for one year after the base year by applying the growth rates of SOR and PE to their respective base values. Having calculated PDOA/SOR ratio for the next year, its value is taken as constant for the future years implying that both SOR and PE would then grow at the same rate as SOR in future.

the most optimistic scenario, all of them are fiscally sustainable. Thus, in the SC states, the situation is not beyond credible repair.

- 2.13 For the NSC states, the  $(D/SOR)^*$  ratio implied by the current (*i.e.* year 2003-04) fiscal scenario is unsustainable in six states – Andhra, Bihar, Madhya Pradesh, Maharashtra, Orissa and West Bengal. If their fiscal parameters return to their respective trend values, the debt in three states – Andhra, Madhya Pradesh and Orissa would become sustainable, but Bihar, Maharashtra and West Bengal would still continue to remain fiscally unsustainable. However, the best values observed for their fiscal parameters in the recent past over five year period would solve their problem of fiscal unsustainability. Since, under the best values scenario none of the SC or the NSC states turns out to be fiscally unsustainable, the fiscal problem of states in India is tractable if proper incentives are provided to states encouraging them to remain fiscally disciplined. Already there are nine NSC states and all but one SC states making efforts in the direction of becoming fiscally disciplined. *Table 2.5* shows that the base year or current growth of SOR is greater than its respective trend rate in Bihar, Gujarat, Karnataka, Kerala, Punjab and Rajasthan among the NSC states, and in Arunachal, Manipur, Meghalaya, Mizoram and Nagaland among the SC states. Similarly, the current growth of PE is less than its trend rate in Andhra Pradesh, Haryana and West Bengal among the NSC states, and in Himachal Pradesh, Jammu & Kashmir, Mizoram, Sikkim and Tripura among the SC states. However, except Mizoram, no other state is attempting to address the issue from both angles, augmenting resources and compressing non-interest expenditures. Well defined, uncomplicated and absolutely transparent system of incentives coupled with clarity about consequences would only make states fiscally responsible and disciplined.

<i>Table 2.5: Alternative Debt Scenarios with Base Year Values, Trend Values, and Most Optimistic Values of Fiscal Parameters</i>									
STATES	Andhra Pradesh			Bihar			Goa		
Items	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic
PE	25963	29324	28944	13299	14615	14227	2476	2891	2775
SOR	16015	18096	18953	3088	3357	3463	2014	2445	2704
Gsor	0.107	0.130	0.184	0.108	0.087	0.121	0.180	0.214	0.343
i	0.130	0.103	0.103	0.123	0.112	0.112	0.089	0.079	0.079
G <sub>PE</sub>	0.041	0.129	0.115	0.517	0.099	0.070	0.216	0.167	0.121
D/SOR	3.435	3.176	2.938	9.749	11.008	9.341	1.819	1.581	1.239
Change(D/SOR)	0.164	-0.095	-0.332	0.344	1.604	-0.063	-0.085	-0.322	-0.665
PDOA/SOR	0.621	0.620	0.527	3.307	3.353	3.108	0.167	0.182	0.026
TrC/SOR	0.490	0.556	0.556	2.746	1.734	2.746	0.099	0.312	0.312
Misc	0.034	0.081	0.081	0.345	0.229	0.345	0.005	-0.019	0.005
Sub-Total	0.097	-0.016	-0.110	0.216	1.391	0.017	0.063	-0.110	-0.291
(g-i)/(1+g)	-0.021	0.024	0.068	-0.014	-0.023	0.009	0.078	0.111	0.196
Do/SORo[(g-i)/(1+g)]	-0.067	0.078	0.223	-0.129	-0.213	0.080	0.148	0.212	0.374
(D/SOR)*	-4.718	-0.682	-1.610	-15.774	-61.269	2.001	0.813	-0.990	-1.482
(IP/RR)*	<b>-0.371</b>	<b>-0.040</b>	<b>-0.090</b>	<b>-0.466</b>	<b>-2.306</b>	<b>0.053</b>	<b>0.056</b>	<b>-0.049</b>	<b>-0.066</b>
j**	0.081	0.137	0.283	0.083	0.025	0.119	0.140	0.369	-3.134
	Gujarat			Haryana			Karnataka		
Items	2003-04	Trend	Optimistic	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic
PE	24564	27769	26642	8288	9325	8402	24105	27283	26903
SOR	16685	18757	19993	7358	8275	9686	16389	18554	19334
Gsor	0.236	0.124	0.198	0.107	0.125	0.316	0.497	0.132	0.180
i	0.107	0.104	0.104	0.116	0.114	0.114	0.100	0.099	0.099
G <sub>PE</sub>	0.281	0.131	0.085	-0.056	0.125	0.014	0.300	0.132	0.116
D/SOR	3.749	4.003	3.619	2.541	2.414	1.789	2.309	2.971	2.775
Change(D/SOR)	-0.153	0.102	-0.283	0.010	-0.117	-0.742	-0.683	-0.021	-0.217
PDOA/SOR	0.472	0.481	0.333	0.127	0.127	-0.133	0.471	0.470	0.392
TrC/SOR	0.207	0.249	0.249	0.177	0.176	0.177	0.326	0.364	0.364
Misc	0.010	0.058	0.058	-0.041	0.044	0.044	0.035	0.039	0.039
Sub-Total	0.255	0.173	0.025	-0.009	-0.093	-0.353	0.110	0.067	-0.012
(g-i)/(1+g)	0.105	0.018	0.079	-0.008	0.010	0.154	0.265	0.029	0.069
Do/SORo[(g-i)/(1+g)]	0.408	0.071	0.308	-0.020	0.024	0.389	0.793	0.088	0.205
(D/SOR)*	2.440	9.505	0.318	1.185	-9.649	-2.293	0.415	2.290	-0.170
(IP/RR)*	<b>0.175</b>	<b>0.702</b>	<b>0.022</b>	<b>0.105</b>	<b>-0.831</b>	<b>-0.169</b>	<b>0.021</b>	<b>0.147</b>	<b>-0.010</b>
j**	0.115	0.073	0.180	0.111	0.206	-0.634	0.351	0.106	0.188

Table 2.5: Alternative Debt Scenarios with Fiscal Parameters at 2002-03, Trend Values, and Most Optimistic Values (cont.)

STATES	Kerala			Madhya Pradesh			Maharashtra		
	2003-04	Trend	Optimistic	2002-03	Trend	Optimistic	2003-04	Trend	Optimistic
PE	14938	16862	16174	16361	18435	18389	48713	54702	53425
SOR	9398	10646	11315	5423	6090	6253	29829	33361	34500
Gsor	0.178	0.133	0.204	0.078	0.123	0.153	0.092	0.118	0.157
i	0.101	0.105	0.101	0.098	0.096	0.096	0.097	0.123	0.097
G <sub>PE</sub>	0.171	0.129	0.083	0.153	0.127	0.124	0.258	0.123	0.097
D/SOR	4.112	4.184	3.779	5.660	6.281	5.219	3.565	3.618	3.300
Change(D/SOR)	-0.022	0.049	-0.356	0.346	0.967	-0.094	0.355	0.408	0.090
PDOA/SOR	0.589	0.584	0.429	2.017	2.027	1.941	0.633	0.640	0.549
TrC/SOR	0.335	0.419	0.419	1.615	0.801	1.615	0.246	0.217	0.246
Misc	0.008	0.013	0.013	0.156	0.129	0.156	0.047	0.027	0.047
Sub-Total	0.246	0.152	-0.003	0.246	1.097	0.170	0.340	0.395	0.256
(g-i)/(1+g)	0.065	0.025	0.085	-0.019	0.024	0.050	-0.005	-0.004	0.051
Do/SORo[(g-i)/(1+g)]	0.268	0.103	0.353	-0.100	0.129	0.264	-0.015	-0.013	0.165
(D/SOR)*	3.792	6.112	-0.035	-13.122	44.999	<b>3.418</b>	-75.139	-97.673	4.965
(IP/RR)*	<b>0.238</b>	<b>0.391</b>	<b>-0.002</b>	<b>-0.457</b>	<b>2.130</b>	<b>0.109</b>	<b>-5.360</b>	<b>-8.821</b>	<b>0.334</b>
i**	0.092	0.087	0.206	0.053	0.030	0.116	0.039	0.045	0.077
	Orissa			Punjab			Rajasthan		
Items	2003-04	Trend	Optimistic	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic
PE	12019	13410	13229	13466	15101	14249	15780	17704	16974
SOR	4085	4572	4761	9847	11189	12371	8109	9082	9700
Gsor	0.066	0.119	0.165	0.265	0.136	0.256	0.129	0.120	0.196
i	0.110	0.105	0.105	0.105	0.097	0.097	0.111	0.106	0.106
G <sub>PE</sub>	0.406	0.116	0.101	0.163	0.121	0.058	0.120	0.122	0.076
D/SOR	8.433	8.161	7.529	3.842	4.250	3.627	5.606	5.504	4.965
Change(D/SOR)	0.639	0.367	-0.264	-0.447	-0.040	-0.662	0.194	0.092	-0.447
PDOA/SOR	1.942	1.933	1.778	0.367	0.350	0.152	0.946	0.949	0.750
TrC/SOR	1.370	1.380	1.380	0.230	0.208	0.230	0.664	0.707	0.707
Misc	0.256	0.087	0.256	0.041	0.034	0.041	0.000	0.081	0.081
Sub-Total	0.316	0.467	0.143	0.096	0.107	-0.119	0.282	0.161	-0.038
(g-i)/(1+g)	-0.041	0.013	0.052	0.127	0.034	0.127	0.016	0.013	0.076
Do/SORo[(g-i)/(1+g)]	-0.323	0.100	0.407	0.544	0.147	0.543	0.087	0.069	0.410
(D/SOR)*	-7.622	36.319	2.732	0.761	3.128	-0.943	17.448	12.599	-0.500
(IP/RR)*	<b>-0.332</b>	<b>1.428</b>	<b>0.103</b>	<b>0.051</b>	<b>0.222</b>	<b>-0.059</b>	<b>1.032</b>	<b>0.696</b>	<b>-0.026</b>
i**	0.039	0.060	0.127	0.191	0.094	0.498	0.070	0.081	0.221

Table 2.5: Alternative Debt Scenarios with Fiscal Parameters at 2002-03, Trend Values, and Most Optimistic Values (cont.)

STATES	Tamil Nadu			Uttar Pradesh			West Bengal		
Items	2002-03	Trend	Optimistic	2003-04	Trend	Optimistic	2001-02	Trend	Optimistic
PE	23878	26596	25892	55429	61391	59909	20135	22974	22294
SOR	17663	20031	20851	15574	17347	18010	7398	8161	8407
Gsor	0.111	0.134	0.180	0.061	0.114	0.156	0.025	0.103	0.136
i	0.107	0.099	0.099	0.124	0.102	0.102	0.121	0.112	0.112
G <sub>PE</sub>	0.172	0.114	0.084	0.819	0.108	0.081	-0.007	0.141	0.107
D/SOR	2.467	2.250	2.028	5.854	7.141	4.988	8.628	8.338	7.716
Change(D/SOR)	0.040	-0.177	-0.400	-0.089	1.199	-0.954	1.304	1.015	0.392
PDOA/SOR	0.352	0.328	0.242	2.559	2.539	2.327	1.722	1.815	1.652
TrC/SOR	0.180	0.351	0.351	1.110	1.028	1.110	0.965	0.805	0.965
Misc	0.124	0.080	0.124	1.889	0.247	1.889	0.134	0.051	0.134
Sub-Total	0.048	-0.103	-0.233	-0.440	1.264	-0.672	0.622	0.959	0.552
(g-i)/(1+g)	0.003	0.030	0.069	-0.059	0.011	0.047	-0.093	-0.008	0.022
Do/SORo[(g-i)/(1+g)]	0.008	0.074	0.167	-0.351	0.065	0.282	-0.682	-0.056	0.160
(D/SOR)*	13.911	-3.395	-3.396	7.439	115.207	-14.193	-6.681	-126.066	25.272
(IP/RR)*	<b>1.137</b>	<b>-0.221</b>	<b>-0.212</b>	<b>0.411</b>	<b>5.181</b>	<b>-0.591</b>	<b>-0.400</b>	<b>-7.067</b>	<b>1.263</b>
i**	0.092	0.217	1.312	-1.434	0.028	-0.264	0.010	0.028	0.057
	Arunachal Pradesh			Assam			Himachal Pradesh		
Items	2002-03	Trend	Optimistic	2003-04	Trend	Optimistic	2002-03	Trend	Optimistic
PE	1451	1611	1569	11660	12952	12301	4584	5226	4984
SOR	170	182	205	2817	3116	3261	1345	1556	1764
Gsor	0.669	0.074	0.205	0.072	0.106	0.158	0.020	0.157	0.311
i	0.123	0.157	0.123	0.159	0.127	0.127	0.167	0.106	0.106
G <sub>PE</sub>	0.184	0.110	0.081	0.793	0.111	0.055	0.088	0.140	0.087
D/SOR	7.226	10.388	7.710	4.674	5.589	3.834	8.899	7.093	5.646
Change(D/SOR)	-3.238	-0.076	-2.753	0.278	1.193	-0.562	1.330	-0.475	-1.922
PDOA/SOR	7.543	7.828	6.668	3.139	3.157	2.772	2.408	2.358	1.826
TrC/SOR	7.308	8.621	8.621	2.440	2.066	2.440	1.886	2.284	2.284
Misc	0.048	0.091	0.091	0.776	-0.021	0.776	0.282	0.217	0.282
Sub-Total	0.186	-0.884	-2.044	-0.076	1.112	-0.444	0.241	-0.143	-0.740
(g-i)/(1+g)	0.327	-0.077	0.068	-0.081	-0.018	0.027	-0.144	0.044	0.156
Do/SORo[(g-i)/(1+g)]	3.424	-0.809	0.709	-0.355	-0.081	0.118	-1.089	0.332	1.183
(D/SOR)*	0.569	11.441	-30.146	0.945	-60.159	-16.503	-1.677	-3.259	-4.733
(IP/RR)*	<b>0.005</b>	<b>0.174</b>	<b>-0.320</b>	<b>0.041</b>	<b>-2.247</b>	<b>-0.525</b>	<b>-0.095</b>	<b>-0.091</b>	<b>-0.117</b>
i**	0.602	0.137	-3.288	0.081	0.038	0.445	0.014	0.201	-2.466

Table 2.5: Alternative Debt Scenarios with Fiscal Parameters at 2002-03, Trend Values, and Most Optimistic Values (cont.)

STATES	Jammu & Kashmir			Manipur			Meghalaya		
Items	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic
PE	6124	6977	6562	1799	2011	1937	1630	1814	1771
SOR	1310	1505	1597	123	134	146	271	306	329
Gsor	0.034	0.148	0.219	0.553	0.088	0.184	0.178	0.129	0.214
i	0.104	0.089	0.089	0.125	0.120	0.120	0.115	0.142	0.115
G <sub>PE</sub>	-0.131	0.139	0.072	0.356	0.118	0.077	0.328	0.113	0.087
D/SOR	8.741	6.458	5.453	3.362	22.173	6.454	6.772	6.426	5.290
Change(D/SOR)	-0.031	-2.314	-3.319	-16.561	2.249	-13.470	0.410	0.064	-1.072
PDOA/SOR	3.673	3.636	3.110	13.571	13.971	12.254	5.012	4.929	4.384
TrC/SOR	4.392	5.150	5.150	11.523	10.691	11.523	4.176	4.845	4.845
Misc	-0.094	0.347	0.347	13.120	1.616	13.120	0.084	0.095	0.095
Sub-Total	-0.625	-1.860	-2.386	-11.072	1.664	-12.390	0.752	-0.011	-0.555
(g-i)/(1+g)	-0.068	0.052	0.106	0.275	-0.029	0.054	0.054	-0.012	0.081
Do/SORo[(g-i)/(1+g)]	-0.593	0.454	0.933	5.489	-0.585	1.080	0.342	-0.075	0.516
(D/SOR)*	9.232	-35.910	-22.437	-40.192	-56.647	-228.533	13.998	0.906	-6.844
(IP/RR)*	<b>0.173</b>	<b>-0.453</b>	<b>-0.267</b>	<b>-0.259</b>	<b>-0.534</b>	<b>-1.848</b>	<b>0.264</b>	<b>0.020</b>	<b>-0.111</b>
i**	0.082	-0.290	-0.233	-0.162	0.051	-0.047	0.103	0.130	0.407
	Mizoram			Nagaland			Sikkim		
Items	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic	2002-03	Trend	Optimistic
PE	1217	1351	1327	1778	1955	1902	2123	2580	2067
SOR	81	84	94	111	120	136	1367	1813	2613
Gsor	0.259	0.045	0.171	0.132	0.080	0.220	0.153	0.326	0.912
i	0.083	0.096	0.083	0.120	0.150	0.120	0.103	0.113	0.103
G <sub>PE</sub>	0.052	0.110	0.091	0.211	0.099	0.069	0.185	0.215	-0.026
D/SOR	25.516	30.000	24.808	21.621	25.587	18.098	0.670	-0.506	-1.348
Change(D/SOR)	-0.325	4.159	-1.033	0.036	4.002	-3.487	-0.059	-1.235	-2.076
PDOA/SOR	14.104	15.046	13.065	15.012	15.299	13.033	0.553	0.423	-0.209
TrC/SOR	11.677	11.858	11.858	13.687	11.773	13.687	0.579	1.558	1.558
Misc	-0.876	0.283	0.283	1.055	0.922	1.055	0.001	-0.018	0.001
Sub-Total	3.303	2.905	0.924	0.270	2.605	-1.709	-0.027	-1.118	-1.768
(g-i)/(1+g)	0.140	-0.049	0.076	0.011	-0.065	0.082	0.043	0.161	0.423
Do/SORo[(g-i)/(1+g)]	3.628	-1.254	1.956	0.234	-1.397	1.778	0.031	0.117	0.308
(D/SOR)*	23.525	-59.872	12.199	24.924	-40.247	-20.756	-0.638	-6.962	-4.183
(IP/RR)*	<b>0.122</b>	<b>-0.426</b>	<b>0.067</b>	<b>0.180</b>	<b>-0.437</b>	<b>-0.139</b>	<b>-0.036</b>	<b>-0.233</b>	<b>-0.088</b>
i**	0.113	0.021	0.126	0.121	0.040	0.527	0.167	-0.276	-0.371

<b>Table 2.5: Alternative Debt Scenarios with Fiscal Parameters at 2002-03, Trend Values, and Most Optimistic Values (concl.)</b>				
<b>Items</b>	<b>Tripura</b>			<b>Note:</b>
	<b>2002-03</b>	<b>Trend</b>	<b>Optimistic</b>	
<b>PE</b>	2386	2685	2618	1. The base year for the six states Gujarat, Maharashtra, UP, Kerala, Orissa and Assam is 2003-04. 2. The base year for WB is 2001-02 because SOR & TrC breakup is not available for the state beyond that year 3. For all other states, the base year is 2002-03 4. The trend values for Int rate, Trc/SOR and Misc/SOR have been taken as the corresponding averages over the entire period. 5. (D/SOR)* is the long-run stable D/SOR ratio. For interpretation, see footnote 13 (para 2.11) above. 6. Optimistic values are best values between trend and base year except for PE and SOR in which case they are based on the best growth average achieved during any 5 year period 7. i** is the interest rate required to bring the stable Int / RR ratio to 20%
<b>SOR</b>	270	313	326	
<b>Gsor</b>	0.055	0.159	0.207	
<b>i</b>	0.121	0.103	0.103	
<b>G<sub>PE</sub></b>	0.112	0.125	0.097	
<b>D/SOR</b>	11.768	7.944	7.025	
<b>Change(D/SOR)</b>	2.102	-1.723	-2.641	
<b>PDOA/SOR</b>	7.834	7.577	7.029	
<b>TrC/SOR</b>	6.208	8.701	8.701	
<b>Misc</b>	0.134	0.129	0.134	
<b>Sub-Total</b>	1.492	-1.253	-1.805	
<b>(g-i)/(1+g)</b>	-0.063	0.049	0.087	
<b>Do/SORo[(g-i)/(1+g)]</b>	-0.610	0.470	0.836	
<b>(D/SOR)*</b>	-23.664	-25.800	-20.869	
<b>(IP/RR)*</b>	-0.377	-0.236	-0.183	
<b>i**</b>	0.027	0.449	2.980	

2.14 Having seen that debt of Indian states can be fiscally sustainable if the states improve their fiscal behaviour to an extent already achieved by them in the recent past, it is necessary to examine whether the debt is also within “tolerable” or “manageable” limit. Since market acceptance is not the criterion to follow in this case,<sup>14</sup> we have to use a normative approach. Debt is said to be tolerable if servicing it does not impose disproportionately heavy burden on the revenues of a state. A state can tolerate interest burden upto what proportion of its total revenues? After informal discussion with senior government officials, politicians, business executives and researchers, we have come to the conclusion that a state can generally tolerate upto one-fifth of its revenues going regularly for meeting its interest obligation<sup>15</sup>. Thus,

$$IP/RR = 0.2 \text{ or } 20\% \text{ and } RR = SOR + TrC$$

$$\text{Therefore, Tolerable } (D/SOR) = (0.2/i) * (RR/SOR) \dots\dots\dots (21)$$

It is clear from equation (21) that the tolerable D/SOR ratio would differ from state

<sup>14</sup> This is because the centre borrows on behalf of states and passes on the borrowing to states in India. States are not required to tap the market directly. Thus effectively the centre stands guarantee for all states.

<sup>15</sup> The repayment of debt in any case is not a part of the fiscal deficit or the net borrowing. Thus, repayment of loans can be met out of fresh borrowing.

to state depending on its effective rate of interest and its degree of autonomy, defined by the SOR/RR ratio as discussed in *Chapter 1* above. This tolerable D/SOR ratio can become an effective policy monitoring tool provided the transfers from the centre (TrC) are in a fixed proportion to the SOR in a state over the target time period. This fixed proportion can vary from state to state but not for a state over the target period.

- 2.15 *Table 2.5* also provides (IP/RR)\* ratio for all the three alternative scenarios. Like the (D/SOR)\* ratio, this (IP/RR)\* ratio would also obtain in the long run equilibrium with the underlying fiscal parameters remaining constant over the period. We can see from *Table 2.5* that (IP/RR)\* ratio turns out to be less than 20% in at least one of the three scenarios in 13 NSC states and all SC states. In Maharashtra and West Bengal, fiscal situation needs serious intervention. The value of (IP/RR)\* ratio is likely to exceed 125% in West Bengal and 33% in Maharashtra, making their debt practically intolerable. We need to consider options for fiscal correction particularly in these states.
- 2.16 As one of the options to intervene effectively, we have considered what average interest rate a state should pay on its total debt in order to contain its interest burden to 20% of its total revenue receipts. We have calculated such a required interest rate to represent the maximum interest rate a state can tolerate if it has to contain its (IP/RR)\* ratio within 20% in the long run. *Table 2.5* also presents these estimates. Again it is established that states can tolerate a high effective interest rate if their other fiscal parameters are as per their best achievements in recent past and if the transfer of resources from the centre continues in the same proportion to SOR as assumed. The only exceptions to this are West Bengal and Maharashtra. They cannot tolerate interest rate more than 5% and 7% respectively. We should, however, note that we have assumed very optimistic combinations of different fiscal parameters for each state. Although individually each of those parameters values are feasible and plausible, their occurrence in a combination may be highly optimistic. We need to consider plausibly optimistic combinations of all these fiscal parameters including the effective interest rate and central transfers as proportion of SOR. Before we consider such plausible

combination of fiscal parameters and provide our suggestions for correcting fiscal situation in states, we examine cases of six selected states in *Chapter 3* to get an insight into state-specific factors and special problems.

## CHAPTER 3

### Case Studies of Selected States

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#### I. Introduction

- 3.1 In the preceding two chapters, we analysed the problem of debt sustainability of states in general and found that the problem is not completely intractable in most states; in this chapter we take a closer look at the problem of debt in the selected six states. In particular, we ask the questions – Is the nature of the economy such where debt accumulation is inevitable? Why the debt got accumulated to the present levels? Are there any state-specific factors responsible? Are there any special features of the state finances not coming out in the cross section analysis of states? How the interest cost is behaving? What are the future prospects of state finances as per the state government; and when realistically optimistic scenario is considered? Is the debt of the state government sustainable in future? In order to make it more manageable, what specific policy changes are required to be made through the Finance Commission? We address these questions for each of the six selected states, *viz.* Assam, Gujarat, Kerala, Maharashtra, Orissa and Uttar Pradesh. These states were selected by the 12<sup>th</sup> FC, but the selection criteria seem to be the geographic location, per capita income strata, special problems, and nature of the economy.
- 3.2 Before we start discussing the selected states one by one, we would like to emphasise again that we would be using the fiscal performance ratios with respect to state's own revenue (SOR) and not with GSDP because the latter involves an unknown margin of error.<sup>16</sup> It is comforting to find, however, that in most of the states, the standard deficit or debt ratios with GSDP bear a very high degree of correlation with those using SOR in the denominator. Although, the correlations are far from perfect, they are likely to reveal similar trends and

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<sup>16</sup> As noted earlier, GSDP is always measured at factor cost in India so far, whereas all these deficits and debt are at market prices. SOR by definition is at market prices. Moreover, the difference between GSDP at factor cost and market prices keeps changing over time within a state and across states particularly during the nineties. For further discussion, see Dholakia (2003).

qualitative inferences in most cases. The quantitative magnitudes would be different. We have preferred SOR over GSDP in order to be theoretically correct in measurement.

## II. Assam<sup>17</sup>

### II.1 Introduction

- 3.3 Assam is a low-income special category state having strategic importance among the north-eastern states. It is the least urbanised state with a very low and narrow industrial base. Heavy dependence on agriculture where it has lower irrigation and yield rates in all major crops than the corresponding national averages causes it to lag behind. It has more than 36% population living below poverty line with high educated unemployment on account of lack of opportunities. This provides fertile recruitment ground for insurgent and anti-national outfits operating in the state. Assam being a border state in the valley of a multiregional, multinational *Brahmaputra* river system is open to frequent and regular exogenous shocks. The internal revenues of GoA (Government of Assam) are mainly from oil, forests and tea plantations.
- 3.4 *Table 3.1* summarises the fiscal parameters of GoA over recent past. The fiscal deficit, primary deficit and revenue deficit peaked in the year 1999-2000 and fell thereafter till 2003-04 when they surpassed corresponding previous peaks. However, the debt-SOR ratio in Assam is hovering around 4.4 to 4.7 after 1996-97. GoA has traditionally a very high degree of dependence on the centre for its revenues, measured as TrC/RR ratio, but it fell continuously from 71.8% in 1996-97 to 61.3% in 2002-03. However, it rose again to 70.9% in 2003-04. The growth of the state's own revenue (SOR) has been high since 1997-98 with contribution from both the own tax revenues and non-tax revenues. Growth in non-interest expenditure (or PE) after peaking in 1999-2000 has rapidly declined during the subsequent years leading to substantial improvement in the three deficit ratios

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<sup>17</sup> Grateful thanks are due to Hon. Nilomani Sen Deka, Minister of Finance; Dr. Jayanta Madhab, Economic Advisor to C.M., Shri J.P. Rajkhowa, Chief Secretary; Shri H.S. Das, Principal Secretary–Finance; Shri M. Alauddin, Additional Secretary–Finance; and Shri Jeeban Choudhary, Sr. R.O. – Finance; for very useful discussion and providing valuable material on Assam.

except the last year when it has jumped to 80%. However, interest payments in absolute terms have been rapidly increasing for the last five years since the debt is rising at 15.6% of late.

<b>Table 3.1: Important Fiscal Parameters: Assam (in %)</b>															
Items	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04 (RE)
RD/SOR	24.7	20.6	-35.0	-16.6	-43.2	32.4	19.4	-26.2	-22.6	-6.3	60.2	40.2	42.2	12.1	82.5
FD/SOR	95.9	81.4	32.7	21.2	-1.9	74.2	63.0	6.7	11.3	23.6	96.1	79.6	69.3	35.3	133.9
PD/SOR	47.7	43.8	20.7	-20.8	-52.8	12.7	15.9	-44.7	-39.3	-12.7	38.0	34.9	18.5	-12.1	68.9
D/SOR	365.3	373.7	368.6	314.7	306.5	519.6	560.6	538.2	472.5	443.8	447.5	459.0	471.3	439.6	467.4
SOR Growth Rate		26.9	11.0	26.3	-1.7	-0.4	8.4	4.9	16.0	13.6	16.4	16.0	7.9	25.7	7.2
GSDP Growth Rate		16.9	11.6	10.1	12.8	15.9	10.6	8.3	8.5	12.1	14.5	4.9	5.6	9.3	10.2
PE Growth Rate		16.0	23.7	-6.5	16.5	9.8	14.9	-4.8	13.7	13.0	26.6	15.3	0.8	2.0	79.3
IP/TE	12.8	11.1	3.5	14.5	14.8	16.0	12.1	14.2	14.3	10.7	15.0	12.0	14.3	16.1	13.6
PE/TE	87.2	88.9	96.5	85.5	85.2	84.0	87.9	85.8	85.7	89.3	85.0	88.0	85.7	83.9	86.4
SOR/RR	35.9	39.3	32.1	37.5	29.0	32.4	30.8	28.2	29.2	31.8	34.5	34.4	35.0	38.7	29.1
TrC/RR	64.1	60.7	67.9	62.5	71.0	67.6	69.2	71.8	70.8	68.2	65.5	65.6	65.0	61.3	70.9
Own Tax Rev/SOR	60.5	60.2	66.1	52.9	63.7	66.0	67.6	70.4	69.8	68.5	73.4	72.8	74.5	73.6	74.6
<i>RR : Total Revenue Receipts</i>											<i>IP: Interest payments</i>				
<i>PE : Primary Expenditure</i>											<i>TrC: Transfers from Centre</i>				

## II.2 Causes of Rising Debt of GoA

3.5 Out of the total fiscal debt of GoA, more than half or Rs.6,407 crores is accounted for by the uncovered non-plan revenue deficits during 10<sup>th</sup> FC (1995-2000) and 11<sup>th</sup> FC (2000-03) period. The specific factors responsible for rising debt in Assam are:

- i. Assam is prone to 6 to 7 waves of heavy and regular floods in the *Brahmaputra*, the *Barak* and their tributaries causing extensive damage to standing crops on 40% of land, dwelling units, vital infrastructure like roads,

bridges, power, irrigation canals and other public assets. These floods in Assam are ascribable to deforestation and topsoil erosion in the catchment areas of the river system lying in neighbouring countries and hill states. The *Brahmaputra* Board has not been able to implement any major project for the past 20 years to reduce the fury of the floods. For this exogenous natural problem, the centre has been providing assistance as 100% central loan. This in itself increases the debt burden of the state.

- ii. Since the interest rate on the central loan is the highest among all sources (*Table 3.2*), regular dependence of the state on the centre for the flood control, relief and rehabilitation expenditures leads to increased uncovered non-plan revenue deficit and hence the debt.

No	Items	89-90	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03
A	Market Loan	11.50	14.00	13.00	13.00	12.00	11.50	10.50	09.45	07.22
B	Institutional Loan	12.00	12.00	12.00	12.00	12.00	12.00	10.00	10.00	10.50
C	Central Loan									
i.	Small Savings	13.00	14.50	14.50	14.50	14.50	12.50	12.50	11.00	10.50
ii.	Block loan	09.75	12.00	13.00	13.00	13.00	12.50	12.50	12.00	11.50
iii.	Other loan	09.75	13.00	13.00	13.00	13.00	12.50	12.50	12.50	11.50
	GPF	12.00	12.00	12.00	12.00	12.00	12.00	11.00	09.50	09.00
	Average (effective)	16.77	9.80	9.62	10.90	8.73	15.24	11.57	11.94	12.63

Note: Effective interest rate during 1998 to 2000 is on account of delayed payment of interest in 1998-99.

- iii. Assam is a border state and is exposed to special insurgency problems like Punjab and Jammu & Kashmir. For this issue of national integration, the GoA stands guarantee against bank loans for rehabilitation of surrendered militants. Since most of these loans have turned out to be bad debts, the GoA has paid Rs.123 crores during 1995-03 against such contingent liabilities.
- iv. Assam has heterogeneous political system largely on account of tribal population with several and unique administrative layers. These were the political demands accepted by the government of India and not GoA, but the expenditure consequences are on GoA. Government officials estimate that about 10% of the revenue expenditure is imposed on the state on this count leading ultimately to higher debt.

- v. On account of natural calamities, ethnic conflicts, and environment of insurgency, there are serious cash flow problems of late in the state making it increasingly dependent on ways and means advances (WMA) and overdrafts (ODs) from the RBI (*Table 3.3*). They attract interest charges of 9% to 11% p.a. adding to the interest cost and ultimately to the debt.

Description	2000-01	2001-02	2002-03
Number of days on which minimum balance was maintained without obtaining any advance	36	23	11
Number of days on which minimum balance was maintained by taking ordinary & special WMA	36	30	39
Number of days on which overdraft was taken	293	312	315

- vi. The state public sector undertakings (PSUs) failed to perform and saddled the GoA with huge contingent liabilities on account of their commercial borrowings backed by GoA guarantees. From 1994-2004, GoA has paid Rs.158 crores of guarantees on behalf of defaulted PSUs. As of 31<sup>st</sup> March 2003, GoA has Rs.1881 crores of outstanding guarantees and most of them are likely to become the liability of GoA. Thus, the effective stock of debt or liabilities of GoA would be higher by about 16% as on 31<sup>st</sup> March, 2003.

### **II.3 Measures to Reduce Interest Cost**

- 3.6 GoA has participated in the debt swap programme of the government of India confined to a fraction of net collections of small saving loans for swapping high cost borrowings. GoA has taken full benefit of 20% during 2002-03 and 30% during 2003-04 offered by GoI. In 2004-05, it will be 40% of net collections of small saving loans. However, the saving of interest cost is not very significant and likely to be around Rs.10 to 20 crores p.a., because the interest rate differential is only 3 to 4% and the base is limited.
- 3.7 As reflected in *Table 3.2*, the effective weighted average interest rate for GoA has remained high during the last five years. This happened in spite of interest rates in all components of debt declining and the weightage of market loans in the total debt increasing over the years. It is the market debt that experienced

the sharpest decline in the interest rate among all components of the debt. However, the overall effective interest rate has not declined. This is because the maturity structure of the debt would not allow the fall in the current interest rates to get fully transmitted to the effective interest rate. This calls for larger effort at restructuring and swapping of the debt than what has been allowed and attempted by Gol.

## **II.4 Prospects for Future – GoA’s Forecast**

3.8 The GoA’s forecast of fiscal aggregates based on their assessment of future prospects is summarised in *Table 3.4*. The GoA predicts the nominal growth of the state income (GSDP) only at 8.12% p.a. over the period 2005-10. This implies the real growth in the state in the range of only 3% p.a. The reason for projecting such a low growth of GSDP is the poor performance of the economy in the last three years and the belief that government’s non-interest expenditure growth is a precondition for achieving high growth of state income. Since the primary (non-interest) expenditure has to be compressed in order to curb fiscal deficit in view of rising debt, the GoA officials feel that the state income cannot grow faster than 8% p.a. More precisely, the assumptions of GoA in their projections are the following:

- i. Tax revenues will grow at 13% p.a. except tax on tea & specified land for tea and central sales tax on crude oil transported outside Assam where the growth is assumed at 0% p.a., and state sales tax on crude oil assumed to grow at 2% p.a. As a result, the effective overall growth rate of state’s own tax revenue comes to about 12% p.a.
- ii. Non-tax revenues of the state excluding royalty on crude oil will grow at 6% p.a. due to revision of user charges in some sectors. Royalty on crude oil is assumed at Rs.1243 / MT based on the international royalty at US\$ 22 / barrel and exchange rate of Rs.46 to a dollar. The effective growth rate of state’s own non-tax revenues comes to less than 1% p.a. and the effective growth rate for all SOR would be about 10% p.a.

- iii. Revenue expenditures in general are assumed to grow only at the inflation rate of 5% p.a., but several specific expenditures like interest payments on loans outstanding and expected, election of *Lok Sabha* & Assembly, district administration, police, pension, education, medical & public health, maintenance of assets, relief for natural calamities, pay revision, etc. are projected to grow at a significantly higher rate. Effective growth rates of the plan and non-plan revenue expenditures are assumed to be (-) 3% p.a. and 13.6% p.a. respectively. The overall revenue expenditure is assumed to grow effectively at 11.8% p.a. during 2004-05 to 2009-10. The interest payments are assumed to increase only at 7.3% p.a. This implies a very low effective interest rate over time.
  - iv. For all items on capital expenditures and capital receipts, growth rate of 10% p.a. is assumed by GoA. Therefore, the primary (non-interest) expenditure is assumed to grow at 12.4% p.a.
  - v. In order to complete the scenario for examining the implications on debt sustainability, we assume all the transfers from centre in the same proportion to SOR as the average obtained during the last 3 years.
- 3.9 Although the government officials in Assam argued about upward rigidities of taxes leading to constraints on revenue mobilisation in terms of widespread poverty, narrow industrial base, non-trading and consuming nature of the economy and serious problems in their tea industry, they envisage a growth of 12% p.a. in the state's own tax revenue. If we believe their forecast of only 8% p.a. growth in the nominal state income, the buoyancy of state's own tax revenue comes to about 1.5. Regarding the non-tax revenue, royalties of crude oil and natural gas constitute an overwhelming proportion in Assam. It is assumed that the international oil price will fall significantly and the rupee exchange rate will remain stable at the current level during the forecast period of 2005-10. On the expenditure side, the effects of pension and pay revision for college teachers, judiciary and government employees through pay commissions are also anticipated. Similarly, the downward movement of the effective interest rate on the state's debt is assumed without any major debt-swap or restructuring

programme. It can be seen from *Table 3.4* that such a scenario could result in a tolerable debt situation by 2009-10 on account of the assumed steep decline in the interest rate. However, the D/SOR ratio is continuously increasing and once interest rate stops declining, the IP/RR ratio would also start rising and become intolerable. We need to consider a more realistic scenario.

<b>Table 3.4: Forecast by Government of Assam (Rs. Crores)</b>									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (BE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	1062	1245	1737	1772	1884	2022	2154	2324	2523
Other Total Expenditure	6380	6504	10902	10309	12701	14581	15760	17122	18468
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>7442</b>	<b>7749</b>	<b>12640</b>	<b>12081</b>	<b>14586</b>	<b>16603</b>	<b>17914</b>	<b>19446</b>	<b>20991</b>
States' Own Revenue	2090	2627	3034	2825	3091	3391	3729	4111	4541
Transfers from Centre	3875	4166	6448	5241	5734	6291	6918	7626	8424
Recovery of loans and advances	29	28	35	38	42	46	51	56	61
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>5993</b>	<b>6821</b>	<b>9517</b>	<b>8105</b>	<b>8868</b>	<b>9728</b>	<b>10698</b>	<b>11793</b>	<b>13027</b>
Outstanding Liabilities	9851	11550	13125	17101	22819	29694	36910	44563	52527
Gross Fiscal Deficit	1448	928	3123	3977	5718	6875	7216	7653	7964
Primary Deficit on Own Account	4289	3877	7869	7484	9610	11190	12031	13011	13927
Misc (MCR+RLA+ACGA+MFD)	517	-743	1583	38	42	46	51	56	61
SOR Growth Rate (in %)	7.9	25.7	15.5	-6.9	9.4	9.7	10.0	10.2	10.5
Interest Rate (in %)	11.94	12.64	15.04	13.50	11.02	8.86	7.25	6.30	5.66
PE Growth Rate (in %)	0.8	2.0	67.6	-5.4	23.2	14.8	8.1	8.6	7.9
<b>D/SOR</b>	<b>4.7</b>	<b>4.4</b>	<b>4.3</b>	<b>6.1</b>	<b>7.4</b>	<b>8.8</b>	<b>9.9</b>	<b>10.8</b>	<b>11.6</b>
<b>IP/RR (in %)</b>	<b>17.8</b>	<b>18.3</b>	<b>18.3</b>	<b>22.0</b>	<b>21.4</b>	<b>20.9</b>	<b>20.2</b>	<b>19.8</b>	<b>19.5</b>
<b>Change(D/SOR)</b>	<b>0.123</b>	<b>-0.317</b>	<b>-0.069</b>	<b>1.726</b>	<b>1.329</b>	<b>1.375</b>	<b>1.141</b>	<b>0.943</b>	<b>0.726</b>
PDOA/SOR	2.052	1.475	2.594	2.649	3.109	3.300	3.226	3.165	3.067
TrC/SOR	1.854	1.585	2.126	1.855	1.855	1.855	1.855	1.855	1.855
Misc/SOR	0.247	-0.283	0.522	0.013	0.014	0.014	0.014	0.014	0.014
(g-I)/(1+g)	-0.037	0.104	0.004	-0.219	-0.015	0.008	0.025	0.036	0.044
Do/SORo	4.590	4.713	4.396	4.326	6.053	7.381	8.756	9.897	10.840
Do/SORo x [(g-I)/(1+g)]	-0.172	0.490	0.016	-0.946	-0.089	0.056	0.216	0.353	0.472

## II.5 Prospects for Future – Realistic Scenario

3.10 That growth in non-interest (primary) expenditure by state is a precondition for achieving higher growth in state income is an empirical assumption and is very popular among government officials. For Assam, we examined this assumption with the help of recent data (1989-90 to 2002-03) by fitting the following regression of growth in primary expenditure ( $G_{PE}$ ) on growth in GSDP ( $G_{GSDP}$ ):

$$G_{\text{GSDP}} = 8.8671 + 0.1830 G_{\text{PE}} : R^2 = 0.2692 \text{ and F-value} = 4.052$$

This regression is not statistically significant at 5% level, implying that the hypothesis does not have strong empirical support from the recent experience in Assam. In any case, the assumption of nominal growth of state income at 8% p.a. appears to be a highly pessimistic assumption. Senior policymakers in Assam also felt that it may not be difficult to achieve a nominal growth of 11 to 11.5% p.a. as per the target set by the 10<sup>th</sup> Plan if normal conditions prevail. Considering the past performance of GoA over five consecutive years during recent past as discussed in *Chapter 2* above, we have chosen plausibly optimistic assumptions about growth of SOR (12% p.a.) & PE (11% p.a.). TrC/SOR and Misc/SOR ratios are taken at the average values (removing outliers) observed during the 11<sup>th</sup> FC period. The PE growth is assumed almost at the past trend level, whereas the SOR growth is assumed marginally at a higher rate than the trend rate. This is necessary to ensure that the primary deficit is wiped out and becomes a surplus so as to absorb relatively high interest burden. This is because the effective interest rate in 2003-04 (RE) works out to 15.8%. We have, moreover, assumed a marginal fall in the effective interest rate by 40 basis points each year upto 2005-06. The absolute figures of PE (and hence SOR) for the 2003-04 (RE) have been ignored since they were found to be outliers. We have replaced them with projected values for further projections. However, we have considered the actual debt and effective interest rate for 2003-04 (RE) in our forecast. If we consider 2003-04 (RE), the growth of SOR and PE to be targeted would be: 12.8% and 2.5% respectively. *Table 3.5* presents this scenario. The table reveals that the Debt / SOR ratio in Assam would drop to 1.55 by 2009-10 and IP / RR ratio would also be only 9.7 % by 2009-10. Thus, the debt would be not only sustainable but also well within the tolerable limits. Such a situation is achievable provided the GoA makes substantial effort at revenue raising and maintains the primary expenditures at the trend rate. In case, GoA is unable to achieve 12% p.a. growth in SOR, its effective interest rate will have to be brought down substantially.

<b>Table 3.5: Realistically Optimistic Forecast for Assam (Rs. Crores)</b>									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (RE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	1062	1245	1832	2035	2027	2027	1976	1860	1661
Other Total Expenditure	6380	6504	11660	8014	8895	9874	10960	12166	13504
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>7442</b>	<b>7749</b>	<b>13492</b>	<b>10049</b>	<b>10922</b>	<b>11901</b>	<b>12936</b>	<b>14026</b>	<b>15165</b>
States' Own Revenue	2090	2627	2817	3296	3691	4134	4631	5186	5809
Transfers from Centre	3875	4166	6873	6419	7189	8051	9018	10100	11312
Recovery of loans and advances	29	28	30	38	42	46	51	56	61
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>5993</b>	<b>6821</b>	<b>9719</b>	<b>9753</b>	<b>10922</b>	<b>12232</b>	<b>13699</b>	<b>15342</b>	<b>17182</b>
Outstanding Liabilities	9851	11550	13167	13461	13458	13123	12354	11031	9004
Gross Fiscal Deficit	1448	928	3772	297	0	-331	-763	-1316	-2017
Primary Deficit on Own Account	4289	3877	8843	4718	5204	5740	6330	6980	7695
Misc (MCR+RLA+ACGA+MFD)	517	-743	2186	40	45	50	57	63	71
SOR Growth Rate (in %)	7.9	25.7	7.2	17.0	12.0	12.0	12.0	12.0	12.0
Interest Rate (in %)	11.94	12.64	15.86	15.46	15.06	15.06	15.06	15.06	15.06
PE Growth Rate (in %)	0.8	2.0	79.3	-31.3	11.0	11.0	11.0	11.0	11.0
<b>D/SOR</b>	<b>4.71</b>	<b>4.40</b>	<b>4.67</b>	<b>4.08</b>	<b>3.65</b>	<b>3.17</b>	<b>2.67</b>	<b>2.13</b>	<b>1.55</b>
<b>IP/RR (in %)</b>	<b>17.8</b>	<b>18.3</b>	<b>18.9</b>	<b>21.0</b>	<b>18.6</b>	<b>16.6</b>	<b>14.5</b>	<b>12.2</b>	<b>9.7</b>
<b>Change(D/SOR)</b>	<b>0.123</b>	<b>-0.317</b>	<b>0.278</b>	<b>-0.590</b>	<b>-0.438</b>	<b>-0.472</b>	<b>-0.506</b>	<b>-0.541</b>	<b>-0.577</b>
PDOA/SOR	2.052	1.475	3.139	1.431	1.410	1.388	1.367	1.346	1.325
TrC/SOR	1.854	1.585	2.440	1.947	1.947	1.947	1.947	1.947	1.947
Misc/SOR	0.247	-0.283	0.776	0.012	0.012	0.012	0.012	0.012	0.012
(g-I)/(1+g)	-0.037	0.104	-0.081	0.013	-0.027	-0.027	-0.027	-0.027	-0.027
Do/SORo	4.590	4.713	4.396	4.674	4.084	3.646	3.174	2.668	2.127
Do/SORo x [(g-I)/(1+g)]	-0.172	0.490	-0.355	0.062	-0.112	-0.100	-0.087	-0.073	-0.058

### III. Gujarat<sup>18</sup>

#### III.1 Introduction

3.11 Among Indian states, Gujarat is a medium to high income, highly drought prone, industrialized, urbanized and trade (export and import) oriented state. Low

<sup>18</sup> Grateful thanks are due to Shri P.K. Laheri, Chief Secretary, Smt. Sudha Anchaliya, Principal Secretary – Finance; Shri P.K. Pujari, Secretary – Economic Affairs; Shri M.M. Srivastava, Secretary – Expenditure; Shri S.K. Shelat, Advisor to Chief Minister; and Shri K.L. Tejani, Director – Finance from GoG for very useful discussion and providing valuable material on Gujarat.

irrigation and heavy dependence on rainfall makes its growth path highly unstable and fluctuating. Still, Government of Gujarat (GoG) enjoys significant confidence and credibility to tap market loans at relatively low interest costs.

3.12 Of late, GoG's performance has raised many concerns. The behaviour of ratios of deficit to SOR since 1989-90 from *Table 3.6* shows that much of the deterioration in Fiscal Deficit (FD) to SOR ratio and Primary Deficit (PD) to SOR ratio has been between 1994-95 and 2000-01. Debt (D) to SOR ratio, on the other hand, deteriorated from 1995-96 till 2002-03, but has shown some improvement in 2003-04. Revenue Deficit (RD) to SOR ratio was negative, showing a surplus, in the years 1993-94 and 1994-95 but deteriorated sharply to 52% in 2001-02 and has shown significant improvement thereafter indicating improved quality of fiscal deficit in recent years.

**Table 3.6: Ratios of Deficits, Interest and Debt to SOR (Per cent)**

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04 (RE)
RD/SOR	4.2	25.1	14.3	6.5	-1.8	-4.2	3.2	7.7	11.6	27.6	31.8	50.8	52.0	26.4	20.7
FD/SOR	32.1	64.2	44.5	24.9	9.8	20.7	25.2	30.9	34.1	54.1	60.1	64.3	50.3	44.7	59.3
PD/SOR	16.2	45.3	26.7	4.8	-9.7	1.6	6.0	9.8	12.7	32.3	34.9	39.0	17.8	8.0	25.5
D/SOR	202.5	275.0	235.4	228.6	211.1	200.3	206.3	218.0	225.6	244.2	286.6	320.0	356.1	390.1	374.9
Debt (Rs. Crores)	6019	7708	9484	10548	11277	12479	14287	16649	19883	25357	31958	39667	46078	52653	62546
GSDP (Rs Crores)	27012	30521	33395	43952	49194	63516	71886	85837	91188	105305	107618	110449	124905	134897	166064
Interest/TE (%)	10.1	10.0	10.8	12.3	13.1	12.9	12.7	13.2	13.1	12.1	13.5	12.1	17.0	20.5	18.7
Interest/RE (%)	12.6	13.0	13.7	15.0	15.1	15.8	15.1	15.7	15.5	14.5	16.0	14.2	18.5	23.1	23.9

Note: Negative sign indicates surplus

3.13 As seen from *Chart 1 and 2*, total expenditure increased at a faster rate than both total revenues (including grants from the centre) and state's own revenues (SOR) after 1993-94. This widening gap (fiscal deficit) could be bridged only by additional borrowings. The absolute debt level has, therefore, gone up at an increasing pace (*Table 3.6*). The debt of GoG is growing at 21% p.a. for the last 6 years. During this period, interest payments as a proportion of total expenditure

(TE) and of revenue expenditure (RE) has increased respectively from 13% and 15.5% to 19% and 24%.

Chart 1: Revenue Receipts and Expenditure

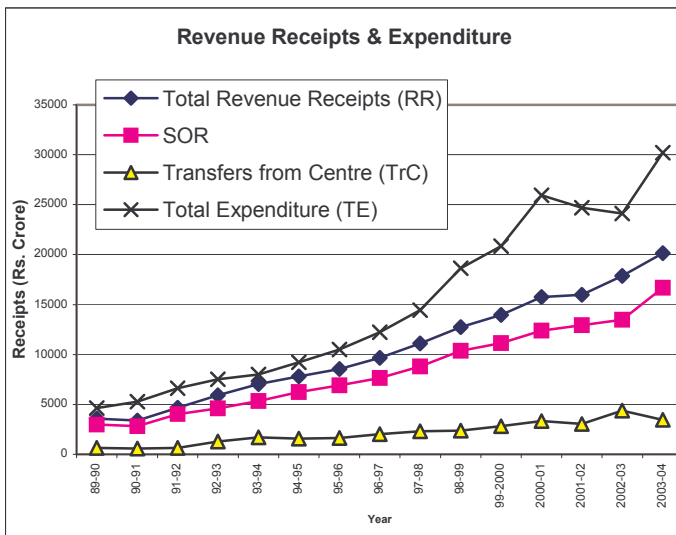
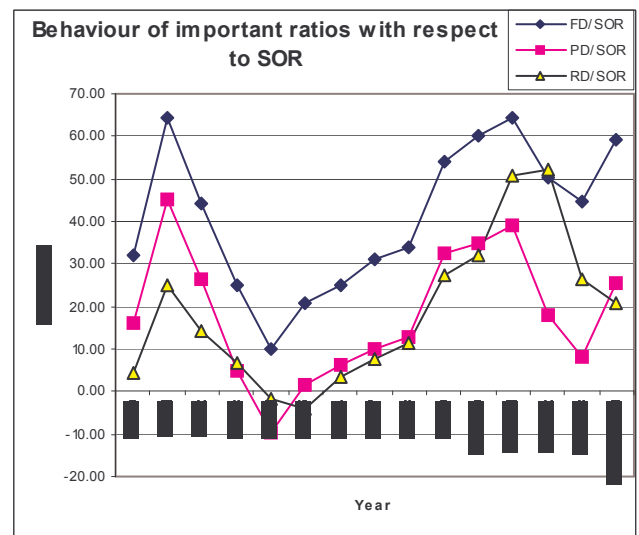


Chart 2: Behaviour of important ratios to SOR



### III.2 Causes of Rising Debt of GoG

3.14 Table 3.7 shows the behaviour of the components of fiscal deficit viz. RD, Capital Outlay, Net Lending and miscellaneous capital receipts (MCR) between 1989-90 and 2003-04. We see that in 2000-01 and 2001-02, revenue deficit rose sharply by about Rs.2000 crores over and above the regular trend, while there was corresponding recovery of loans and advances. In these two years, GoG tried to clean up the balance sheet of Gujarat Electricity Board (GEB). Thus, while RD deteriorated, FD was not largely affected on this count and the sudden deterioration in RD was purely temporary and an accounting matter. Fiscal Deficit and Primary Deficit ratios to SOR improved considerably during 2001-02 and 2002-03 but have again increased in 2003-04. This has been primarily on two counts: a sharp increase in loans and advances, which have increased from Rs.346 crores in 2002-03 to Rs.2448 crores in 2003-04 (RE); and increase in

capital outlay on economic services, which has gone up from 1286 crores in 2002-03 to Rs.2835 crores in 2003-04. Loans for power projects, road transport, housing & urban development and cooperation account for a major portion of the increase in loans and advances. Major increase in capital outlay comes from major, medium and minor irrigation and forestry and wildlife. Thus, it seems at first that investment in agriculture and infrastructure is increasing of late. But, a closer examination reveals that these expenditures are once for all type restructuring exercise rather than fresh investment.

**Table 3.7: Components of Fiscal Deficit (Rs. crores)**

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
RD	126	703	576	299	-97	-263	222	592	1018	<b>2863</b>	<b>3546</b>	<b>6302</b>	<b>6732</b>	3565	<b>3462</b>
Capital Outlay	507	713	944	799	624	962	1261	1485	1859	<b>2289</b>	<b>2695</b>	<b>2995</b>	1757	2341	<b>4145</b>
Net Lending	320	383	356	75	-2	593	263	282	297	466	480	<b>-1310</b>	<b>-1978</b>	174	<b>2291</b>
MCR	0	0	85	22	0	0	0	0	172	1	16	22	2	52	4
FD	953	1799	1791	1151	525	1292	1746	2359	3002	5617	6705	7965	6509	6028	9894

Note: Negative sign indicates surplus

3.15 Gujarat went through a difficult time during the period 1997 to 2001 when a series of natural disasters struck: there was drought in 1997-98, two cyclones in 1998 (June and October), followed by two consecutive years of drought; and an earthquake on 26th January 2001. The entire period, 1997-98 to 2000-01 was bad for agriculture. As seen from *Table 3.8* below, the growth in the agricultural output was negative except for a minor increase in 1998-99. Expenditure on social welfare and nutrition more than doubled in 1997-98, tripled in 1999-2000 and rose to nine times in 2000-01 over its value in 1996-97. This increase can be attributed to relief measures during drought, cyclone and earthquake. The expenditure increased further in 2001-02 although agriculture picked up, largely due to earthquake relief.

**Table 3.8: Revenue and Capital Expenditure and Agricultural Output between 1997-98 and 2001-02 (Rs. crores)**

	96-97	97-98	98-99	99-2000	2000-01	2001-02
Total Revenue Expenditure (RE)	10613	12544	16366	18030	22822	20498
Annual % change (RE)	(15.8)	(18.19)	(30.47)	(10.17)	(26.58)	(-10.19)
Total Capital Outlay (CO)	1485	1859	2289	2695	2995	1757
Annual % change (CO)	(17.76)	(25.19)	(23.13)	(17.74)	(11.13)	(-41.34)
Real SDP in Agriculture, Forestry and Fish (AFF)	1813984	1662464	1760118	1184824	1036300	1447584
Annual % change (AFF)	(33.96)	(-8.35)	(5.87)	(-32.68)	(-12.54)	(39.69)
Expenditure on Social Welfare & Nutrition(Calamity Relief)- (SE)	238	533	434	730	1854	2758
Annual % change (SE)		(124)	(-19)	(68)	(154)	(49)

3.16 Implementation of the fifth pay commission recommendations caused a substantial upward shift in both wages and salaries and pension payments in 1998-99 (Table 3.9), thereby increasing the debt of GoG.

<b>Table 3.9: Expenditure on Administration and Pensions (Rs. crore)</b>								
	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03
Wages and Salaries	1268	1340	1553	2056	2249	2236	2307	2539
Pensions	458	609	762	1237	1507	1439	1502	1588
Total	1091	1268	1553	2216	2556	2538	2540	2783

3.17 One major element of capital expenditure by the state was on *Sardar Sarovar* project, a multi-state, multi-purpose project of national importance. The project had been delayed by about 7 to 8 years due to various reasons like anti-dam activism, initial lack of cooperation among participating states and delay in rehabilitation programmes in the other three states viz. Maharashtra, Madhya Pradesh and Rajasthan. Gujarat has incurred extra expenditure due to price-escalation and interest burden on account of this external and extraneous delay. About 60% of Rs.11,615 crores of interest burden is ascribable to such delays. This excludes the effect on cost escalation due to the delay. All this adds to the increasing debt burden on the state.

3.18 Gujarat government received \$1054 million from the centre as special loans for the rehabilitation programme launched in Gujarat after the massive earthquake on 26<sup>th</sup> January 2001. Rough estimates suggest that while the centre sourced

these loans from multilateral agencies at an effective interest rate (service charge) of 1.2% p.a., it is still charging an effective interest rate of 6.7% from the state, earning a margin of 5.5%.<sup>19</sup> Thus, effectively, the centre has taxed the natural calamity striking the state, adding to Gujarat's interest burden.

- 3.19 According to the state government officials, in 2002-03, the Cabinet Committee on Economic Affairs (CCEA) approved a proposal that loans for important projects be rolled over for another three years at 10%. Decision on this proposal is pending with the centre for the past two years. An early decision would be beneficial to several states. The delay in this decision by the centre has put avoidable interest burden on the state.
- 3.20 Till date the total devolvement of guarantees has been only Rs.115 crores, which constitutes a small fraction of the total stock. Gujarat has also subscribed to the Guarantee Redemption Fund Scheme and guarantees are now formally a part of the budgeting process in the state. Thus, the future fiscal deficits and the debt will increase only to the extent to which guarantees are invoked. While given the past record and future possibilities, increase in the present liabilities of GoG on this count may not be significant, the repayment of the borrowings through the special purpose vehicles (SPV) like *Sardar Sarovar Narmada Nigam Limited* (SSNL) will pose the major challenge. These repayments have to be through the budget and to that extent would increase future debt of the GoG by about 10%.

### III.3 Measures to Reduce interest Cost

- 3.21 Centre-state debt swap is allowed only in small savings which constitute a small proportion of the total debt of the state government. Gujarat swapped 20% of its

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<sup>19</sup> World Bank and ADB gave loans of US \$ 704 million and US\$ 350 million respectively for the rehabilitation programme launched in Gujarat after the massive earthquake. The entire funds of US \$ 704 million by the World Bank have been made available from IDA funds, which carry no interest and only a commitment charge of 0.75% on the undisbursed component. ADB loan is at LIBOR + 0.75% commitment charge.. Government of India has made these loans available to the Gujarat Government on normal Additional Central assistance (ACA) pattern i.e. 70% loans and 30% grant. The initial rate of interest on these loans was 12.5% which has been subsequently revised to 9.5%. The effective interest rate is  $(3.50 \times 350) / 1054 = 1.16\%$ . The interest rate charged is  $0.70 \times 9.5 = 6.7\%$ . In addition, the tenor of these loans is 23 years but they have been provided to Gujarat for 20 years, effectively adding to its cost of servicing.

small savings collections in 2002-03 with the centre. As an incentive, it was allowed an additional swap of the central government loans. In 2003-04, 30% of small savings collections have been swapped. Overall, the GoG has swapped about Rs.5451 crores of high interest bearing loans till January 2004. Prudent fiscal measures like debt swap had resulted in interest savings to the extent of Rs.336 crores per annum to the state by 2003-04.

- 3.22 The state government had approached financial institutions to swap certain high cost loans but the talks didn't proceed because the repayment premium demanded by these institutions was not acceptable to GoG. It has requested the centre to intervene and resolve the matter. If successful, it can significantly reduce the interest burden of the state.

#### **III.4 Prospects for Future – GoG's Forecast**

- 3.23 The GoG's forecast of fiscal aggregates based on their assessment of future prospects is summarised in *Table 3.10*. GoG predicts a dismal growth of only 7.5% p.a. in its nominal GSDP over the period 2005-10, implying a real growth of only 2.5% p.a. as against 10.2% of the real growth target assigned to it in the 10<sup>th</sup> Plan. These projections are based on the observed trend over the recent period of 1997-2002 when the state faced a series of natural calamities. The interest rate on the other hand is assumed at a rate higher than the growth of nominal GSDP over the years. Therefore, the GoG's forecast would predict an unsustainable debt situation. More specifically, GoG forecasts till 2009-10 are based on detailed exercise implying the following assumptions:
- i. The annual average growth rate of SOR will be 7.5% till 2009-10.
  - ii. The annual average growth rate in Primary Expenditure will also be around 7.7%.
  - iii. Interest rate will gradually fall from 10.5% in 2003-04 (BE) to 9% in 2009-10.
  - iv. In order to complete the scenario, we have assumed TrC / SOR ratio to remain the same as the average of the last 3 years.
- 3.24 These assumptions and particularly the assumption about revenues appear highly pessimistic. The annual compound growth rate of SOR and RR between

1996-97 and 2002-03 were 11.5% and 10.8% respectively although this period saw deterioration in finances, as already discussed. Now that the negative shocks have been absorbed, the growth rates in revenues are expected to accelerate and not fall further to around 7.5%, as assumed. As per the GoG's forecast, Debt to SOR ratio keeps rising implying unsustainability and shows intolerable level of IP/RR ratio in 2009-10.

<b>Table 3.10: Forecast by Government of Gujarat (Rs. Crores)</b>									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (BE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	4206	4949	5542	6096	6706	7377	8114	8926	9818
Other Total Expenditure	20498	19178	22865	21484	23104	24863	26773	28848	31102
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>24704</b>	<b>24127</b>	<b>28407</b>	<b>27581</b>	<b>29810</b>	<b>32240</b>	<b>34887</b>	<b>37774</b>	<b>40920</b>
States' Own Revenue	12940	13496	14614	15401	16553	17794	19131	20573	22129
Transfers from Centre	3046	4379	4131	4325	4649	4997	5373	5778	6215
Recovery of loans and advances	2207	171	150	165	181	199	219	241	265
MCR	2	52	4	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>18194</b>	<b>18099</b>	<b>18899</b>	<b>19891</b>	<b>21383</b>	<b>22991</b>	<b>24724</b>	<b>26593</b>	<b>28609</b>
Outstanding Liabilities	46078	52653	62165	69854	78281	87530	97694	108875	121186
Gross Fiscal Deficit	6509	6028	9512	7689	8427	9249	10164	11181	12311
Primary Deficit on Own Account	7557	5682	8251	6083	6551	7069	7642	8274	8973
Misc (MCR+RLA+ACGA+MFD)	2306	-323	150	165	181	199	219	241	265
SOR Growth Rate (in %)	4.4	4.3	8.3	5.4	7.5	7.5	7.5	7.5	7.6
Interest Rate (in %)	10.60	10.74	10.53	9.81	9.60	9.42	9.27	9.14	9.02
PE Growth Rate (in %)	-10.2	-6.4	19.2	-6.0	7.5	7.6	7.7	7.7	7.8
<b>D/SOR</b>	<b>3.6</b>	<b>3.9</b>	<b>4.3</b>	<b>4.5</b>	<b>4.7</b>	<b>4.9</b>	<b>5.1</b>	<b>5.3</b>	<b>5.5</b>
<b>IP/RR (in %)</b>	<b>26.3</b>	<b>27.7</b>	<b>29.6</b>	<b>30.9</b>	<b>31.6</b>	<b>32.4</b>	<b>33.1</b>	<b>33.9</b>	<b>34.6</b>
<b>Change(D/SOR)</b>	<b>0.361</b>	<b>0.341</b>	<b>0.352</b>	<b>0.282</b>	<b>0.193</b>	<b>0.190</b>	<b>0.187</b>	<b>0.186</b>	<b>0.184</b>
PDOA/SOR	0.584	0.421	0.565	0.395	0.396	0.397	0.399	0.402	0.405
TrC/SOR	0.235	0.324	0.283	0.281	0.281	0.281	0.281	0.281	0.281
Misc/SOR	0.178	-0.024	0.010	0.011	0.011	0.011	0.011	0.012	0.012
(g-l)/(1+g)	-0.060	-0.062	-0.021	-0.042	-0.020	-0.018	-0.016	-0.015	-0.014
Do/SORo	3.200	3.561	3.901	4.254	4.536	4.729	4.919	5.106	5.292
Do/SORo x [(g-l)/(1+g)]	-0.190	-0.220	-0.081	-0.178	-0.090	-0.085	-0.080	-0.076	-0.072

### III.5 Prospects for Future – Realistic Scenario

3.25 The second scenario viz. realistically optimistic case is based on the following assumptions:

- i. The average annual growth rate for both SOR and nominal GSDP will be 13.5% between 2004-05 and 2009-10<sup>20</sup>. This is only slightly higher than 11.5% achieved during the lean period of 1996-97 to 2002-03.
- ii. Primary Expenditure will grow by 10% annually during the same period. The corresponding figure for 1996-97 to 2002-03 was 10.4%. The target growth rates of SOR and PE with 2003-04(RE) as base would be 11.9% and 7.2% respectively. Since the year 2003-04 is statistically an outlier, we have considered 2002-03 as the base year for estimating SOR and PE beyond 2003-04.
- iii. Effective Interest rate will fall from 10.7% in 2003-04 (RE) to 9.9% in 2009-10, declining by 40 basis points p.a. upto 2005-06 and then remaining constant. This assumption is the same as taken in *Chapter 1* above and in the previous case (*para 3.10*).
- iv. The other parameters, TrC/SOR and Misc / SOR ratios are taken as averages (excluding outliers) during the 11<sup>th</sup> FC period, as in other cases considered here.

3.26 *Table 3.11* presents the forecast based on our realistically optimistic scenario. We can see that Debt / SOR ratio and IP / RR ratio in 2009-10 work out to 3.23 and 24% respectively. Thus, the debt in Gujarat can be sustainable but not within tolerable limits by 2009-10 even when the state adheres to the plausibly optimistic targets of growth rates of SOR and PE. Further, the problem of off-budget borrowing (e.g. SSNNL) resulting in contingent liabilities can make it difficult for GoG to achieve the PE growth target. We know that sustainability of debt is highly sensitive to interest rates. GoG can meet the tolerability condition

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<sup>20</sup> In Gujarat, the growth of GSDP and SOR seems to be almost independent during the nineties. This was largely on account of the tax concessions, exemptions and sops offered to new enterprises. Now that all this has stopped, we can expect restoration of the normal relationship between GSDP and SOR. We are effectively assuming the buoyancy of (+)1 for SOR as done by GoG.

of 20% IP/RR ratio, if the interest costs or rate can be reduced further. To that extent, interest rate reduction or debt restructuring would be required. Thus, Gujarat is a problematic state in terms of its debt.

<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (RE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	4206	4949	5637	6446	6964	7721	8473	9202	9880
Other Total Expenditure	20498	19178	24564	23206	25526	28079	30887	33976	37373
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>24704</b>	<b>24127</b>	<b>30200</b>	<b>29651</b>	<b>32490</b>	<b>35800</b>	<b>39360</b>	<b>43177</b>	<b>47253</b>
States' Own Revenue	12940	13496	16685	17386	19733	22397	25420	28852	32747
Transfers from Centre	3046	4379	3461	4507	5116	5806	6590	7480	8489
Recovery of loans and advances	2207	171	157	165	181	199	219	241	265
MCR	2	52	4	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>18194</b>	<b>18099</b>	<b>20307</b>	<b>22058</b>	<b>25030</b>	<b>28403</b>	<b>32230</b>	<b>36573</b>	<b>41502</b>
Outstanding Liabilities	46078	52653	62546	70305	77946	85543	92893	99738	105754
Gross Fiscal Deficit	6509	6028	9894	7594	7461	7397	7131	6604	5751
Primary Deficit on Own Account	7557	5682	7879	5820	5793	5682	5466	5123	4626
Misc (MCR+RLA+ACGA+MFD)	2306	-323	157	0	0	0	0	0	0
SOR Growth Rate (in %)	4.4	4.3	23.6	4.2	13.5	13.5	13.5	13.5	13.5
Interest Rate (in %)	10.60	10.74	10.71	10.31	9.91	9.91	9.91	9.91	9.91
PE Growth Rate (in %)	-10.2	-6.4	28.1	-5.5	10.0	10.0	10.0	10.0	10.0
<b>D/SOR</b>	<b>3.6</b>	<b>3.9</b>	<b>3.7</b>	<b>4.04</b>	<b>3.95</b>	<b>3.82</b>	<b>3.65</b>	<b>3.46</b>	<b>3.23</b>
<b>IP/RR (in %)</b>	<b>26.3</b>	<b>27.7</b>	<b>28.0</b>	<b>29.4</b>	<b>28.0</b>	<b>27.4</b>	<b>26.5</b>	<b>25.3</b>	<b>24.0</b>
<b>Change(D/SOR)</b>	<b>0.361</b>	<b>0.341</b>	<b>-0.153</b>	<b>0.295</b>	<b>-0.094</b>	<b>-0.131</b>	<b>-0.165</b>	<b>-0.197</b>	<b>-0.227</b>
PDOA/SOR	0.584	0.421	0.472	0.335	0.294	0.254	0.215	0.178	0.141
TrC/SOR	0.235	0.324	0.207	0.259	0.259	0.259	0.259	0.259	0.259
Misc/SOR	0.178	-0.024	0.009	0.000	0.000	0.000	0.000	0.000	0.000
(g-l)/(1+g)	-0.060	-0.062	0.105	-0.059	0.032	0.032	0.032	0.032	0.032
Do/SORo	3.200	3.561	3.901	3.749	4.044	3.950	3.819	3.654	3.457
Do/SORo x [(g-l)/(1+g)]	-0.190	-0.220	0.408	-0.220	0.128	0.125	0.121	0.116	0.109

#### **IV. Kerala<sup>21</sup>**

##### **IV.1 Causes for Rising Debt**

3.27 Kerala's fiscal situation took a turn for the worse in 1996-97 (*Table 3.12*), with both the fiscal deficit to SOR and debt to SOR ratios beginning to rise from that

<sup>21</sup> Grateful thanks are due to Ms. Sudha Pillai, Principal Secretary – Finance; Shri V.S. Senthil, Secretary-Expenditure; Shri. E.K. Prakash Additional Secretary – Finance; V. Ramachandran, Deputy Chairman – State Planning Board from GoK, for useful discussion and providing valuable material on Kerala.

year. By 2001-02, the debt to SOR ratio had climbed to nearly 4.38 from the level of 2.5 to 3.0 seen in the first half of the nineties.

**Table 3.12: Ratios of Deficits and Debt to SOR (Percent)**

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
RD/SOR	17.8	27.2	19.1	15.6	13.9	12.6	10.3	14.6	22.2	39.0	63.3	48.2	40.3	51.7	39.1
FD/SOR	42.9	51.5	42.1	33.8	35.1	34.7	33.2	35.0	47.7	57.8	79.2	59.4	50.6	62.6	60.2
PD/SOR	22.1	29.5	16.8	8.8	9.3	9.1	9.7	10.0	22.2	30.0	45.1	24.8	12.1	25.6	24.6
D/SOR	282.0	306.0	289.1	290.5	274.7	265.0	248.8	254.9	273.5	319.9	368.5	384.4	438.6	418.0	411.2

FD: Gross Fiscal Deficit; PD: Primary Deficit; RD: Revenue Deficit; D: Debt; SOR: State's Own Revenue

3.28 As Tables 3.13 and 3.14 show, this deterioration has occurred mainly on account of a worsening of the revenue deficit. The steep growth in revenue expenditure owes a great deal to the impact of the Fifth Pay Commission recommendations and to increased interest costs arising both from higher levels of debt and higher interest rates. The large increase in 2002-03 was because Dearness Allowance increases, withheld earlier, were released.

**Table 3.13: Components of Fiscal Deficit (Rs. crores)**

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (Forecast)
Revenue Deficit	250	422	364	338	372	401	403	643	1123	2030	3624	3147	2606	4122	3676
Capital Outlay	232	256	286	278	363	446	563	623	739	652	648	577	558	699	677
Net Lending	122	120	153	117	201	262	336	277	552	330	265	154	105	173	1301
MCR	0	0	0	0	0	0	0	0	5.9	2.47	2.05	0	0	0	0
<b>FD</b>	<b>604</b>	<b>794</b>	<b>797</b>	<b>733</b>	<b>936</b>	<b>1009</b>	<b>1202</b>	<b>1543</b>	<b>2497</b>	<b>3017</b>	<b>4539</b>	<b>3878</b>	<b>3269</b>	<b>4994</b>	<b>5654</b>
MCR: Miscellaneous Capital Receipts % of FD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0

3.29 The unusually increasing and high level of revenue deficit as a proportion of fiscal deficit in Kerala reflects a poor quality of its fiscal deficit. This happens because per capita expenditure in social sectors in Kerala is well above that in other states. This, in turn, arises because of extensive provision of education,

health and social security in the past now requiring continuation and maintenance. Thus, in respect of its fiscal situation, Kerala is a victim of its vaunted successes in the social sector. Even as other states deal with first-generation problems in respect of the social sector i.e., making services available to a higher proportion of the population, Kerala is, in fact, struggling to deal with second-generation problems arising from having dealt successfully with the first: high unemployment and an ageing population.

- 3.30 Capital outlay sharply declined as a proportion of the fiscal deficit in 1997-98 and 1998-99, and also in absolute terms in recent years. This obviously has important implications for the development of infrastructure, physical and social. Interestingly, however, Kerala's fiscal problems have not come in the way of its economy growing at a brisk pace: real GSDP growth was around 7% through the past decade. This is despite the cash crop sector being impacted adversely in the nineties and especially in the late nineties as a result of the steep fall in international prices. The problems in the cash crop sector affected not only consumption expenditure but also growth in the secondary and tertiary sectors and tax revenues as well (*Table 3.15*).

**Table 3.15: Annual Growth Rates in Revenue, Income and Expenditure (Percent)**

	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
OTR Growth Rate	8.7	24.9	12.7	24.3	19.4	20.9	15.2	15.5	3.3	11.7	13.0	0.9	23.3	17.5
SOR Growth Rate	10.1	23.2	13.5	23.2	19.8	22.6	12.6	14.5	3.1	9.9	14.0	-1.0	23.4	17.8
GSDP Growth Rate	15.4	24.3	13.7	12.9	21.1	21.6	14.7	11.3	13.7	11.2	11.6	13.9	14.5	11.0
PE Growth Rate	21.0	11.0	10.5	19.2	18.5	17.1	14.0	24.6	6.6	19.8	-1.0	-5.5	29.0	17.1

OTR: Own Tax Revenue; SOR: State's Own Revenue; PE: Primary Expenditure; GSDP at current prices

- 3.31 The growth experience of Kerala thus highlights an important facet of economic performance in the post-reform period: sources of growth have emerged that are not contingent on government expenditure and this arguably makes a certain

level of economic growth independent of the fiscal situation. The surge in inflows through remittances has driven a consumption boom reflected in runaway growth in housing. Tourism has also turned out to be a high growth area and is expected to fuel further growth in the future. The link between these growing activities and SOR is again not evident and hence fiscal situation of the state also remains largely independent of economic growth.

- 3.32 Austerity measures commonly implemented in most states like recruitment freeze, VRS, CPF, etc., tend to be limited in their impact because expenditure compression is difficult to sustain for long. The revenue deficit to revenue receipt ratio declined from 45.6% in 1999-00 to 36% in 2000-01 and 28.8% in 2001-02. However, as mentioned earlier, dearness allowance increases withheld earlier had to be released and the government also had to take up committed liability of Rs 900 crore from the Ninth Plan. As a result, the revenue deficit to revenue receipt ratio rose in 2002-03 to 38.8% (*Table 3.16*).

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
SOR/GSDP	9.9	9.4	9.3	9.3	10.1	10.0	10.1	9.9	10.2	9.3	9.2	9.5	8.5	8.8	9.3
RD/RR	12.2	17.6	12.8	10.2	9.5	8.6	7.4	10.5	15.8	28.2	45.6	36.0	28.8	38.8	29.3
SOR/RE	61.2	54.8	59.4	59.2	62.1	63.1	67.3	65.0	61.3	56.4	49.5	55.0	55.5	54.1	57.9
SOR/TE	52.7	48.1	51.9	53.2	54.5	55.1	58.0	56.9	52.8	50.7	45.7	51.3	52.2	50.8	51.4

- 3.33 On the revenue raising side, Kerala is constrained by two factors. It starts from a relatively high taxation base compared to other states: although the own tax to GSDP<sup>22</sup> ratio has declined from 9.1% in 1997-98 to 7.8% in 2000-01, it is still 1.6 percentage points above the states' average. Secondly, the shift towards the service sector and the inability thus far to capture taxes from this sector do inhibit efforts to augment tax revenues.

<sup>22</sup> There are limitations of using this ratio. Ideally tax to personal income ratio should be used. Kerala is often referred to as 'money order economy' since it has started receiving huge inflow of remittances from abroad. These are not captured in GSDP at factor cost figures. With proper adjustments, Kerala may not show very high tax-income ratio. However, for lack of alternatives, we are constrained to use this ratio for illustrative purposes.

3.34 Resources from disinvestment are not expected to be significant. The state has more than 100 corporations of which 48 have been taken for restructuring but privatisation does not figure high on the government's agenda.

#### **IV.2 Measures to Reduce Interest Cost**

- 3.35
- i. The state has taken advantage of the debt swap arrangement which is expected to reduce interest costs by Rs 100 crore annually.
  - ii. The weight of market borrowings in total debt portfolio is low for Kerala as in most other states and it has not changed much in recent years, so this is not a factor in managing interest costs for the state. However, like other states, Kerala has benefited from the decline in interest rates in general. The weighted average interest cost on its portfolio has declined from 11.4% to 10.0% over the last six years.

#### **IV.3 Future Prospects – GoK Forecast v/s Realistic Scenario**

3.36 The official forecast for revenue and expenditure provided by the state government to the 12th Finance Commission assumes that revenue receipts will grow by 11.8% compared to growth of 9.1% in the past. We believe that this forecast, perhaps, understates the growth potential for Kerala in the years to come. Given the boom in tourism in recent years, it is fair to assume that this alone would add 0.5% GSDP growth. Another source of growth will be IT enabled services, where past investment in education will yield payoffs. The software park in Ernakulam has been sold out and is expected to go on stream by September 2004. With more and more educated people going abroad, the composition of remittances itself is expected to change in favour of higher remittances per person and this will further boost domestic consumption. The vast infrastructure in *Ayurveda* – in terms of schools, laboratories, hospitals, etc- has the potential to translate into exports targeting the growing global appetite for these products. Hence, we believe that real growth in GSDP in the coming years can be safely assumed to be 7.5%, which gives nominal growth of 12.5%. We assume SOR to grow at 13.5% p.a. This forecast for revenue receipts may turn

out to be conservative if we factor in the scope for service tax, which is bound to be a high growth area for the country as a whole in the future.

3.37 The official forecast assumes primary expenditure growth at 11.4% compared to 9.9% in the recent past. We assume that there is some scope for expenditure compression and hence project this at 10% p.a. in our proposed scenario. The other parameters, TrC / SOR and Misc / SOR ratios are taken as averages (excluding outliers) observed during the 11<sup>th</sup> FC period.

3.38 *Table 3.17 and Table 3.18* present respectively the GoK projections and our forecast. We can see that the GoK projections yield a technically sustainable but intolerable debt situation in Kerala by 2009-10. The Debt / SOR ratio works out to 4.8 and the IP / RR ratio at 27% in 2009-10 as per GoK projection. *Table 3.18*

<b>Table 3.17: Forecast by Government of Kerala</b> (Rs. Crores)									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (BE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	2489	2947	3392	3711	4096	4679	5331	5999	6702
Other Total Expenditure	9892	12758	14614	15502	19042	21247	22871	24583	26609
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>12381</b>	<b>15705</b>	<b>18006</b>	<b>19213</b>	<b>23138</b>	<b>25926</b>	<b>28202</b>	<b>30582</b>	<b>33311</b>
States' Own Revenue	6467	7980	8771	9885	11143	12565	14172	15988	18043
Transfers from Centre	2590	2654	3248	3635	4098	4621	5212	5880	6635
Recovery of loans and advances	55	77	75	81	87	93	101	109	118
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>9112</b>	<b>10711</b>	<b>12094</b>	<b>13601</b>	<b>15328</b>	<b>17279</b>	<b>19484</b>	<b>21977</b>	<b>24796</b>
Outstanding Liabilities (Excluding WMA)	28366	33359	39271	44883	52694	61341	70059	78664	87179
Gross Fiscal Deficit	3269	4994	5912	5612	7810	8647	8718	8605	8515
Primary Deficit on Own Account	3425	4777	5842	5617	7899	8683	8699	8594	8566
Misc (MCR+RLA+ACGA+MFD)	-167	77	75	81	87	93	101	109	118
SOR Growth Rate (in %)	-1.0	23.4	9.9	12.7	12.7	12.8	12.8	12.8	12.8
Interest Rate (in %)	9.92	10.39	10.17	9.45	9.13	8.88	8.69	8.56	8.52
PE Growth Rate (in %)	-5.5	29.0	14.5	6.1	22.8	11.6	7.6	7.5	8.2
<b>D/SOR</b>	<b>4.4</b>	<b>4.2</b>	<b>4.5</b>	<b>4.5</b>	<b>4.7</b>	<b>4.9</b>	<b>4.9</b>	<b>4.9</b>	<b>4.8</b>
<b>IP/RR (in %)</b>	<b>27.5</b>	<b>27.7</b>	<b>28.2</b>	<b>27.4</b>	<b>26.9</b>	<b>27.2</b>	<b>27.5</b>	<b>27.4</b>	<b>27.2</b>
<b>Change(D/SOR)</b>	<b>0.542</b>	<b>-0.206</b>	<b>0.297</b>	<b>0.063</b>	<b>0.188</b>	<b>0.153</b>	<b>0.062</b>	<b>-0.023</b>	<b>-0.088</b>
PDOA/SOR	0.530	0.599	0.666	0.568	0.709	0.691	0.614	0.538	0.475
TrC/SOR	0.400	0.333	0.370	0.368	0.368	0.368	0.368	0.368	0.368
Misc/SOR	-0.026	0.010	0.009	0.008	0.008	0.007	0.007	0.007	0.007
(g-l)/(1+g)	-0.110	0.105	-0.002	0.029	0.032	0.034	0.036	0.038	0.038
Do/SORo	3.844	4.386	4.180	4.477	4.541	4.729	4.882	4.944	4.920
Do/SORo x [(g-l)/(1+g)]	-0.422	0.463	-0.010	0.129	0.145	0.163	0.177	0.186	0.189

shows that the debt situation in Kerala can substantially improve provided GoK makes marginal efforts to raise the growth of SOR to 13.5 % and compress PE growth to 10% p.a. on 2002-03 base. When we convert these targets to the base of 2003-04 (RE) they are 12.8% for SOR and 8.9% for PE. The debt in Kerala would, however, still remain above the tolerance limit in 2009-10 requiring some intervention in terms of debt restructuring.

<b>Table 3.18: Realistically Optimistic Forecast for Kerala (Rs. Crores)</b>									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (RE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	2489	2947	3341	3751	4065	4531	4998	5455	5886
Other Total Expenditure	9892	12758	14938	15437	16981	18679	20546	22601	24861
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>12381</b>	<b>15705</b>	<b>18279</b>	<b>19188</b>	<b>21046</b>	<b>23210</b>	<b>25545</b>	<b>28056</b>	<b>30748</b>
States' Own Revenue	6467	7980	9398	10280	11668	13243	15031	17061	19364
Transfers from Centre	2590	2654	3153	3613	4101	4654	5282	5996	6805
Recovery of loans and advances	55	77	74	81	87	93	101	109	118
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>9112</b>	<b>10711</b>	<b>12625</b>	<b>13974</b>	<b>15856</b>	<b>17991</b>	<b>20415</b>	<b>23165</b>	<b>26287</b>
Outstanding Liabilities (Excluding WMA)	28366	33359	39013	44117	49178	54246	59198	63882	68103
Gross Fiscal Deficit	3269	4994	5654	5214	5190	5219	5130	4891	4461
Primary Deficit on Own Account	3425	4777	5540	5156	5312	5435	5515	5540	5497
Misc (MCR+RLA+ACGA+MFD)	-167	77	74	190	216	245	278	316	358
SOR Growth Rate (in %)	-1.0	23.4	17.8	9.4	13.5	13.5	13.5	13.5	13.5
Interest Rate (in %)	9.92	10.39	10.01	9.61	9.21	9.21	9.21	9.21	9.21
PE Growth Rate (in %)	-5.5	29.0	17.1	3.3	10.0	10.0	10.0	10.0	10.0
<b>D/SOR</b>	<b>4.39</b>	<b>4.18</b>	<b>4.15</b>	<b>4.29</b>	<b>4.21</b>	<b>4.10</b>	<b>3.94</b>	<b>3.74</b>	<b>3.52</b>
<b>IP/RR (in %)</b>	<b>27.5</b>	<b>27.7</b>	<b>26.6</b>	<b>27.0</b>	<b>25.8</b>	<b>25.3</b>	<b>24.6</b>	<b>23.7</b>	<b>22.5</b>
<b>Change(D/SOR)</b>	<b>0.542</b>	<b>-0.206</b>	<b>-0.029</b>	<b>0.140</b>	<b>-0.077</b>	<b>-0.119</b>	<b>-0.158</b>	<b>-0.194</b>	<b>-0.227</b>
PDOA/SOR	0.530	0.599	0.589	0.502	0.455	0.410	0.367	0.325	0.284
TrC/SOR	0.400	0.333	0.335	0.351	0.351	0.351	0.351	0.351	0.351
Misc/SOR	-0.026	0.010	0.008	0.019	0.019	0.019	0.019	0.019	0.019
(g-I)/(1+g)	-0.110	0.105	0.066	-0.002	0.038	0.038	0.038	0.038	0.038
Do/SORo	3.844	4.386	4.180	4.151	4.291	4.215	4.096	3.938	3.744
Do/SORo x [(g-I)/(1+g)]	-0.422	0.463	0.275	-0.009	0.162	0.159	0.155	0.149	0.141

## V. Maharashtra<sup>23</sup>

### V.1 Off-Budget Borrowing and Measurement Issues

- 3.39 In analyzing Maharashtra's fiscal situation, we need to factor in an element that is not accounted for in conventional reporting of debt, namely, servicing of debt of Special Purpose Vehicles (SPVs) created for channelling debt to various government-owned entities. Such debt is estimated at Rs.13,167 crore in Maharashtra in 2003-04. The creation of such SPV-related debt commenced in 1996-97, when it was Rs.975 crore, and has grown enormously since. We need to include such debt to the stock of state government debt because it is to be serviced through the budget. The fiscal deficit figure shown in the government's budgetary statistics includes interest on account of SPV debt. However, the fiscal deficit figure shown in the budget would not correspond to the true fiscal deficit figure for the year as it would not include borrowings made during the year through SPVs. We correct for this by computing the fiscal deficit for a given year as simply the fiscal deficit as computed in *Chapters 1 & 2* of this report, adjusted for the difference in SPV debt between two successive years.
- 3.40 We should also be factoring in guarantees likely to be invoked into our debt stock computations. In this respect, past experience is somewhat misleading in that invocation of guarantees has been low in Maharashtra as in Gujarat. But this merely reflects the fact that the transactions have largely been between government entities and there is a natural reluctance to go in for invocation. Cooperative banks, for instance, have lent to cooperatives under such guarantees. The loans or investments should show up as non-performing assets but, under the norms followed thus far, these do not. If we assume that these bad assets will have to be cleaned up by the state government at some point, it would have clear implications for government debt. Unfortunately, there is no means of quantifying the contingent liabilities on this count.

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<sup>23</sup> Grateful thanks are due to Shri. Shri Jayantrao Patil, Minister of Finance, GOM; Ms. Chitkala Zutshi, Principal Secretary – Finance; Shri. Sudhir Srivastava, Secretary – Accounts and Treasury; Shri. J.S. Sahni, Principal Secretary- Financial Reforms ; Shri. Jayant Gaikwad, Deputy Secretary –Finance from GoK, for useful discussion and providing valuable material on Kerala.

## V.2 Causes for Rising Debt

3.41 The various fiscal ratios, using both adjusted and unadjusted figures for fiscal deficit and debt, are as shown in *Table 3.19*. As can be seen from the table, there has been a deterioration in the fiscal deficit to SOR ratio from 1994-95 onwards, with a significant worsening from 1998-99 onwards. Reflecting this trend, we see that the debt to SOR ratio rises sharply from 2001-02 onwards. Secondly, we see that the trends in both adjusted and unadjusted ratios have remained the same though there is upward revision in the adjusted figures.

**Table 3.19: Ratios of Deficits and Debt to SOR (Percent)**

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
RD/SOR	6.2	0.8	3.6	9.7	4.1	-2.2	4.5	10.3	14.9	22.1	18.5	30.9	31.6	34.3	30.3
FD/SOR	30.9	23.3	21.4	31.6	22.5	23.2	30.3	32.0	37.1	42.0	53.0	35.4	42.0	52.3	65.3
PD/SOR	18.2	10.5	6.4	15.9	3.7	5.4	15.3	16.2	20.4	21.3	30.3	14.8	17.2	26.2	36.8
D/SOR	109.5	117.6	127.0	145.9	144.9	139.4	158.8	170.4	190.8	227.4	251.7	250.5	282.9	321.0	356.5
RD*/SOR	6.2	0.8	3.6	9.7	4.1	-2.2	4.5	10.5	16.3	23.8	21.8	34.9	37.0	40.4	34.7
FD*/SOR	30.9	23.3	21.4	31.6	22.5	23.2	30.3	38.3	41.4	56.3	67.0	49.3	47.8	52.5	30.0
PD*/SOR	18.2	10.5	6.4	15.9	3.7	5.4	15.3	22.3	23.3	33.9	40.9	24.7	17.6	20.3	-2.9
D*/SOR	109.9	118.0	127.3	146.3	145.2	139.6	159.0	176.9	200.9	251.5	285.5	293.0	331.5	367.0	368.4

\* These values are after adjusting for SPV debt and interest payable thereon.

3.42 *Tables 3.20* and *3.21* help explain what exactly caused the worsening in state finances. Whereas in the initial years in which the worsening took place (1994-95 to 1997-98), capital outlays could be said to be the dominant factor, this was not so from 1998-99 onwards. It was the increase in revenue deficit that was primarily responsible for the deterioration in the fiscal situation in the later years.

**Table 3.20: Components of Fiscal Deficit (Rs. crores)**

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
Revenue Deficit	373	54	276	828	411	-278	611	1591	2581	3926	3969	7835	8189	9371	9037
Capital Outlay	1009	964	973	1380	1675	3796	2703	2720	3212	3193	3761	4463	2948	3684	9688
Net Lending	461	592	408	478	179	-657	839	643	651	344	3676	-3321	-239	1235	753
MCR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FD	1843	1610	1657	2686	2265	2861	4153	4954	6444	7463	11406	8976	10898	14290	19477

% of FD	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
Revenue Deficit	20.2	3.4	16.7	30.8	18.1	-9.7	14.7	32.1	40.1	52.6	34.8	87.3	75.1	65.6	46.4
Capital Outlay	54.7	59.9	58.7	51.4	73.9	132.7	65.1	54.9	49.8	42.8	33.0	49.7	27.1	25.8	49.7
Net Lending	25.0	36.8	24.6	17.8	7.9	-23.0	20.2	13.0	10.1	4.6	32.2	-37.0	-2.2	8.6	3.9
MCR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

- 3.43 The impact of the Fifth Pay Commission is an obvious factor and is often cited to explain the fiscal mess in the states but we can see that deceleration in growth has been an important factor as well. From 1997-98 onwards, nominal GSDP growth has considerably slowed down. The fiscal deficit to SOR ratio reached a high of 53% in 1999-2000 despite double digit growth in nominal GSDP because net lending through loans made by the government to various state-owned entities, rose sharply that year. Maharashtra's experience thus bears out our contention in part that a combination of slow growth and lax fiscal behaviour has led up to today's fiscal situation in the states- it would be incorrect to ascribe this wholly to either factor.
- 3.44 As in the case of Gujarat, we see a change in the composition of the fiscal deficit in the years 2000-01 and 2001-02. With a view to cleaning up the balance sheets of the state electricity board, the government made available funds from the budget. This caused the revenue deficit to rise sharply. The electricity board used the funds to pay back its debt – this showed up as net recoveries of loans and advances. Thus, the overall fiscal deficit did not change on account of this factor but the relative importance of the revenue deficit and net lending did.
- 3.45 The impact of slower economic growth on the sharp deterioration in state finances since 1998-99 is evident. Maharashtra's economic growth has decelerated from 6.17% in the period 1994-95 to 1997-98 to 4.05% in the period 1998-99 to 2003-04. This is mainly on account of the decline in average growth in the secondary sector from 8.55% to -0.6%. There has been a modest increase in growth in the primary sector from 1.51% to 2.63% and in the tertiary sector

from 6.58% to 7.51% but this has not been sufficient to offset the decline in the secondary sector. Industry in Maharashtra has been adversely impacted by liberalisation of imports in the past five or six years and also by conditions in the global economy since the East Asian crisis of 1997. The shakeout in sectors such as steel is said to be particularly severe. However, the general perception is that the shakeout in industry may be over, which bodes well for industry's growth prospects in the years to come.

- 3.46 To summarise, Maharashtra's finances have shown deterioration since 1995-96 for a variety of reasons:
- i. The slowdown in revenues as a result of the slowing down of economic growth, particularly growth in manufacturing.
  - ii. High level of borrowings made outside the budget to finance infrastructure, the servicing of which is through the budget.
  - iii. Impact on wage bill of Fifth Pay Commission award.
  - iv. Rise in interest rates on borrowings.

### **V.3 Measures to Reduce Interest Cost**

- 3.47
- i. The government has entered into a debt swap with the centre in which older and costlier debt is substituted by newer and cheaper debt. This is expected to result in savings of Rs.300 crores each year from 2003-04 onwards. This is only about 3.5% of the total interest payments for the state in 2003-04.
  - ii. The weighted average interest rate on total debt (as defined by us and including SPV debt in the case of Maharashtra) has declined from 12.5% to 9.7% in the last four years. This reflects the general decline in interest rates.

### **V.4 Steps Taken to Contain Expenditure and Improve Revenues**

- 3.48 GoM has taken some exclusive measures besides the common ones implemented in most other states. These are:
- i. The state government decided to de-link DA payable to its employees from that payable to government of India employees. No bonus was paid after 2000-01.

- ii. Financial assistance to cotton growers through support prices was reduced and this helped relieve fiscal stress.
- iii. Government decided not to assist any new cooperatives in terms of cash or guarantees.
- iv. A Board for restructuring of state enterprises has been set up with a mandate to restructure, privatise and close PSUs in the state. The scope for raising revenues through privatisation is rather limited in Maharashtra. Nearly 80% of investment in the state public sector is in electricity boards and road transport corporations, which are not attractive candidates for private sector investment. There are not many commercial corporations and fewer big players among these. The potential for revenues from privatisation is thus placed at not more than Rs 1000 crores.
- v. Stamp duty and registration fees have grown by more than 20% in the last three years thanks to computerisation, outsourcing and rate rationalisation.

## **V.5 Future Prospects – GoM’s Forecast**

3.49 The GoM’s forecast for fiscal aggregates for the period 2005-10 is summarized in *Table 3.22*. Surprisingly, the forecast assumes a nominal GSDP growth of only 8% or real growth of around 3%. This is presumably based on the growth rate for the five year period up to 2002-03 of 8.3%. We believe this to err on the side of pessimism as the growth rate in the previous five- year period was 15%. Other key assumptions underlying the forecasts are:

- i. The SOR growth would be 10.1% p.a.
- ii Revenue expenditure is projected to rise by around 6% whereas in the past this item had grown at nearly 10%. Non-Plan expenditure to grow at 5% p.a. and the non-interest (primary) expenditure to grow by 4.8% p.a.
- iii. The effective interest rate would fall from 9.6% in 2003-04 to 8.1% in 2009-10.
- iv. To complete the forecast, we assume the TrC / SOR ratio at the average of the last 3 years.

Ratios	2001-02	2002-03 (RE)	2003-04 (LE)	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Interest Payment	6429	7130	8428	9241	10053	10884	11729	12591	13190
Other Total Expenditure	34860	38732	46189	43419	46401	48948	50192	52555	54902
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>41289</b>	<b>45862</b>	<b>54617</b>	<b>52660</b>	<b>56454</b>	<b>59832</b>	<b>61921</b>	<b>65145</b>	<b>68092</b>
States' Own Revenue	25943	27313	30553	33138	36429	40084	44108	48573	53527
Transfers from Centre	4150	3790	5936	5446	5987	6587	7249	7983	8797
Recovery of loans and advances	298	469	380	392	404	416	428	441	454
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>30391</b>	<b>31572</b>	<b>36869</b>	<b>38976</b>	<b>42819</b>	<b>47087</b>	<b>51785</b>	<b>56996</b>	<b>62778</b>
Outstanding Liabilities	73394	87679	105427	119111	132746	145490	155626	163775	169089
Gross Fiscal Deficit	10898	14290	17748	13684	13635	12745	10136	8149	5314
Primary Deficit on Own Account	8917	11419	15636	10281	9973	8864	6083	3982	1375
Misc (MCR+RLA+ACGA+MFD)	1229	474	380	392	404	416	428	441	454
SOR Growth Rate (in %)	2.4	5.3	11.9	8.5	9.9	10.0	10.0	10.1	10.2
Interest Rate (in %)	10.14	9.71	9.61	8.77	8.44	8.20	8.06	8.09	8.05
PE Growth Rate (in %)	-2.9	11.1	19.3	-6.0	6.9	5.5	2.5	4.7	4.5
<b>D/SOR</b>	<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.5</b>	<b>3.4</b>	<b>3.2</b>
<b>IP/RR (in %)</b>	<b>21.4</b>	<b>22.9</b>	<b>23.1</b>	<b>23.9</b>	<b>23.7</b>	<b>23.3</b>	<b>22.8</b>	<b>22.3</b>	<b>21.2</b>
<b>Change(D/SOR)</b>	<b>0.324</b>	<b>0.381</b>	<b>0.241</b>	<b>0.144</b>	<b>0.050</b>	<b>-0.014</b>	<b>-0.101</b>	<b>-0.157</b>	<b>-0.213</b>
PDOA/SOR	0.344	0.418	0.512	0.310	0.274	0.221	0.138	0.082	0.026
TrC/SOR	0.160	0.139	0.194	0.164	0.164	0.164	0.164	0.164	0.164
Misc/SOR	0.047	0.017	0.012	0.012	0.011	0.010	0.010	0.009	0.008
(g-l)/(1+g)	-0.075	-0.042	0.020	-0.003	0.014	0.017	0.018	0.018	0.019
Do/SORo	2.505	2.829	3.210	3.451	3.594	3.644	3.630	3.528	3.372
Do/SORo x [(g-l)/(1+g)]	-0.188	-0.119	0.065	-0.010	0.049	0.061	0.065	0.065	0.066

3.50 On these assumptions, GoM forecasts a sustainable and almost tolerable debt situation in the future. It is, however, important to realise that GoM has projected highly unrealistic growth of primary expenditure in future. This is because the trend rate of growth of PE in Maharashtra is 12.3% and the minimum growth of PE in any 5 consecutive years in recent past in the state is 9.7% p.a. Against these figures, GoM has assumed only 4.8%. This is further corroborated when we consider the problem of off-budget borrowing and repayment of contingent liabilities on account of state guarantees in near future. We need a more plausible and realistic scenario.

## V.6 Future Prospects – Realistic Scenario

3.51 We have reworked the forecasts with following assumptions:

- i. Nominal GSDP and SOR growth of 13.5% p.a., with base year 2002-03, but 14.2% when base is 2003-04.
- ii. We exclude SPV liabilities in our definition of debt because, if we include SPV liabilities in our analysis today, the fiscal pressure likely to fall on the state government in future on this count would be factored in now and so these repayments will have to be subtracted from actual expenditure in the future. We feel that these contingent liabilities should be considered separately as per actual redemption requirements and, therefore, have been ignored in our forecast (*Table 3.23*).
- iii. Interest behaviour is taken the same as that in previous cases and in *Chapter 1* above.
- iv. Primary expenditure growth is 10% p.a. with 2002-03 base, but 7.6% p.a. when the base is 2003-04.
- v. The other parameters, TrC/SOR and Misc/SOR ratios are taken as averages (excluding outliers) observed during the 11<sup>th</sup> FC period.

Our forecasts are presented in *Table 3.23*. It appears that the GoM's debt can be sustainable and also within manageable limits, provided the plausible targets are adhered to. However, the PE growth compression may be problematic since the state also faces the problem of contingent liabilities. In that case, it may require reduction of interest cost or restructuring of debt.

Ratios	2001-02	2002-03	2003-04 (RE)	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Interest Payment	6429	7130	8509	9894	10716	11939	13146	14304	15369
Other Total Expenditure	34860	38732	48713	46866	51553	56708	62379	68617	75478
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>41289</b>	<b>45862</b>	<b>57223</b>	<b>56761</b>	<b>62268</b>	<b>68647</b>	<b>75525</b>	<b>82921</b>	<b>90847</b>
States' Own Revenue	25943	27313	29829	35185	39935	45326	51445	58391	66273
Transfers from Centre	4150	3790	7330	6264	7109	8069	9158	10395	11798
Recovery of loans and advances	298	469	587	392	404	416	428	441	454
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>30391</b>	<b>31572</b>	<b>37746</b>	<b>41841</b>	<b>47448</b>	<b>53811</b>	<b>61032</b>	<b>69226</b>	<b>78526</b>
Outstanding Liabilities	73394	87679	106333	120332	134065	147624	160625	172581	182883
Gross Fiscal Deficit	10898	14290	19477	14920	14820	14835	14493	13694	12321
Primary Deficit on Own Account	8917	11419	18885	11681	11618	11382	10933	10226	9205

Misc (MCR+RLA+ACGA+MFD)	1229	474	1409	1313	1490	1692	1920	2179	2474
SOR Growth Rate (in %)	2.4	5.3	9.2	18.0	13.5	13.5	13.5	13.5	13.5
Interest Rate (in %)	10.14	9.71	9.71	9.31	8.91	8.91	8.91	8.91	8.91
PE Growth Rate (in %)	-2.9	11.1	25.8	-3.8	10.0	10.0	10.0	10.0	10.0
<b>D/SOR</b>	<b>2.83</b>	<b>3.21</b>	<b>3.56</b>	<b>3.42</b>	<b>3.36</b>	<b>3.26</b>	<b>3.12</b>	<b>2.96</b>	<b>2.76</b>
<b>IP/RR (in %)</b>	<b>21.4</b>	<b>22.9</b>	<b>22.9</b>	<b>23.9</b>	<b>22.8</b>	<b>22.4</b>	<b>21.7</b>	<b>20.8</b>	<b>19.7</b>
<b>Change(D/SOR)</b>	<b>0.324</b>	<b>0.381</b>	<b>0.355</b>	<b>-0.145</b>	<b>-0.063</b>	<b>-0.100</b>	<b>-0.135</b>	<b>-0.167</b>	<b>-0.196</b>
PDOA/SOR	0.344	0.418	0.633	0.332	0.291	0.251	0.213	0.175	0.139
TrC/SOR	0.160	0.139	0.246	0.178	0.178	0.178	0.178	0.178	0.178
Misc/SOR	0.047	0.017	0.047	0.037	0.037	0.037	0.037	0.037	0.037
(g-l)/(1+g)	-0.075	-0.042	-0.005	0.073	0.040	0.040	0.040	0.040	0.040
Do/SORo	2.505	2.829	3.210	3.565	3.420	3.357	3.257	3.122	2.956
Do/SORo x [(g-l)/(1+g)]	-0.188	-0.119	-0.015	0.261	0.138	0.136	0.132	0.126	0.120

## VI. Orissa<sup>24</sup>

### VI.1 Introduction

- 3.52 Orissa is a state with low income, low urbanisation, low human development, and high proportion of population in poverty and susceptible to regular natural calamities like flood, drought or cyclone. The state is rich in mineral resources and heavily dependent on primary sector activities where its productivity is less than the national average. Although the unregistered manufacturing activities have been contributing a small and declining proportion (2%) in the total economic activities since 1996-97, there is a good potential for mineral, fishery and commercial agriculture based activities in the state. Orissa has yet to exploit its locational advantage of being a coastal state. Regular occurrence of natural calamities for the last ten years creates special public expenditure needs on one hand and depresses growth performance and hence revenue generation on the other hand. Moreover, Orissa has a substantially high proportion of scheduled casts & tribe population requiring special developmental efforts by the state.
- 3.53 *Table 3.24* provides a summary of fiscal aggregates of Government of Orissa (GoO) over recent past. Upto the year 1996-97 all the three deficit ratios to SOR were mildly fluctuating and as a result, the debt to SOR ratio also fluctuated

<sup>24</sup> Grateful thanks are due to Shri P.K. Mohanty, Chief Secretary; Shri J.K. Mahapatra, Secretary to C.M.; Dr U. Sarat Chandran, Principal Secretary – Finance; Shri K.C. Badu, Additional Secretary – Finance; and Shri Dpankar Sahu of Finance Department for very useful discussion and providing valuable material on Orissa.

between 5.7 and 6.3. From 1998-99, there has been a quantum jump in the revenue, fiscal and primary deficit in Orissa; and as a result, the debt – SOR ratio has also started increasing at a significantly fast rate and has reached 8.4 in 2003-2004. The primary deficit has started falling since 1999-2000 and has turned into a surplus in 2002-03. However, the primary surplus in 2002-2003 is due to the extraordinary growth in SOR accounted for by a windfall of Rs.152 crores of deferred dividend payment from OPG. GoO's dependence on the transfers from the centre was around 60% in the early nineties and around 55% during 2001-03. SOR's growth has been impressive at 17% p.a. since 1998-99 with both the tax and non-tax revenues contributing to the growth. On the other hand, the growth in primary expenditure has been only 10% p.a. on an average during the last decade but is only 2.7% p.a. during 1999-2003. It is the interest payment that is rising alarmingly. It has crossed 25% of GoO's total expenditure and 75% of its SOR. This is because the GoO's debt has been rising at 16.9% p.a. for the last four years.

**Table 3.24: Debt and Deficits Ratios in Orissa (Percent)**

	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	00-01	01-02	02-03	03-04
RD/FD	3.2	20.5	8.5	30.5	39.7	57.8	51.8	50.1	77.7	68.7	58.1	71.4	56.0	53.9
RD/SOR	2.3	20.0	5.5	21.6	29.5	46.0	45.5	46.0	111.2	106.3	67.3	89.7	41.1	72.5
FD/SOR	70.9	97.7	64.3	70.7	74.4	79.6	87.8	91.7	143.0	154.7	115.9	125.6	73.5	134.5
PD/SOR	29.0	46.2	17.2	17.2	23.9	26.7	28.7	25.9	70.4	78.8	36.2	35.9	-1.8	54.1
D/SOR	576.5	628.1	573.5	593.2	567.0	572.9	631.2	692.3	782.2	826.7	798.1	836.9	779.4	843.3
Interest Rate	8.6	9.6	9.2	10.4	10.4	10.5	10.7	11.2	10.9	11.5	11.4	12.4	10.9	11.0
SOR Growth Rate	20.2	7.4	23.1	10.9	22.1	12.7	3.9	7.6	4.1	18.4	18.5	10.1	21.4	6.6

GSDP Growth Rate	-1.1	28.5	8.0	17.2	19.9	22.0	-2.3	21.6	10.4	8.6	0.4	11.6	1.6	6.0
PE Growth Rate	21.5	19.1	11.4	6.6	14.9	10.4	14.1	4.7	25.2	19.7	1.5	3.7	2.8	40.6
SOR/RR	40.1	38.2	38.5	39.7	43.5	45.1	42.5	42.4	45.0	41.1	41.6	44.8	45.4	42.2
IP/Total Expense	12.9	14.1	14.3	16.4	16.5	17.4	17.7	19.7	18.4	18.9	22.2	25.4	25.2	21.5
IP/SOR	42.0	51.5	47.1	53.6	50.5	52.9	59.2	65.8	72.7	75.9	79.7	89.8	75.3	80.4

## VI.2 Causes of High Debt of GoO

3.54 Orissa is a poor state with a weak resource base but high need for infrastructure development. It has been traditionally a revenue deficit state, totally dependent on transfers from the centre in terms of grants and loans. The specific factors responsible for high debt of GoO are:

- i. Orissa is prone to multiple hazards and has been experiencing floods, drought and cyclone almost every year since 1998 causing damages ranging from Rs.400 crores to Rs.1900 crores p.a. The Gol assistance in the last three years has been less than 12% of the loss. This has put severe pressure on the state budget.
- ii. For Orissa, the State Plans almost exclusively depend on the central assistance, but it comes in the form of 70:30 combination of loans and grants. Loans not only add to the stock of debt but also accompany high interest cost, leading to further deficit and hence rise in the debt.
- iii. The Fifth Pay Commission affected the salary and pension liability in 1998-1999 and 1999-2000. It was already higher than SOR in the state, but since 1998, the gap became very large. High interest payments of late have made the committed non-plan revenue expenditure in terms of interest + salary + pension exceed the total revenue receipt in the state (*Table 3.25*).

<b>Table 3.25: Unsustainable Committed Expenditure (Rs. in crore)</b>					
Year	Salary	Pension	Interest	Salary + Pension + Interest	Total Revenue Receipt
1997-98	2623.36	316.83	1291.81	4232.00	4632.03
1998-99	3399.06	475.30	1484.92	5359.28	4554.40
1999-00	3886.77	688.41	1237.77	5812.95	5884.64
2000-01	3802.84	832.07	2286.88	6921.79	6902.02
2001-02	3735.90	1003.22	2834.96	7574.08	7047.99
2002-03	3718.81	1029.79	2885.58	7634.18	8438.77

iv. The Tenth and Eleventh Finance Commissions under-assessed the expenditure liability on pension and interest along with overestimation of non-plan miscellaneous grant (by 11<sup>th</sup> F.C.) resulting in the increase in the GoO's borrowing by Rs.7783 crores over the period 1995-1996 to 2003-2004. This by itself has raised the growth of GoO's debt from 12% p.a. to 15.9% p.a. over the same period. Adding the interest cost on the incremental debt would imply that the growth of debt could have been lower by 4.4% p.a. All this has ultimately resulted in severe fiscal stress compelling the state to become increasingly dependent on WMA and OD from RBI with high interest burden (*Table 3.26*) adding to the deficit and the debt.

2002-03	169	189	10.88	8.75	19.63
<b>Table 3.26: Severity of Fiscal Stress</b>					
Year	No. of Days of WMA	No. of Days of OD	In Rs. Crores		
			Interest paid on WMA	Interest Paid on OD	Total Interest Paid
1999-00	144	141	6.54	3.07	9.61
2000-01	141	204	11.75	4.13	15.88
2000-02	107	257	11.59	8.32	19.91

- v. Orissa being a mineral rich state has not been able to capitalise on it on account of Gol policies of freight equalisation, uniform pricing of coal, steel, etc., constraints on sales tax, and prevention from levying cess on mining royalty. This has adversely affected the growth of non-tax and sales tax revenue in the state thereby increasing its deficits and hence the debt
- .vi. The inordinate delay in the revision of royalty on coal caused Orissa to lose Rs.750 crores over the period 1997 to 2002. The Gol has not compensated the loss through grants as recommended by 11<sup>th</sup> F.C., which has resulted in the increase in the debt by the same amount.
- vii The state PSUs, Cooperatives, Urban local bodies (ULBs), and special purpose vehicles (SPVs) often borrow resources from the financial institutions with guarantees by the state government. In the event of default by the borrowing organisations, the state government has to repay the debt as guarantor and the guarantees would add to the state's liabilities. As on 22<sup>nd</sup> January, 2004, GoO had Rs.5349 crores of outstanding guarantees and Rs.74 crores of outstanding off-budget borrowing by the SPVs. Thus, the effective stock of debt of GoO should be raised by Rs.5423 crores.

### **VI.3 Measures to Reduce Interest Cost**

3.55 Orissa is a state with high fiscal stress and has been getting the debt relief of declining magnitude in the awards of the last four Finance Commissions. The 11<sup>th</sup> F.C. had linked the debt relief to fiscal performance and accordingly Orissa should have received the debt relief of Rs.12 crores in 2000-01, Rs.2 crores in 2001-02, and Rs.55 crores in 2002-03, but such relief has not been granted to the state. Moreover, fiscal performance of a mineral-rich state like Orissa would critically depend on the revision of royalty rates by the centre on one hand and the due share of central taxes on the other hand. If there are undue delays and shortfalls in these matters, the state would suffer on other counts without its fault. While debt relief of even relatively small amounts does reduce debt servicing, it impacts the future interest burden only marginally and indirectly.

3.56 The major initiative for reducing the interest cost is in terms of the debt swap scheme of the centre. Orissa's debt is about 4% of total debt of all states, and the same would be its share in the additional market borrowing for debt-swapping. In 2002-03, Orissa swapped only 14.25% of the small savings collection against the 20% allowed by the centre. The total amount of debt swapped by Orissa in 2002-03 and 2003-04 is respectively Rs.475 crores and Rs.788 Crores. In 2004-05 the state is also not likely to use the maximum amount permissible (40%) by the centre because the officials feel that the state cannot afford to surrender such an amount of resources without seriously curtailing the plan financing, and that the savings in the interest cost is only marginal, e.g. Rs.40 crores on Rs.1000 crores of swapping. Moreover, it is argued that debt-swaps would result in bunching of repayment that would create fiscal stress in future beyond the capacity of already heavily indebted state like Orissa. These marginal solutions cannot serve the purpose. Only serious and substantial fiscal correction by debt restructuring can address the problem.

3.57 *Table 3.27* presents the debt structure by interest rate in Orissa as on 31.3.2003. It can be seen that the weighted average of interest rate is highest for loans from Gol (11.94%), followed closely by loans from financial institutions (11.85%). Moreover, these two sources together account for almost 48% of the total debt of the state, and 92% of them is bearing the interest of more than 10%. Thus, there is a considerable scope for reducing the effective interest rate by debt swap or substantial restructuring of the debt.

**Table 3.27: Debt Structure by Interest Rate in Orissa as on 31.3.2003  
(in Rs. Crore)**

Rate of Interest	Loans from Gol	Open Market Loans	Loans from Fin. Inst.	GPF	Grand Total
	A	B	C	D	(A+B+C+D)
> 14%	781	401	7		1188
12% - 13.99%	6775	2924	1113		10812
10% - 11.99%	3334	1579	326		5240
8% - 9.99%	358	669	98	7588	8714
6% - 7.99%	208	1308	25		1541
< 6%	224	16	0		240
<b>G. Total</b>	<b>11680</b>	<b>6897</b>	<b>1569</b>	<b>7588</b>	<b>27734</b>

Weighted Interest (%)	11.94	10.98	11.85	8.00	10.62
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#### VI.4 Prospects for Future – GoO’s Forecast

3.58 The GoO’s forecast of fiscal aggregates (*Table 3.28*) is based on the assumption of marginally rising nominal GSDP growth from 6% in 2003-04 to 9% p.a. in 2009-10. Inflation is assumed @ 5% p.a. The other assumptions are:

- i. Revised estimates of 2003-04 are taken as the base, and tax & non-tax buoyancy is calculated on actuals of the last 10 years. The forecast implies a growth rate of 9.4% p.a. in SOR, 10.4% p.a. in state’s own tax revenues, and 5.4% in the non-tax revenues. In projecting non-tax revenues, abnormal receipts are excluded.
- ii. All capital receipts in the aggregate are assumed to fall @ (-) 3.15% p.a. This is because loans from Gol, net small savings and *net* market borrowings are all assumed to remain at the same absolute level as in 2003-04.
- iii. The revenue expenditures are projected by components like projected plan size with an annual growth of 11.72%, and non-plan expenditure growing at 11.41% p.a. The interest payments are calculated by GoO from the existing debt-structure, fresh borrowings and effects of debt-swaps. The salary and pension expenditures assume 3% retirement, 1% fresh appointments and VRS schemes. The social services and economic services are assumed to grow at 10.3% and 16% p.a. respectively. Maintenance expenditures are special priority of the state. The non-salary expenditures are assumed to grow at the trend rate of growth (TRG) for the last 10 years and at the growth of GSDP where TRG is negative.
- iv. The capital outlay is assumed to grow at 14.5% p.a. and capital expenditure by 11.1% p.a. Thus, the primary expenditure is assumed to grow by 12.65% p.a.
- v. Interest rate is taken at its observed value, 11% in 2003-04 and is assumed to decline to 5.9% in 2009-10.

- vi. In order to complete the scenario for examining the implications on debt sustainability, we assume all transfers from the centre in the same proportion to SOR as the average obtained during the last 3 years.

<b>Table 3.28: Forecast by Government of Orissa (Rs. Crores)</b>									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (LE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	2835	2886	3286	3379	3580	3858	4121	4331	4531
Other Total Expenditure	8313	8546	12452	13146	14527	16137	19036	21236	23850
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>11148</b>	<b>11432</b>	<b>15738</b>	<b>16525</b>	<b>18107</b>	<b>19995</b>	<b>23157</b>	<b>25567</b>	<b>28381</b>
States' Own Revenue	3159	3833	4085	4453	4828	5286	5786	6338	6979
Transfers from Centre	3889	4606	5222	5508	5972	6539	7158	7840	8634
Recovery of loans and advances	132	177	128	165	165	165	165	165	165
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>7180</b>	<b>8616</b>	<b>9435</b>	<b>10126</b>	<b>10964</b>	<b>11990</b>	<b>13109</b>	<b>14343</b>	<b>15778</b>
Outstanding Liabilities	26436	29873	34591	40990	48133	56138	66186	77410	90013
Gross Fiscal Deficit	3968	2816	6303	6399	7143	8005	10048	11224	12603
Primary Deficit on Own Account	5154	4713	8367	8694	9700	10851	13250	14898	16871
Misc (MCR+RLA+ACGA+MFD)	562	-444	1713	165	165	165	165	165	165
SOR Growth Rate (in %)	10.1	21.4	6.6	9.0	8.4	9.5	9.5	9.5	10.1
Interest Rate (in %)	12.38	10.92	11.00	9.77	8.73	8.02	7.34	6.54	5.85
PE Growth Rate (in %)	3.7	2.8	45.7	5.6	10.5	11.1	18.0	11.6	12.3
<b>D/SOR</b>	<b>8.4</b>	<b>7.8</b>	<b>8.5</b>	<b>9.2</b>	<b>10.0</b>	<b>10.6</b>	<b>11.4</b>	<b>12.2</b>	<b>12.9</b>
<b>IP/RR (in %)</b>	<b>40.2</b>	<b>34.2</b>	<b>35.3</b>	<b>33.9</b>	<b>33.1</b>	<b>32.6</b>	<b>31.8</b>	<b>30.5</b>	<b>29.0</b>
<b>Change(D/SOR)</b>	<b>0.388</b>	<b>-0.576</b>	<b>0.674</b>	<b>0.738</b>	<b>0.765</b>	<b>0.650</b>	<b>0.819</b>	<b>0.775</b>	<b>0.683</b>
PDOA/SOR	1.632	1.230	2.048	1.952	2.009	2.053	2.290	2.351	2.42
TrC/SOR	1.231	1.202	1.278	1.237	1.237	1.237	1.237	1.237	1.237
Misc/SOR	0.178	-0.116	0.419	0.037	0.034	0.031	0.029	0.026	0.024
(g-l)/(1+g)	-0.021	0.086	-0.041	-0.007	-0.003	0.014	0.019	0.027	0.039
Do/SORo	7.981	8.369	7.794	8.468	9.206	9.970	10.620	11.439	12.214
Do/SORo x [(g-l)/(1+g)]	-0.166	0.720	-0.323	-0.060	-0.027	0.135	0.206	0.312	0.473

3.59 The trend rates of growth of SOR and PE in Orissa are 11.9% and 11.6% respectively. Also the maximum growth rate in SOR achieved over any consecutive 5 year period in recent past is 16.5%. Given the past behaviour, the government's estimate of annual growth in SOR at 9.4% appears to be pessimistic. Coupled with the assumption of PE growing at a rate higher than the trend, the scenario results in unsustainable and intolerable debt position (*Table 3.28*). We need to consider a more optimistic scenario.

#### **VI.5 Prospects for Future – Realistic Scenario**

3.60 The growth expectations of the GoO officials seem to be highly influenced by the experience of poor performance in the recent past based on a series of natural calamities striking the state. If at all, it should give some optimism for the immediate future because the long-run performance of the state has not been so poor. Senior policymakers in the state also agree that the state can achieve a nominal growth of 11 to 11.5% p.a. as stipulated by the 10<sup>th</sup> Plan, if severe natural calamities do not strike so often. Considering the past performance of GoO over five consecutive years during recent past as discussed in *Chapter 2* above, we have chosen plausibly optimistic assumptions about annual growth of SOR (13.5%) & PE (10%) with 2002-03 as base, and values of other parameters to build the scenario as in previous cases. When the base is taken as 2003-04(RE), the growth rates of SOR & PE work out to be 14.7% and 5.6% respectively. Given these assumptions, we see that GoO's debt can be sustainable and also within manageable limits provided the plausible targets are adhered to. However, the PE growth compression may be problematic since the state also faces recurring natural calamities. In that case, it may require reduction of interest or restructuring of debt. *Table 3.29* presents this scenario.

<b>Table 3.29: Realistically Optimistic Forecast for Orissa</b> (Rs. Crores)									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (RE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	2835	2886	3286	3651	3728	3892	4002	4041	3985
Other Total Expenditure	8313	8546	12019	10341	11375	12513	13764	15140	16655
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>11148</b>	<b>11432</b>	<b>15304</b>	<b>13992</b>	<b>15103</b>	<b>16404</b>	<b>17766</b>	<b>19182</b>	<b>20639</b>
States' Own Revenue	3159	3833	4085	4938	5604	6361	7220	8194	9301
Transfers from Centre	3889	4606	5595	6429	7297	8282	9401	10670	12110
Recovery of loans and advances	132	177	129	165	165	165	165	165	165
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>7180</b>	<b>8616</b>	<b>9809</b>	<b>11532</b>	<b>13067</b>	<b>14808</b>	<b>16785</b>	<b>19029</b>	<b>21576</b>
Outstanding Liabilities	26436	29873	34450	36552	38159	39245	39625	39074	37316
Gross Fiscal Deficit	3968	2816	5495	2460	2036	1596	981	153	-936
Primary Deficit on Own Account	5154	4713	7933	5403	5771	6152	6544	6946	7354
Misc (MCR+RLA+ACGA+MFD)	562	-444	1047	524	595	675	766	869	987
SOR Growth Rate (in %)	10.1	21.4	6.6	20.9	13.5	13.5	13.5	13.5	13.5
Interest Rate (in %)	12.38	10.92	11.00	10.60	10.20	10.20	10.20	10.20	10.20
PE Growth Rate (in %)	3.7	2.8	40.6	-14.0	10.0	10.0	10.0	10.0	10.0
<b>D/SOR</b>	<b>8.37</b>	<b>7.79</b>	<b>8.43</b>	<b>7.40</b>	<b>6.81</b>	<b>6.17</b>	<b>5.49</b>	<b>4.77</b>	<b>4.01</b>
<b>IP/RR (in %)</b>	<b>40.2</b>	<b>34.2</b>	<b>33.9</b>	<b>32.1</b>	<b>28.9</b>	<b>26.6</b>	<b>24.1</b>	<b>21.4</b>	<b>18.6</b>
<b>Change(D/SOR)</b>	<b>0.388</b>	<b>-0.576</b>	<b>0.639</b>	<b>-1.031</b>	<b>-0.594</b>	<b>-0.639</b>	<b>-0.681</b>	<b>-0.720</b>	<b>-0.756</b>
PDOA/SOR	1.632	1.230	1.942	1.094	1.030	0.967	0.906	0.848	0.79
TrC/SOR	1.231	1.202	1.370	1.302	1.302	1.302	1.302	1.302	1.302
Misc/SOR	0.178	-0.116	0.256	0.106	0.106	0.106	0.106	0.106	0.106
(g-l)/(1+g)	-0.021	0.086	-0.041	0.085	0.029	0.029	0.029	0.029	0.029
Do/SORo	7.981	8.369	7.794	8.433	7.402	6.809	6.170	5.488	4.768
Do/SORo x [(g-l)/(1+g)]	-0.166	0.720	-0.323	0.717	0.215	0.198	0.179	0.160	0.14

## VII. Uttar Pradesh<sup>25</sup>

### VII.1 Introduction

3.61 Uttar Pradesh (UP) even after its bifurcation in November, 2000 continues to be the most populated state with the highest population density and the highest population of the poor in the country. It is a low income state having plain fertile land and hence heavily dependent on agriculture, but is not prone to major

<sup>25</sup> Grateful thanks are due to Dr. B.M. Joshi, Secretary – Finance; Shri. Om Kumar Saxena, Director, Economic and Statistics Division, Planning Department; Shri Sivanand Giri; Special Secretary – Finance; Shri Neel Ratan, Deputy Secretary – Finance; and Shri K. C. Chaturvedi of Finance Commission Section, Finance Department for very useful discussions and providing valuable material on UP.

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
FD/SOR	75.82	77.88	61.93	69.92	54.13	70.43	55.68	78.11	91.40	123.93	97.24	78.74	81.79	64.69	131.08
PD/ SOR	44.00	45.41	24.60	31.45	18.03	24.78	13.42	24.84	34.84	65.15	39.82	21.08	13.96	16.60	61.84
RD/ SOR	31.50	31.18	15.82	19.12	19.64	29.59	29.75	41.70	55.78	92.64	63.54	48.64	51.12	34.86	128.02
D/ SOR	463.8	468.7	462.2	468.5	482.9	484.7	475.5	568.8	614.5	666.5	645.5	624.7	749.5	677.9	756.7

disasters. There has been a gradual reduction in the proportion of primary sector in the economy during the last decade (*Table 3.30*). Poor infrastructure and high degree of political instability have marred its economic performance of late.

Ratios	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03
<b>Primary</b>	40.90	39.78	39.09	38.88	37.22	36.21	35.75	36.10	34.48	32.85
<b>Secondary</b>	21.35	23.26	23.20	23.62	23.49	25.21	25.72	21.67	22.22	22.65
Registered	8.17	9.98	9.00	10.59	8.92	10.58	10.90	7.33	7.59	7.26
Unregistered	5.34	5.45	5.70	5.02	5.57	5.76	6.24	5.62	5.66	5.66
<b>Tertiary</b>	37.75	36.97	37.71	37.50	39.29	38.58	38.53	42.23	43.30	44.50

3.62 The behaviour of ratios of deficit to SOR since 1989-90 (*Table 3.31*) shows that between 1995-96 and 1998-99, there was rapid deterioration in the three deficit ratios FD to SOR, PD to SOR, and RD to SOR. The trend reversed after 1998-99 and the ratios were back at their 1996-97 levels by 2000-01. The ratios improved further by 2002-03. The year 2003-04 is an outlier when these ratios jumped to their highest values in the entire period under consideration. This deterioration is largely due to the implementation of Ahluwalia Committee recommendations on power sector reforms. Debt (D) to SOR ratio hovered between 4.6 and 4.8 till 1995-96 but deteriorated sharply thereafter and is expected to cross 7.6 in 2003-04 (RE).

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
RD	1031	1228	725	1015	1149	2003	2341	3179	4624	8696	7252	6287	6195	5117	19938
Capital Outlay	972	1178	714	1270	949	1120	1129	1435	1668	2097	2533	3268	3556	3794	11892
Net Lending	479	662	1398	1426	1068	1643	910	1341	1285	840	1313	623	161	585	-11416
<b>FD</b>	<b>2482</b>	<b>3068</b>	<b>2837</b>	<b>3711</b>	<b>3165</b>	<b>4766</b>	<b>4380</b>	<b>5955</b>	<b>7577</b>	<b>11633</b>	<b>11098</b>	<b>10177</b>	<b>9911</b>	<b>9497</b>	<b>20414</b>

Note: Negative sign indicates surplus

Chart 3: Revenue Receipts and Expenditure

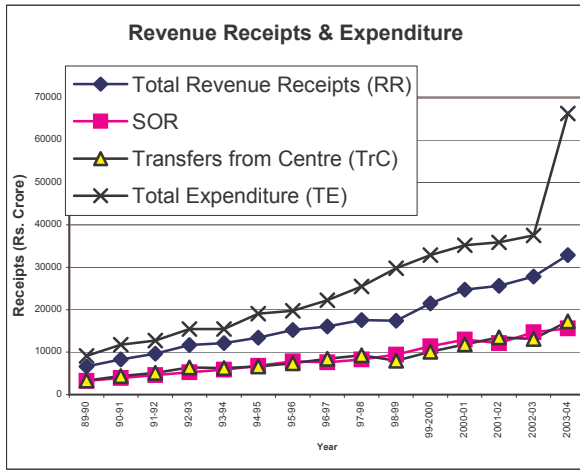
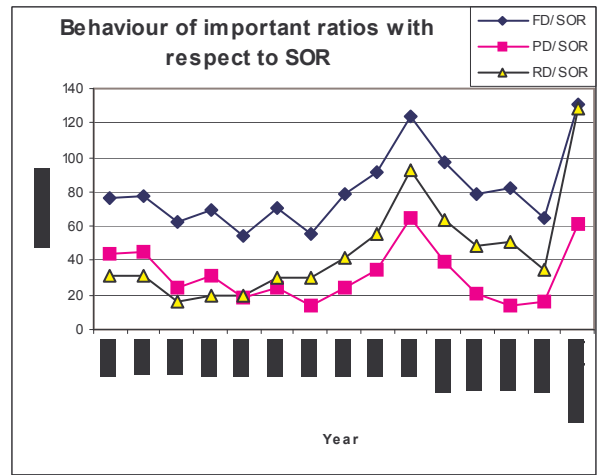


Chart 4: Behaviour of important ratios to SOR



3.63 Table 3.32 shows the behaviour of the components of fiscal deficit viz. RD, Capital Outlay and Net Lending between 1989-90 and 2003-04. There has been a significant deterioration in fiscal deficit during the past decade and the proportion of RD in FD also increased sharply from 25% in 1991-92 to 75% in 1998-99 before decreasing to 53.9% in 2002-03 (Table 3.33). As mentioned above, 2003-04 is an outlier because of the restructuring of the power corporation in UP.

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
RD	41.5	40.0	25.5	27.3	36.3	42.0	53.4	53.4	61.0	74.8	65.3	61.8	62.5	53.9	97.7
Capital Outlay	39.2	38.4	25.2	34.2	30.0	23.5	25.8	24.1	22.0	18.0	22.8	32.1	35.9	40.0	58.3
Net Lending	19.3	21.6	49.3	38.4	33.7	34.5	20.8	22.5	17.0	7.2	11.8	6.1	1.6	6.2	-55.9

## VII.2 Causes for Increasing Debt of GoUP

3.64 Non-tax revenue constituted 16 % of the total revenue receipts which was improving consistently from 1990-91 till 1995-96, but dropped to almost half in 1996-97 and has fared dismally since then (Table 3.34). This proportion is currently around 6%. The state government took some steps to bring buoyancy

on this front by revising forest royalty rates, education fees and user charges in 1999-2000 but these have again been brought back to the 1996-97 values after the 11<sup>th</sup> FC's favourable award. But, increased transfers from the centre could more than compensate the reduction in non-tax revenue and reduce the debt.

**Table 3.34: State's Own Revenues (Amounts in Rs. Crores; Ratios in Percent)**

Ratio	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
OTR	2449	3162	3497	3886	4132	4878	5469	6306	6998	7912	9401	11691	10330	12767	13708
ONTR	824	777	1083	1421	1717	1890	2399	1318	1292	1475	2012	1234	1787	1913	1866
OTR/RR	37	38	36	33	34	36	36	39	40	46	44	47	40	46	42
ONTR/RR	12	9	11	12	14	14	16	8	7	8	9	5	7	7	6
G(OTR)		29.11	10.59	11.12	6.33	18.05	12.12	15.30	10.97	13.06	18.82	24.36	-11.64	23.59	7.37

OTR: Own Tax Revenue; ONTR: Own Non-Tax Revenue; RR: Total Revenue Receipts; G (OTR): Year to Year growth in OTR

3.65 The state's expenditure is excessively large compared to its own revenues (Table 3.35). In fact, own resources are barely sufficient to meet salary, pensions and interest payments. The fact that its absolute fiscal and revenue deficits declined after 2000-01 till 2002-03 is firstly because it received handsome transfers from the centre due to the 11<sup>th</sup> FC recommendations (Table 3.31), and secondly because of its bifurcation into U.P. and Uttaranchal.

**Table 3.35: State's Own Revenues as a Proportion of Revenue and Total Expenditure (Percent)**

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
SOR/RE	42.76	41.30	44.04	41.82	44.04	43.88	44.82	39.69	37.35	36.00	39.70	41.65	38.11	44.57	29.50
SOR/TE	35.81	33.54	36.07	34.34	37.95	35.57	39.85	34.33	32.54	31.53	34.74	36.70	33.78	39.11	23.52

3.66 Political instability had also been a drain on the economy. Political establishment shied away from introducing measures of fiscal prudence. On the other hand, many sops were offered. The state was ranked as the second worst state to invest in by *Business Today* in 1999 for reasons of political instability and poor governance (Beschel Jr., 2003). A related problem is the frequent transfers of government officials. According to an estimate, the average tenure at one place of an official in UP was only eighteen months between 1992 and 1998 (ibid p. 242). This had the likely fallout of lack of commitment, accountability,

answerability and responsibility on the part of the officers in particular and administration in general.

3.67 Power capacity had stagnated since 1990-91. It has had the following effects:

- i. Erratic power availability had discouraged new private investments in the state and also affected the existing manufacturers. Prominent example is the Tata Trucks plant, which had to close down primarily due to this fact.
- ii. Important irrigation projects like the State Tubewell Scheme failed due to unavailability of sufficient power.
- iii. Foreign Direct Investment was falling in the state. It was likely that poor infrastructure, including power was one of the factors causing this slowdown.
- iv. The impact of the implementation of the Fifth Pay Commission recommendations is clearly visible in 1998-99 when both salary expenses and pension payments show a marked increase (*Table 3.36*). Thereafter, growth in these two components of expenditure has subsided by 2000-01.

<b>Table 3.36: Expenditure on Salary and Pensions (Rs. Crores)</b>				
<b>Expenditure</b>	<b>97-98</b>	<b>98-99</b>	<b>99-2000</b>	<b>2000-01</b>
Salary	9110	<b>10380</b>	10980	11350
Pensions	1050	<b>1780</b>	2410	2160
Total	10160	12160	13390	13510

- v. Till date the total devolvement of guarantees has been negligible. During discussions with government officials, it was noted that almost all the guarantees given by the state government were being called but the state government was funding the concerned government body to make the necessary payment. As such, the guarantees given by the state government were in high risk category. They indicate contingent but effective liabilities of GoUP.

### VII.3 Measures to Reduce Interest Cost

3.68 Debt to SOR ratio has increased sharply since 2000-01 after showing an initial reduction after 1998-99 (*Table 3.37*). At this rate, the state will soon fall into a debt trap. Recognizing this fact, the state has swapped high cost NSSF loans with lower interest bearing loans from NSSF and market. Under the swap scheme, 20% of NSSF loans were swapped in 2002-03 and 30% in 2003-04. The figure is likely to be 40% in 2004-05. According to government estimates, the expected interest savings due to debt swap would be Rs.133 crores in 2003-04 and Rs.495 crores in 2004-05.

**Table 3.37: Debt, Income and Interest Ratios**

Ratios	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04 (RE)
Debt (Rs. crores)	15181	18460	21168	24862	28246	32802	37411	43364	50939	62568	73673	80739	90819	99517	117838
GSDP(Rs crores)	51693	61145	71247	77886	87555	102137	115743	138129	148175	170780	187642	173669	188687	202904	210250
D/GSDP (%)	29.37	30.19	29.71	31.92	32.26	32.12	32.32	31.39	34.38	36.64	39.26	46.49	48.13	49.05	56.05
D/SOR (%)	463.83	468.66	462.17	468.48	482.91	484.66	475.49	568.78	614.46	666.54	645.51	624.69	749.50	677.89	756.63
Interest/TE(%)	11.4	10.9	13.5	13.2	13.7	16.2	16.8	18.3	22.3	18.5	19.9	21.2	22.9	18.8	16.3
Interest/RE (%)	13.6	13.4	16.4	16.1	15.9	20.0	18.9	21.1	25.6	21.2	22.8	24.0	25.9	21.4	20.4

3.69 Certain loans from the financial institutions carry high interest rates. If these loans can be swapped, the state can save on its interest payments. Negotiation and perhaps intervention from the centre is called for settlement with financial institutions.

### VII.4 Future Prospects – GoUP’s Forecast and Realistic Forecast

3.70 Our forecasts are based on two scenarios: One based on state government estimates and the other on certain realistically optimistic estimates based on past trends and future outlook.

3.71 The following assumptions are made for forecasts, till 2009-10, by GoUP:

- i. The year-to-year average growth rate of SOR will be 12.5 till 2009-10 over the SOR value in 2004-05.

- ii. The year-to-year average growth rate in Primary Expenditure will be around 7.2% during 2004-05 to 2009-10.
- iii. We assume that transfers from the centre as a proportion of SOR will be at the average of last three years.
- iv. Interest rate will gradually decline from 12.36% in 2003-04(RE) to 10.96% in 2009-10 as per the debt structure.

3.72 These assumptions and particularly the assumption about revenues appear reasonable, given the past trends. The annual compound growth rate of SOR between 1996-97 and 2002-03 was 9.3% although this period saw deterioration in finances, as already discussed. Now that the negative shocks have been absorbed, the growth rates in own revenues were expected to be a little higher, as assumed. We see that, given these assumptions, Debt to SOR ratio shows a sustainable trend and falls from 5.9 in 2002-03 to 4 in 2009-10. IP / RR also declines from 25.4% to 21.6% during this period. Thus, the scenario results in a sustainable debt, close to the tolerable limit in terms of IP / RR ratio by 2009-10 (*Table 3.38*).

3.73 We feel that it is plausible to achieve a little higher growth in SOR than assumed by the government, while the compression assumed in PE may be difficult to achieve. These assumptions have been modified in our suggested scenario based on the following assumptions:

- i. As in other cases considered above, we have ignored 2003-04(RE) for PE and SOR as it turns out to be statistically an outlier. However, we have considered the actual debt and interest rate observed in the year for our forecast.

<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (RE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	8220	7060	10783	11477	12198	12789	13552	13897	14235
Other Total Expenditure	27655	30478	55429	36841	38960	41344	45626	48697	52199
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>35875</b>	<b>37537</b>	<b>66211</b>	<b>48318</b>	<b>51158</b>	<b>54133</b>	<b>59178</b>	<b>62595</b>	<b>66434</b>
States' Own Revenue	12117	14680	15574	17884	20109	22619	25453	28652	32266
Transfers from Centre	13481	13141	17286	18585	20897	23506	26450	29775	33530
Recovery of loans and advances	366	219	12937	660	471	497	524	552	581
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc.</b>	<b>25963</b>	<b>28040</b>	<b>45798</b>	<b>37129</b>	<b>41477</b>	<b>46622</b>	<b>52428</b>	<b>58979</b>	<b>66377</b>

<b>Receipts</b>									
Outstanding Liabilities	89952	87232	91164	102352	112033	119544	126294	129910	129967
Gross Fiscal Deficit	9911	9497	20414	11189	9681	7511	6750	3615	57
Primary Deficit on Own Account	15537	15797	39854	18957	18851	18725	20173	20045	19933
Misc (MCR+RLA+ACGA+MFD)	887	12436	29420	660	471	497	524	552	581
SOR Growth Rate (in %)	-6.2	21.2	6.1	14.8	12.4	12.5	12.5	12.6	12.6
Interest Rate (in %)	10.20	7.85	12.36	12.59	11.92	11.42	11.34	11.00	10.96
PE Growth Rate (in %)	-0.4	10.2	81.9	-33.5	5.8	6.1	10.4	6.7	7.2
<b>D/SOR</b>	<b>7.4</b>	<b>5.9</b>	<b>5.9</b>	<b>5.7</b>	<b>5.6</b>	<b>5.3</b>	<b>5.0</b>	<b>4.5</b>	<b>4.0</b>
<b>IP/RR (in %)</b>	<b>32.1</b>	<b>25.4</b>	<b>32.8</b>	<b>31.5</b>	<b>29.7</b>	<b>27.7</b>	<b>26.1</b>	<b>23.8</b>	<b>21.6</b>
<b>Change(D/SOR)</b>	<b>1.190</b>	<b>-1.481</b>	<b>-0.089</b>	<b>-0.130</b>	<b>-0.152</b>	<b>-0.286</b>	<b>-0.323</b>	<b>-0.428</b>	<b>-0.506</b>
			-2.559	-1.060	-0.937	-0.828	-0.793	-0.700	-0.618
PDOA/SOR	1.282	1.076	2.559	1.060	0.937	0.828	0.793	0.700	0.618
TrC/SOR	1.112	0.895	1.110	1.039	1.039	1.039	1.039	1.039	1.039
Misc/SOR	0.073	0.847	1.889	0.037	0.023	0.022	0.021	0.019	0.018
(g-l)/(1+g)	-0.175	0.110	-0.059	0.020	0.005	0.009	0.011	0.014	0.015
Do/SORo	6.233	7.423	5.942	5.854	5.723	5.571	5.285	4.962	4.534
Do/SORo x [(g-l)/(1+g)]	-1.094	0.815	-0.351	0.114	0.027	0.053	0.056	0.069	0.067

- ii. The average annual growth rate for SOR will be 13.5%. This translates into a growth rate of 14.8% with 2003-04 as base. The average growth during the last two years has been more than 13.5%, barring 2001-02, which saw a negative growth most likely due to the division of UP. Also, the average growth rates of SOR and nominal GSDP in undivided UP have been 13.5% and 12.8% between 1990 and 1999.
  - iii. Primary Expenditure will grow by 10% annually with 2002-03 as base or 1.2% p.a. with 2003-04(RE) as base. The corresponding figure for 1990 to 1999 was 12.9%.
  - iv. Effective Interest rate will be following the same behaviour as assumed in other cases above and in *Chapter 1*. It falls from 12.4% to 11.6% by 2009-10.
  - v. The other parameters, TrC/SOR and Misc/SOR ratios, are taken as averages (excluding outliers) observed during the 11<sup>th</sup> FC period.
- 3.74 Following the same methodology, *Table 3.39* shows that the debt is not only sustainable but also within tolerable limits in 2009-10.

<b>Table 3.39: Realistically Optimistic Forecast for U.P. (Rs. Crores)</b>									
<b>Ratios</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04 (RE)</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>
Interest Payment	8220	7060	10783	10904	11541	12432	13202	13791	14122
Other Total Expenditure	27655	30478	55429	36878	40566	44622	49085	53993	59392
<b>Total Expenditure (Excluding Loan Repayments)</b>	<b>35875</b>	<b>37537</b>	<b>66211</b>	<b>47782</b>	<b>52107</b>	<b>57055</b>	<b>62287</b>	<b>67784</b>	<b>73515</b>
States' Own Revenue	12117	14680	15574	18912	21465	24362	27651	31384	35621
Transfers from Centre	13481	13141	17286	19653	22306	25317	28735	32614	37017
Recovery of loans and advances	366	219	12937	660	471	497	524	552	581
MCR	0	0	0	0	0	0	0	0	0
<b>Total Revenue and Misc Receipts</b>	<b>25963</b>	<b>28040</b>	<b>45798</b>	<b>39225</b>	<b>44242</b>	<b>50177</b>	<b>56910</b>	<b>64550</b>	<b>73219</b>
Outstanding Liabilities	89952	87232	91164	99828	107535	114197	119288	122155	121988
Gross Fiscal Deficit	9911	9497	20414	8557	7865	6878	5377	3234	296
Primary Deficit on Own Account	15537	15797	39854	17966	19101	20260	21433	22609	23771
Misc (MCR+RLA+ACGA+MFD)	887	12436	29420	554	629	714	810	919	1043
SOR Growth Rate	-6.2	21.2	6.1	21.4	13.5	13.5	13.5	13.5	13.5
Interest Rate	10.20	7.85	12.36	11.96	11.56	11.56	11.56	11.56	11.56
PE Growth Rate	-0.4	10.2	81.9	-33.5	10.0	10.0	10.0	10.0	10.0
<b>D/SOR</b>	<b>7.42</b>	<b>5.94</b>	<b>5.85</b>	<b>5.28</b>	<b>5.01</b>	<b>4.69</b>	<b>4.31</b>	<b>3.89</b>	<b>3.42</b>
<b>IP/RR</b>	<b>32.1</b>	<b>25.4</b>	<b>32.8</b>	<b>28.3</b>	<b>26.4</b>	<b>25.0</b>	<b>23.4</b>	<b>21.5</b>	<b>19.4</b>
<b>Change(D/SOR)</b>	<b>1.190</b>	<b>-1.481</b>	<b>-0.089</b>	<b>-0.575</b>	<b>-0.269</b>	<b>-0.322</b>	<b>-0.373</b>	<b>-0.422</b>	<b>-0.468</b>
PDOA/SOR	1.282	1.076	2.559	0.950	0.890	0.832	0.775	0.720	0.667
TrC/SOR	1.112	0.895	1.110	1.039	1.039	1.039	1.039	1.039	1.039
Misc/SOR	0.073	0.847	1.889	0.029	0.029	0.029	0.029	0.029	0.029
(g-l)/(1+g)	-0.175	0.110	-0.059	0.078	0.017	0.017	0.017	0.017	0.017
Do/SORo	6.233	7.423	5.942	5.854	5.279	5.010	4.687	4.314	3.892
Do/SORo x [(g-l)/(1+g)]	-1.094	0.815	-0.351	0.456	0.090	0.086	0.080	0.074	0.066

\*The year 2003-04 is an outlier as stated in the text. We have, therefore, taken the year 2002-03 as the base year for forecast of PE, SOR and related variables. The base year for debt and interest rates, however remains as 2003-04 (RE).

## VIII. Concluding Remarks on Cases

3.75 The cases of the six selected states and our discussions with officials have thrown up some interesting issues pertaining to the debt situation of states. Some of them have implications on the centre-state relationship and others have bearing on the fiscal behaviour of the centre and the states. We briefly summarise them as under:

- i. There are some states where series of natural disasters or calamities have been the major contributory factor for their current debt situation, e.g. Assam, Gujarat, and Orissa. There are, however, some states where the debt

- problem is largely on account of the changes in macroeconomic environment accentuated by the state's fiscal behaviour, e.g. Kerala, Maharashtra, and U.P.
- ii. The relief and rehabilitation funds are made available to the states largely in the form of loans rather than grants. High interest on all such loans charged by the centre has created a severe debt-servicing problem for the states. Moreover, unjustifiably high interest rates on such loans effectively act like a tax on the natural calamity occurring in the state. There is a strong case for considering all such loans separately and take appropriate decision on either writing them off fully or partially or giving some moratorium apart from reducing interest rates on them.
  - iii. It is clearly brought out by all six cases that loans from the centre have the highest effective interest rate compared to other sources of funds in a state. In a liberalized environment, this appears inconsistent and requires modification.
  - iv. While there are states like Assam, Orissa and U.P. dependent heavily on the centre and small savings, there are others like Gujarat and Maharashtra keen to tap the market directly. However, there is a cap on market borrowing by states and the centre needs to review these caps.
  - v. The states find the small savings too costly but are forced to accept them although encouraging such savings is a national priority and not the states' priority. Thus, the states have to bear higher cost of their debt which can be effectively reduced by the centre particularly for those states not interested in availing all the small savings from their territory.
  - vi. Loans from financial institutions also have a very high effective interest rate due to their vintage and states find it extremely difficult to negotiate prepayments with them. Most of these institutions are under direct control of the central government.
  - vii. The Cabinet Committee on Economic Affairs had approved a proposal for rolling over loans for important projects. The decision to implement it is, however, pending since 2002-03, imposing interest burden on the states.

- viii. VRS liabilities on states would be very heavy considering their thin resource base. It is necessary for the centre to extend special help to states in this regard.
  - ix. There are several parallel departments and schemes between the centre and the states involving a huge duplication of resources. The centre can step out to avoid such duplication saving the scarce national resource that could be additionally transferred to states through vertical allocation.
  - x. By and large, the states have not been realistic in their projections of the future fiscal scenarios. On the other hand, states' projections to the Planning Commissions are again not realistic on the other extreme. This results in inflated plan sizes and subsequent larger debt burden. It is a reflection of their helpless dependence on the centre and the Finance Commission award for funds.
- 3.76. Keeping all these points in view, and the analysis of *Chapters 1 and 2*, we now turn to our recommendations in the next and concluding chapter.

# CHAPTER 4

## Recommendations

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### I. Plausibly Optimistic Scenario

- 4.1 Our analysis in *Chapter 1* shows that the debt and deficit situation in most of the 25 states has been a cause of concern after the slow down of the growth rate since 1997-98. Revival of the growth by itself may not solve the problem because the effective interest rate of the debt of most of the states, while showing a declining trend, is still very high and the fiscal behaviour of the states has also been unfavourable. In *Chapter 2*, a further examination of the problem of debt and fiscal behaviour of states reveals that the problem is not beyond credible repair, and that the debt is not only technically sustainable in all states but also within a tolerable limit in most cases provided the states achieve performance targets on the growth of SOR and PE already achieved in recent past. In the analysis in *Chapter 2*, we did not specify the time limit and considered only long run equilibrium when the fiscal parameters are repeated. In *Chapter 3*, we examined cases of 6 selected states and considered fiscal projections upto the year 2009-10 on some realistically optimistic assumptions that also included marginal decline in the effective interest rate upto 2005-06. The cases and our discussions with state officials brought out some relevant issues needing attention and action. We make our recommendations by first generalising the projections for all states based on plausibly optimistic assumptions and then finding out the need for specific intervention in the problematic states. We may then give our general recommendations.
- 4.2 We have seen towards the end of *Chapter 2* above that the 'best' achieved performance in terms of maximum growth of SOR and minimum growth of PE during 5 consecutive years in the recent past may be individually plausible, but their simultaneous occurrence is very unlikely. Moreover, considering the range of annual growth rates given by the trend rate and the maximum achieved growth of SOR over five years in different states, we feel that a uniform growth target for

SOR of 13.5% p.a. is a plausibly optimistic target and 11.5% is an average performance<sup>26</sup> for all the states. Similarly, we find that for PE an annual compound growth of 10% is plausibly optimistic and 11% an average performance for all the states. However, considering the special problems of several special category (SC) states, we should consider more relaxed targets for growth of SOR, 12% optimistic and 11% p.a. average performance. As far as the other parameters from our framework in *Chapter 2* are concerned, TrC / SOR and Misc. / SOR are taken at their respective average values (excluding outliers) for each state during the 11<sup>th</sup> FC period (2000-01 to 2003-04 or 2002-03 depending on the availability of data)<sup>27</sup>. The effective interest rate is the most critical parameter and we make the same assumption about its behaviour in future as we did in *Chapter 3* for the six selected states. We assume that the effective interest rate in each state would fall by 0.4 percentage points (or 40 basis points) every year upto 2005-06 and remain constant thereafter<sup>28</sup>. We present our basic assumptions for each state in *Table 4.1*.

- 4.3 We then calculate for different scenarios the implied (Debt / SOR) and (IP / RR) ratios for the period upto 2009-10 using the figures from *Table 4.1*. For several states, IP/RR ratio turns out to be higher than 20%, the tolerable limit. In case of those states where the IP / RR ratio in 2009-10 works out to be in excess of 20%, we find out the interest rate required to bring down the IP / RR ratio to 20% by 2009-10. These findings are summarized for different scenarios in *Table 4.2*.
- 4.4 From *Table 4.2*, we can see that among the NSC states under the optimistic scenario with  $G_{SOR} = 13.5\%$  p.a. and  $G_{PE} = 10\%$  p.a., problem of intolerable debt would exist in 2009-10 only in Gujarat, Kerala, Rajasthan and West Bengal. In Bihar, Maharashtra, Punjab and U.P, the problem would be actually non-existent because the required reduction in interest rate is around or less than 40 basis points from the base year interest rate and we expect the interest rate to decline

<sup>26</sup> We have assumed future inflation rate to be 5% p.a. as per the trends in the recent past. However, if inflation picks up to 7% or 8% p.a. as in the period prior to 1999-2000, 11.5% p.a. growth in SOR may turn out to be a pessimistic assumption.

<sup>27</sup> Data are available upto 2003-04 (RE) for the six states discussed in *Chapter 3* above, and for the rest upto 2002-03 (RE).

<sup>28</sup> This assumption is consistent with marginal increase in interest rates in future as expected from the current trends in international markets (DeLong, 2004).

**Table 4.1: Assumptions Underlying the Scenario Calculations** (Amounts in Rs. Crores)

Non Special Category States	Base Year Values**			Interest Rate	Average 11 <sup>th</sup> FC period*		G <sub>SOR</sub> (Range)	G <sub>PE</sub> (Range)
	PE <sub>0</sub>	SOR <sub>0</sub>	Debt		TrC/SOR	Misc. SOR		
AP	25963	16015	55009	0.130	0.4884	0.0415	0.135-0.115	0.11-0.1
Bihar	13299	3088	30105	0.123	2.6654	0.3573	0.135-0.115	0.11-0.1
Goa	2476	2014	3663	0.089	0.1092	-0.0353	0.135-0.115	0.11-0.1
Gujarat	24564	16685	62546	0.107	0.2592	0.0000	0.135-0.115	0.11-0.1
Haryana	8288	7358	18697	0.116	0.1545	0.0127	0.135-0.115	0.11-0.1
Karnataka	24105	16389	37842	0.100	0.3702	0.0182	0.135-0.115	0.11-0.1
Kerala	14938	9398	39013	0.100	0.3514	0.0185	0.135-0.115	0.11-0.1
MP	16361	5423	30692	0.098	1.4205	0.0593	0.135-0.115	0.11-0.1
Maharashtra	48713	29829	106333	0.097	0.1780	0.0373	0.135-0.115	0.11-0.1
Orissa	12019	4085	34450	0.110	1.3021	0.1061	0.135-0.115	0.11-0.1
Punjab	13466	9847	37836	0.105	0.1910	0.0574	0.135-0.115	0.11-0.1
Rajasthan	15780	8109	45462	0.111	0.7088	0.0193	0.135-0.115	0.11-0.1
TN	23878	17663	43576	0.107	0.2241	0.0507	0.135-0.115	0.11-0.1
UP	55429	15574	91164	0.124	1.0392	0.0293	0.135-0.115	0.11-0.1
WB	22350	8248	72996	0.121	0.9889	0.0731	0.135-0.115	0.11-0.1
<b>Special Category States</b>								
Arunachal	1451	170	1228	0.123	9.0956	0.1528	0.12 -0.11	0.11-0.1
Assam	11660	2817	13167	0.159	1.9474	0.0122	0.12 -0.11	0.11-0.1
HP	4584	1345	11969	0.167	2.0221	0.1381	0.12 -0.11	0.11-0.1
JK	6124	1310	11454	0.104	4.0902	0.0918	0.12 -0.11	0.11-0.1
Manipur	1799	123	415	0.125	11.9382	5.6751	0.12 -0.11	0.11-0.1
Meghalaya	1630	271	1836	0.115	4.1848	0.0808	0.12 -0.11	0.11-0.1
Mizoram	1217	81	2056	0.083	12.8512	0.8005	0.12 -0.11	0.11-0.1
Nagaland	1778	111	2401	0.120	13.3097	0.5503	0.12 -0.11	0.11-0.1
Sikkim	2123	1367	916	0.103	0.8448	0.0050	0.12 -0.11	0.11-0.1
Tripura	2386	270	3179	0.121	6.3049	0.1912	0.12 -0.11	0.11-0.1

\* Outliers have been ignored

\*\* Base year for the six states viz. Assam, Gujarat, Kerala, Maharashtra, Orissa and UP is 2003-04 (RE). For other states, the base year is 2002-03 (RE). However, for SOR and PE (and related) calculations, the base year for all states is 2002-03 since 2003-04 turns out as an outlier in terms of PE for most of the states.

**Table 4.2: Optimistic and Pessimistic Scenarios for Debt Position of NSC & SC States in 2009-10**

Scenario 1 Optimistic	Assumptions: $G_{SOR} = 0.135$ & $G_{PE} = 0.100$									
	$\Delta(D/SOR)$		D/ SOR		IP/ RR		$i_0$	Required $i_1$	$i_0 - i_1$	$100^* \left( \frac{i_0 - i_1}{i_0} \right)$
	2003-04*	2009-10	2002-03**	2009-10	2002-03**	2009-10				
Andhra Pradesh	0.025	-0.261	3.43	2.53	0.371	0.201	0.130	0.130	0.000	0.0
Bihar	0.005	-0.733	9.75	6.95	0.774	0.203	0.123	0.118	-0.005	-3.8
Goa	0.044	-0.158	1.82	1.34	0.142	0.096	0.089	0.089	0.000	0.0
Gujarat	0.248	-0.258	3.75	2.99	0.280	0.196	0.107	0.090	-0.017	-15.9
Haryana	-0.119	-0.294	2.54	1.03	0.276	0.109	0.116	0.116	0.000	0.0
Karnataka	-0.033	-0.262	2.31	1.20	0.194	0.087	0.100	0.100	0.000	0.0
Kerala	0.117	-0.243	4.15	3.40	0.266	0.204	0.100	0.090	-0.010	-10.1
Madhya Pradesh	0.260	-0.281	5.66	5.40	0.418	0.186	0.098	0.098	0.000	0.0
Maharashtra	-0.139	-0.192	3.56	2.79	0.229	0.203	0.097	0.095	-0.002	-2.1
Orissa	-1.009	-0.745	8.43	4.11	0.339	0.195	0.110	0.109	-0.001	-0.8
Punjab	-0.042	-0.262	3.84	2.68	0.341	0.200	0.105	0.100	-0.005	-4.6
Rajasthan	-0.040	-0.353	5.61	4.08	0.533	0.199	0.111	0.095	-0.016	-14.6
Tamil Nadu	-0.025	-0.243	2.47	1.45	0.208	0.121	0.107	0.107	0.000	0.0
Uttar Pradesh	-0.573	-0.466	5.85	3.43	0.328	0.195	0.124	0.120	-0.004	-2.9
West Bengal	-0.013	-0.425	8.73	6.95	0.279	0.199	0.121	0.073	-0.048	-39.5
<b>Scenario 2</b>	<b>Assumptions: <math>G_{SOR} = 0.135</math> &amp; <math>G_{PE} = 0.110</math></b>									
<b>NSC States</b>										
Andhra Pradesh	0.016	-0.197	3.43	2.73	0.371	0.197	0.130	0.122	-0.008	-5.9
Bihar	-0.026	-0.571	9.75	7.44	0.774	0.196	0.123	0.110	-0.013	-10.3
Goa	0.054	-0.103	1.82	1.59	0.142	0.109	0.089	0.089	0.000	0.0
Gujarat	0.265	-0.198	3.75	3.24	0.280	0.202	0.107	0.088	-0.019	-17.8
Haryana	-0.109	-0.240	2.54	1.27	0.276	0.124	0.116	0.116	0.000	0.0
Karnataka	-0.020	-0.193	2.31	1.50	0.194	0.101	0.100	0.100	0.000	0.0
Kerala	0.129	-0.180	4.15	3.63	0.266	0.204	0.100	0.086	-0.014	-14.1
Madhya Pradesh	0.287	-0.142	5.66	6.01	0.418	0.202	0.098	0.098	0.000	0.0
Maharashtra	-0.130	-0.137	3.56	2.99	0.229	0.201	0.097	0.090	-0.007	-7.3
Orissa	-0.999	-0.653	8.43	4.43	0.339	0.196	0.110	0.105	-0.005	-4.5
Punjab	-0.046	-0.208	3.84	2.86	0.341	0.198	0.105	0.095	-0.010	-9.4
Rajasthan	-0.037	-0.273	5.61	4.39	0.533	0.202	0.111	0.092	-0.019	-17.3
Tamil Nadu	-0.013	-0.179	2.47	1.73	0.208	0.136	0.107	0.107	0.000	0.0
Uttar Pradesh	-0.562	-0.379	5.85	3.74	0.328	0.198	0.124	0.115	-0.009	-7.0
West Bengal	0.010	-0.312	8.73	7.47	0.268	0.200	0.121	0.070	-0.051	-42.0

\* 2004-05 for Gujarat, Kerala, Maharashtra, Orissa and UP, for which 2003-04 (RE) are available. 40 Basis point reduction assumed every year till 2005-06.

\*\*2003-04 for Gujarat, Kerala, Maharashtra, Orissa and UP, for which 2003-04 (RE) are available.

**Table 4.2: Optimistic and Pessimistic Scenarios for Debt Position of NSC & SC States in 2009-10. (cont.)**

Scenario 3	Assumptions: $G_{SOR} = 0.115$ & $G_{PE} = 0.100$									
	$\Delta(D/SOR)$		D/SOR		IP/RR		$i_0$	Required $i_1$	$i_0 - i_1$	$100^* \left( \frac{i_0 - i_1}{i_0} \right)$
NSC States	2003-04*	2009-10	2002-03**	2009-10	2002-03**	2009-10				
Andhra Pradesh	0.054	-0.094	3.43	3.24	0.371	0.205	0.130	0.110	-0.020	-15.2
Bihar	0.069	-0.316	9.75	8.70	0.774	0.196	0.123	0.097	-0.026	-20.9
Goa	0.096	-0.019	1.82	2.05	0.142	0.135	0.089	0.089	0.000	0.0
Gujarat	0.394	-0.109	3.75	3.75	0.280	0.203	0.107	0.078	-0.029	-27.1
Haryana	-0.054	-0.155	2.54	1.77	0.276	0.161	0.116	0.116	0.000	0.0
Karnataka	0.033	-0.094	2.31	2.05	0.194	0.130	0.100	0.100	0.000	0.0
Kerala	0.266	-0.081	4.15	4.20	0.266	0.204	0.100	0.076	-0.024	-24.1
Madhya Pradesh	0.355	0.042	5.66	6.93	0.418	0.202	0.098	0.087	-0.011	-11.3
Maharashtra	-0.018	-0.049	3.56	3.48	0.229	0.204	0.097	0.080	-0.017	-17.6
Orissa	-0.777	-0.519	8.43	5.22	0.339	0.197	0.110	0.092	-0.018	-16.4
Punjab	0.001	-0.120	3.84	3.35	0.341	0.204	0.105	0.086	-0.019	-18.0
Rajasthan	0.026	-0.150	5.61	5.07	0.533	0.203	0.111	0.082	-0.029	-26.3
Tamil Nadu	0.041	-0.079	2.47	2.29	0.208	0.172	0.107	0.107	0.000	0.0
Uttar Pradesh	-0.407	-0.259	5.85	4.38	0.328	0.196	0.124	0.100	-0.024	-19.1
West Bengal	0.143	-0.127	8.85	8.72	0.245	0.203	0.121	0.063	-0.058	-47.8
Scenario 4 Pessimistic	Assumptions: $G_{SOR} = 0.115$ & $G_{PE} = 0.110$									
NSC States										
Andhra Pradesh	0.050	-0.019	3.43	3.49	0.371	0.203	0.130	0.104	-0.026	-19.8
Bihar	0.072	-0.107	9.75	9.47	0.774	0.199	0.123	0.093	-0.030	-24.2
Goa	0.107	0.047	1.82	2.33	0.142	0.149	0.089	0.089	0.000	0.0
Gujarat	0.408	-0.042	3.75	4.00	0.280	0.204	0.107	0.075	-0.032	-29.9
Haryana	-0.044	-0.090	2.54	2.04	0.276	0.178	0.116	0.116	0.000	0.0
Karnataka	0.046	-0.012	2.31	2.39	0.194	0.145	0.100	0.100	0.000	0.0
Kerala	0.279	-0.009	4.15	4.46	0.266	0.202	0.100	0.072	-0.028	-28.1
Madhya Pradesh	0.351	0.172	5.66	7.39	0.418	0.195	0.098	0.081	-0.017	-17.5
Maharashtra	-0.005	0.016	3.56	3.71	0.229	0.203	0.097	0.076	-0.021	-21.7
Orissa	-0.751	-0.405	8.43	5.65	0.339	0.203	0.110	0.090	-0.020	-18.2
Punjab	-0.001	-0.057	3.84	3.58	0.341	0.203	0.105	0.082	-0.023	-21.8
Rajasthan	0.028	-0.058	5.61	5.41	0.533	0.204	0.111	0.079	-0.032	-29.0
Tamil Nadu	0.054	-0.002	2.47	2.61	0.208	0.190	0.107	0.107	0.000	0.0
Uttar Pradesh	-0.380	-0.150	5.85	4.79	0.328	0.204	0.124	0.098	-0.026	-20.7
West Bengal	0.167	0.005	8.85	9.30	0.233	0.201	0.121	0.060	-0.061	-50.2

\* 2004-05 for Gujarat, Kerala, Maharashtra, Orissa and UP, for which 2003-04 (RE) are available. 40 Basis point reduction assumed every year till 2005-06

\*\*2003-04 for Gujarat, Kerala, Maharashtra, Orissa and UP, for which 2003-04 (RE) are available

**Table 4.2: Optimistic and Pessimistic Scenarios for Debt Position of NSC & SC States in 2009-10. (concl.)**

Scenario 1	Assumptions: $G_{SOR} = 0.120$ & $G_{PE} = 0.110$									
	$\Delta(D/SOR)$		D/ SOR		IP/ RR		$i_0$	Required $i_1$	$i_0 - i_1$	$100^* \left( \frac{i_0 - i_1}{i_0} \right)$
SC States	2003-04*	2009-10	2002-03**	2009-10	2002-03**	2009-10				
Arunachal	-1.763	-2.205	7.23	-6.79	0.735	-0.047	0.123	0.123	0.000	0.0
Assam	-0.574	-0.567	4.67	1.63	0.189	0.103	0.159	0.159	0.000	0.0
Himachal Pradesh	-0.052	-0.256	8.90	7.66	0.968	0.183	0.167	0.086	-0.081	-48.6
Jammu & Kashmir	-0.673	-0.878	8.74	3.17	0.977	0.068	0.104	0.104	0.000	0.0
Manipur	-4.156	-4.876	3.36	-28.34	0.114	-0.190	0.125	0.125	0.000	0.0
Meghalaya	0.663	0.269	6.77	9.92	0.573	0.178	0.115	0.115	0.000	0.0
Mizoram	-0.536	-1.277	25.52	18.69	13.643	0.096	0.083	0.083	0.000	0.0
Nagaland	1.005	-0.004	21.62	24.78	1.111	0.173	0.120	0.120	0.000	0.0
Sikkim	-0.321	-0.361	0.67	-1.73	0.065	-0.063	0.103	0.103	0.000	0.0
Tripura	1.070	0.421	11.77	16.76	0.980	0.188	0.121	0.102	-0.019	-15.8
Scenario 2	Assumptions: $G_{SOR} = 0.110$ & $G_{PE} = 0.100$									
SC States										
Arunachal	-1.699	-2.250	7.23	-6.71	0.735	-0.046	0.123	0.123	0.000	0.0
Assam	-0.491	-0.539	4.67	1.89	0.189	0.115	0.159	0.159	0.000	0.0
Himachal Pradesh	0.033	-0.195	8.90	8.18	0.968	0.197	0.167	0.087	-0.080	-48.0
Jammu & Kashmir	-0.595	-0.850	8.74	3.54	0.977	0.075	0.104	0.104	0.000	0.0
Manipur	-4.127	-5.097	3.36	-28.99	0.114	-0.195	0.125	0.125	0.000	0.0
Meghalaya	0.723	0.351	6.77	10.42	0.573	0.187	0.115	0.115	0.000	0.0
Mizoram	-0.315	-1.148	25.52	19.93	13.643	0.102	0.083	0.083	0.000	0.0
Nagaland	1.199	0.212	21.62	26.23	1.111	0.183	0.120	0.120	0.000	0.0
Sikkim	-0.315	-0.374	0.67	-1.76	0.065	-0.064	0.103	0.103	0.000	0.0
Tripura	1.173	0.550	11.77	17.59	0.980	0.198	0.121	0.102	-0.019	-15.8

\* 2004-05 for Gujarat, Kerala, Maharashtra, Orissa and UP, for which 2003-04 (RE) are available. 40 Basis point reduction assumed every year till 2005-06

\*\*2003-04 for Gujarat, Kerala, Maharashtra, Orissa and UP, for which 2003-04 (RE) are available

by this amount under normal course as per our assumption in *Chapter 1* and *3*. Under the pessimistic scenario with  $G_{SOR} = 11.5\%$  p.a. and  $G_{PE} = 11\%$  p.a., only Goa, Haryana, Karnataka and Tamil Nadu would escape the problem of intolerable debt in 2009-10. The rest of the states would all be faced with serious debt problem. Among the SC states, the two scenarios considered here are not very different, and except HP and Tripura, all the remaining eight states would not be facing the problem of intolerable debt in 2009-10. However, the debt of Nagaland and Meghalaya is potentially unsustainable and would create problems in the long run. These four states together account for less than 2.7% of the total debt of states in the country (*Table 1.1*). The major problem is of the debt of Gujarat, Kerala, Rajasthan and West Bengal that accounts for almost 29% of the total debt of states in 2003-04.

- 4.5 *Table 4.2* also shows the reduction in the effective interest rate in these states required to bring the IP/RR ratio to the tolerable limit of 20% in 2009-10. We can see that in all states except West Bengal, the required reduction in the effective interest rate is not substantial in the sense that it is less than 170 basis points under optimistic scenario and less than 325 basis points under pessimistic scenario. West Bengal, on the other hand, would require a reduction of 480 basis points under optimistic scenario and 610 basis points under pessimistic scenario. Thus, it has a serious problem of intolerable debt and needs special treatment in terms of both stricter targets for fiscal discipline and more flexibility in its debt servicing obligations. The percentage reduction required in the effective interest rate broadly indicates the proportion of the stock of debt that needs to be restructured in the state. However, we must recognise that all these calculations are based on the assumptions given in *Table 4.1* and depend critically, *inter alia*, on fiscal discipline as reflected by  $G_{SOR}$  and  $G_{PE}$  targets and transfers from the centre as well as miscellaneous factors in state finances.

## II. Suggestions for Correcting Fiscal Situation

- 4.6 At the outset, we suggest linking of the transfer of resources (tax and grants) from the centre to states' own revenue generation, subject to their own account

primary deficit (PDOA). It will provide the currently missing but most crucial incentive to states to generate their own resources and control expenditures. It will go a long way towards solving the problem of fiscal profligacy and indiscipline at the state level and hence alleviating their debt situation in the medium and long term. As comes out of our framework, the transfers from the centre could be ultimately expressed in terms of a ratio to the state's own resources(SOR). This ratio can vary from state to state (as it actually does) but should be pre-announced. Once the Finance Commission determines the level of transfers to state on whatever basis, the ratio to SOR stands determined and must form the basis of an incentive scheme. Various considerations can be incorporated while deciding "the ratio" for each state. Even this ratio can be broken up into a fixed number and a variable component varying negatively with the growth of the state's primary expenditure ( $G_{PE}$ ), and positively with growth of SOR ( $G_{SOR}$ ). A suggested formula for the  $j^{th}$  state is:

$$(TrC / SOR)_j = \alpha_j + \beta_j \left( g_{SOR} - \bar{g}_{SOR} \right)_j - \gamma_j \left( g_{PE} - \bar{g}_{PE} \right)_j \dots\dots\dots(22)$$

where  $\gamma_j > \beta_j > 0$  for all  $j$ (i.e. states); and  $\alpha_j$  would be decided by the F.C. based on its horizontal distribution criteria.  $\bar{g}_{SOR}$  and  $\bar{g}_{PE}$  are the suggested target growth rates of SOR and PE respectively for each state to achieve sustainable and tolerable debt over the target period. As per our exercise in Chapter 3 and based on our *Table 4.2* above, we suggest  $\bar{g}_{SOR} = 13.5\%$  for NSC states and 12% for SC states, and  $\bar{g}_{PE} = 10\%$  for NSC states and 11% for SC states. The uniform target for growth of SOR is equitable because states with lower base would find it easier to achieve the target than the ones with larger base. For the growth of PE, the uniform target is equally taxing for all the states since differentiation among states is not as stark in this regard as in SOR. As an exception these targets can be more stringent for West Bengal. We have taken the two components of the own account primary deficit separately because half-hearted efforts by various states, as in recent past, would not achieve the desired

result. There is a need to incentivize states on both grounds separately – augmentation of own resources and compression of expenditures. Given the greater need to curb spending, we need  $\gamma > \beta$  for all states.

4.7 The only conceptual problem we can think of is the situation when all states perform extremely well in terms of surpassing the expectations of the Finance Commission about their own revenue generation with significant control over the own account primary deficit. Under such a situation, our recommendation may imply increase in the vertical allocation to states if the growth of central tax collection is less than  $G_{SOR}$  for all states together. However, in our opinion, it would not create any fiscal problem for the centre because the centre will, in such a case, get better recovery of loans and advances from states and will not have to provide more loans to them. We, therefore, feel that the Commission should seriously consider our suggestion of making the vertical allocation variable by linking the horizontal distribution among states to their respective SOR as suggested by the above formula.

4.8 Second broad suggestion we would like to make about the sources of financing the deficit at the state level is that, although we have separated four distinct sources, hitherto considered minor, of funding the fiscal deficit at the state level, we treat them together for purposes of setting fiscal targets. It would enhance the flexibility of states, providing options which may be politically very valuable. These sources are:

- i. MFD consisting of running down cash balances or ways & means advances;
- ii. MCR largely reflecting the disinvestment and privatisation proceeds;
- iii. RLA comprising the recoveries from state PSUs, other states and local bodies; and
- iv. ACGA including interstate settlements and appropriation to contingency funds. States have not used these factors to any significant extent on a regular basis perhaps because MFD and ACGA cannot be used on a regular basis, and MCR and RLA may have potentially serious political implications. However, states need to find some judicious combinations of these factors to generate critical

resources on a regular basis at least in the medium term to emerge from a fiscally bad condition.

4.9 The following are our recommendations having bearing on the centre-state relationship and on the fiscal behaviour of both the centre and the states:

- i. There are some states where series of natural disasters or calamities have been the major contributory factor for their current debt situation, e.g. Assam, Gujarat, and Orissa. The relief and rehabilitation funds are made available to the states largely in the form of loans rather than grants. High interest on all such loans charged by the centre has created a severe debt-servicing problem for the states. Moreover, unjustifiably high interest rates on such loans effectively act like a tax on the natural calamity occurring in the state. We recommend considering all such loans separately and either write them off fully or partially or give a five-year moratorium, apart from reducing interest rates on them.
- ii. Four states – Gujarat, Kerala, Rajasthan and Tripura need restructuring of about 15% of their debt through five-year moratorium on interest payments. For West Bengal and Himachal Pradesh, the proportion of debt has to be 30% and 50 % respectively. All this should be subject to strict adherence to the achievement of  $G_{SOR}$  and  $G_{PE}$  targets of 13.5% and 10% p.a. respectively, failing which, the interest should be added back with penal interest of additional 2%.
- iii. Since loans from the centre have the highest effective interest rate compared to other sources of funds in a state, we recommend at least 200 basis points reduction in the effective interest rate charged by the centre. Over a five-year period, it should be brought in line with the market rate of interest.
- iv. We recommend that the existing cap on market borrowing by states should be reviewed and more freedom should be given to states based on their credit rating and overall economic performance.
- v. Regarding the small savings at higher interest cost, primarily to encourage savings, the centre should give the option to states whether or not to retain these savings. The centre can, moreover, supply excess of small savings

- from one state to the other state demanding such savings. Alternatively, the centre should bear the difference in the interest cost on these savings and the market rate of interest.
- vi. We recommend that the central government should facilitate the prepayment negotiations of loans by state governments to the public sector financial institutions since they carry a very high effective interest rate due to their loan vintage.
  - vii. The Cabinet Committee on Economic Affairs had approved a proposal for rolling over loans for important projects. We recommend an immediate decision to implement it since it will reduce the interest cost for states.
  - viii. We recommend creation of a VRS fund with contributions from the centre and states so that the contributing states can get some relief in meeting their requirements to implement the VRS schemes that would reduce their expenditure.
  - ix. The debt problem of states can be alleviated by increasing vertical distribution of resources. This can be partially achieved by avoiding the huge duplication of resources between the centre and the states on various schemes.
- 4.10 Finally, we must make it explicit that all our scenario calculations and hence specific recommendations depend critically on our assumption about transfers from the centre (TrC). We have assumed that TrC / SOR ratio during 2004-05 to 2009-10 would remain at the average level observed during the 11<sup>th</sup> FC period. If the 12<sup>th</sup> FC alters the horizontal distribution (which it will), the scenarios will have to be recalculated, and accordingly our specific recommendations including the required reduction in effective interest rate for bringing down the IP / RR ratio to tolerable limit (20%) would also change<sup>29</sup>. What we have been able to show here is that the problem of fiscal debt of states in the country is not intractable and can be satisfactorily resolved by 2009-10 if our general recommendations are implemented with the specific cases identified and tackled the way we have suggested.

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<sup>29</sup> We can provide the software on request.

## Appendix- A

### Measurement of Fiscal Deficit and Debt of States

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#### I. Measurement of Fiscal Deficit at State Level

A.1. There is a consensus on the broad definition of fiscal deficit in India both at the central and state level. RBI defines Gross Fiscal Deficit (GFD)<sup>30</sup> as 'the difference between aggregate disbursements net of debt repayments and recovery of loans and revenue receipts and non-debt capital receipts'.

$$\text{GFD} = \text{Total Expenditure} - \text{Recovery of Loans and advances} - \text{Revenue Receipts} - \text{Non-debt Capital Receipts} - \text{Repayment of debt}$$

$$= \text{Revenue Expenditure} + \text{Capital Expenditure} - \text{Recovery of Loans and advances} - \text{Revenue Receipts} - \text{Non-debt Capital Receipts} - \text{Repayment of debt}$$

$$= \text{Revenue Expenditure} + \text{Capital Outlay} + \text{Repayment of debt} + \text{Loans and advances} - \text{Recovery of Loans and advances} - \text{Revenue Receipts} - \text{Non-debt Capital Receipts} - \text{Repayment of debt}$$

$$= \text{Revenue Expenditure} + \text{Capital Outlay} + \text{Loans and advances} - \text{Recovery of Loans and advances} - \text{Revenue Receipts} - \text{Non-debt Capital Receipts}$$

$$= (\text{Revenue Expenditure} - \text{Revenue Receipts}) + \text{Capital Outlay} + (\text{Loans and advances} - \text{Recovery of Loans and advances}) - \text{Non-debt Capital Receipts}$$

$$= \text{Revenue Deficit} - \text{Non-debt Capital Receipts} + \text{Capital Outlay} + \text{Net Lending}$$

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<sup>30</sup>GFD is referred to as fiscal deficit in the government of India's budget documents. The Net Fiscal Deficit (NFD) is a concept relevant for calculating combined fiscal deficit for the centre and the states. Thus, for calculating GFD, we consider total expenditure less recovery of loans & advances, while for NFD, we consider total expenditure reduced by loans & advances net of recoveries (see, Pattnaik, Pillai and Das, 1999; p.13 ).

- A.2. The primary source of the data required for all these calculations is the *Finance Accounts* of the state governments. The RBI and the Indian Audit and Accounts Department (IAAD) have direct access to these data. Therefore, there should not be any ambiguity in the calculation of GFD by these two institutions, if they are using the same definition. We compare the GFD figures for 26 states during the period 1996-97 to 2000-01 (*Table A.1*) between RBI (2002 and 1999) and the Office of the Comptroller and Auditor General of India (CAG, 2003, Study). We see that although the figures match in most cases, which show that both publications have followed the same definition, there are many instances where the difference is quite significant. These instances have been shown in bold in the table.
- A.3. If we take Gujarat as an illustration, we find that GFD figures of RBI and CAG study only in the year 1999-2000 differ by Rs.71 Crores. According to RBI, GFD in 1999-2000 for Gujarat was 6792 Crores while CAG-study figure was 6721 Crores. A closer inspection of RBI and Finance Accounts Data shows that the disparity arises due to the head 'Sale of land and property' which had been ignored by RBI while Finance Accounts had included this under the head 'Non-tax revenue'. While *RBI has committed an error of omission*, *CAG office has made an error of commission* by making the entry not in 'Capital Receipts (Miscellaneous)' but under 'Non-tax revenue'. It is likely that difference between the two estimates in other cases is also due to such errors and not due to any fundamental change in the concept of GFD followed by them.
- A.4. The case of Bihar and Nagaland, however, is more interesting. The GFD figures do not match even in a single year for these two states. The difference arises because RBI has given 'revised estimates' while CAG-study has taken 'actuals'. Similar difference arises for Mizoram and Arunachal Pradesh for the years where RBI has given revised estimates and not accounts data. The large differences in most of these cases arise because of poor marksmanship at the state level. It is a matter of serious concern that we cannot put enough confidence on revised estimates, for their use in policymaking.
- A.5. Another question still remains. Do the figures given in the *Table A.1*, at least when

**Table A.1: State wise Comparison of Gross Fiscal Deficit: RBI V/s CAG Office Publication (In Rs. Crore)**

Sr.	Non Special	1996-97	1997-98	1998-99	1999-00	2000-01
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they match for the two institutions, mean that they are correct as per the RBI definition? Certainly not in all cases! Again taking Gujarat as an illustration, we find that RBI has not followed its own definition in its entirety. The head 'Non-

Debt Capital Receipts (NDCR)' or 'Miscellaneous Capital Receipts (MCR)' has

		RBI	CAG	RBI	CAG	RBI	CAG	RBI	CAG	RBI	CAG
1	Andhra Pradesh	2812	2811	2428	2428	5706	5705	4976	4976	7306	7306
2	Bihar	891	1347	981	2239	2379	3660	6108	5996	4884	6085
3	Goa	104	97	125	125	269	269	341	341	413	413
4	Gujarat	2358	2359	3175	3174	5619	5618	6792	6721	7988	7987
5	Haryana	1099	1100	1128	1127	2240	2240	2133	2132	2265	2265
6	Karnataka	1944	1945	1610	1610	3112	3112	4277	4276	4219	4219
7	Kerala	1543	1543	2414	2414	3012	3012	4537	4536	3878	3878
8	Madhya Pradesh	1926	1925	1821	1820	4127	4129	3911	3911	2712	4188
9	Maharashtra	4954	4954	6442	6442	7462	7462	11706	11706	8976	8976
10	Orissa	1602	1795	1803	1801	2916	3419	3746	3746	3325	3325
11	Punjab	1465	1465	2478	2478	3779	3780	3195	3194	3904	3904
12	Rajasthan	2507	2507	2552	2552	5151	5151	5361	5361	4313	4312
13	Tamil Nadu	2445	2445	2122	2122	4777	4777	5382	5382	5076	5077
14	Uttar Pradesh	5956	5955	7576	7577	11633	11633	11099	11098	10180	12359
15	West Bengal	3397	3397	4008	4008	7109	7110	11666	11657	10920	10920
	<b>Special Category States</b>										
1	Arunachal Pradesh	70	72	121	122	55	56	59	89	210	284
2	Assam	74	74	142	142	338	338	1606	1606	1540	1540
3	Himachal Pradesh	572	572	1202	1203	1662	1662	190	189	1845	1845
4	Jammu & Kashmir	166	954	444	501	1054	1054	1339	1338	2166	1873
5	Manipur	168	157	188	190	106	108	656	644	234	227
6	Meghalaya	23	23	127	126	147	147	209	209	250	249
7	Mizoram	125	136	124	163	132	99	179	214	375	375
8	Nagaland	184	137	204	265	243	185	249	183	359	271
9	Sikkim	56	55	67	66	147	147	93	92	51	51
10	Tripura	122	122	196	196	118	118	290	291	445	445

been ignored. The same is true for CAG-study. GFD figures are, therefore, higher by this factor for both the studies. It has introduced an error in four of the last five years. Similar analysis on two other states viz. Assam and Kerala

corroborates the finding. Only in the case of Orissa do RBI actuals and RBI definition figures match, indicating that MCR is included in the GFD calculation for Orissa. This introduces another dimension to this problem. If MCR inclusion or exclusion is not consistent across all states, comparison of GFD across states on this criterion could be erroneous sometimes to a large extent. For example the value of MCR for Orissa in the year 1998-99 is Rs.500 crores which is about 17% of the correct GFD figure. In order to ensure comparability and consistency, we have, therefore, recalculated GFD for all states using the RBI definition given above. We report these estimates in *Table A.2*.

## **A-II. Measurement of Total Liabilities or Debt of States**

A.6 Fiscal Deficit is the overall gap in the expenditure and revenue of the government and therefore represents a liability that can be covered either by borrowing or through monetization. Thus,

$$\text{GFD} = \text{DFD} + \text{MFD} \dots\dots\dots (\text{A.1})$$

Where DFD: Deficit Financed by Debt i.e., Debt-Financed Deficit; and

MFD: Deficit financed by increased liquidity, i.e., Money-Financed Deficit or Quasi-Money-Financed Deficit.

The Central government has both the options available with it while a state government is constrained with respect to the second because it doesn't have access to seigniorage. However, it does not mean that MFD is nil for state governments. Suri (2000) contends that the money financing in the context of states would comprise changes in the following elements: 1) Cash balances; 2) WMA advances and overdrafts from RBI; 3) Net sale of securities held by states in their investment account; and 4) Encashment of securities held in revenue funds. There are 'investment accounts' appearing as sub-heads in Finance Accounts statements of state governments as part of the reserve fund, deposits & advances, sinking fund and as 'cash balance investment account' under suspense & miscellaneous head. These investments are generally in statutory corporations, government companies, cooperative institutions, etc. and not in Government of India securities. It is the sale of only Government of India

securities held by RBI on behalf of the state governments that would qualify as monetization. This sale comes into effect automatically once the general cash balance of a state government falls below the stipulated minimum<sup>31</sup>. Thus, changes in general cash balance would reflect items 3 & 4 given above.

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<sup>31</sup> See, Explanatory Notes, Statement No. 7, *Finance Accounts*, CAG Office publication.

Table A.2: Consistent and Comparable Estimates of GFD for States (Rs. Crores)																
Sr. No.	Non Special Category States	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04
1	Andhra Pradesh	972	967	1125	1484	1833	2349	2417	2811	2428	5705	4976	7306	6723	7692	7528
2	Bihar	993	1595	1617	1330	1339	1342	1571	1347	2239	3660	5996	4075	608	4911	4257
3	Goa	97	96	125	79	60	45	97	103	125	269	341	413	419	426	429
4	Gujarat	953	1799	1791	1151	525	1292	1746	2359	3002	5617	6705	7965	6509	6028	9894
5	Haryana	392	386	375	444	480	535	986	1100	1127	2241	2132	2264	2740	1471	0
6	Karnataka	633	558	918	1386	1254	1513	1457	1945	1610	3112	4276	4219	5870	5564	3757
7	Kerala	604	798	803	733	936	1109	1302	1543	2408	3009	4535	3878	3269	4994	5654
8	Madhya Pradesh	724	1019	984	876	839	1377	1633	1925	1820	4129	3911	3539	3649	4569	4120
9	Maharashtra	1843	1610	1657	2686	2265	2861	4153	4954	6444	7463	11406	8976	10898	14290	19477
10	Orissa	573	617	912	740	902	1158	1397	1602	1801	2924	3746	3325	3968	2816	5495
11	Punjab	909	1242	736	1252	1493	1785	1365	1465	2478	3779	3194	3904	4959	4772	5319
12	Rajasthan	581	544	792	818	1467	1763	2574	2507	2552	5152	5361	4312	5748	6605	7559
13	Tamil Nadu	920	1126	1300	1749	1358	1496	1256	2446	2122	4777	5382	5058	4699	6028	6944
14	Uttar Pradesh	2481	3068	2838	3711	3166	4793	4379	5955	7577	11633	11098	10177	9911	9497	20414
15	West Bengal	1055	1634	1144	1013	1672	1965	2696	3397	4008	7110	11657	10920	11804	10569	13325
<b>Special Category States</b>																
1	Assam	527	568	253	208	-18	711	654	73	143	339	1606	1541	1448	928	3772
2	Arunachal	75	26	-20	-9	16	73	40	72	123	57	71	282	247	169	71
3	Himachal Pradesh	227	279	266	312	152	620	521	572	1203	1662	189	1845	1513	2345	2502
4	Jammu & Kashmir	524	661	449	203	68	-23	97	166	402	1054	1338	1873	1474	214	605
5	Manipur	70	40	69	18	-20	62	105	157	189	106	644	225	340	451	296
6	Meghalaya	30	41	72	93	88	35	52	23	125	147	209	249	221	381	291
7	Mizoram	-3	-94	5	69	8	38	71	134	161	98	214	377	422	315	281
8	Nagaland	141	102	96	138	174	239	231	133	262	194	192	273	337	392	312
9	Sikkim	29	20	41	34	22	46	40	55	64	146	91	50	67	52	45
10	Tripura	88	91	94	23	111	110	34	120	195	119	290	444	524	727	610

Office/ Department/ Commission	Items	31st Mar 1997	During 97-98	31st Mar 1998	During 98-99	31st Mar 1999	During 99-2000	31st Mar 2000	During 00-01	31st Mar 2001
Finance Accounts (CAG Office)	Debt and Other Obligations	17175.13	3242.88	20418.01	5400.59	25818.6	6752.52	32571.12	8372.53	40943.65
	Deduct Cash Balance	-6.58	79.7	73.12	-143.27	-70.15	123.63	53.48	406.73	460.21
	Deduct Investments	528.86	8.93	537.79	-74.16	463.63	-76.49	387.14	0.53	387.67
CAG Office Research Publication	Net Provision of funds	16652.85	3154.25	19807.1	5618.02	25425.12	6705.38	32130.5	7965.27	40095.77
	Outstanding Fiscal Liabilities (CAG - Study)	17024	3115	20139	4618	24757	6804	31561	8446	40007
RBI	Outstanding Fiscal Liabilities (RBI)	12784	2278	15062	3500	18562	4422	22984	6802	29786

Government of Gujarat	Outstanding Fiscal Liabilities (GOG)	11976	2083	14059	3021	17080	3771	20851		
EFC	Outstanding Fiscal Liabilities (EFC - including WMA advances and overdrafts from RBI)			24757			4046	28804		
	Outstanding Fiscal Liabilities (EFC - excluding WMA advances and overdrafts from RBI)					19189	3486	22674		
	GFD: CAG-Study		3174		5618		6721		7987	
	GFD: RBI (Actuals)		3174		5619		6792		7987	
	GFD: RBI Actuals corrected for MCR		3002		5617		6705		7965	
	GFD: RBI Definition		3002		5617		6705		7965	

**The definitions of debt followed by these publications are as follows:**

- CAG Study** : Internal Debt+ Loans from the Centre+ Reserve Funds + Small Savings & Provident Funds + Other obligations (Reserve Funds and Deposits & Advances etc. with some adjustments)
- Government of Gujarat** : Internal Debt + Loans from the Centre
- EFC** : Central loans + Market loans and bonds + Loans from Banks etc. + Provident funds + Reserve Funds and Deposits + (WMA from RBI). Although EFC had stated two definitions of debt, one with and the other without WMA, for calculation of ratios etc. the commission included WMA as a part of debt.
- RBI** : Internal loans (net) + Loans from the Centre (net)+ Small Savings and Provident Funds etc.

Thus, what remains under MFD at state level is reduction in cash balances and WMA advances and overdrafts from RBI<sup>32</sup>.

- A.7. Our next step will be to examine how significant is MFD in financing state government deficits. We need to define 'Fiscal Liabilities' for this purpose. Here again we find marked differences in the definitions of 'fiscal liabilities' as followed by State Governments, CAG study (2003), RBI and the Eleventh Finance Commission (11<sup>th</sup> F.C). *Table A.3* provides an illustration for Gujarat. We can see that incremental fiscal liabilities do not match with GFD figures (given by RBI/ CAG Office) for any of the years. Among these sources, the figure under 'net provision of funds' as given in the Statement 15 of *Finance Accounts* is the closest to the GFD value. The mismatch could be either due to an *incorrect definition of deficit and debt* or if there was a *component of money finance in the deficit*. We examined the data closely for all these possibilities and after correcting for the erroneous exclusion of MCR in GFD calculation by RBI, found that the following sources financed GFD:

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<sup>32</sup> That is precisely what the *RBI Staff Study* (DEAP), June 1999 has stated in note 11 p.33.

### Statement 1: Provision of funds (RBI data)

A	<b>Add</b> (From Appendix III) <ol style="list-style-type: none"><li>1. Internal debt (receipts)</li><li>2. Loans from the Centre (receipts)</li><li>3. Increase in WMA advances and overdrafts from RBI<sup>33</sup>.</li><li>4. Contingency fund (net)</li><li>5. Small savings, provident fund etc. (net)</li><li>6. Reserve Funds (net)</li><li>7. Deposits and advances (net)</li><li>8. Suspense and Misc. (net).<sup>34</sup></li><li>9. Remittances (net)</li></ol>
B	<b>Subtract</b> (From Appendix IV) <ol style="list-style-type: none"><li>10. Repayment of Internal Debt</li><li>11. Discharge of Central Loans</li></ol>
<hr/> <b>Total Debt and other obligations</b> <hr/>	
C	<b>Subtract</b> (From Appendix IV) <ol style="list-style-type: none"><li>1. Increase in Cash</li><li>2. Increase in Cash Investment Balance</li></ol>
<hr/> <b>Net Provision of Funds</b> <hr/>	
D	<b>Add</b> <sup>35</sup> (from Appendix III) <ol style="list-style-type: none"><li>1. Inter-state Settlement</li><li>2. Appropriation to Contingency Fund</li></ol>
<hr/> <b>=&gt; Provision of funds = Gross Fiscal Deficit</b> <hr/>	

<sup>33</sup> This is if we are using RBI data. CAG data already includes this hence this step is not required. RBI gives this information in Annexure IV (last item)

<sup>34</sup> We may note that RBI figure includes Cash Investment Balance already. It is subtracted later when calculating fiscal deficit. Thus investment balance has no effect on fiscal deficit

<sup>35</sup> Items 1 & 2 under 'D' are a part of the Consolidated Fund Statement 16: Part 1 of *Finance Accounts*. Items 1 & 2 under 'D' are 'closed to government accounts'. According to explanatory note 4, statement 8, *Finance Accounts, Gujarat 1997-98*, 'the amounts booked under revenue and capital heads and other transactions of government, the balances of which are not carried forward from year to year in the accounts are closed to a single account called 'Government Accounts'. Amount appropriated to the contingency fund is closed by a net credit entry in the contingency fund. This transfer implies an increase in the closing balance of contingency fund and, therefore, is reflected as an additional liability. For the state of Gujarat, Item 1 under 'C' comprises recoveries from/payments to Maharashtra arising out of the Bombay Reorganization Act, 1960 adjusted under the head "Inter State Settlement" and is shown under "E – Miscellaneous" of *Finance Accounts* for the purpose of closing. While it does form a part of the fiscal deficit, it does not induce additional liability on the government. Thus, both the items under 'C' would not classify as additional debt for the subsequent years but would be added to bridge the GFD in the current year.

A.8 The above statement has been applied to 25 states for a 15 year period (1989-90 to 2003-04). It can be seen that there is an almost exact match between the 'Provision of funds' as given by Statement 1 and Gross Fiscal Deficit values (RBI Actuals corrected for MCR) for all the years under consideration. This perfect matching of the correct GFD estimate with an aggregate from the *Finance Accounts* of the state government is a precondition for first defining and then measuring the theoretically consistent and appropriate concept of debt at the state level. After all, debt must have a well-defined link with the fiscal deficit. Again, the link is not of a 'stock and flow' nature as generally assumed in the simplified expositions. This is because,  $GFD = DFD + MFD$  (as stated earlier) And it is only DFD that adds to the debt of a state. It is, therefore, important to get estimates of money financed or quasi-money financed deficits for different years for all the states. We present these estimates in *Table A.4* along with the debt financed deficits.

Now, we are in a position to generate consistent estimates of liabilities of the state governments over time because

$$\Delta D_t = DFD_t = D_t - D_{t-1} \quad \dots\dots\dots (A.2)$$

where  $D_t$  is debt or liabilities of the state government at the end of the year  $t$  and  $DFD_t$  is the debt financed deficit during the year  $t$ .

$$\therefore D_t = D_{t-1} + DFD_t \quad \dots\dots\dots(A.3)$$

It is clear from equation (3) that we need an estimate of the stock of debt in any one year and a continuous time series of DFD for each of the states. It is possible to get the consistent estimate of debt to our concept of the debt financed deficit from the *Finance Accounts* of a state using the above method and the following precise definition of debt (outstanding liabilities). Outstanding Liabilities = internal debt+ loans from the centre + small savings+ deposits and advances+ contingency fund + reserve fund+ remittances+ suspense and miscellaneous.

We have, thus, generated estimates of debt or liabilities of all state governments, and report them in *Table A.5*.

**Table A.4: Debt Financed and Money Financed Deficits for States (Rs. In Crores)**

Sr. No.	States	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	
		89-90	89-90	90-91	90-91	91-92	91-92	92-93	92-93	93-94	93-94	94-95	94-95	95-96	95-96	96-97	96-97	96-97
<b>Non Special Category</b>																		
1	AP	915	57	1031	-64	1100	25	1547	-63	1722	112	2290	59	2649	-232	2370	441	
2	Bihar	968	26	1413	181	1569	48	1288	42	1330	9	1342	0	850	721	1347	0	
3	Goa	98	-1	99	-3	123	2	94	-15	51	8	58	-13	85	12	116	-13	
4	Gujarat	1136	-183	1691	108	1776	15	1064	87	727	-201	1202	90	1809	-63	2364	-5	
5	Haryana	376	16	412	-26	437	-62	387	57	446	34	590	-55	1028	-42	1015	85	
6	Karnataka	660	-27	590	-31	877	41	1330	56	1243	11	1555	-42	1464	-7	1988	-44	
7	Kerala	677	-73	773	25	780	23	773	-40	1035	-100	1141	-32	1280	22	1497	46	
8	Maharashtra	1865	-22	1593	17	1700	-43	2664	21	2206	59	2623	238	4553	-400	4583	371	
9	Madhya Pradesh	896	-172	950	69	785	199	996	-120	908	-69	1536	-159	1499	135	2162	-237	
10	Orissa	449	124	785	-168	849	63	728	12	969	-67	1263	-105	1228	169	1458	144	
11	Punjab	901	8	1264	-22	816	-80	1184	68	1411	82	1643	142	1351	14	1793	-328	
12	Rajasthan	619	-38	440	104	1066	-274	988	-171	1339	128	1819	-56	2217	358	2284	223	
13	Tamil Nadu	1107	-187	1059	67	1155	145	1934	-185	1563	-205	1406	90	1370	-114	2462	-16	
14	Uttar Pradesh	2634	-153	3234	-166	2896	-58	3502	209	3028	138	4582	211	4827	-448	5628	327	
15	West Bengal	972	83	1742	-109	1058	86	1190	-177	1527	144	2199	-233	2773	-76	3476	-79	
<b>Special Category</b>																		
1	Arunachal	88	-13	38	-13	-13	-7	15	-25	-48	64	30	43	36	3	32	39	
2	Assam	429	98	601	-33	246	7	225	-18	-133	115	2030	1319	843	-189	41	32	
3	Himachal Pradesh	168	59	316	-38	231	35	203	109	299	-147	305	315	-35	556	658	-86	
4	Jammu & Kashmir	524	0	386	275	27	421	164	40	-56	123	-23	0	97	0	73	93	
5	Manipur	51	19	72	-32	43	26	13	6	12	-33	50	12	70	35	205	-48	
6	Meghalaya	38	-8	26	15	70	3	79	14	67	20	36	-1	60	-9	34	-12	
7	Mizoram	38	-41	-109	14	14	-9	63	6	6	2	43	-5	45	26	71	64	
8	Nagaland	100	41	69	33	34	62	10	128	180	-6	133	106	146	85	54	79	
9	Sikkim	22	7	37	-17	25	16	46	-12	21	0	47	-2	35	5	31	25	
10	Tripura	166	-77	93	-1	60	34	72	-49	97	14	130	-20	72	-38	74	46	

**Table A.4: Debt Financed and Money Financed Deficits for States (concl.) (Rs. In Crores)**

Sr. No.	Non Special Category States	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	DFD	MFD	
		97-98	97-98	98-99	98-99	99-00	99-00	00-01	00-01	01-02	01-02	02-03	02-03	03-04	03-04	03-04
1	AP	2844	-417	5363	342	5235	-259	6971	335	7157	-434	7692	0	7528	0	
2	Bihar	2324	-86	2890	770	6230	-234	-1745	5821	-410	1018	3882	1030	4366	-109	
3	Goa	122	3	267	2	514	-173	421	-8	613	-194	415	11	427	2	
4	Gujarat	3233	-231	5474	143	6602	103	7710	255	6411	98	6574	-546	9894	0	
5	Haryana	1097	30	2173	68	2032	100	2221	43	2429	311	1878	-407	0	0	
6	Karnataka	1662	-52	3056	56	4294	-18	4185	33	5827	43	5093	471	4005	-248	
7	Kerala	2577	-169	2716	293	4515	20	3458	420	3491	-222	4994	0	5654	0	
8	Maharashtra	6769	-325	7288	175	13718	-2312	9297	-321	9967	931	14285	5	18655	822	
9	Madhya Pradesh	2111	-291	3750	378	3990	-78	-3021	6560	4521	-872	3960	609	3985	136	
10	Orissa	2076	-275	2406	518	4024	-278	2885	440	3538	430	3437	-621	4577	918	
11	Punjab	2281	198	3003	776	3822	-628	4090	-186	4752	206	4449	323	4885	435	
12	Rajasthan	2961	-409	4055	1097	5811	-450	4689	-376	5143	606	6605	0	7559	0	
13	Tamil Nadu	2135	-12	4634	143	5104	278	5368	-310	4695	3	4985	1042	5904	1041	
14	Uttar Pradesh	8011	-434	11058	575	9449	1649	10662	-485	9390	521	-2720	12217	3932	16482	
15	West Bengal	4086	-78	7070	39	10168	1489	10928	-8	10978	826	10684	-115	13126	199	
<b>Special Category States</b>																
1	Arunachal	145	-22	26	31	106	-35	290	-8	200	48	163	7	86	-15	
2	Assam	107	36	403	-64	1104	502	1419	122	960	488	1699	-771	1606	2166	
3	Himachal Pradesh	1067	136	1397	265	1038	-849	1874	-29	1364	149	1994	352	1786	716	
4	Jammu & Kashmir	-91	493	975	78	1460	-122	1382	492	1676	-202	341	-127	492	113	
5	Manipur	79	111	45	61	487	158	438	-213	-155	495	-1168	1619	292	4	
6	Meghalaya	140	-15	155	-8	247	-38	293	-44	165	56	372	9	285	6	
7	Mizoram	199	-38	32	66	323	-109	318	59	312	110	403	-87	184	97	
8	Nagaland	160	102	134	60	356	-164	191	82	388	-51	284	109	212	100	
9	Sikkim	47	17	159	-13	174	-83	35	14	104	-37	52	0	45	0	
10	Tripura	119	76	38	81	311	-21	390	54	485	39	703	24	637	-27	

**Table A.5: Liabilities (Debt) of State Governments Consistent with Debt Financed Deficits (Rs. Crores)**

Sr. No.	Non Special Category States	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04
1	Andhra Pradesh	5979	7034	8065	9166	10712	12434	14723	17373	19746	22591	27954	33189	40161	47317	55009	62536
2	Bihar	6644	7611	9025	10594	11882	13213	14555	15405	16933	19258	22148	28378	26633	26223	30105	34471
3	Goa	585	682	781	904	998	1050	1107	1193	1311	1432	1699	2213	2635	3248	3663	4090
4	Gujarat	4884	6019	7708	9484	10548	11277	12479	14287	16649	19883	25357	31958	39667	46078	52653	62546
5	Haryana	2177	2553	2965	3402	3788	4234	4823	5851	6865	7963	10135	12168	14390	16819	18697	18697
6	Karnataka	4124	4784	5374	6251	7581	8791	10346	11810	13798	15460	18515	22736	26922	32749	37842	41847
7	Kerala	3335	3967	4740	5520	6293	7328	8468	9749	11245	13822	16539	21054	24511	28003	32996	38650
8	Madhya Pradesh	5621	6517	7467	8252	9237	10145	11721	13220	15382	17494	21242	25232	22211	26732	30692	34677
9	Maharashtra	4671	6537	8131	9831	12395	14602	17225	21776	26359	33126	40413	54131	63427	73394	87679	106333
10	Orissa	3797	4231	5015	5866	6595	7564	8828	10055	11513	13590	15988	20013	22898	26436	29873	34450
11	Punjab	5075	5977	7240	8056	9240	10652	12295	13645	15438	17718	20722	24544	28634	33386	37836	42720
12	Rajasthan	5426	6045	6485	7552	8540	9878	11697	13914	16198	19159	23213	29025	33714	38857	45462	53022
13	Tamil Nadu	4366	5478	6522	7901	9835	11398	12804	14174	16635	18769	23404	28527	33895	38590	43576	49480
14	Uttar Pradesh	12551	15186	18419	21316	24818	27845	32428	37255	42883	50894	60244	69900	80562	89952	87232	91164
15	West Bengal	5618	6590	8332	9390	10611	12139	14337	17110	20586	24672	31741	41918	52846	63824	74508	87634
<b>Special Category States</b>																	
1	Assam	1580	2009	2609	2856	3081	2948	4977	5819	5861	5967	6369	7474	8891	9851	11550	13157
2	Arunachal	99	187	226	212	228	180	210	247	279	424	450	575	866	1065	1228	1314
3	Himachal Pradesh	1184	1352	1668	1899	2101	2400	2705	2670	3328	4394	5699	6737	8611	9975	11969	13755
4	Jammu & Kashmir	4227	4751	5138	5165	5329	5273	5250	5346	5420	5370	6346	7838	9437	11113	11454	11946
5	Manipur	217	268	340	383	395	406	456	526	689	767	813	1299	1738	1583	415	707
6	Meghalaya	49	88	114	184	263	330	366	426	461	603	758	1005	1299	1463	1836	2120
7	Mizoram	299	338	229	242	305	311	354	399	470	669	701	1024	1342	1654	2056	2240
8	Nagaland	137	237	305	339	349	529	662	808	862	1022	1156	1503	1730	2118	2401	2614
9	Sikkim	72	94	132	157	203	224	272	307	338	388	548	724	760	864	916	962
10	Tripura	369	531	624	684	756	853	983	1056	1131	1251	1289	1600	1991	2476	3179	3816

Note: Outstanding Liabilities = Internal Debt+ Loans from the Centre+ Small Savings+ Deposits and Advances+ Contingency Fund+ Reserve Fund+ Remittances+ Suspense and Miscellaneous

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