Working Paper

INTERNATIONAL MONETARY FUND

WP/91/72

INTERNATIONAL MONETARY FUND

Fiscal Affairs Department

The Growth of Indian Public Debt--
Dimensions of the Problem and Corrective Measures

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July 1991

Abstract

This paper traces the causes of the rapid growth of India's public debt, with special reference to internal debt. It then demonstrates that the growth of debt would become unsustainable by the end of the 1990s if the present trends continue. It develops a methodology to iterate the path of growth of debt to discover the sustainable level of the primary deficit. Finally, it suggests concrete measures to bring down the primary deficit.

JEL Classification Number

H63

1/ The main part of this paper was written while Professor Raja J. Chelliah of the National Institute of Public Finance and Policy (NIPFPO), New Delhi, India, was a Visiting Scholar at the Fiscal Affairs Department of the International Monetary Fund. The basic data were collected at the Institute at New Delhi, where revisions were also carried out. Help in gathering and codifying data from R.D. Gupta and computational assistance from K.K. Atri (both of NIPFP), and further computational assistance in making projections from J. Brondolo of FAD, as well as from K.K. Atri are gratefully acknowledged. Thanks for useful comments are due to Vito Tanzi, Jocelyn Horne, Anupam Basu, Shankar Acharya, and Susan Schadler. The author is responsible for any errors that remain.

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Summary

This paper examines public debt in India and concludes that if present trends of borrowing by the Government of India continue, the country will plunge into financial crisis by the end of the 1990s. It analyses the causes of the growth of debt by tracing trends in the total fiscal deficit and in the primary deficit. In the base year 1989/90, the primary deficit was nearly 4 percent of GDP, while the total deficit was taken to be 7.6 percent. On the basis of a number of conservative (favorable) assumptions and using a simple projection methodology, the analysis demonstrates that maintaining the primary deficit even at a level of 3.5 percent is unsustainable because this would raise the debt-to-GDP ratio to 77.4 percent in 2000/01 from 60.2 percent in 1989/90, and the deficit-to-GDP ratio to nearly 10 percent. Interest payments would then absorb 6.4 percent of GDP, casting an unbearable burden on the budget.

The paper shows that the first stage of fiscal adjustment should consist of measures to enable the Government to reduce the primary deficit to 2.5 percent of GDP by the year 2000/01. If this is done, the growth of public debt will slow and the total deficit will be contained around 8 percent of GDP in 2000/01.

In order to reduce the primary deficit to 2.5 percent of GDP, steps must be taken to reduce the deficit on the budget's revenue account to take much of the financing of the public enterprises out of the budget, to stabilize the rate of capital formation on government account, to raise the return on government lending and investment, and to increase the income elasticity of taxes through tax reform. Given the waste and slack in Government, and in view of certain unjustifiable subsidies, expenditure reduction should be emphasized more than tax increases. Three steps are needed: narrowing the scope of government activities, freezing government employment, and cutting subsidies. To reduce capital expenditure, the Government should privatize public enterprises and close down or sell inessential loss-making ventures, while compensating or rehabilitating the workers who will be displaced. Finally, the Planning Commission's approach of approving the growth of expenditure within a five-year horizon without regard to how the higher expenditure will be sustained in the future, must be abandoned.

Once the first stage of adjustment is completed, loan finance should be largely limited to capital expenditures, whose benefits could be spread over a number of years. The paper ends by suggesting an accounting framework that would help regulate and evaluate the role of debt in government finance.

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I. Introduction

1. Objectives

The uninterrupted and rapid growth of public debt in India during the 1980s is only a manifestation of the deepening fiscal crisis that has overtaken the country. Earlier on, most Indian economists had held that the growth of public debt in "planned" magnitude was normal and desirable in a developing country since government borrowing represented the absorption by the Government of a part of domestic savings and of the inflow of capital from abroad, to finance and promote capital formation in the public sector and priority areas in the private sector. The rather complacent attitude to government budget deficit (in the broad sense) and the resultant growth in public debt was based on the assumptions that borrowed funds would be used only for capital purposes and that the resultant investments would yet yield adequate direct or indirect returns. The assumptions were often not fulfilled in practice. The manner in which capital funds from the domestic private sector were raised and its impact on the allocation of resources also have not been adequately studied and taken note of. The fiscal crisis and the attendant exponential growth of public debt has arisen, not merely because of revenue expenditures running ahead of current revenues, but also because capital expenditures financed by borrowing have not been productive of adequate returns.

Public debt has grown very fast during the 1980s--both absolutely and in relation to GDP. The total debt of the Central and state governments ^{1/}, according to budgetary figures, grew from Rs 215.77 billion at the end of 1970/71 to Rs 663.51 billion at the end of 1980/81. From this level, it grew rapidly to Rs 2,637.58 billion at the end of 1988/89. As a proportion of GDP, this meant a fall from 50 percent at the end of March, 1971, to 48.9 percent at the end of 1980/81, and then a rise to 67.4 percent at the end of 1988/89. Of the total public debt (center and states), external debt accounted for Rs 252.30 billion or 9.57 percent of the total at the end of 1988/89.

The debt of the Government of India (GOI) grew from Rs 191.93 billion at the end of 1970/71 to Rs 594.49 billion at the end of 1980/81, and to Rs 2,282.41 billion at the end of 1988/89; of this, internal debt accounted for Rs 2,027.02 billion. That is, internal debt at the end of 1988-89 formed 51.8 percent of GDP in that year.

It is clear that during recent years the public debt in India has been growing at a rather alarming rate, with the budget deficits increasing as a proportion of revenues as well as of GDP. ^{2/} Alongside, the proportion of the central government deficit financed by net Reserve

^{1/} Eliminating double counting and ignoring the small portion of central government securities held by the state governments.

^{2/} The ratio deficit to GDP was around 8 percent in 1989/90 for the GOI.

Bank of India (RBI) credit has increased from less than 16 percent in the early 1970s to nearly one third during the latter half of the 1980s. This burgeoning of public debt and the disproportionate and rising share of RBI credit in the total financing of central government budget deficit has naturally given rise to serious concern among financial experts as well as the general public. Questions have been raised about the medium- or long-term "sustainability" of the debt and its burden, and fears have been expressed about the Government (and the country) falling into "debt traps," external and internal.

In considering the growth of public debt/GDP ratio and its consequences, not just internal debt, but both internal and external debt should be included. However, the growth of external debt at a fast pace and beyond a limit creates its own special problems, which are additional to the problems caused by the rising debt/GDP ratio as such, and a discussion of the problems caused by external debt must take note of the total external debt of the economy as a whole and not just that of the public or government sector. In this paper, attention is focused on the internal public debt of the GOI, although the GOI's external debt is also taken into account at the appropriate stage for projecting the path of growth of total public debt/GDP ratio and the growth of interest burden.

Three of the most recent studies of the problem of the rapid growth of Indian public debt, namely, Rangarajan et al (1990), Buiter and Patel (1990), and Genberg (1989b) have carried out mathematical exercises, on the basis of an implicit or explicit model, to predict the growth and nonsustainability of the Indian public debt. The purpose of this present paper is not to explore the consequences of the growth of public debt on the basis of an explicit model, which takes into account the interactions between the growth of debt/GDP ratio, real interest rate, growth of the economy, and inflation. The purpose of this paper is rather to demonstrate to the policymakers that the rate of growth of net public borrowing witnessed in recent years is not sustainable on reasonable assumptions regarding interest and growth rates even if these and the inflation rate are held invariant to the rates of growth of deficit/GDP and debt/GDP ratios. After such demonstration, attention is concentrated on working out the degree of adjustment needed to restrict the growth of internal debt to a sustainable level, and on the policy measures required to move toward that objective. During the course of the discussion, an attempt is also made to clarify some conceptual issues.

2. Definition of public debt and deficit

In this paper, by public debt of India, we mean the internal and external debt of the GOI. The most comprehensive definition of Indian public debt would include the indebtedness of all the three levels of Government and all public enterprises, to the domestic private sector and to the external sector. Since we are mainly concerned with identifying the budgetary policy changes to be effected by the GOI--the main

actor in the field--we are confining ourselves to the debt of the GOI. It so happens that, as of today, the major part of the debt of central public enterprises and of the state governments consists of their indebtedness to the GOI. Hence, the debt of GOI is a good index of the Indian public debt.

The RBI is wholly owned by the GOI. We treat RBI as a public financial enterprise and exclude it from the definition of the GOI. Since the liabilities of GOI to RBI are treated as part of its debt, we are able to consider separately RBI credit to Government, and discuss its consequences. (However, while discussing the interest burden on the community arising from public debt, it may be proper to exclude the interest paid to RBI since almost all of it can, in theory, be rerouted to GOI as dividends.) Borrowing from RBI is equivalent to printing (base) money, which is taken as seignorage. Seignorage enables the Government to obtain resources without incurring liability to repay or pay interest. Borrowing from the RBI does not in effect entail any liability to repay, but interest is paid on the government debt held by it. Most of this interest is not rerouted to GOI but is spent in various ways by RBI as allocation of its profits. We are therefore reckoning the liabilities of the GOI to RBI as part of public debt, and including the interest thereon in the interest on public debt.

The budget deficit has been defined in many ways. Since we are dealing with public debt and its growth, we define government deficit as the required net borrowing ^{1/} by the Government to cover the gap between expenditures and revenues. Since part of net borrowing is used for lending, expenditures are taken to include those on (a) goods and services; (b) subsidies and transfers other than interest; (c) interest; and (d) net lending, including investment in equity. This gap is generally referred to as fiscal deficit. Fiscal deficit minus interest payment has been defined as primary deficit, indicating the gap in resources occasioned by the current policies of the Government. Thus, primary deficit = expenditure on goods and services + subsidies and transfer payments other than interest + net lending - current revenues inclusive of interest and dividend receipts. If primary deficit is zero, it would mean that government expenditure on the three items mentioned in the above equation is confined within the limit of total revenues raised. ^{2/}

3. Coverage and assumptions

The study covers the interest-bearing obligations of GOI excluding (a) securities issued to the international financial institutions; (b) compensation and special bearer bonds; and (c) reserve funds and

^{1/} Cross borrowing minus repayment, if any, of part of existing debt.

^{2/} The primary deficit can also be calculated after excluding net lending from the expenditure side.

deposits. The debt figures used here therefore differ from the budget figures. The debt at the end of 1989-90 is taken as the base for projections which are extended generally up to the year 2000/01.

To indicate the nonsustainability of the fiscal policy stance of recent years, we first project the growth of internal debt on the assumption that net borrowing from domestic sources, except RBI, would grow at the same rate as in the last five years (Assumption 1). Borrowing from RBI is taken to remain constant as proportion of GDP. During the projection period, nominal GDP is assumed to grow at the rate of 12 percent per annum; comprising a real growth rate of 5.5 percent (as achieved during the Seventh Plan period (1985-90) and as stipulated in the Eighth Plan for the period 1990-95), and a 6.5 percent rise in the price level (close to the rate of increase in the GDP deflator in the 1980s).

In order to keep close to budgetary practice and to facilitate the use of budgetary data, borrowing from RBI or monetary deficit, has been taken to be equivalent to (a) issue of 91-day Treasury bills, plus (b) running down of Government's cash balances. Since (b) is usually negligible, we take in effect what roughly amounts to short-term borrowing from RBI. ^{1/} The reason for holding constant the ratio of borrowing from RBI is to make realistic the assumption that the rate of inflation will not accelerate and would be 6.5 percent per annum (i.e., only slightly higher than in the past in terms of GDP deflator).

Once the rate of increase in the price level is taken to remain the same as in the past, the nominal rates of interest on the instruments of government borrowing are also assumed to remain the same as in 1989/90. This would imply that no increase in the real rates of interest would be needed to obtain funds on an increasing scale--at the same rapid pace as in the past five years. This is an unrealistic assumption. But what could be shown is that even on such an unrealistic assumption, a program of borrowing by GOI leading to the past rate of growth of internal public debt would not be sustainable.

The nominal rates of interest on different instruments were as follows in 1989/90:

^{1/} The monetary deficit as defined by the Report of the Committee to Review the Working of the Monetary System (RBI, 1985) is broader and more appropriate, but even that does not indicate the full monetary impact of budgetary operations since, for example, it excludes foreign grants spent domestically and the receipt of profits from RBI. In recent years, the monetized deficit, as taken here, and as traditionally measured in India, and the monetary deficit as defined by the above-mentioned Committee have been fairly close as percentage of GDP.

<u>Description</u>	<u>Rate of Interest</u>
Market loans	11.5
Small savings	
(a) Post office savings account	5.5
(b) Others	12.0
Provident funds, etc.	12.0
Treasury bills	4.6

The assumption that the nominal rates of interest on future borrowing would remain the same as in the base year does not mean that the average rate of interest on internal debt would not increase. In fact, that would increase for two reasons: (a) the relative share of Treasury bills with the lowest rate of interest would fall as borrowing from other sources would be rising faster than GDP whereas borrowing from RBI would be growing only as fast as GDP; (b) the rate of interest on market loans contracted earlier at lower rates of interest and forming part of the base-year internal debt, would go up as they mature and are converted into "new" securities.

Indeed, an important feature of this study is that the maturity pattern and the different interest rates on the components of the existing internal debt have been taken into account, and additional interest liability has been included from the respective dates of conversion. Thus, we get a profile of interest burden in respect of the debt existing in the base year during the projection period. To this is added the interest on additional debt arising from future budget deficits. This procedure enables us to get a more realistic picture of the future interest burden than if we had assumed the same average rate of interest as in the base year, or had applied the marginal rates to the different components of total debt.

Having traced the major implications of the growth of net domestic borrowing at a pace registered during the past five years (Assumption I), we then project the growth of internal debt on the assumption that the ratio of net domestic borrowing to GDP remains constant at the level reached in 1989/90 (Assumption II). In both cases, in order to give an idea of the total debt burden, we add on the growth of external debt of GOI on the assumption that external borrowing would form the same proportion of GDP as in the base year.

4. The public debt position in the base year (1989/90)

At the end of 1989/90, total internal debt amounted to Rs 2,098.7 billion, which constituted 47.9 percent of GDP. The major components of the internal debt and their relative importance are shown in Table 1. Treasury bills representing borrowing from RBI and market loans were of equal importance, each category accounting for about 30 percent of the total. While the Treasury bills mentioned here are held by RBI, much of

the greater part of market loans are held by the banks and other financial institutions. On the other hand, provident funds and small savings represent direct liabilities to households, and these together accounted for about 40 percent of GOI's internal debt.

Table 1. India: The Level of Debt and its Composition

	In Billions of Rupees	Percent of Total
Market loans	624.42	29.8
Small savings	409.83	19.3
Provident funds, etc.	436.43	20.8
Treasury bills	632.02	30.1
Total domestic debt	2,098.70	100.0
External debt	285.17	
Total domestic debt/GDP	47.90	
External debt/GDP	0.65	
Total debt/GDP	48.55	

External debt at the end of 1989/90 amounted to Rs 285.2 billion, which was only 12.3 percent of GDP. Thus, the total public debt formed 60.2 percent of GDP. ^{1/}

In the same year, of the total domestic borrowing, Treasury bills constituted 33 percent, provident funds 25.9 percent, and small savings 19.6 percent. We note that the marginal share of Treasury bills is higher than their average share, while it is lower than the average share in respect of market loans. The combined marginal share of provident funds and small savings was higher than the average. Thus, while the Government was able to borrow relatively more directly from the households largely through higher provident fund payments, it was forced to depend much more on RBI credit than in the past.

^{1/} This figure differs from the debt GDP ratio derived from unadjusted budgetary data, which was given earlier while discussing the past growth of debt. See Appendix I for analysis of growth in public debt between 1984/85 and 1989/90.

In the budget proposals for 1989/90, it had been decided to limit borrowing from RBI through Treasury bills to around Rs 72.0 billion, which would have formed 1.64 percent of GDP for that year. The revised estimates, however, showed that borrowing from RBI would reach Rs 113.76 billion. Realizing that borrowing from RBI in such relative magnitude was highly inflationary, the Finance Minister has proposed that in 1990/91, Treasury bills issue would be limited to Rs 74.07 billion. Given the past performance and the trends in expenditure, it appears that this limit might be exceeded. However, since we wish to preserve the assumption that the inflation rate would not accelerate, we would like to proceed on the basis that the Government would be able from now on to hold RBI credit to itself at 1.7 percent of GDP. We are therefore assuming that net RBI credit to Government was only Rs 74.07 billion in 1989/90, and have derived on that basis the figures for the succeeding years. Correspondingly, the total net borrowing during 1989/90, which forms the basis of projections, is taken to be Rs 304.98 billion, instead of the revised budget estimate of Rs 344.67 billion.

As taken here, the total budget deficit in 1989/90 constituted 7.65 percent of GDP (internal borrowing 7.0 percent, and external borrowing 0.65 percent). Primary deficit formed 3.7 percent of GDP, and gross interest payments 3.9 percent.

5. Growth of public debt--1990/91 through 2000/01: Assumption I

Table 2 shows the evolution of the internal debt/GDP ratio on the assumption that all major components of domestic borrowing other than RBI credit (i.e., market loans, post office savings, other small savings, and provident funds) would grow at the same respective rates as during the last five years. This is taken to represent the continuation of the present stance of fiscal policy. On the above assumption, the internal debt/GDP ratio grows at an increasing rate, from 47.9 percent at the end of 1989/90 to 102 percent by the end of 2000/01. The interest on internal debt correspondingly rises from 3.6 percent of GDP in 1989/90 to 8.7 percent in 2000/01 (Table 3).

To the above must be added the burden of external debt. We make the simple assumption that external net borrowing by the Government would remain constant as proportion of GDP at the level in 1989/90, and that the average interest rate on Government's external debt will not change. In practice, this assumption might not hold good; most likely, the liabilities and the burden of interest in terms of rupees would be higher. ^{1/} This would only mean that if anything, we are underestimating the external part of total liabilities. When external liabilities are added, the total debt/GDP ratio is seen to rise from 60.2 percent of GDP at the end of 1989/90 to 109.9 percent in 2000/01 (Table 2). The total interest payments rise from 3.9 percent of GDP in

^{1/} The rupee might depreciate faster than the rate of domestic inflation, the interest in dollar terms might harden, and the ratio of foreign borrowing to GDP might rise.

Table 2. India: Projection of the Growth of Debt to GDP Under Assumptions I and II

Year	Assumption I			Assumption II		
	Domestic Debt	External Debt	Total Debt	Domestic Debt	External Debt	Total Debt
1989/90	47.9	12.3	60.2	47.9	12.3	60.2
1990/91	50.2	11.6	61.8	49.7	11.6	61.4
1991/92	52.7	11.0	63.8	51.4	11.0	62.4
1992/93	55.6	10.5	66.1	52.8	10.5	63.3
1993/94	58.9	10.0	68.9	54.1	10.0	64.1
1994/95	62.7	9.6	72.3	55.3	9.6	64.9
1995/96	67.0	9.2	76.3	56.3	9.2	65.5
1996/97	72.1	8.9	81.0	57.2	8.9	66.1
1997/98	78.1	8.6	86.7	58.2	8.6	66.8
1998/99	84.7	8.3	93.1	58.8	8.3	67.1
1999/00	92.7	8.1	100.8	59.5	8.1	67.5
2000/01	102.1	7.9	109.9	60.1	7.9	67.9

I
∞
I

Table 3. India: Growth of Interest on Public Debt Under Assumptions I and II

	Assumption I			Assumption II		
	Interest on Internal Debt to GDP	Interest on External Debt to GDP	Interest on Total Debt to GDP	Interest on Internal Debt to GDP	Interest on External Debt to GDP	Interest on Total Debt to GDP
1989/90	3.58	0.339	3.92	3.58	0.339	3.92
1990/91	3.84	0.348	4.19	3.88	0.348	4.23
1991/92	4.09	0.329	4.42	4.09	0.329	4.42
1992/93	4.39	0.312	4.70	4.28	0.312	4.59
1993/94	4.71	0.297	5.01	4.45	0.297	4.75
1994/95	5.08	0.284	5.37	4.60	0.284	4.88
1995/96	5.50	0.272	5.77	4.73	0.272	5.00
1996/97	5.97	0.261	6.23	4.84	0.261	5.10
1997/98	6.51	0.251	6.76	4.95	0.251	5.20
1998/99	7.14	0.243	7.38	5.04	0.243	5.28
1999/00	7.87	0.235	8.11	5.12	0.235	5.36
2000/01	8.73	0.228	8.96	5.20	0.228	5.43

1989/90 to 9.1 percent in 2000/01 (Table 3). Even if one assumes that the buoyancy of revenues of GOI would be 1.2--higher than in the past--gross interest payments would absorb as much as 60.6 percent of revenues in 2000/01. And if revenues increased only as fast as GDP, interest payments would absorb 76.5 percent of revenues in that year (Table 4). By that year the total fiscal deficit would have reached 20.0 percent of GDP and domestic borrowing would be 19.3 percent of GDP, with the primary deficit reaching nearly 11 percent of GDP (Tables 5 and 9).

We have so far considered total borrowing and gross interest payments out of the budget. Part of the Government's borrowing has been, and in the future would be, used for net financial investments. Hence, the net interest burden on the budget would depend on the return on such investments. To the extent that the returns on financial investments cover the interest on the part of borrowing used for such investments, the net burden on the budget would be reduced (or would not increase).

Over the years, the ratio of return on investments in the form of receipts of interest and dividend to interest payments, has been falling. Such receipts formed 83 percent of gross interest payments in 1982/83; by 1989/90, they had come down to 48.4 percent. Correspondingly, net interest payments by the Government have risen from 17 percent of gross payments in 1982/83 to 51.6 percent in 1989/90. There seem to be three main reasons for the fall in the ratio of returns to payments of interest on debt. First, an increasing part of net borrowing by the Government has been absorbed by expenditures other than net lending. Second, the rates of interest charged, and recoveries of interest due, have been lagging behind interest payments. Third, the average rate of dividend on equity in public enterprises has been quite low. It is not possible to predict the movements in the above three relations in the future. We, therefore, consider two alternative possibilities. We work out net interest payments on two alternative assumptions, namely, that they would remain 50 percent of gross, and that they would fall as percentage of gross gradually to 25 percent by 2010/11 ^{1/} (the latter would mean a radical reversal of past trends).

Table 6 shows what the proportions of net interest payments to net revenues of the Government would be under different sets of assumptions concerning the rate of growth of revenues and the proportions of net to gross payments of interest. If net interest payments are 50 percent of gross payments under the assumption of Government's revenues growing as fast as GDP, net interest payment as percent of net revenues would rise from 20.7 percent in 1989/90 to 61.9 percent in 2000/01; even with a buoyancy of 1.2, net interest payments would have risen to 43.4 percent of net revenues by 2000/01. If one assumes that net interest would fall to 25 percent of gross interest, and government revenues will have a buoyancy of 1.2 percent--both "favorable" assumptions--net interest payments would rise to 29.4 percent of net revenues by 2000/01. But

^{1/} Thirty-nine percent by 2000/01.

Table 4. India: Gross Interest Payments on Total Debt
as Percent of Gross Central Government Revenue

Year	Assumption I		
	Elasticity = 1.0	Elasticity = 1.1	Elasticity = 1.2
1989/90	33.6	33.6	33.6
1990/91	35.7	35.4	35.0
1991/92	37.9	37.1	36.3
1992/93	40.2	38.9	37.7
1993/94	42.8	41.0	39.3
1994/95	45.8	43.4	41.2
1995/96	49.2	46.2	43.4
1996/97	53.2	49.3	45.8
1997/98	57.7	53.0	48.7
1998/99	63.0	57.3	52.1
1999/00	69.2	62.2	56.0
2000/01	76.5	68.0	60.6

Year	Assumption II		
	Elasticity = 1.0	Elasticity = 1.1	Elasticity = 1.2
1989/90	33.6	33.6	33.6
1990/91	36.0	35.7	35.3
1991/92	37.7	36.9	36.2
1992/93	39.2	38.0	36.8
1993/94	40.5	38.8	37.2
1994/95	41.6	39.5	37.4
1995/96	42.7	40.0	37.6
1996/97	43.6	40.4	37.6
1997/98	44.4	40.7	37.4
1998/99	45.1	41.0	37.3
1999/00	45.7	41.1	37.0
2000/01	46.3	41.2	36.7

Table 5. India: Ratio of Borrowing (Domestic and Total) to GDP
Under Assumptions I and II

Year	<u>Domestic Borrowing</u> Assumption I	<u>Total Borrowing</u> Assumption I	<u>Domestic Borrowing</u> Assumption II	<u>Total Borrowing</u> Assumption II
1989/90	7.0	7.6	7.0	7.6
1990/91	7.4	8.1	7.0	7.6
1991/92	7.9	8.6	7.0	7.6
1992/93	8.5	9.2	7.0	7.6
1993/94	9.3	9.9	7.0	7.6
1994/95	10.1	10.7	7.0	7.6
1995/96	11.1	11.7	7.0	7.6
1996/97	12.2	12.9	7.0	7.6
1997/98	13.6	14.2	7.0	7.6
1998/99	15.2	15.8	7.0	7.6
1999/00	17.1	17.7	7.0	7.6
2000/01	19.3	20.0	7.0	7.6

Table 6. India: Net Interest Payments on Total Debt
as Percent of Net Central Government Revenue

Parameters Table

Growth in GDP		0.120
Growth in revenues of Central Government for elasticity =	1.0	0.120
	1.2	0.144

	Net Revenues of Central Govt. (e = 1.0)				Net Revenues of Central Govt. (e = 1.2)			
	Assumption I		Assumption II		Assumption I		Assumption II	
	50% wt	50-25% wt	50% wt	50-25% wt	50% wt	50-25% wt	50% wt	50-25% wt
1989/90	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
1990/91	21.8	21.8	22.0	22.0	21.2	21.2	21.4	21.4
1991/92	23.3	22.6	23.2	22.5	22.2	21.5	22.1	21.4
1992/93	25.1	23.6	24.4	22.9	23.2	21.8	22.5	21.2
1993/94	27.2	24.7	25.4	23.0	24.5	22.2	22.8	20.8
1994/95	29.7	26.0	26.3	23.1	25.9	22.8	23.0	20.3
1995/96	32.7	27.5	27.1	23.0	27.7	23.4	23.1	19.7
1996/97	36.2	29.2	27.9	22.7	29.7	24.2	23.1	19.0
1997/98	40.6	31.3	28.5	22.4	32.2	25.2	23.0	18.3
1998/99	46.0	33.7	29.1	22.0	35.2	26.3	22.9	17.5
1999/00	52.9	36.7	29.6	21.5	38.9	27.7	22.7	16.7
2000/01	61.9	40.2	30.1	21.0	43.4	29.4	22.4	15.9
2001/02	73.9	44.5	30.5	20.4	49.1	31.4	22.2	15.1
2002/03	90.5	49.8	30.9	19.8	56.4	33.8	21.9	14.4
2003/04	114.5	56.3	31.3	19.2	65.8	36.6	21.5	13.6
2004/05	152.0	64.5	31.6	18.5	78.2	39.9	21.2	12.8
2005/06	217.4	74.9	31.9	17.8	95.3	43.9	20.8	12.1
2006/07	357.8	88.3	32.1	17.1	119.8	48.6	20.4	11.3
2007/08	859.7	106.2	32.3	16.3	157.5	54.2	20.0	10.6
2008/09	-3,340.4	130.9	32.5	15.6	221.6	61.0	19.6	9.9
2009/10	-624.1	166.8	32.7	14.9	353.0	69.2	19.2	9.2
2010/11	-363.0	222.7	32.9	14.1	763.9	79.3	18.8	8.6

Note: Net central government revenues = Gross revenues - Net interest payments.

even that would constitute an unsustainable situation, wherein only 70.6 percent of net revenues would be available for noninterest expenditure; by 2010/11, net interest payments would absorb nearly 80 percent of net revenues.

The numbers regarding the debt burden we have given in the preceding paragraphs clearly indicate that the budget of GOI would have entered a disastrous situation by the turn of the century, if net borrowing were increased during the next ten years as fast as during the last five years. The debt/GDP ratio would rise to 110 percent and the gross interest burden would rise to more than 9.0 percent of GDP, absorbing 61-77 percent of government revenues depending on whether revenues exhibited a buoyancy of 1 or 1.2. Even though the average effective rate of interest paid on debt (Table 7) would, on our assumptions, be lower than the rate of growth--a real rate of interest of 1.5 percent as against the real rate of growth of 5.5 percent--the debt ratio would continue to grow because of the rising ratio of primary deficit to GDP and the higher marginal rate of interest. The task of reversing the trends would be far more difficult in 2000/01 than now.

Table 7. India: Average Interest Rate on Total Debt

Year	Assumption I	Assumption II
1990/91	6.5	6.5
1991/92	6.8	6.9
1992/93	6.9	7.1
1993/94	7.1	7.3
1994/95	7.3	7.4
1995/96	7.4	7.5
1996/97	7.6	7.6
1997/98	7.7	7.7
1998/99	7.8	7.8
1999/00	7.9	7.9
2000/01	8.0	7.9

Note: Average interest rate calculated as total interest divided by total debt.

In the scenario sketched above, only the first round-effect of the growth of borrowing or deficit as proportion of GDP has been considered. The impact of the fast rate of growth of deficit and of the debt/GDP ratio on the rate of interest, the rate of growth of GDP, and the rate

of inflation has not been taken into account. But surely, with borrowing from the RBI frozen as percent of GDP, the Government would find it increasingly difficult to squeeze more funds out of the market. Even if one assumes that the rate of domestic savings would rise, say, from 21 percent of GDP in 1989/90 to 23 percent in 2000/01, the Government's domestic borrowing on the scale postulated would absorb an increasing proportion of domestic savings, going up to 74.2 percent by 2000/01 (Table 8). The absorption of such a high proportion of private savings --government sector savings are likely to be negligible--would not be possible without a steep increase in the interest rate and severe crowding out of private investment resulting in a fall in the growth rate. ^{1/}

Rangarajan et al (1990) have attempted to project the growth of public debt and interest burden by first deriving the growth of net primary deficit through estimating noninterest revenues and noninterest expenditures on the basis of observed elasticities, and then estimating the growth of interest and debt using the primary deficit figures, and on the basis of plausible assumptions regarding relevant key parameters. Although they have assumed the same growth rate of nominal GDP as in our exercise, and kept constant the ratio of external borrowing, and borrowing from RBI to GDP, as we have done, they arrive at much larger estimates of deficit and debt/GDP ratios than ours. Their estimates of the key ratios for the year 1999/2000 are as given below:

<u>As percent of GDP in 1999-2000</u>				
<u>Noninterest Revenue</u>	<u>Noninterest Expenditure Excluding Net Lending</u>	<u>Net Primary Deficit</u>	<u>Gross Primary Deficit</u>	<u>Debt</u>
16.05	27.19	11.1	19.5	149.7

^{1/} Instead of assuming that each major component of domestic borrowing would grow as during the last five years, one could assume that total domestic borrowing would grow at the same rate (16.9 percent per annum). This would imply imposing a uniform growth rate on all components except RBI credit. If we did that, the debt/GDP ratio would grow less fast, but nevertheless, the situation in 2000/01 would be quite grave. The debt/GDP ratio would have risen to 84.9 percent and the interest burden to 7 percent. Gross interest payments would absorb 49 percent of revenues with a buoyancy of 1.2, and 62 percent with a buoyancy of 1.0. Domestic borrowing would absorb 48.7 percent of domestic saving, as against 33.2 percent in 1989/90. Even these figures imply severe disruption to the economy.

Table 8. India: Net Domestic Borrowing as a Percent of Gross Domestic Savings

Year	GDP Rs. Crore	Gross Domestic Savings Rs. Crore	Gross Domestic Savings to GDP (%)	Net Domestic Borrowing		Net Domestic Borrowing to GDP	
				Assumption I Rs. Crore	Assumption II Rs. Crore	Assumption I (%)	Assumption II (%)
1989/90	438,097	92,000	21.00	30,498	30,498	33.15	33.15
1990/91	490,669	104,022	21.20	36,352	34,151	34.95	32.83
1991/92	549,549	117,603	21.40	43,581	38,249	37.06	32.52
1992/93	615,495	132,947	21.60	52,558	42,838	39.53	32.22
1993/94	689,354	150,279	21.80	63,774	47,979	42.44	31.93
1994/95	772,077	169,857	22.00	77,869	53,737	45.84	31.64
1995/96	864,726	191,969	22.20	95,683	60,185	49.84	31.35
1996/97	968,493	216,942	22.40	118,318	67,407	54.54	31.07
1997/98	1,084,712	245,145	22.60	147,221	75,496	60.05	30.80
1998/99	1,214,877	276,992	22.80	184,300	84,555	66.54	30.53
1999/00	1,360,663	312,952	23.00	232,067	94,702	74.15	30.26

The main reasons for Rangarajan and others obtaining larger estimates than under our Assumption 1 seem to be the higher expenditure elasticity derived through the use of longer period data (we have used the trends of the five years preceding 1990/91) and the application of the marginal rate of interest to total debt. On the other hand, they seem to be overestimating the rate of interest received by the Government. However that may be, the two exercises point to the same conclusion, namely, that with the continuation of the present stance of fiscal policy, the debt/GDP ratio and the ratio of interest on public debt to GDP would continue to grow, and that by the turn of the century, the fiscal situation would have already caused great harm to the economy. Although the marginal rate of interest on borrowing is still below the assumed growth rate, with primary deficit rising as a percent of GDP, the debt/GDP ratio would continue to rise even after 2001 unless there are radical policy corrections.

It must be pointed out that we have counted only the borrowing and deficit of the GOI, which is of course the major borrower. But state governments also borrow from the market, from financial institutions, and through provident fund deposits. Besides, selected public enterprises have been allowed to borrow from the market with tax concessions. They have also been permitted to incur external debt. It is the total demand for funds of the public sector that must be kept in mind while considering the possibility of crowding out of private investment, the pressure on interest rates, and the implications for balance of payments.

Government has a captive market from which it attempts to obtain a good part of its requirements to cover its deficit. However, as we have seen earlier, Government has had to rely increasingly on direct borrowings from the household sector in the form of small savings and provident funds. ^{1/} In 1989/90, the share of these sources in total domestic borrowing was already over 45 percent, as against their average share (in debt) of 40 percent. If the Government continues to borrow a rising proportion of GDP, the share of direct borrowings from the households would rise, as we have assumed in our exercise, and the real rate of interest would have to rise.

We have assumed that seignorage in the form of RBI credit can form 1.69 percent of GDP with a real rate of growth of 5.5 percent and a target rate of inflation of 6.5 percent. If a lower rate of inflation is desired, or if it is found that the relative amount of seignorage we have assumed would lead to a higher rate of inflation, borrowing from RBI would have to be kept at a lower level. This would again mean a higher effective rate of interest on government borrowing.

^{1/} In the 1970s, financial institutions invested in small savings instruments, but more recently only households are buying them.

For reasons discussed in the two preceding paragraphs, the average effective rate of interest on additional domestic borrowing would increase. At present, this rate is 8.6 percent, which leaves a gap of about 3.4 percentage points between the (projected) real rate of growth and the real rate of interest. With the narrowing of the gap, the debt/GDP ratio would rise faster than projected.

The rate of interest on government debt has been rising fairly steadily since the early 1970s. Hans Genberg (1989a) has worked out the weighted average yield on small savings instruments and the average interest on debt of GOI (Table II-1, p.4). The former rose from 3.9 percent in 1970 to 10.9 percent in 1986, and the latter from 2.9 percent in 1970 to 6 percent in 1986.

In India, as is known, the interest rates are administratively set, and as such, they are not allowed to play a market-clearing role. Given the interest rates, the amount of government debt which the private sector, more particularly, the nonfinancial sector, would buy, depends on its savings behavior and portfolio preferences or portfolio demand elasticities with respect to the rate of interest. This being so, in order to induce the private sector to hold larger debt, the Government has to adjust the real interest rates upward in the light of the expected behavior of the private sector. Empirical work carried out on the basis of recent data by Genberg (1989a) supports the view that the composition of private sector portfolios in India responds significantly to relative interest rates. A higher volume of government debt relative to GDP will only be absorbed at a higher interest rate.

Once we allow for a rise in the interest rate on government borrowing, the projections we have made of debt/GDP ratio and of interest burden would become invalid, even if the assumptions regarding the rate of inflation and the buoyancy of revenues should hold good. For, with the higher rate of interest, the debt/ratio would grow faster, and with the higher interest rate depressing private investment, the rate of growth will tend to go down. We must, therefore, conclude that the present fiscal stance is one that cannot be sustained, and must consider substantially reducing the scale of government borrowing.

6. Debt dynamics and related conceptual issues

Before we consider the degree of policy correction needed, it may be useful to discuss briefly the theory of debt dynamics as recently developed, as well as certain related conceptual issues.

In view of the fast growth of internal debt/GDP ratios in several industrial and developing countries in the 1980s, considerable attention has been paid lately in the literature to the study of the growth path of debt and the relations between deficits and debt. Attention has been focused on the determinants of the pace of growth of the debt/GDP ratio (hereinafter referred to as the debt ratio), and possible outcomes are indicated depending on the values of the determinants. In working out

the debt dynamics, the starting point is the dynamic budget constraint, which says that at each point in time the change in the stock of public debt is equal to noninterest spending (including transfers) minus revenues plus interest charges on the existing stock of debt. That is,

$$dB = G + H - T + rB = D + rB \quad (1)$$

where B = public debt
 G = government spending on goods and services
 H = transfers
 T = revenues
 D = primary deficit, and
 r = rate of interest

Note: Implicitly, net lending is taken to be zero.

Equation (1) can be written in terms of ratios to GDP as follows:

$$db = g + h-t + (r-y) b = d + (r-y)b \quad (2)$$

where y is the rate of growth of the economy and every variable other than r and y is expressed as a ratio to GDP. That is, the change in the debt ratio is equal to the primary deficit to GDP ratio plus the current debt ratio times (the average interest rate on debt minus the growth rate of GDP). The growth of GDP lowers the debt ratio. The interest on the existing stock of debt plus the primary deficit act as counter forces tending to raise the debt ratio. With a constant primary deficit to GDP ratio, a constant growth rate and a constant interest rate, with the interest rate on debt lower than the growth rate, the debt ratio will grow asymptotically and stabilize at an equilibrium level. But, according to several growth theories, in the steady state, the growth rate and the interest would become equal, in which case, with a positive primary deficit, the debt ratio would continue to grow. This is also the case if the interest rate is higher than the growth rate. In fact, with $r > y$, if there is already a stock of debt, even with a zero primary deficit, the interest burden would continuously grow along with the debt ratio. There would have to be primary surpluses high enough to offset the difference between the interest rate and the growth rate, if the debt ratio is not to explode.

It is, of course, realized that just stabilizing the debt ratio cannot be a sufficient goal. For one thing, given the parameters involved, it might take decades (or centuries!) before the debt ratio stabilizes, and by that time, the ratio might have risen to a very high level. Of course, even before such a level could be reached, with increasing deficit, the interest rate would probably rise and the growth

rate fall, thus invalidating the stability condition. The growing deficit would also spill over into the balance of payments, increase the current account deficit, and necessitate action leading to the curbing of imports, again adversely affecting the growth rate. Let us assume that the debt ratio does get stabilized at a moderately high level, say, between 80 and 60 percent of GDP. In developing countries, that would represent a very undesirable situation, because continuing high debt ratio would mean that a large part of government revenues was being used to pay interest, and correspondingly, the tax ratio would be quite high. Because the real world tax systems, particularly those in developing countries, are distortionary, a higher tax ratio would mean greater adverse impact on the economy. Alternatively, borrowed money would have to be used to pay interest. This would imply a lower rate of saving in the economy than the potential, given the propensity to save of the private sector. As stated earlier, there would also arise the harmful economic and the undesirable distributional consequences of a high tax ratio used to service interest payments. Hence, bringing about conditions that would stabilize the tax ratio can only be considered the first stage of adjustment in the stance of fiscal policy.

Growth in the debt ratio causes alarm, partly because a growth in that ratio would lead to crowding out of private investment, but mainly because it is implicitly assumed that all, or most, of the expenditure by the Government out of borrowed funds is not, or would not be, yielding any direct or indirect returns (i.e., the expenditure would be "unproductive"). Michael Posner (1987) makes this quite explicit when he points out that the Domar proposition on debt dynamics warns us that the "alleged Keynesian cure for steady state secular stagnation--deficit spending without limit on unproductive capital projects--may not be sustainable" (p. 397). It is that part of public debt, the burden of servicing of which falls entirely, or mostly, on tax revenues, which should cause concern, and it is that which should be included in debt calculations. Thus, some of the writers specifically take net deficit and net public debt in their calculations (e.g., Buiter (1985) and Chouraqui, et al (1990)) and include on the expenditure side, goods and services expenditure, transfers and interest payments. That is, net lending is excluded, and correspondingly, only borrowing minus lending is taken as the size of the deficit. This general practice seems justifiable, but carries with it the supposition that Government's financial assets can be set off against government debt, since the budget has to bear the burden of interest on, and the servicing of, only the net debt. However, just as it cannot be assumed that all public debt is unproductive or "dead weight," it can also not be taken that all financial investments by the Government would have created remunerative financial assets which, taken together, would enable the Government to service the corresponding part of the debt outside the budget. Such a supposition will certainly be invalid in relation to COI's investments. A good part of the debt incurred has been used to provide "budgetary support" to public enterprises in the form of equity investment and loans. While some of the enterprises have done well and earned sufficient profits, several others have either earned low returns or incurred

losses. In some cases, the cumulative losses have eroded the net worth ^{1/}. Furthermore, some portion of loans given constitutes bad debt, and the interest charged on loans is generally significantly lower than the interest rate payable by the Government on its borrowing. Loans to state governments have been partially, or fully, rescheduled repeatedly, and some have been written off. In these circumstances, to take the net debt of GOI as representing the liabilities chargeable to the budget would be quite misleading. Hence, we are using gross debt figures, but to get a measure of the net burden on the budget, we are also showing net interest payments as percent of net revenues.

If the accounts of public enterprises are integrated with those of the general Government, the gross debt figure for the Government will remain the same, but the size of financial investments will show a fall. Instead of the acquisition of some of the financial assets, the Government will be shown to have undertaken more capital formation. Since we are interested in gross debt figures, and since they would not be affected by integration or nonintegration, we have desisted from integrating the accounts of the nondepartmental public enterprises with those of the general Government. Thereby, we incidentally avoid dealing with the problems arising from integration, such as how to treat the retained profits of the enterprises. It may be added that if only net debt had been taken into account, one would have underestimated the impact of the Government's borrowing program, as, in India, a not inconsiderable portion of the money raised by the Government from the captive market at controlled interest rates, is invested in, or lent to, public enterprises.

Let us ignore this aspect for a moment and assume that the financial investments by the Government are yielding returns at least sufficient to meet interest charges on the corresponding part of borrowing. We can then deal with net debt. Such debt will have been incurred for purposes other than productive financial investments. What are the justifiable purposes for which Government can incur net debt? That is, what is the role of debt financing of public expenditure? This question has been repeatedly asked in the literature, and differing answers have been given. We would like to consider this question in relation to a developing country with a large public sector.

Debt financing, in addition to seignorage, has been considered necessary or justifiable for the following purposes (apart from net lending):

(a) For smoothing out tax rates: Nonremunerative capital formation expenditure is often lumpy in character and financing it always through taxation would involve considerable fluctuations in the rates. Apart from the inherent difficulties with constantly changing rates, the higher rates might cause large distortions. It would therefore be

^{1/} Many loss-making private enterprises taken over by the Government and converted to public enterprises fall in this category.

preferable to finance such capital formation through debt. The debt may be repaid during the life of the asset, or alternatively, an adequate depreciation fund may be maintained for replacing the assets in time.

(b) For macroeconomic stabilization: Deficit financing to counter or cure recession, and unemployment of a cyclical nature has not been quite successful in the industrial countries. Hence, a discretionary policy of augmenting public expenditure to be financed by debt seems to be at a discount now. Nevertheless, permitting a recession-induced deficit might generally be advocated, or accepted, if full employment revenues are shown to result in a balance or surplus. In a developing country in which exports form a large part of GDP, a sizable fall in export demand could cause a fall in economic activity and revenues. In India, however, export fluctuations would not have a large impact on revenues. Deficit financing to counter, or to tide over, a recession has no role in fiscal policy there.

(c) For financing part of war or other emergency expenditure: A good part of war expenditure might have to be financed through borrowing because of economic and political, and even moral reasons. War finance has played only a negligible part in the growth of the debt ratio in independent India and, therefore, we need not discuss this question in detail. It may be pointed out, however, that debt contracted for financing a war represents deadweight debt and, as such, its burden must be liquidated or reduced through growth and repayment.

(d) For meeting part or whole of categories of current expenditure which, while not leading to physical capital formation, results in human capital formation, or has favorable impact on productivity: One view is that all current expenditure on goods and services (in the national accounting sense) of the Government should be met out of revenues. This is based on the argument or supposition that such expenditure is in the nature of public consumption. Transfers, including subsidies, are in the nature of negative taxes designed to bring about redistribution, and must be met out of revenues. Net interest payments do not lead to any current creation of assets and represent postponed payment for benefits received in the past, and should also, therefore, be met out of revenues. For intergenerational equity reasons, as well as on economic grounds, the buildup of debt due to subsidies and interest payments, should be avoided. This much might be generally agreed to. But as regards current expenditure on goods and services, it could be argued that, while as a general rule, recurrent expenditure on defense, law and order, and general administration should be met out of revenues, certain types of current expenditures leading to the creation of social capital, and having a favorable impact on the economy, could be met out of debt finance, though in the national accounting sense, these expenditures could not be classified as capital. Examples of such expenditure are additional educational expenditure on extending education to more students, and new agricultural extension services. Since the expenditures will be recurrent, in course of time, they must be met out of

revenues. As a rule of thumb, one could specify a certain proportion of recurrent expenditure on education, health, extension services, etc., which could be met out of borrowing by the Government.

(d) Apart from the above purposes, the Government could borrow for remunerative capital formation by the Government and for lending and equity investments: The Government in a developing country could play a useful role, to an extent, as a financial intermediary helping to channel investment to priority areas. Some of the lending may be at subsidized rates of interest to help weaker sections. All other lending and equity investment should, as a general rule, earn adequate returns to meet the interest charges on the corresponding debt, and to amortize the debt. Similarly, the Government's own investment in departmental undertakings should yield sufficient returns. Debt incurred for these purposes would be backed-up assets, and to that extent, need not be counted as net debt.

It follows from the preceding discussion of the role of debt financing that the ultimate objective toward which policies for correcting the present fiscal stance should be oriented is to approach the ideal situation in which (a) revenues will meet subsidies, other transfers, interest payments, and the greater part of current expenditure, and debt finance will be used for meeting Government's nonremunerative capital formation, a proportion of current expenditure designed to increase social capital and productivity, and the requirements of financial investments; and (b) the total of domestic borrowing will be determined in such a way that, given the rate of domestic savings, the nongovernment sector will be able to obtain a due share of saving and that there will not be need to borrow from the Central Bank more than the correct amount of seignorage.

If these rules are observed, and if the growth of the economy is commensurate with investments being undertaken, the net interest to GDP ratio should not be rising. The growth of public debt (i.e., the deficit) will arise only through government investments and other income-raising expenditures having positive impact on growth.

The final goal of reform is not a size of deficit equal to interest payments, but one which would not be more than the total of the three categories of capital or income-raising expenditures mentioned above. If the rate of savings in the economy is constant, in order that the nongovernment sector may be assured of a definite share of savings, the net borrowings by the Government may be kept constant as a percent of increase in GDP.

Then, $B = xWY$

where B = borrowing by Government (budget deficit)

Y = GDP, and

x = the constant proportion of WY which is borrowed by Government

$$\text{So, } \frac{B}{Y} = x \frac{WY}{Y}$$

In a steady state, when $\frac{WY}{Y}$ is constant, B/Y , or the proportion of government borrowing to GDP, will remain constant. If the rate of growth of the economy is accelerating, B/Y will increase. Then, if necessary, the value of x can be reduced by discretionary policy action.

Corrective action with regard to the burgeoning (internal) public debt of GOI must be carried out in two stages. In the first stage, action must be directed toward slowing down the pace of growth of the debt ratio. In the second stage, attempts must be made, through the needed adjustments in the revenue and expenditure policies, to contain most revenue expenditures within the revenues raised, so that Government's net borrowing is used only for the "productive" purposes indicated earlier.

7. Growth of debt--scenario under Assumption II

While the primary deficit to GDP ratio has not been rising much during the last five years (except for 1989/90), the ratio of total borrowing to GDP has been steadily growing. We found that the past rate of growth of domestic borrowing was not sustainable. We now assume that the ratios of total domestic borrowing and total borrowing to GDP will be kept constant, and trace the growth of debt ratio and interest to GDP ratio.

Under this assumption, the domestic debt ratio rises from 47.9 percent in 1989/90 to 60.1 percent in 2000/01, and the total debt ratio, from 60.2 percent to 67.9 percent (Table 2). There is a noticeable deceleration in the rate of growth of debt; however, projections beyond the year 2000/01 indicate that the debt ratio would continue to grow even beyond 2010/11, although at a very slow pace. The brunt of this deceleration will fall on the primary deficit to begin with. Given the assumptions about the growth rate and the interest rate, if total borrowing is to be kept constant as percent of GDP, primary deficit will have to fall from 3.7 percent of GDP in 1989/90 to 2.2 percent in 2000/01, while interest payments would rise from 3.9 percent to 5.5 percent of GDP during the same period (Tables 9 and 3). Since the ratio of domestic borrowing to GDP is kept constant, there would be much less crowding out of private investment, and it would be easier to keep the amount of borrowing from the RBI within proper limits. If the rate of

saving goes up gradually from 21 percent of GDP to 23 percent by 2000/01, there would be a steady fall in the proportion of domestic saving absorbed by Government's domestic borrowing--from 33.2 percent in 1989/90 to 30.3 percent in 2000/01 (Table 8). This is a scenario very favorable to growth and stability provided the primary deficit is reduced by cutting mainly nonessential expenditure, unjustified subsidies, and unproductive financial investments, with only a marginal reduction in public sector capital formation in key infrastructural sectors.

Table 9. India: Primary Deficit as a Percent of GDP

Year	Assumption I	Assumption II
1989/90	3.70	3.70
1990/91	3.90	3.41
1991/92	4.15	3.20
1992/93	4.50	3.04
1993/94	4.89	2.87
1994/95	5.39	2.75
1995/96	5.96	2.63
1996/97	6.65	2.51
1997/98	7.47	2.42
1998/99	8.44	2.34
1999/00	9.61	2.27
2000/01	10.99	2.20

To bring about such a radical change in the rate of growth of the debt ratio, as is implied in the assumption, of a freezing of the borrowing to GDP ratio, the axe would have to fall heavily on Government's noninterest expenditure together with attempts to increase the tax ratio. For the purpose of our projections, we have assumed that the total deficit in 1989/90 was only 7.6 percent of GDP. On that assumption, the primary deficit in that year works out to be 3.7 percent of GDP. In fact, it was 4.6 percent of GDP. A reduction of this level of primary deficit to 2.1 percent of GDP by 2000/01 might be considered too difficult a task, even if the political will for policy changes was forthcoming. We shall therefore consider a few alternatives requiring less severe action on the part of the Government.

8. Maintaining a constant proportion of primary deficit to GDP

Over the three years preceding 1989/90, the ratio of primary deficit to GDP had not been rising. There was a significant and sudden rise in the ratio in 1989/90. The least that the Government could be asked to do is to maintain the ratio around the level prevailing before the jump in 1989/90. We assume that the primary deficit will be contained at 3.5 percent of GDP, and project the growth of debt and related figures through 2010/11. For the projection of debt and interest payments, the following identities were used:

The debt at the end of a given year (B_{t+1}) = the debt at the end of the previous year (B_t) plus the primary deficit of the year ($t+1$) plus the total interest in the year ($t+1$).

The total interest in the year (I_{t+1}) = the interest paid in year t on debt outstanding at the end of year ($t-1$) plus the interest on the increment in debt between the end of years t and $t-1$ plus additional interest on conversion. Since we have debt and interest figures for the years 1988/89 and 1989/90, we are able to derive the debt at the end of 1990/91. We then make the assumption as before that borrowing from RBI and external borrowing would remain constant as a proportion of nominal GDP. Deducting these two figures from the total debt we obtain the amount of debt owed to other domestic sectors in 1990/91. With this breakdown, it becomes possible to work out the additional interest on the increment in debt between 1990/91 and 1989/90 in order to calculate the increase in interest payments in 1991/92, and so on. The figures of additional interest on conversion were separately worked out in connection with the exercise under Assumption I.

In symbols, the formula used is:

$$B_{t+1} = B_t + .035Y_{t+1} + I_t + AI_{t+1} + r_1 (RB_t - RB_{t-1}) + r_2 (F_t - F_{t-1}) + r_3 (ODD_t - ODD_{t-1})$$

where B = total debt
 I = total interest
 AI = additional interest on conversion
 RB = debt owed to RBI
 F = external debt, and
 ODD = debt owed to other domestic sectors

It is assumed that $r_1 = .0476$
 $r_2 = .0576$
 $r_3 = .1189$ (the average for 1989/90).

The projection is given in Table 10. It is seen that the debt ratio builds up rapidly, though not as fast as under Assumption I. By 2000/01, the debt ratio would have risen to 77.4 percent and by 2010/11, to 96 percent. Since the average rate of interest keeps rising (because the marginal rate is higher than the average rate), the debt ratio will not stabilize. We note that the interest payments rise from 3.9 percent of GDP in 1989-90 to 6.4 percent by 2000-01, and to 8.4 percent in 2010/11. Correspondingly, the total deficit rises from 7.6 percent of GDP in 1989/90 to 9.9 percent in 2000/01, and to 11.9 percent in 2010/11.

It is clear that keeping the primary deficit constant at 3.5 percent of GDP is not a viable policy option even with a 5.5 percent annual growth of real GDP. In fact, in view of the rather precarious balance of payments situation, particularly after the rise in oil prices in 1990, imports might be curbed with adverse effect on the growth rate. An annual growth rate of GDP of 5.5 percent, it seems, can no longer be safely assumed for the Eighth Plan (1990/91-1994/95). It would be preferable to adjust the fiscal stance to cope with a somewhat lower growth rate of the economy.

Table 11 traces the growth of debt ratio and the movement of the ratio of interest to GDP from 1989/90 through 2010/11 on the assumption that the primary deficit would be brought down to 2.5 percent of GDP immediately, and be maintained at that level. It is seen that the total deficit reaches only 7.8 percent of GDP by 2000/01, of which interest would account for 5.3 percent. Of the total deficit, domestic borrowing would account for 7.37 percent of GDP, which would form only 32 percent of gross domestic saving if the latter grows as postulated earlier. All these would be acceptable goals of the first-stage adjustment, but immediate reduction of primary deficit ratio to 2.5 percent of GDP would be considered infeasible.

Our exercises show that a policy of maintaining a constant primary deficit ratio would not be sustainable unless, indeed, the ratio is first sufficiently reduced. Although the arithmetic of debt dynamics shows that the debt ratio would stabilize with a constant primary deficit ratio if the interest rate is lower than the growth rate, the date of achieving a stable ratio is pushed forward if the gap between the growth rate and the interest rate is being narrowed. If a considerable stock of debt (in terms of ratio to GDP) has already been built up, even with a constant primary deficit ratio and interest rate it would take a very long time before the debt ratio stabilizes. We assumed a primary deficit ratio of 3 percent of GDP and a constant average rate of interest of 8.57 percent (the base year average), with a 12 percent rate of growth. With these assumptions it was found that the debt ratio would continue to grow until the year 2109/10, when it would reach 79.0 percent!

Table 10. India: Simulated Debt:GDP Ratio

(In billions of rupees)

Parameter Table

Interest rates	
Other domestic debt	0.1189
Treasury bills	0.0476
Foreign debt	0.0317

Ratios	
Deficit/GDP	0.0350
Net foreign borrowing/GDP	0.0065
New Treasury bills/GDP	0.0169

Year	Treasury Bills Debt RB(t)	Total Internal Debt BI(t)	Other Domestic Debt MB(t)	Total External Debt F(t)	Total Debt B(t)	Replacement Interest	Total Interest I(t)	GDP Y(t)	Total Debt to GDP B(t)/Y(t)	Average Interest Rate	Net Borrowing to GDP	Interest to GDP
1988/89	518	1,755	1,236	468	2,223	--	--	--	--	--	--	--
1989/90	632	2,099	1,467	539	2,638	--	172	4,381	60.2	7.75	--	3.934
1990/91	715	2,447	1,732	571	3,018	0.45	208	4,907	61.5	7.88	7.7	4.237
1991/92	808	2,848	2,041	606	3,455	0.60	245	5,495	62.9	8.12	8.0	4.457
1992/93	912	3,311	2,400	646	3,958	0.38	288	6,155	64.3	8.32	8.2	4.672
1993/94	1,028	3,845	2,816	691	4,536	0.40	337	6,894	65.8	8.51	8.4	4.887
1994/95	1,159	4,459	3,300	741	5,200	0.37	394	7,721	67.4	8.68	8.6	5.100
1995/96	1,305	5,165	3,860	798	5,962	0.52	460	8,647	68.9	8.84	8.8	5.315
1996/97	1,469	5,976	4,507	861	6,836	0.22	535	9,685	70.6	8.97	9.0	5.525
1997/98	1,552	6,907	5,255	931	7,838	0.27	622	10,847	72.3	9.10	9.2	5.736
1998/99	1,857	7,976	6,118	1,010	8,986	0.30	722	12,149	74.0	9.22	9.4	5.946
1999/00	2,087	9,201	7,114	1,098	10,299	0.17	837	13,607	75.7	9.32	9.7	6.154
2000/01	2,345	10,605	8,260	1,198	11,803	0.45	970	15,239	77.4	9.42	9.9	6.365
2001/02	2,633	12,214	9,580	1,308	13,522	0.33	1,122	17,068	79.2	9.51	10.1	6.574
2002/03	2,956	14,055	11,099	1,433	15,488	0.54	1,297	19,116	81.0	9.59	10.3	6.783
2003/04	3,318	16,163	12,845	1,572	17,735	0.76	1,497	21,410	82.8	9.67	10.5	6.994
2004/05	3,723	18,573	14,850	1,728	20,301	0.28	1,727	23,980	84.7	9.74	10.7	7.201
2005/06	4,177	21,328	17,151	1,902	23,231	0.46	1,990	26,857	86.5	9.80	10.9	7.409
2006/07	4,686	24,477	19,791	2,098	26,575	0.37	2,291	30,080	88.3	9.86	11.1	7.617
2007/08	5,255	28,073	22,818	2,317	30,390	0.43	2,636	33,690	90.2	9.92	11.3	7.824
2008/09	5,893	32,178	26,285	2,562	34,740	0.03	3,030	37,732	92.1	9.97	11.5	8.030
2009/10	6,607	36,863	30,256	2,837	39,700	0.54	3,481	42,260	93.9	10.02	11.7	8.236
2010/11	7,407	42,208	34,801	3,144	45,353	0.72	3,996	47,331	95.8	10.07	11.9	8.443

Table 11. India: Simulated Debt:GDP Ratio

(In billions of rupees)

Parameter Table

Interest rates	
Other domestic debt	0.1189
Treasury bills	0.0476
Foreign debt	0.0317

Ratios

Deficit/GDP	0.0250
Net foreign borrowing/GDP	0.0065
New Treasury bills/GDP	0.0169

Year	Treasury Bills Debt RB(t)	Total Internal Debt BI(t)	Other Domestic Debt MB(t)	Total External Debt F(t)	Total Debt B(t)	Replacement Interest	Total Interest I(t)	GDP Y(t)	Total Debt to GDP B(t)/Y(t)	Average Interest Rate	Net Borrowing to GDP	Interest to GDP
1988/89	518	1,755	1,236	468	2,223	--	--	--	--	--	--	--
1989/90	632	2,099	1,467	539	2,638	--	172	4,381	60.2	7.75	--	3.934
1990/91	715	2,398	1,683	571	2,969	0.45	208	4,907	60.5	7.88	6.7	4.237
1991/92	808	2,739	1,931	606	3,345	0.60	239	5,495	60.9	8.05	6.9	4.351
1992/93	912	3,127	2,215	646	3,773	0.38	275	6,155	61.3	8.21	7.0	4.460
1993/94	1,028	3,569	2,541	691	4,261	0.40	315	6,894	61.8	8.35	7.1	4.569
1994/95	1,159	4,073	2,915	741	4,815	0.37	361	7,721	62.4	8.47	7.2	4.676
1995/96	1,305	4,647	3,342	798	5,445	0.52	414	8,647	63.0	8.59	7.3	4.785
1996/97	1,469	5,300	3,831	861	6,160	0.22	474	9,685	63.6	8.70	7.4	4.890
1997/98	1,652	6,042	4,390	931	6,973	0.27	542	10,847	64.3	8.79	7.5	4.995
1998/99	1,857	6,887	5,029	1,010	7,897	0.30	620	12,149	65.0	8.88	7.6	5.099
1999/00	2,087	7,846	5,759	1,098	8,945	0.17	708	13,607	65.7	8.96	7.7	5.203
2000/01	2,345	8,937	6,592	1,198	10,134	0.45	809	15,239	66.5	9.04	7.8	5.308
2001/02	2,633	10,176	7,543	1,308	11,485	0.33	924	17,068	67.3	9.11	7.9	5.412
2002/03	2,956	11,585	8,628	1,433	13,017	0.54	1,055	19,116	68.1	9.18	8.0	5.516
2003/04	3,318	13,184	9,866	1,572	14,756	0.76	1,204	21,410	68.9	9.25	8.1	5.622
2004/05	3,723	15,001	11,277	1,728	16,728	0.28	1,373	23,980	69.8	9.30	8.2	5.725
2005/06	4,177	17,063	12,885	1,902	18,965	0.46	1,565	26,857	70.6	9.36	8.3	5.828
2006/07	4,686	19,403	14,717	2,098	21,501	0.37	1,784	30,080	71.5	9.41	8.4	5.931
2007/08	5,255	22,059	16,804	2,317	24,376	0.43	2,033	33,690	72.4	9.45	8.5	6.033
2008/09	5,893	25,072	19,179	2,562	27,634	0.03	2,315	37,732	73.2	9.50	8.6	6.135
2009/10	6,607	28,489	21,882	2,837	31,326	0.54	2,636	42,260	74.1	9.54	8.7	6.237
2010/11	7,407	32,366	24,959	3,144	35,510	0.72	3,001	47,331	75.0	9.58	8.8	6.340

It follows from the discussion in this section that given the large stock of debt that already exists, the unavoidable rise in the average rate of interest and the possibility of the medium term growth rate of the economy falling below 5.5 percent, a falling primary deficit ratio has to be the goal of fiscal policy. ^{1/} The process of reduction has to be gradual, but the degree of annual reduction has to be sufficient to keep the growth of the debt ratio within reasonable bounds. It is suggested that the Government should aim at such a fall, or reduction of the primary deficit ratio, that it could reach 2.5 percent by the year 2000/01. Table 12 shows how the debt ratio and the interest burden would grow if such a rate of reduction of the primary deficit were brought about. It should be possible within this period of ten years to eliminate what might be called "unproductive" borrowing. We note that the total deficit ratio would rise only to 8.4 percent of GDP by 2000/01 which could be accommodated if there was rise in the domestic saving rate to 23 percent of GDP. If the entire, or most, of the primary deficit of 2.5 percent of GDP were devoted to capital formation and lending, and if the return on investment was adequate, this level of primary deficit could be continued for a few years without any relative rise in the net interest burden. It might also be possible during this period to reduce the proportion of credit from RBI to GDP. Thereafter, the whole situation could be reviewed, and measures to implement the second stage of adjustment could be formulated. We shall now consider the measures immediately needed to reduce the primary deficit ratio.

9. Measures to reduce the primary deficit ratio

The primary deficit ratio could be reduced by the following categories of measures:

- (a) raising the income elasticity of the taxes;
- (b) increasing fees and user charges commensurately with increases in the nominal costs of performing services not in the nature of pure public goods;
- (c) reducing the rate of growth of current expenditure;
- (d) stabilizing the ratios to GDP of government capital formation and of current expenditure directed to augment the level of social capital;
- (e) increasing the return to net lending by Government;
- (f) reducing the scale of net lending to, and investment in, public enterprises; and
- (g) directly reducing the interest burden on the budget.

^{1/} See also Tanzi (1990), for a discussion on how to determine the degree of fiscal adjustment.

Table 12. India: Simulated Debt:GDP Ratio

(In billions of rupees)

Parameter Table

Interest rates	
Other domestic debt	0.1189
Treasury bills	0.0476
Foreign debt	0.0317
Deficit/GDP ratios	Declines from .035 to .025 from the year 1990/91-2000/01
Net foreign borrowing/GDP	0.0065
New Treasury bills/GDP	0.0169

Year	Treasury Bills Debt RB(t)	Total Internal Debt RI(t)	Other Domestic Debt MB(t)	Total External Debt F(t)	Total Debt R(t)	Replacement Interest	Total Interest I(t)	GDP Y(t)	Total Debt to GDP B(t)/Y(t)	Average Interest Rate	Net Borrowing to GDP	Interest to GDP
1988/89	518	1,755	1,236	468	2,223	--	--	--	--	--	--	--
1989/90	632	2,099	1,467	539	2,638	--	172	4,381	60.2	7.75	--	3.934
1990/91	715	2,447	1,732	571	3,018	0.45	208	4,907	61.5	7.88	7.7	4.237
1991/92	808	2,843	2,035	606	3,449	0.60	245	5,495	62.8	8.12	7.9	4.457
1992/93	912	3,293	2,381	646	3,939	0.38	287	6,155	64.0	8.32	8.0	4.662
1993/94	1,028	3,803	2,775	691	4,495	0.40	335	6,894	65.2	8.50	8.1	4.855
1994/95	1,159	4,381	3,223	741	5,123	0.37	389	7,721	66.4	8.65	8.1	5.037
1995/96	1,305	5,035	3,730	798	5,833	0.52	450	8,647	67.5	8.79	8.2	5.209
1996/97	1,469	5,773	4,304	861	6,633	0.22	520	9,685	68.5	8.91	8.3	5.366
1997/98	1,652	6,604	4,952	931	7,535	0.27	598	10,847	69.5	9.02	8.3	5.513
1998/99	1,857	7,539	5,682	1,010	8,549	0.30	686	12,149	70.4	9.11	8.3	5.649
1999/00	2,087	8,590	6,503	1,098	9,689	0.17	786	13,607	71.2	9.19	8.4	5.773
2000/01	2,345	9,769	7,425	1,198	10,967	0.45	897	15,239	72.0	9.26	3.4	5.888

(a) In the context of the fiscal trends in India, and of the low income of the majority of the people, emphasis has to be placed now more on reducing the growth of current expenditure of the Government than on raising the rate of growth of revenues. It is not that revenues have not been growing with the growth in income. Over the period 1974/75 through 1986/87, the revenues of the central and state governments increased at an annual rate of 14.5 percent in nominal terms (in real terms 8.4 percent); during the same period, the revenue expenditures increased at 17 percent per annum in nominal terms (in real terms, 10.3 percent). The average real growth rate of GDP during the period was 4.6 percent.

This is not to say that no attempt needs to be made to raise the growth rate of tax revenues. In the past, the income elasticity of the revenues has been near unity. Frequent increases in the rates of taxes and changes in the definition of bases were resorted to for raising the buoyancy of the tax system. The tax system needs to be rationalized and simplified and the enforcement considerably strengthened to improve the built-in elasticity to at least 1.1 by the end of the Eighth Plan (1994/95).

(b) The cost of providing many services, provision of higher education, issue of licenses, registration, maintenance of parks, etc., has gone up, while the user charges have remained fairly stagnant. It is generally argued, therefore, that the user charges must be raised for most of such services. To be sure, it would be necessary to do so, but attempts should also be made to reduce the cost of performing services through increased efficiency and reduction of surplus staff. More of this is found in the discussion below.

(c) The main budget of the GOI is divided into Revenue and Capital Accounts. The main justification for making such a distinction is that, under normal times, public consumption largely benefiting the current generation should be paid for on a pay-as-you-go basis through currently raised taxes. However, some revenue expenditure which is directed toward increasing social capital would benefit future taxpayers. This seems to be the argument against attempting a clear-cut division between revenue and capital expenditure. Since the revenue expenditure of GOI mainly consists of what might be properly labeled as public consumption, subsidies, transfers, and interest, it would be correct to argue that revenue expenditure must be more or less covered by revenue receipts.

Table 13 shows the composition of revenue expenditure of GOI and their respective rates of growth. The budget classification has been modified to show separately nondevelopmental expenditure, developmental expenditure, and grants. All subsidies have been put together unlike in the budget. We note that total revenue expenditure grew around 20 percent per annum in nominal terms over the period 1981-89 (i.e., at 12.4 percent in real terms); in 1975-81, revenue expenditure grew at 14.5 percent per year in nominal terms (i.e., at 7.9 percent in real

Table 13. India: Growth in Revenue Expenditure of the Central Government

(Compound growth rates)

		Growth Rates				
		-75	-89	-75-89	-75-81	-81-89
(In crores of rupees)						
Revenue Expenditure: Nondevelopment						
A. Nondevelopment expenditure (adjusted)		4,069.69	37,189.79	17.38	13.07	20.22
a-1	(Interest payments)	1,000.76	14,150.00	20.95	16.72	23.58
a-2	(Defence services, net)	1,920.21	11,070.05	14.23	9.65	16.00
a-3	(Organs of state)	59.80	287.88	11.62	7.87	15.04
a-4	(Fiscal services)	122.61	1,173.44	16.91	13.49	20.55
a-4-1	(Tax collection charges)	85.37	500.54	12.63	6.53	17.67
a-5	(Administrative services)	326.37	2,087.96	13.89	8.44	17.60
a-5-1	(Police)	169.24	1,256.75	15.48	8.67	20.10
a-5-3	(External affairs)	34.45	201.06	12.63	8.94	15.63
a-6	(Pension and other retirement benefits)	19.53	443.88	23.77	23.07	25.81
a-8	(Assignments to local bodies)	15.99	54.51	10.19	11.16	7.50
a-13	(Grants to union territories, nonplan)	22.07	51.85	10.82	17.19	0.66
	Of which:					
	Subsidies	429.69	6,897.11	21.43	22.27	24.04
a-9	(Loss/subsidy on vegetable oils)	--	--	--	--	--
a-10	(Subsidy on controlled cloth)	--	27.00	23.77	416.28	-15.37
a-1	(Subsidy to Food Corporation of India)	295.00	2,200.00	15.80	16.35	19.68
b-4-1	(Subsidy to Cotton Corporation of India)	--	--	--	--	--
b-4-2	(Others)	134.69	1,420.11	17.75	16.43	18.06
b-5	(Fertilizer subsidy)	--	3,250.00	37.90	37.50	42.01
Revenue Expenditure: Developmental						
B. Development expenditure (adjusted)		822.46	9,422.90	16.94	16.18	19.13
b-1	(Social and community services)	461.70	5,248.87	17.52	11.80	22.37
b-1-1	(Education)	149.36	2,131.81	18.31	10.89	27.31
b-1-2	(Art and culture)	8.88	116.52	20.46	9.44	33.05
b-1-3	(Scientific services and research)	112.02	984.85	17.00	11.61	19.89
b-1-4	(Medical, public health, sanitation, and water)	68.77	517.69	13.56	13.11	15.77
b-1-5	(Family welfare)	58.59	640.92	18.21	6.42	21.24
b-1-6	(Housing)	11.28	83.73	16.08	16.87	12.29
b-1-7	(Urban development)	0.61	85.69	42.65	23.16	55.50
b-1-8	(Broadcasting)	22.06	318.25	18.67	18.93	22.73
b-1-9	(Labor and employment)	22.92	261.51	17.91	18.06	19.41
b-2	(General economic services)	96.80	1,536.49	15.47	27.29	14.42
b-3	(Agricultural and allied services)***	128.52	1,528.30	17.91	19.13	19.34
b-6	(Water and power development)	17.81	240.45	16.84	13.50	13.82
b-7	(Transport and communication)	99.79	758.53	15.79	18.98	12.50
b-8	(Public works)	17.84	110.26	14.94	3.33	24.39
c	(Self-balancing items)	3.75	9.68	-14.40	-20.42	18.46
Grants		881.62	7,736.41	17.08	18.27	19.41
d	(Statutory grants to states)	497.92	1,360.51	6.95	-7.50	21.90
b-10-e	(Plan Grants)*****	278.65	3,096.71	17.27	25.41	15.40
b-10	(Grants to states/U.T.s.)	105.05	2,979.19	29.26	44.71	24.22
b-10-a	(for drought-prone area program)	26.36	51.00	0.84	5.66	4.28
b-10-b	(for rural water supply scheme)	--	375.90	24.17	32.56	19.17
b-10-c	(for rural roads)	--	--	--	--	--
b-10-d	(for gainful employment in rural areas)	--	528.00	24.05	219.61	14.78
b-10-f	(for welfare of backward classes)	40.50	199.57	10.89	12.42	10.90
b-10-g	(as special central assistance for STs)	--	178.27	--	--	--
b-10-h	(toward special incentive scheme)	--	722.00	--	--	--
b-10-i	(Misc. grants to state/UTs)	39.19	824.45	31.49	24.20	31.31
a-12	(Grants to state for natural calamities)**	--	300.00	23.87	138.36	9.02
e	(Adjustment in accounts of differences in figures)	-63.76	--	--	--	--
f	(Total expenditure)	5,713.76	54,358.78	17.25	14.52	19.92

terms). Thus the rate of growth of expenditure has considerably accelerated during the 1980s. Among the three categories, nondevelopmental, developmental, and grants, the highest acceleration has been under nondevelopmental expenditure--from 13 to 20 percent. The major causes for the high acceleration seem to be the much higher rates of growth in interest payments and in defense expenditure in the latter period.

During the period 1981-89, however, developmental expenditure, nondevelopmental expenditure, and grants have all grown at about the same rate--around 20 percent. The relative shares of the major items of revenue expenditure in 1989/90 (revised estimates) were as follows:

The Shares of Major Items of Revenue Expenditure in 1989/90

	Amount in Rs billion	Percent of Total
1. Interest payments	170.00	29.1
2. Defense	104.42	17.9
3. Developmental expenditure	102.55	17.6
4. Grants	85.89	14.7
5. Subsidies	71.76	12.3
6. Administration and police	<u>49.49</u>	<u>8.5</u>
Total	584.11	100.1

If the primary deficit ratio is to be brought down, the growth of all the above-mentioned major categories of noninterest expenditure must be slowed down considerably. If revenues have an elasticity of 1.1 and income grows at 12 percent, revenues will grow at 13.1 percent. In order to create a significant impact on the revenue deficit, and through that on the primary deficit, it would be necessary to keep down the growth rate of noninterest revenue expenditure to around 10 percent per annum. Such a goal would call for a drastic change in the direction of policy and a whole new approach to budget making, expenditure planning and control, and the role of Government. We shall briefly indicate the kinds of changes in expenditure policy that have to be brought about.

(a) While defense expenditure might have to be allowed to grow with GDP, it is widely felt that much remains to be done to make it more cost-effective. For fear of jeopardizing the security of the country, no systematic study of defense expenditure has been undertaken. Exercises must now be initiated to determine ways of making defense expenditure more cost-effective.

(b) The greater part of expenditure on administration and on developmental items at the level of the Central Government consists of expenditure on staff. Analysis carried out by the Ninth Finance Commission showed that nonsalary revenue expenditure (other than interest and subsidies) grows in direct proportion to expenditure on staff. We have noted earlier that administration, police, and development departments account for about 26 percent of revenue expenditure (and 37 percent of noninterest expenditure). The growth of expenditure under these heads can be curbed in several ways: (i) Since there is considerable overstaffing in most of the departments, there should be a freeze on fresh recruitment for the next five years or so. There should be studies to locate surplus staff and relocate them to undertake new tasks, if any. (ii) Government must shed some activities. Reduction of controls and licensing would not only be a boost to private initiative, but also bring down staff requirements. There are many other activities, such as running trade fairs and conducting film festivals, which can be left to the nongovernment sector. (iii) Each Ministry (other than Defense) must be asked to manage within a 3.5 percent increase in real expenditure. To achieve this, the ministries should be encouraged to give up activities of the lowest priority accounting for 10 percent of their expenditure. Thus, each ministry, other than Defense, would be required to fulfill two conditions: budget only for a 3.5 percent increase in real expenditure and contribute to the pool of surplus staff.

(c) Subsidies out of the GOI budget have grown at 24 percent per annum in nominal terms during 1981-89; fertilizer subsidy on domestically-produced and imported fertilizer grew at the rate of 42 percent. It is obvious that the rate of growth witnessed during recent years is not sustainable. It is welcome that Government has already taken action to keep down the growth of subsidies--the amount of subsidies budgeted for 1990/91 is hardly different from the revised estimate for 1989/90. The thinking seems to be to target food subsidy toward the poor and to establish a dual market for fertilizer. These would be steps in the right direction. In addition, it could be examined if the price of naphtha used as feedstock can be justifiably reduced. If the poor are protected through a subsidy on food, fertilizer prices must be allowed in course of time to reflect costs.

The category of "other subsidies" has also grown at a high rate. In this category, interest subsidy to public enterprises amounted to Rs 9.3 billion in 1989/90. Apart from the interest subsidy, some public enterprises received subsidy "for other purposes" amounting to Rs 0.7 billion so the total subsidy to public enterprises amounted to Rs 10 billion. The point to note is that these and other miscellaneous subsidies have been growing steadily. Most of them are not targeted toward the poor and need to be phased out.

(d) We now turn to capital expenditure which consists of government capital formation and net lending. The growth of debt and of interest burden will be reduced if borrowing for financing capital

expenditure is reduced, or if part of the existing stock of debt is liquidated. The burden of net interest payments will be reduced if the proportion of ratio of receipts of interest and dividend to interest payments increases.

The manner of use of borrowed funds and recoveries of loans (total capital receipts) in the years 1988/89 through 1990/91 is shown in Table 14. We shall look at the figures for 1989/90 for which we have revised estimates and also the necessary breakdown of expenditure. Nearly 47 percent of the total capital receipts was deployed to cover the revenue deficit and defense capital outlay. Another 3 percent of the receipts was given as loans to public enterprises to cover their losses. Thus, 50 percent of capital receipts was spent for purposes other than capital formation except for a small portion of capital formation that might be contained in the revenue budget. The expenditure for these purposes brings no financial return to the Government nor can it be said to raise the level of productivity of the economy. Of the other 50 percent, 23.7 percent went toward investments in public enterprises, 7 percent toward Government's own capital formation, and 17.8 percent toward loans to states for plan outlay. As already indicated, the funds invested in public enterprises and the loans to the state governments do not bring adequate returns, with the result that the general budget has to bear a considerable part of the corresponding interest burden. It is because of these reasons that the volume of "unproductive" or deadweight debt has been built up and the burden of net interest on the budget has grown. We consider below some ways of preventing, or at least slowing down, such growth.

(1) It is not suggested here that the relative level of expenditure on Government's own capital formation under the plans should be reduced. However, it is necessary to reduce net lending to public enterprises. In any case, it militates against efficiency that public enterprises should have access to funds unconditionally without any link to criteria of performance. Public enterprises must be made to compete for funds on the basis of their performance, at least for a substantial part of their requirements. "Budgetary support" to the investment of public enterprises must be cut down except perhaps for the public sector coal companies which are in no position now to go to the market. It is suggested that a wing be created in the Industrial Development Bank of India which would act as an investment bank for key public enterprises. This public-sector bank would get money from three sources: a part of the money that is now borrowed by the Government under the Statutory Liquidity Ratio provision will be passed on to it without going through the budget; it will have the sole right to issue capital gains bonds; all central public enterprises with surplus funds would be required to invest them in medium-term bonds to be issued by the public sector bank, with buy-back facility. The Bank will appraise the performance of the applicant public enterprises before making loans or investing in equity, as in the case of private enterprises. Profit-making public enterprises may sell part of their existing share capital in the market, say, up to 30 percent of their share capital, or they can increase their share

Table 14. India: Utilization of Capital Receipts

(In billions of rupees)

	1988/89 Accounts	Percent of Total	Revised Estimate	Percent of Total	1990/91 Budget Estimate	Percent of Total
Total capital receipts	<u>313.15</u>		<u>354.42</u>		<u>365.97</u>	
1. To cover revenue deficit	<u>105.15</u>	<u>33.58</u>	<u>124.36</u>	<u>35.09</u>	<u>130.32</u>	<u>35.61</u>
2. Nonplan capital outlay	<u>(59.94)</u>	<u>19.14</u>	<u>68.97</u>	<u>19.46</u>	<u>76.72</u>	<u>20.96</u>
(i) Defense outlay	(37.27)	11.90	42.28	11.90	48.02	13.12
(ii) Loans to public enterprises	(8.67)	2.77	11.31	3.19	9.69	2.65
(iii) Loans to foreign governments	<u>(1.99)</u>	<u>0.64</u>	<u>3.95</u>	<u>1.12</u>	<u>4.04</u>	<u>1.10</u>
(a) Vietnam	(.16)	0.05	.20	0.06	.12	0.03
(b) Sri Lanka	(.14)	0.05	.06	0.02	.15	0.04
(c) Technical credits in terms of trade and agreements	(1.50)	0.48	3.50	0.99	3.50	0.96
(d) Others	(.19)	0.06	0.19	0.05	0.27	0.07
(iv) Others	(12.00)	2.83	11.43	3.22	14.97	4.09
3. Plan outlay	<u>150.33</u>					
(i) Investment in public enterprises	(156.24)	<u>49.89</u>	<u>161.09</u>	<u>45.45</u>	<u>158.93</u>	<u>43.43</u>
(a) Loans	(33.82)	<u>10.80</u>	<u>34.41</u>	<u>9.71</u>	<u>19.47</u>	<u>5.32</u>
(b) Equity	(44.89)	14.33	49.55	13.98	48.97	13.38
(ii) Other investments	(16.18)	5.17	14.14	3.99	15.83	4.33
(iii) Plan assistance to states/UTS	(61.35)	19.59	62.99	17.77	74.76	20.40

1988/89 figures given in parentheses are revised estimates. The necessary breakdown is not available in the accounts.

capital and issue new shares. In the former case, the Government will get the proceeds of the sale, and to that extent needs to borrow less from the market.

Some public enterprises may not be able to raise money from outside the budget, particularly those that are of a promotional character and are not meant to make profits. However, industrial enterprises in general, enterprises in the energy, transportation, and telecommunication sectors, and financial intermediaries can also be asked to borrow from the public-sector bank, instead of from the Government, but they should be granted funds only on the basis of performance. Some of the enterprises may be allowed by the controller of capital issues to issue debentures on the basis of the same criteria as private enterprises; they would perhaps be able to borrow at lower rates of interest.

It is found that in the year 1989/90, budgetary support to public enterprises amounted to nearly 25 percent of government borrowing. Even if only half of it were to be taken out of the budget, borrowing by the Government could have been reduced by 12.5 percent.

(2) Loss-making public enterprises are being supported by subsidies as well as by "nonplan" loans out of the budget. In most cases, loss-making public enterprises have been allowed to continue to operate at a loss for fear of displacing labor. Given the institutional framework, it is not possible to close down enterprises in some "core" sectors such as coal and power. However, all public enterprises in the "noncore" sectors (i.e., excluding coal, power, petroleum, railways, and some nonferrous metals) should be made fully autonomous and be left to operate according to market forces. They should, as a rule, obtain funds for further investment and operations from nonbudgetary sources (from the public-sector wing of the Industrial Development Bank of India and the market). This implies that those public enterprises which are running efficiently and making profits will continue and expand; those which can be rehabilitated with reasonable infusion of funds, will be rehabilitated by financial institutions; and those which would not become viable, would be wound up and sold, or merged with other enterprises. Labor, which would be thrown out of employment through closure or merger, must be given alternative employment or adequate compensation. Thus, before a program of closure of loss-making public (and private) enterprises is initiated, detailed schemes of compensation, retraining, redeployment, and rehabilitation of surplus or displaced labor should be worked out.

(3) Another way of reducing the load on the public sector is to share with the private sector the task of expanding capacity in some industries which have hitherto been reserved largely for the public sector. This is already being done in respect of power generation and steel production. Other capital-intensive industries, such as oil exploration and refining, may be added to the list. Government should increasingly move out of the business of public transport by road. Most of the public sector road transport corporations are making sizable

losses, including the Delhi Transport Corporation. The private sector can also be utilized to a greater extent than at present for the manufacture of materials and components needed by public sector service industries, such as telecommunications and railways.

(4) The closure of loss-making public enterprises, the shifting of a good part of the financing of public enterprises out of the budget, and the sale of part of the equity owned by the Government would help cut down government borrowing and thus bring down the growth of interest. If most of the remaining enterprises are operating autonomously and according to market principles, the average rate of return to Government would increase and net interest burden would grow more slowly.

(5) *An advantage with seignorage is that it carries with it no interest liability. In India, since seignorage takes the form of borrowing from the RBI, there is an attendant interest liability. One view is that this liability is fictitious. According to this view, the accounts of the RBI should be integrated with those of GOI while measuring the magnitudes of debt and interest. If this is done, the debt to RBI would get canceled and the interest burden would be less than without integration. However, the level of government expenditure would be higher, because then the expenditure by RBI out of its profits, only part of which is paid to the Government, will be shown as government expenditure. Correspondingly, the amount of seignorage will be shown to be higher than RBI credit to Government. Such a presentation would be a more faithful picture of what is actually happening.*

What we are interested in here is to prevent RBI from undertaking expenditure out of "fictitious" profits arising from its "lending" to the Government. Paying all of the profits arising from seignorage back to Government would only add to credit creation and artificially inflate government revenues. Equally, the expenditure by RBI out of its profits from lending to the Government represents additional credit creation which is under no regulation. The best course of action would be to stipulate that a high proportion of the interest (say, 80 percent) paid by the Government every year should be applied to the cancelation of the public debt held by RBI. Additionally, it should be stipulated that Government shall not be given credit by RBI against Treasury bills beyond the limit set by due seignorage (i.e., such credit should be limited to the expected additional demand for cash by the nongovernment sector in any given year on reasonable assumptions regarding the growth rate and the permissible low degree of inflation).

10. A suggested accounting framework for appraisal of long-term fiscal stance

As the level of primary deficit in relation to GDP is reduced and the growth of the debt ratio is brought under control, it would be possible to move to the second-stage of adjustment which would be geared to the attainment of a desirable long-term fiscal stance. Under this

stance, deficit financing (deficit meaning here total net government borrowing) should be used only for purposes which have been enumerated earlier on (pp. 21-24), and Government's net lending should not result in any appreciable interest burden on the budget. The following accounting framework is suggested as a basis for appraising Government's fiscal stance from the above-mentioned angle:

Main Budget

<u>Revenue Receipts</u>	<u>Expenditures</u>
1. Tax revenues	4. Government consumption (expenditure on goods and services not leading to physical capital formation)
2. Nontax revenues other than investment income	5. Transfer payments
3. Investment income	6. Interest
	7. Depreciation on Government-owned assets
	8. Government capital formation
9. Surplus (-) or deficit (+) in main budget	
<u>Total</u>	<u>Total</u>

Investment Budget

<u>Receipts</u>	<u>Expenditures</u>
10. Recoveries of loans	12. Investment in equity of public enterprises
11. Capital grants from abroad	13. Loans to public enterprises
	14. Loans to private parties
15. Deficit (+) on investment account	
<u>Total</u>	<u>Total</u>

16. Total deficit = 9 + 15

17. Total cash deficit = 9 + 15 - 7

17 = external borrowing + borrowing from domestic private sector
+ borrowing from RBI

In the ideal situation, the total deficit should not exceed 8. (Government capital formation) plus 15. (Deficit on investment account) plus a small proportion of revenue expenditure on social overheads contained in 4. (Government consumption). Within this ceiling, borrowing from RBI should be limited to the due amount of seignorage. Given the amount of external borrowing, which would be determined by availability as well as by long-term balance of payments considerations, the total of domestic borrowing from the private sector would be determined as a residual. If it is felt to be too large to permit the private sector its due share of saving in the light of the responsibilities thrown on it, then the proposed scale of public investment may be reviewed.

Decomposition of Growth in the Debt of Central Government

In this appendix, changes in the debt ratio between 1984/85 and 1989/90 are analyzed by decomposing the total change into changes attributable to three different factors, namely, growth of real income, increase in the price level, and the growth of debt (in nominal terms). Table 15 presents the relevant figures. Column 2 in the table shows the ratios of the debt at the end of 1984/85 to the GDP of different years at 1984/85 prices; that is, it shows how the debt ratio in 1984/85 (46.1 percent) would have come down as a result of the real growth in GDP. If the debt had not grown, the debt ratio would have come down to 34.3 percent in 1989/90 because of the real growth in GDP. Column 3 shows the ratio of the debt at the end of 1984/85 to the GDPs of different years as a result of price changes only, without any change in GDP; that is, figures in the column show the decrease in debt ratio brought about by inflation alone. Inflation would have reduced the debt ratio from 46.1 percent to 32.7 percent. Column 4 combines the two effects and indicates the reduction in the debt ratio of 1984/85 as a result of the interaction of the growth of real GDP and change in the price level, the level of debt remaining the same. We note that if the debt had not grown, the debt ratio would have been reduced from 46.1 percent in 1984/85 to 24.3 percent in 1989/90, as a result of the interaction of the income effect and the price effect.

Column 6 indicates the impact of the income effect alone: the growth of income has the effect of reducing the debt ratio to the extent of 10.23 percentage points by the end of 1989/90. Similarly, Column 7 shows the impact of the price effect alone: the change in prices has the effect of reducing the debt ratio to the extent of 11.6 percentage points by the end of 1989/90.

The growth of debt by itself would have raised the debt ratio by 35.92 percentage points had real income and prices not changed (Column 8); in point of fact, the debt ratio increased by 14.09 percentage points because the growth in debt was counterbalanced by the growth in real income and prices.

Table 15. India: Decomposition of Growth in the Debt of Central Government

(Base year = 1984/85)

	Proportion of Debt to GDP (Percent)				Decomposition of Growth in Debt			
	1984/85 Debt to GDP at 1984/85 Prices	1984/85 Debt to GDP at Current Prices	1984/85 Debt to GDP at Current Prices	Actual Debt to GDP	Income Effect %	Price Effect %	Debt Effect %	Total Effect
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1984/85	46.11	46.11	46.11	46.11	--	--	--	--
1985/86	43.41	43.03	40.51	49.48	-2.62	-2.99	8.97	3.37
1986/87	41.43	40.36	36.26	53.77	-4.42	-5.43	17.51	7.66
1987/88	39.63	37.22	31.99	55.01	-5.96	-8.17	23.02	8.90
1988/89	36.14	34.69	27.19	56.82	-8.82	-10.10	29.62	10.70
1989/90	34.26	32.68	24.28	60.20	-10.23	-11.60	35.92	14.09

Chart I

DEBT GDP RATIO

(Primary Deficit/GDP = 3% Avg. Int. = 7.75%)

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