India's Fiscal Deficits and their Sustainability in Perspective*

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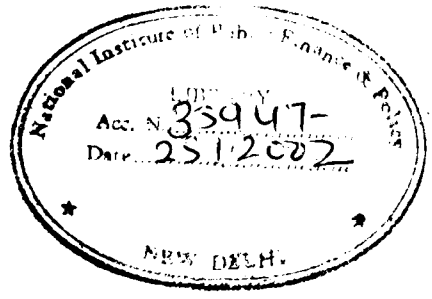

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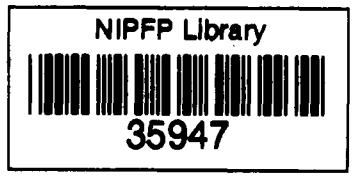

INDIA'S FISCAL DEFICITS AND THEIR SUSTAINABILITY IN PERSPECTIVE

I. Introduction

Among the top twenty-five countries in terms of high Central budgetary deficit in 1997, India ranked tenth, after Greece, Turkey and Pakistan, among others. High deficits at the State Government levels have further compounded the problem. According to the IMF, "Weak revenue performance and lack of expenditure control at both the central and state government levels caused the consolidated deficit of the public sector to rise sharply to around 11 per cent of GDP in FY 1999/00, with public sector debt exceeding 80 per cent of GDP."[1] The deficit and debt has attracted focused attention with the introduction of the Fiscal Responsibility and Budget Management Bill in the Lok Sabha in December 2000.

There are five aspects of the deficit problem that have attracted attention. First, is the deficit itself, which is a large proportion of GDP. Second, is the composition of the deficit, in particular the sizable revenue deficit that goes to finance current consumption of the government, and the primary deficit, which is the fiscal deficit less interest payments. Third, is the growing debt, which is the accumulated deficit from the past. Fourth, is the growing interest burden on public debt, which is an obligatory expenditure and constrains the flexibility available with the government in resource allocation. Fifth, is the financing a part of the high deficit through borrowings from the Reserve Bank of India.

There is a widespread unanimity about the unsustainability of the current Indian fiscal stance. Mounting debt from accumulated deficit of the past resulted in interest expenditure of the Central Government increasing 51 times over the two decades from 1979-80. Centre's interest payments of Rs. 902 billion preempted 40 per cent of gross tax and non-tax revenues in 1999-2000.[2] Taking into account defence revenue expenditure, major subsidies and transfer to States, there is nothing left after interest payment and the Centre has to borrow to meet other items of revenue expenditure.

Discussions about the high fiscal deficit in India has gone on two tracks, which could be categorised into the orthodox and the Keynesian ones. According to the orthodox school, high fiscal deficit poses considerable risks to macroeconomic stability, and compromises the growth prospects of the economy. In the orthodox track, the emphasis has been on measures to safeguard against the vulnerabilities that large fiscal deficit induces and on how to restore 'sustainability'. The Keynesian school, on the other hand, while wanting a change in the fiscal stance, regrets that "It is the bugbear of fiscal

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1 Towe (2001), p. 2.

2 Revenue receipts are taken on a gross basis, that is inclusive of States' share of Union excise duties and income tax.

deficit, it seems, that has held the government back in following an expansionary fiscal programme, even when there is considerable slack in the economy".[3]

The disagreement, it appears, comes in the area of what should be done to restore sustainability. The orthodox school wants the deficit to be reduced by a combination of revenue enhancing and expenditure containment measures. Given the decline in revenues as a proportion of GDP during the 1990s, there is some pessimism about the prospect of revenues increasing in the short run. This pessimism leads to added emphasis on expenditure control. This is where the Keynesian school and the economists on the left of the spectrum disagree. Capital expenditure, as well as expenditure for physical and social infrastructure needs augmentation. The economists of the non-orthodox school want capital expenditure, targeted expenditure for the poor and that on agriculture and social sector such as education and health to be augmented; they forcefully suggest that revenue expenditure be reduced sharply. Furthermore, there is a disagreement between the two schools about the extent that the deficit should be 'monetised'.

This paper attempts to analyse India's fiscal deficit and its sustainability in perspective. The second section describes some stylised facts on the evolution of the deficit and debt both at the central and state level, and provides an international comparison. The third section summarises the positions of the orthodox and Keynesian schools. The fourth section of the paper discusses the relationship between fiscal deficit on the one hand and inflation, growth and baiance of payments, on the other. The implications of alternative ways of financing a given level of fiscal deficit and the relationship between solvency and sustainability are also explored. The fifth and final section concludes.

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[3] Rakshit (2000), p. 47.

II. Debt and Deficit: Some Stylised Facts and International Comparison

Some stylised facts

i. Debt on the rise, deficit high and fluctuating

The debt-to-GDP ratios of the Central and State Governments in India have been on an upward trend since the early-1970s (Table 1 and Chart 1).[4,5,6] The rise has been particularly pronounced during the 1980s. The centre's debt, as a proportion of GDP, after declining by 1.9 percentage points during 1970-71 to 1980-81, rose by almost 14 percentage points during 1980-81 to 1990-91.

One of the principal factors responsible for the consistent rise in fiscal deficit is a similar rise witnessed in revenue deficit. There is a consensus that the revenue account should generate surpluses to finance at least a part of the capital expenditure. Borrowings shall be kept to the minimum and utilised only for financing capital expenditure. In accordance with this principle, by and large, both the Central and State Governments maintained surpluses in their revenue accounts during the first three decades since Independence. However, since the eighties, revenue deficits escalated to a sizeable portion. In the 1970s, the revenue account of the Central Government revealed a surplus in 8 out of 10 years, except for 1971-73. But, it moved to a deficit of 0.23 per cent of GDP in 1981-82 and increased further to 3.81 per cent in 1993-94 (Table 5). Although some decline was noticed in the next two years, this ratio started increasing again from 1997-98. A similar increasing trend was noticed in the case of States also.

As a proportion of GDP, gross fiscal deficit of the Centre and the States increased from a little over 3 per cent and a little under 2 per cent,

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[4] The definition of Central Government debt itself is a matter of some confusion. Debt consists of both the internal and external variety. In the official documents, a distinction is drawn between internal debt and internal liabilities. Internal debt consists of three components, namely (i) market loans, (ii) 91-day treasury bills, and (iii) 182- and 364-day treasury bills. Internal debt together with (i) small savings, deposits and provident funds, (ii) 'other accounts', and (iii) reserve fund and deposits, constitute internal liabilities. In this paper, debt refers to liabilities in official documents. The items apart from internal debt included in internal liabilities are, at least in theory, mobilised by the government in its capacity as a banker, and are not secured under the Consolidated Fund of India. While we compare the debt of India with that of other countries, we must keep in mind that for India only Central and State Governments are included and it does not include the debt of public enterprises and sub-national governments like municipalities and panchayats. Data problems also need to be recognised in that there is a wide scope of improving the coverage of debt statistics of Central public enterprises. With reference to State enterprises and municipalities, etc., consistent data at the national level are yet to be made available.

[5] Buiter and Patel (1992) use GNP rather than GDP as the denominator for deriving the ratios. GDP is about 10-11 per cent higher than GNP. Furthermore, they subtract official foreign exchange reserves from the gross debt figures to derive their debt figures in the numerator.

[6] The GDP figures used in this paper are from the new series (1993-94 base).

respectively, in 1970-71 to 5.75 per cent and 2.57 cent, respectively, in 1980-81 (Chart 2 and Table 2). During 1980-81 to 1990-91, these ratios increased further to 7.8 per cent and 3.3 per cent, respectively. The stabilisation-cum-reform programme launched after the balance of payments crisis in 1991 had fiscal consolidation as one of its primary instruments. Progress, however, has been tardy at best. A mild tendency for the deficit to decline has been overshadowed by large fluctuations in the Central deficit since 1993-94 and a sharp increase in the deficit of the States, particularly in 1998-99.

While analysing the debt situation, the impact of various quasi-fiscal activities, unfunded liabilities (viz., liabilities arising from unfunded public pension or insurance schemes) and contingent liabilities (viz., loan guarantees, exchange rate guarantees, deposit insurance, etc.) should not be ignored. The impact of unfunded liabilities arising from pension obligations to employees in the public sector has been significant. The outstanding liabilities of the Central and State Governments against the State and public provident funds, insurance and pension funds and special deposits of non-Government provident funds amounted to Rs. 1,68,617 crore in 1997-98 as against Rs. 60,753 crore in 1990-91.

Guarantees provided by the Centre and State Governments for promoting economic activities were about 9 per cent of GDP by end March 1999. Although from an accounting viewpoint guarantees do not form part of the public debt, such contingent liabilities could pose constraints in the event of a default. Recognising this risk, some State Governments have already placed a limit/ceiling on guarantees.

In addition to the explicit contingent liabilities, State Governments have been issuing letters of comfort to banks/financial institutions as well. These are in the nature of implicit guarantees, and are not included in the present estimates of guarantees. At the international level, however, these letters of comfort are treated on par with guarantees.

Table 1

Debt of Central and State Governments, GDP and Debt-to-GDP ratio

		Total liabilities at the end of the year			Debt as a proportion of GDP		
	GDP at current market prices*	Central Government**	State Governments***	Consolidated Centre and States****	Central Government	State Governments	Consolidated Centre and States
	(1)	(2)	(3)	(4)	(5)=(2)/(1)	(6)=(3)/(1)	(7)=(4)/(1)
		(In rupees crore)				(In per cent)	
1980-81	144,393	59,749	23,959	66,728	41.38	16.59	46.21
1981-82	169,495	68,186	28,820	77,918	40.23	17.00	45.97
1982-83	188,866	84,872	32,726	94,013	44.94	17.33	49.78
1983-84	219,688	95,261	38,089	106,352	43.36	17.34	48.41
1984-85	246,883	113,441	44,644	127,479	45.95	18.08	51.64
1985-86	280,258	137,484	53,660	152,358	49.06	19.15	54.36
1986-87	313,580	166,546	60,722	183,566	53.11	19.36	58.54
1987-88	355,417	195,561	69,971	215,998	55.02	19.69	60.77
1988-89	423,497	229,771	81,020	254,569	54.26	19.13	60.11
1989-90	487,740	268,192	94,224	298,277	54.99	19.32	61.15
1990-91	568,772	314,558	110,289	350,730	55.30	19.39	61.66
1991-92	653,298	354,662	126,338	397,509	54.29	19.34	60.85
1992-93	747,387	401,924	142,178	451,690	53.78	19.02	60.44
1993-94	859,220	477,968	160,077	536,100	55.63	18.63	62.39
1994-95	1,009,906	538,611	184,527	606,433	53.33	18.27	60.05
1995-96	1,181,961	606,232	212,225	686,952	51.29	17.96	58.12
1996-97	1,361,952	675,676	243,525	770,148	49.61	17.88	56.55
1997-98	1,515,646	778,294	281,207	886,772	51.35	18.55	58.51
1998-99	1,762,609	891,806	341,978	1,029,998	50.60	19.40	58.44
1999-2K#	1,956,997	1,030,744	418,582	1,205,661	52.67	21.39	61.61
2000-01$	2,211,407	1,179,793	498,839	1,392,808	53.35	22.56	62.98

Source: Handbook of Statistics on Indian Economy 2000, Reserve Bank of India.

Notes:

* New series, base 1993-94. See Table 1 on macroeconomic aggregates at current prices in the Handbook.

** Includes internal debt (market loans, 91, 182 and 364 days treasury bills), small savings, deposits and provident funds, other accounts, reserve fund and deposits, and external liabilities. See Table 106 entitled Outstanding Liabilities of the Central Government in the Handbook for data from 1980-81. Data for 1970-71 to 1979-80 are from RBI.

*** Includes internal debt, loans and advances from the Central Government and total provident fund, etc. Internal debt consists of market loans, compensation and other bonds, ways and means advances from the RBI, loans from banks and other institutions. Total provident fund etc. consists of State provident fund, insurance and pension fund trust and endowment. See Table 107 entitled Outstanding Liabilities of State Governments in the Handbook for data from 1980-81.

**** The liabilities of Centre and States will not add upto the combined liabilities on account of inter-Governmental transactions.

\# The liabilities relate to revised estimates.

$ The liabilities relate to budget estimates.

Chart 1. Debt-to-GDP on the Rise

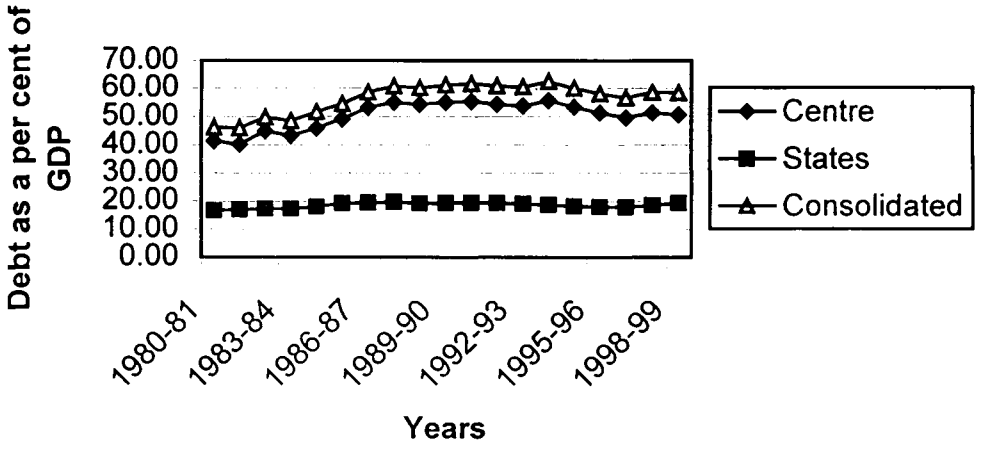


Chart 2. High and Fluctuating Fiscal Deficits

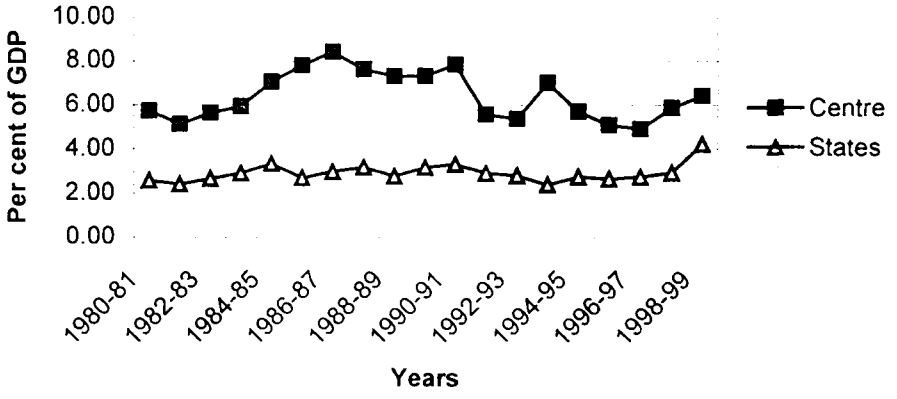


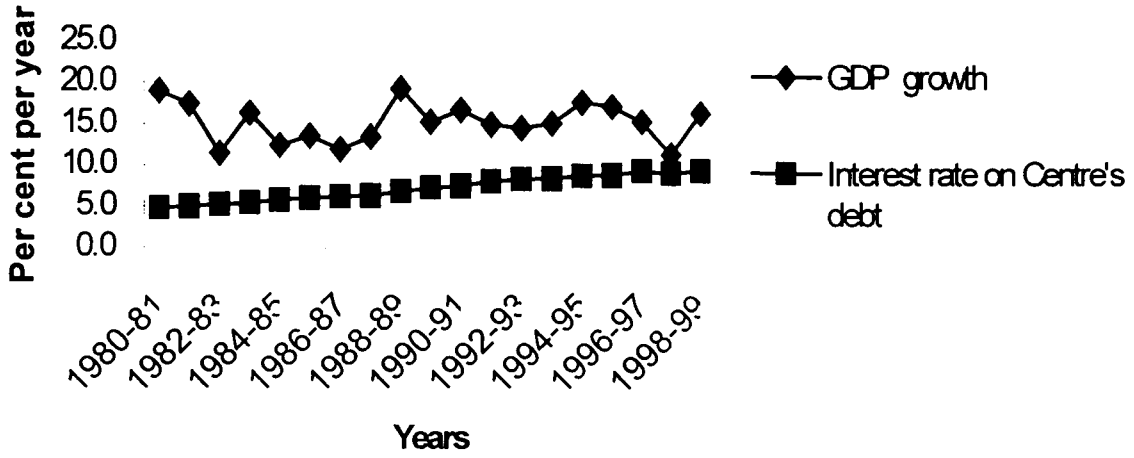
Table 2

Gross Fiscal Deficit (as a per cent of GDP)

Year	Centre	States	Combined
1980-81	5.75	2.57	7.5
1981-82	5.11	2.40	6.3
1982-83	5.63	2.64	5.9
1983-84	5.93	2.89	7.3
1984-85	7.05	3.32	9.0
1985-86	7.80	2.68	8.0
1986-87	8.40	2.96	9.9
1987-88	7.61	3.16	9.2
1988-89	7.30	2.76	8.5
1989-90	7.31	3.16	8.9
1990-91	7.85	3.30	9.4
1991-92	5.56	2.89	7.4
1992-93	5.38	2.80	7.4
1993-94	7.01	2.40	8.3
1994-95	5.71	2.74	7.1
1995-96	5.10	2.66	6.6
1996-97	4.90	2.74	6.4
1997-98	5.87	2.92	7.3
1998-99	6.43	4.21	8.9
1999-00	5.59	4.86	9.6
2000-01(RE)	5.10	3.90	8.9

Note: The figures for Centre for the last two years exclude States' share in small savings collections, following the change in the reporting pattern in Central Budget.

Chart 3. Rising Interest Rates, Even Higher Nominal GD Growth



ii. Rate of interest on the rise, still lower than GDP growth

The rate of interest on public debt has steadily increased over time, but even then it has consistently remained below the rate of growth of GDP at current prices (Chart 3 and Table 3).[7] Since 1981-82, the effective rate on States' debt has exceeded the rate on debt of the Centre by an average of 200 basis points. The highest premium observed was 2.60 percentage points in 1994-95. While a part of the premium reflects the lower credit rating of the States relative to the Centre, a part may be because of the terms and conditions under which external assistance is on-lent by the Centre to the States. [8]

The rate of interest on public debt was traditionally low because of the administered interest rate structure. The Government of India earned an average of at least 2.86 per cent of GDP annually in revenues from financial repression during the period 1980-85.[9] The partial end to financial repression from 1992 has resulted in an increase in the interest rate on government debt. The statutory liquidity ratio (SLR), whereby banks have to invest a specified proportion of their outstanding domestic net demand and time liabilities in 'approved' securities bearing low interest rates, has been brought down in stages from 38.5 per cent on April 3, 1992 to 25 per cent from the fortnight ended October 22, 1997. However, while the rate has been affected at the margin, the average rate has remained low because of the stock of low-interest debt inherited from the past. There is a two-pronged development here. Since April 1997, ad hoc Treasury Bills have been totally wiped out in accordance with the agreement between the Reserve Bank of India and the Central Government. Concurrently, the Government has resorted to market borrowing at market related interest rates.

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7 Interest rate on public debt has been calculated as interest expenditure in a particular year as a proportion of the average value of debt at the beginning and the end of the period. As pointed out by Rakshit (2000), the interest rate as calculated above is an overestimate as by disregarding intra-year debt, it imputes interest payments to a lower volume of debt thereby getting a higher than the true value.

8 See Srivastava, Rao and Rangamannar (2000). It is important to recognise here that exchange risk is borne by the Central Government and Centre gives 30 per cent as grant and 70 per cent as loan to non-special category States and 90 per cent as grant and 10 per cent as loan to special category States.

9 Giovannini and de Melo (1993). This estimate, calculated as the product of ex-post differential between the domestic and international interest rates and stock of government debt held outside the central bank, ignores the effect of tax concessions on government debt.

Table 3

Interest Rates on Debt and GDP Growth

(per cent per annum)

Year	Nominal GDP growth	Interest on Government debt		Weighted interest rate
		Centre	States	
1980-81	19.0	4.7		7.03
1981-82	17.4	5.0	5.6	7.29
1982-83	11.4	5.1	5.6	8.36
1983-84	16.3	5.3	5.5	9.29
1984-85	12.4	5.7	6.0	9.98
1985-86	13.5	6.0	6.0	11.08
1986-87	11.9	6.1	7.2	11.38
1987-88	13.3	6.2	7.5	11.25
1988-89	19.2	6.7	7.9	11.40
1989-90	15.2	7.1	8.2	11.49
1990-91	16.6	7.4	8.5	11.41
1991-92	14.9	7.9	9.3	11.78
1992-93	14.4	8.2	9.8	12.46
1993-94	15.0	8.4	10.5	12.63
1994-95	17.5	8.7	11.3	11.90
1995-96	17.0	8.7	11.1	13.75
1996-97	15.2	9.3	11.2	13.69
1997-98	11.3	9.0	11.5	12.01
1998-99	16.3	9.3	11.5	11.86
1999-2K[#]	10.2	9.5	12.0	11.77
2000-01[$]	12.5	9.2		

Source: Tables 1 and 2 above and Handbook of Statistics on Indian Economy 2000, Reserve Bank of India, Tables 91, and 99.

Notes:

Interest expenditure is calculated as a per cent of the average value of the total outstanding liabilities at the beginning and at the end of the year.

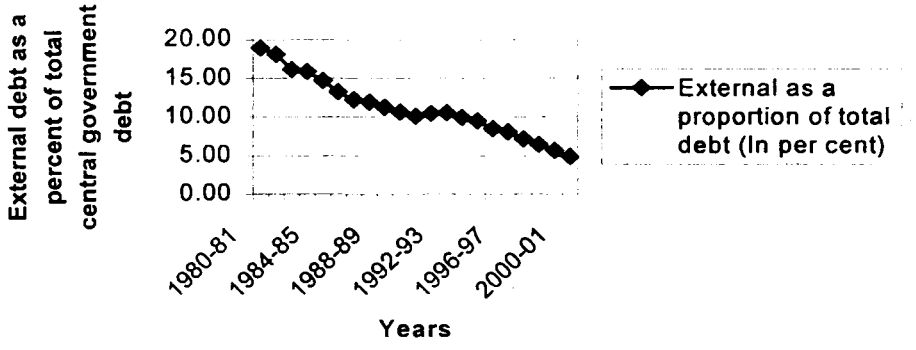
\# Relates to revised estimates.

$ Relates to budget estimates.

iii. Deficit financed domestically and debt predominantly internal

The debt is predominantly of the domestic variety, and the proportion of total debt of the Central Government from external sources has been declining over time (Chart 4). According to Article 293 of the Constitution, States can borrow only within the territory of India. Consequently, the proportion of external debt in the consolidated debt of the Centre and the States is even lower than the corresponding proportion in the debt of the Central Government.[10] All the external loans of the Central Government are of the official variety from bilateral and multilateral donors.[11] The drying up of 'official assistance' together with large internal borrowing has resulted in the diminishing significance of external debt in total public debt.[12]

Chart 4. Declining External Debt as a Proportion of Total Debt of the Central Government



The external financing of the Central deficit has also been very limited in recent years (Chart 5). In the budget estimates for 2000-01, such financing was negative (-Rs. 44 crore) for a total budgeted fiscal deficit of Rs. 111,275 crore.

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10 External debt is calculated at historic exchange rates, but the actual recovery is done at current rate.

11 In times of difficulties, the Centre has borrowed from commercial sources only in an indirect manner. Two standard methods have been through Central public sector undertakings, including financial institutions, and through non-resident Indian (NRI) deposit schemes with exchange rate guarantees from the Reserve Bank of India.

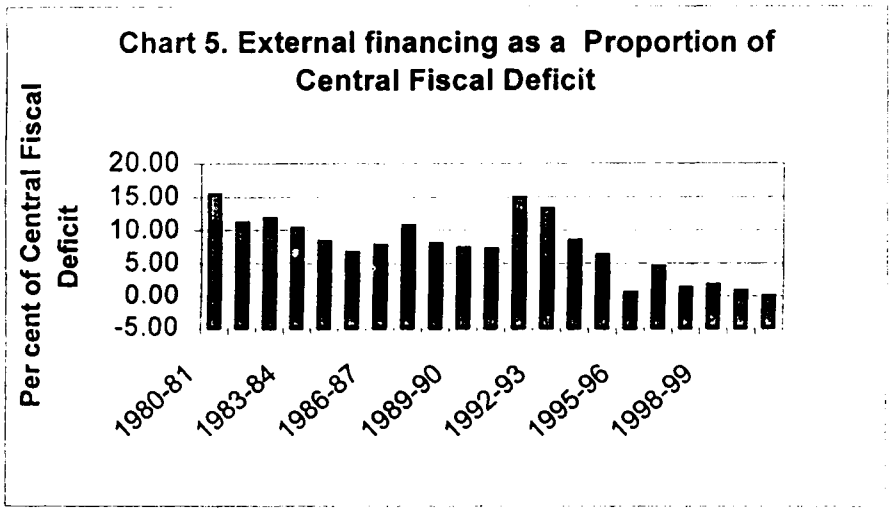
12 The flow of net official assistance – disbursements less debt-servicing (both amortisation and interest) -- turned negative in 1995-96. Such flows after, recovering from -$486 million in 1995-96 to a net inflow of $11 million in 1996-97, remained negative in subsequent years until 1999-2000.

Table 4

External Component of Central Government Debt

	Centre's liabilities (end of year)		
	Total	External	External as a proportion of total
	(In rupees crore)		(In per cent)
1980-81	59,749	11,298	18.91
1981-82	68,186	12,328	18.08
1982-83	84,872	13,682	16.12
1983-84	95,261	15,120	15.87
1984-85	113,441	16,637	14.67
1985-86	137,484	18,153	13.20
1986-87	166,546	20,299	12.19
1987-88	195,561	23,223	11.88
1988-89	229,771	25,746	11.21
1989-90	268,192	28,343	10.57
1990-91	314,558	31,525	10.02
1991-92	354,662	36,948	10.42
1992-93	401,924	42,269	10.52
1993-94	477,968	47,345	9.91
1994-95	538,611	50,929	9.46
1995-96	606,232	51,249	8.45
1996-97	675,676	54,239	8.03
1997-98	778,294	55,332	7.11
1998-99	891,806	57,254	6.42
1999-2K	1,030,744	57,603	5.59
2000-01	1,179,793	56,898	4.82

Source: Handbook of Statistics on Indian Economy 2000, Reserve Bank of India, Table 106.



iv. Deficit finances current rather than capital expenditure

The fiscal deficits of the Centre and the States (Tables 5 and 6) indicate three distinct developments. First, the gross fiscal deficit of the Centre, after reaching a peak of 8.40 per cent of GDP in 1986-87, declined continuously for the next four years, before reaching to 7.85 per cent in 1990-91. It has fluctuated unevenly around a mildly declining trend since the beginning of the 1990s. Second, there has been a clear increasing trend in the fiscal deficit of the States. Third, the composition of the fiscal deficit has undergone a distinct deterioration. The deficit has been financing more and more current rather than capital expenditure.

The worsening quality of the fiscal deficit can be seen from the increases in the revenue deficit, which measures the excess of revenue expenditure over revenue receipts. For the Centre, the revenue deficit increased almost continuously since the early-1980s reaching a peak of 3.81 per cent in 1993-94. After declining for three years during 1994-97, following the pay revision of employees after the Fifth Pay Commission award, it again jumped to well over 3½ per cent on average during the subsequent period. The States reveal a sharper deterioration in revenue deficit. The States, which were generating revenue surpluses in the early 1980s, had a revenue deficit below 1 per cent of GDP until 1995-96. The revenue deficit increased sharply in the subsequent period and, according to the revised estimates, was a high of 2.91 per cent of GDP in 1999-2000.

Table 5

Select Fiscal Indicators of the Central Government (As percentage of GDP)*

Year	Gross Fiscal Deficit (GFD)	Gross Primary Deficit (GPD)	Revenue Deficit (RD)	Monetised Deficit (MD)#	Seigno-rage (in per cent)
1	2	3	4	5	6
1980-81	5.75	3.94	1.41	2.46 (42.8)	1.07
1981-82	5.11	3.23	0.23	1.89 (37.0)	1.25
1982-83	5.63	3.54	0.69	1.78 (31.7)	3.12
1983-84	5.93	3.75	1.16	1.80 (30.3)	3.29
1984-85	7.05	4.63	1.71	2.45 (34.8)	1.19
1985-86	7.80	5.12	2.10	2.21 (28.3)	2.37
1986-87	8.40	5.45	2.48	2.26 (26.3)	2.77
1987-88	7.61	4.44	2.57	1.85 (24.3)	2.66
1988-89	7.30	3.93	2.48	1.54 (20.0)	3.46
1989-90	7.31	3.66	2.44	2.83 (38.8)	2.09
1990-91	7.85	4.07	3.26	2.59 (33.0)	1.79
1991-92	5.56	1.49	2.49	0.84 (15.2)	1.73
1992-93	5.38	1.22	2.49	0.57 (10.6)	3.73
1993-94	7.01	2.74	3.81	0.03 (0.4)	3.56
1994-95	5.71	1.35	3.07	0.21 (3.7)	2.49
1995-96	5.10	0.86	2.52	1.68 (32.9)	0.47
1996-97	4.90	0.53	2.40	0.14 (2.9)	1.94
1997-98	5.87	1.54	3.06	0.85 (14.5)	2.17
1998-99	6.43	2.01	3.85	0.67 (1.4)	2.04
1999-00(RE)	5.59	0.90	3.77	-0.29 (-5.1)	1.19
2000-01(BE)	5.10	0.46	3.55	...	

Source: Reserve Bank of India Handbook of Statistics 2000, Table 207 and authors' calculation.

Notes: RE = Revised Estimates. BE = Budget Estimates.

* GDP at current market prices with 1993-94 base.

\# Figures in parentheses indicate the percentage share of MD to that of GFD.

Table 6

Select Fiscal Indicators of State Governments (as percentage of GDP)*

Year	Revenue Deficit	Gross Fiscal Deficit	Primary Deficit
1980-81	-1.03	2.57	1.72
1981-82	-0.81	2.40	1.55
1982-83	-0.47	2.64	1.74
1983-84	-0.10	2.89	2.00
1984-85	0.37	3.32	2.32
1985-86	-0.23	2.68	1.63
1986-87	-0.05	2.96	1.65
1987-88	0.31	3.16	1.78
1988-89	0.43	2.76	1.35
1989-90	0.75	3.16	1.69
1990-91	0.93	3.30	1.78
1991-92	0.86	2.89	1.22
1992-93	0.68	2.80	1.03
1993-94	0.44	2.40	0.56
1994-95	0.61	2.74	0.82
1995-96	0.69	2.66	0.80
1996-97	1.18	2.74	0.86
1997-98	1.08	2.92	0.93
1998-99	2.48	4.21	2.18
1999-00(RE)	2.91	4.86	2.52
2000-01(BE)	2.09	4.13	1.64

Source: Reserve Bank of India Handbook of Statistics 2000, Table 208.

Notes: RE = Revised Estimates. BE = Budget Estimates.
(-) In the deficit indicators indicate a surplus.
* Ratios are based on new GDP series (with 1993-94 base).

v. Declining importance of 'Monetised' deficit (MD)

'Monetised deficit' is the part of fiscal deficit that is financed by borrowing from the RBI and results in a one-to-one increase in reserve money. During the 1980s, monetised deficit worked out to about 27 per cent of the gross fiscal deficit. This proportion came down significantly in the 1990s to 10 per cent, except for in 1995-96, when it was 32.9 per cent (Table 5). A conscious policy decision by the Centre and the RBI contained the monetised deficit during the 1990s.

The decline in the proportion of monetised deficit in fiscal deficit has been accompanied by a corresponding increase in the share of commercial banks in the financing of the deficit. Although the statutory liquidity ratio has been lowered from the peak value of 38.5 per cent in 1992 to 25 per cent as of now, the banks continued to find the investment in Government securities attractive because of the introduction of market related interest rates on

government securities and the zero risk nature of such investments. Banks' holdings of government securities exceed the statutory requirements by a considerable margin. Average holding of RBI of government securities has drastically come down from 20.3 per cent to 2.8 per cent in 1997 while commercial banks' holdings have escalated from 48 per cent to 63 per cent.

vi. Fiscal and Current Account Deficits

The relation between balance of payments and fiscal deficit is far from straightforward.[13] Aggregate excess demand representing a shortage of domestic supplies relative to demand, spills over as a current account deficit. The impact of the deficit on the current account. however, depends on how much of the deficit is for financing investment projects enhancing supply of goods and services and how much private investment is crowded out by the deficit.

There is some apparent regularity in the relationship between high deficit of the Central Government and a balance of payments crisis in India. A rise in the deficit (as a proportion of GDP) from 3.6 per cent in 1977-78 to 5.27 in 1979-80, and further to 5.75 per cent in 1980-81 preceded the external payments crisis in the early 1980s. The Central deficit remained high throughout the decade of the 1980s. It was brought down from the dizzy height of 8.4 per cent in 1986-87 to 7.3 per cent in each of the two years of 1988-89 and 1989-90. A further build up of the deficit from these already high levels to 7.85 per cent in 1990-91 yet again preceded the last crisis in 1991. No before-and-after analysis, however, can constitute a conclusive proof of causality.

vii. International comparison

The deficit in India appears to be high by international standards. Table 7 presents the data on Central fiscal deficit as a proportion of GDP in twenty-five countries during 1989-97. The countries chosen represent the top twenty-five countries in terms of high Central budgetary deficit in 1997. In 1997, India ranked tenth in terms of the Central fiscal deficit as a proportion of GDP, after Greece, Turkey and Pakistan, among others. The rank in 1991 was 25th before gradually "improving" to 18th in 1993. India's rank went down again to 20th and 24th in the two subsequent years before "improving" again to 10th in 1997.

[13] See Lahiri (2000).

Table 7

Twenty-five countries with High Central Budgetary Deficit

	1989	1990	1991	1992	1993	1994	1995	1996	1997
LEBANON	...	...	...	...	-7.75	-17.19	-18.36	-20.56	-25.80
ALBANIA	...	...	...	...	...	...	-8.97	-12.34	-12.01
MALTA	-4.65	-5.18	-5.05	-3.11	-2.93	-3.65	-2.69	-7.73	-9.83
MONGOLIA	...	...	...	-6.00	-16.67	-9.18	-6.80	-8.46	-8.73
CONGO, REPUBLIC OF	...	...	...	-14.13	-12.62	-13.23	-8.19	-1.90	-8.64
GREECE	-21.32	-23.21	-15.04	-5.90	-9.75	-10.82	-9.44	-8.57	-8.45
TURKEY	-3.41	-3.00	-5.22	-4.31	-6.64	-3.89	-3.99	-8.65	-8.44
PAKISTAN	-6.98	-4.92	-6.91	-7.47	-8.87	-7.21	-6.57	-7.91	-7.72
BAHRAIN	-8.43	-6.84	-4.24	-6.91	-0.11	-3.19	-6.66	-2.73	-6.05
INDIA	**-7.57**	**-7.79**	**-5.55**	**-5.40**	**-7.13**	**-5.69**	**-5.10**	**-4.91**	**-5.72**
BURUNDI	...	...	-3.31	-7.13	-3.99	-3.22	-3.01	-7.81	-5.50
CYPRUS	-2.92	-5.35	-6.85	-4.76	-2.38	-1.42	-1.00	-3.44	-5.33
ZIMBABWE	-6.35	-5.29	-7.12	-11.22	-6.23	-3.72	-9.38	-6.07	-5.09
SRI LANKA	-8.65	-7.82	-9.45	-5.39	-6.42	-8.54	-8.27	-7.80	-4.49
MAURITIUS	-1.52	-0.44	0.00	-0.77	0.04	-0.28	-1.24	-4.24	-4.21
ROMANIA	8.22	0.94	1.94	-4.68	-0.47	-2.51	-2.96	-4.02	-3.89
NEPAL	-7.75	-5.66	-6.49	-5.72	-5.20	-3.41	-3.17	-3.91	-3.72
COLOMBIA	-1.90	3.93	2.55	-1.89	-0.54	-1.37	-2.30	-3.63	-3.63
FRANCE	-1.93	-2.10	-1.26	-3.91	-5.68	-5.58	-6.56	-5.25	-3.50
SOUTH AFRICA	-0.22	-4.06	-4.06	-8.72	-9.13	-5.59	-5.42	-5.18	-3.36
ITALY	-10.47	-10.18	-9.80	-10.78	-10.26	-10.43	-7.52	-7.00	-3.05

Source: Lahiri (2000).

The public debt of India is strictly speaking not comparable with other countries. The data for India refers to the Central and State Governments only, while that for other countries includes public sector enterprises and local governments. For India, data problems complicate the incorporation of the debt of public enterprises and that of lower level governments like municipalities and panchayats. Even after taking account of this partial coverage, the public debt of India does not appear high by international standards (Table 8). Debt as a proportion of GDP is considerably lower in India than that in Belgium, Canada, Greece and Italy.

Table 8

A comparison of Domestic Debt of India with Other Countries (as a per cent of GDP)

Country	1980	1985	1990	1991	1992	1993	1994
Belgium	81.6	126.0	134.4	137.6	140.2	145.6	145.0
Canada	44.6	64.9	72.5	80.0	87.5	92.3	95.7
Finland	14.1	18.9	16.6	25.3	44.0	51.7	71.1
France	30.9	38.6	40.2	41.2	45.5	52.5	55.9
Greece	27.7	57.9	89.0	96.3	104.7	106.1	120.7
Italy	59.0	84.3	100.5	103.8	108.3	113.9	123.1
United States	37.7	48.1	55.4	58.9	62.0	63.9	64.5
United Kingdom	54.1	52.7	34.6	35.4	40.6	46.5	51.8
G-7 Countries	41.9	53.8	58.1	60.0	63.7	67.2	70.6
India*	46.2	54.4	61.7	60.9	60.4	62.4	60.1

Source: Hand Book of Statistics on Indian Economy 2000, Reserve Bank of India, and Tanzi and Fanizza (1995), p. 11.

Note: * Years for India refers to 12 months beginning April 1 of the particular year.
Also see footnote 4 on p.3 about comparability of data.

III. Two Alternative Schools of Thought

In the post-independence period, there appears to have been a consensus about the need for a planned strategy for economic development.[14] An active government expenditure programme to provide financial support to the plans followed as a corollary. The usefulness of such expenditure, however, was mostly seen from the supply side. Government expenditure was more for creation of assets that enhanced the productive capacity of the economy, than for giving a boost to aggregate demand. With very limited debt stock in the initial years, the question of how to finance government expenditure was seen as one of limited significance.[15] Furthermore, there was a firm belief about the paybacks from the assets created by such expenditure.

In spite of the fact that the extent of the fiscal deficit was limited during the first four Plans, there was a debate about the role of deficit finance in an underdeveloped country like India. As A.K. Dasgupta (1987) points out "It was, let us remember, the eve of the Second Five Year Plan, and the problem before us, among other things, was whether we could go in for some deficit-financing for the mobilisation of additional resources." [16] This debate, in its wider context, even raised issues about the relevance of the multiplier in an underdeveloped country. As early as 1952, V.K.R.V.Rao (1952) pointed out the problems posed by supply constraints in limiting the role of government expenditure in boosting GDP or national income.

The debate about the role of deficit finance intensified during the run-up to the Second Plan. The joint memorandum entitled "The Second Five Year Plan: Basic Considerations Relating to the Plan Frame" of the panel of twenty-one economists (chaired by C. D. Deshmukh) appointed by the Planning Commission produced some differing positions. B.R. Shenoy, in his note of dissent, opposed resorting to deficit financing because of its inflationary impact.[17] As Byres (1998) comments "Shenoy would be an active opponent of state intervention and planning: a consistent, penetrating and active proponent of what would now be called the neo-liberal position – a prophet before his time."[18] A. K. Dasgupta (1955) differed with Shenoy, and continued the debate by joining issues with V.K.R.V.Rao in 1987 about the whole question of relevance of Keynesian economics in an underdeveloped country.[19]

Over time, the poor performance of public sector units dampened the faith in the efficacy of public investment in the productive sectors. According to Bagchi and Stern (1994) "The early results of Indian planning were quite impressive. Breaking out of the stagnation of the preceding fifty years, the

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14 As discussed by Desai (1998) (p. 45), the opposition, for example, between the Bombay School and the Calcutta School was 'not so much Plan versus Market but about an employment versus an accumulation strategy'.

15 The outstanding liabilities of the Central Government was Rs. 19,864 crore or less than 44 per cent of GDP until 1970-71.

16 See Dasgupta (1987a), p. 1601.

17 Shenoy (1955).

18 Byres (1998), p. 80.

19 See Dasgupta (1987a, b, and c).

Indian economy grew at about 4 per cent per annum in the first two plan periods. Per capita income grew at 1.8 to 2 per cent. But this momentum was not maintained. What was more, financing the public sector proved increasingly difficult, leading to larger and larger recourse to 'deficit financing' (borrowing from the central bank) with all their attendant consequences. Before the decade of the 1980s had drawn to a close it was evident that the government budget in India was in a crisis and this was at the root of the structural imbalances plaguing the economy."[20] The ranks of the demand side votaries of public expenditure also seem to have been depleted over time. The emphasis now is on the need for larger public sector outlays in infrastructure – physical (such as roads and water supply) and social (such as education and health) – and direct support to the poor for poverty alleviation. Furthermore, the indirect benefits from larger public sector capital outlays from 'crowding in' of private investment and boosting of aggregate demand have been underlined. The major points about the continuing debate between the Keynesians and the others about deficit finance as well as sustainability of the fiscal stance of the government are summarised below.

i. The Orthodox school

The orthodox school strongly argues for containing the fiscal deficit and debt mainly due to three reasons: risk of inflation, unsustainability and danger on the external front.

a. High deficit endangers price-stability

Starting from Shenoy, most economists of the orthodox school have been against, not deficit financing per se, but the level of deficit that was too high for maintaining price stability.[21] In an exchange with L.K.Jha, A.K.Dasgupta put it succinctly: "I have not indeed made 'the point', as Jha suggests, 'that with the shortage of capital, addition to aggregate demand through budgetary deficits will not help countries like India'. I have, on the other hand always argued,...that deficit financing can be legitimately used towards capital formation (and hence growth), provided its infiationary impact could be regulated." [22]

The focus on the relationship between deficit and infiation can be partly explained by the way the deficit was defined until 1991-92. Until 1991-92, the Budget document of the Central Government did not even report the fiscal deficit figure; what was reported instead was the 'budgetary' or uncovered deficit, which was the excess of total expenditure (both revenue and capital) over total receipts (both revenue and capital). This gap was financed by the

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20 Bagchi and Stern (1994), p. 3.

21 According to Shenoy (1955), p. 163. "I also generally agree with ..scope for a certain measure of deficit financing.".

22 See Dasgupta (1987c), p. 2126. In the same article, Dasgupta continues to add "Frankly I did not envisage, while advocating a policy of deficit financing in the early stages of planning, the excesses that the prescription would lead to. If I now say "we have had enough of deficit financing", it is because of our experience over the years, which is not at all edifying."

issue of 91-day ad hoc Treasury Bills held by the Reserve Bank of India, and draw down of cash balances. This deficit, by definition, was monetised.[23,24]

Apart from the flow effect of deficit and its financing through money creation, the predominantly domestic nature of the debt compounds the apprehension about inflation. According to Auerbach (1994), "To the extent that there is domestically held debt denominated in the local currency, the government always has the option of inflating it away. While this is economically equivalent to repudiation, it is legally distinct."[25]

b. Increasing trend of deficit and debt together are unsustainable

In the initial period, when debt was low, the discussion was mostly focused on the high level of deficit, and the flow impact of the high deficit on prices, growth and distribution. In the interim, the debt, representing the accumulated deficits from the past, was also rising. As pointed out by Rangarajan, Basu and Jadhav (1994), "Seshan (1987) was probably the first one to draw a pointed attention to the possibility of domestic debt in India reaching an unacceptably high level in the none too distant future. Subsequently, the Report of the Comptroller and Auditor General of India (1988) also warned against the alarming growth in domestic debt."[26]

The initial studies, based on simple trend analysis, were criticised on the grounds that they lacked 'analytical constructs' behind the findings.[27] Later studies by Buiter and Patel (1992), Rangarajan, Basu and Jadhav (1994), and others provided the analytical constructs. Buiter and Patel (1992) argued that, while unbounded debt-GDP ratio can be 'still consistent with solvency', "If deadweight losses, excess burdens or collection costs are an increasing and strictly convex function of the real tax rate or of the tax-GDP ratio, then only finite debt-GDP ratios are feasible".[28] They argued that "While our *weak solvency criterion* only implies that *discounted debt* D_t cannot have a positive stochastic or deterministic trend, a *stricter and very plausible practical solvency criterion* in addition states that the *undiscounted debt-GDP ratio* d_t cannot have a positive or stochastic trend."[29]

Buiter and Patel (1992), using annual data for 18 years (1970-71 to 1987-88), with four alternative interest rates, demonstrated that discounted public debt in India is nonstationary. Given that the initial debt is positive, they ruled out the case of supersolvency and were left with the conclusion of 'bankruptcy of the Treasury'. Even the debt-GDP ratio was found to contain a

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23 The fiscal deficit found its place in the Budget document of the Government of India only in 1991-92, six years after the Committee to Review the Working of the Monetary System – the Chakravarty Committee as its more popularly known – submitted its report in April 1985. See Lahiri (2000).

24 Rangarajan, et. al. (1994) provide a useful guide to the various measures of deficit as well as measurement of debt.

25 Auerbach (1994), p. 133.

26 Rangarajan, Basu and Jadhav (1994), p. 135. See also Seshan (1987).

27 Mihir K. Rakshit (1989).

28 Buiter and Patel (1992), p. 186.

29 Buiter and Patel (1992), p. 187.

unit root, implying a positive or stochastic trend. They pointed out that without a sharp reversal of the primary deficit to a primary surplus, avoiding repudiation or default would require the mobilisation of large seignorage or inflation tax (as a proportion of GDP) equivalent to high double digit figures relative to 2.6 per cent in 1988-89.

Using data for the 1970s and 1980s, Rangarajan, et. al. (1994) noted that "real income elasticity of nominal government expenditure exceeds the corresponding elasticity of nominal revenue receipts. Similarly, price elasticity of nominal expenditure exceeds the corresponding elasticity of nominal receipts. These phenomena, widely observed in developing countries, confirm the hypothesis that the primary deficit tends to widen with a passive fiscal policy stance."[30] They simulated two alternative scenarios for financing the deficit: a debt-financing scenario and a monetary-financing scenario. They calculated that, under the debt-financing scenario, "..with the rapid increase in the debt-GDP ratio, the corresponding net interest burden is also likely to go up substantially from 11.4 per cent of receipts in 1987-88 to as much as 30.1 per cent of projected receipts by the turn of the century. The enormity of this potential situation can be appreciated with a historical perspective. The net interest burden was actually negative until 1973-74."[31] Given the 'serious socio-economic constraints' on raising tax revenues and the downward stickiness of current outlays, they prophetically concluded that "..the higher interest burden may invariably lead to a squeeze on budgetary capital outlays, thereby stifling economic growth."[32]

Rangarajan, et. al. (1994) also analysed the monetary-financing scenario under the assumptions that real GDP growth is 5 per cent per year, the real interest rate for domestic debt held by the RBI and outside the RBI are –2 per cent and +3 per cent, respectively, keeping the external and market financing of debt constants as proportions of GDP. They concluded that "..resorting to monetary financing is likely to set in motion a vicious circle of large deficit, higher monetary financing, greater inflation leading again to a larger deficit, and so on. Indeed, reliance on net RBI credit is likely to raise the monetary financing ratio from 2.4 per cent of GDP in the base year to 17.3 per cent of GDP, and consequently the inflation rate is likely to shoot up from under 7 per cent in the base year to as much as 20 per cent within five years."[33]

c. Deficit a risk for the balance of payments

Buiter and Patel (1992), in their original draft in 1989, had written "Unless measures to reduce the primary deficit are taken, a fiscal crisis is bound to come. Where and when it will strike cannot be predicted with certainty. Often a fiscal crisis first manifests itself in the foreign exchanges.

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30 Rangarajan, et. al. (1994), p. 159. The data used for expenditure and revenue receipts are 1970-71 to 1987-88 and from 1975-76 to 1986-87, respectively.

31 Rangarajan, et. al. (1994), p. 162. The net interest burden is the gross interest burden less interest receipts from loans and advances by the government.

32 Rangarajan, et. al. (1994), p. 162.

33 Rangarajan, et. al. (1994), p. 166.

Actual or imminent international reserve exhaustion is a common trigger for emergency measures including recourse to IMF standby financing and the conditionality this implies. Such foreign exchange crises can happen even if, as in the case of India, the external debt burden of the country is quite modest."[34] Indeed, the country had a balance of payments crisis in 1990-91 and had to go to the IMF for exceptional support.

ii. The Keynesians

Those who adopt Keynesian view argued on the basis of the following eight points:

a. Debt is moderate by international standards

Rakshit (2000) has argued "Why should a 65 per cent debt-GDP ratio be considered too high, remembering that instances abound when some countries often had debt-GDP ratio exceeding 100 per cent, without any apparent clogging of their wheels?" [35]

b. Debt is of the internal variety

Given that the Indian public debt is of the internal variety, interest payments are essentially in the nature of a transfer from taxpayers to bondholders, both domestic parties. Why worry about public debt when it is mostly of the internal variety, the Keynesians argue.[36] Financial assets held by the rest of the economy exactly offsets government debt. Furthermore, interest payments on internally held debt should not be a source of concern as such payments are nothing but transfers to holders of government securities and do not constitute any net diminution in the community's command over goods and services available for consumption or investment. [37]

c. Rate of interest is lower than GDP growth

"For any given tax-GDP ratio, financing part of public consumption expenditure through borrowing is sustainable so long as the interest rate on such borrowing is less than the GDP growth rate".[38] In India, the crucial condition for sustainability of debt-financing, viz., the growth rate of the economy exceeding the interest cost of government borrowing, is satisfied. During the decade of the 1990s, while interest rate on government borrowing was less than 10 per cent throughout, the average GDP growth in nominal terms was about 14 per cent per annum.[39]

Rajaraman and Mukhopadhyay (2000) point out how the interest rate – on market loans, as well as on small savings plus provident funds – after being

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34 Quoted in Buiter and Patel (1992), p. 204.
35 Rakshit (2000), p. 21.
36 Rakshit (2000), p. 22.
37 Rakshit (2000), p. 22.
38 Rakshit (2000), p. 23.
39 Rakshit (2000), p. 37.

higher than the nominal growth rate of GDP until 1997-98, crossed over to the lower than growth rate regime.[40] But, although in 1997-98, the growth rate was marginally lower than the implicit interest rate, the situation reversed itself in the next year.

d. A tale of private profligacy and public thrift

The decline in savings and investment as a proportion of GDP has constrained the performance of the economy during the 1990s. According to Rakshit (2000): "Contrary to popular perception, it was private, not public, profligacy that lay at the root of the trouble. Government consumption ratio, unlike that in the private sector, did not go up in the reference period (1990-91 to 1999-00). In fact, over the 80s, this ratio went up by more than 2 percentage points, but showed some slide, albeit marginal, during the last decade. The explanation of the declining trend in aggregate saving seems to lie in two factors. First, over the 90s the tax-to-GDP ratio came down by more than 3.5 percentage points; government transfer payments by way of interest and subsidies mounted; and out of interest payments, by far the largest item in government's revenue expenditure, an increasing fraction was accruing to the private sector, as monetised deficits came down sharply and government liability to private agents went up by 9 percentage points. The result was a whopping 6 percentage points increase in the ratio of household disposable income to gross domestic product. Such an increase could not but produce a fall in aggregate saving, remembering that private marginal propensity to consume is quite substantial and much larger than that of the government. Thus while public consumption was not responsible for downward drift of the saving ratio, fiscal policies pursued by the government played an important role in inducing the drift. No less important behind the negative trend in savings was the increasing profligacy of households during the 90s, something which stands in sharp contrast to their behaviour in earlier periods. An increase in household disposable income (at the expense of the government) reduces aggregate saving in the economy; but under normal conditions household saving as a ratio of GDP should rise. The fall of the ratio implies that for every additional rupee households received from the government by way of transfer, they spent more than one rupee on consumption".[41]

e. Deficit per se does not lead to inflation or balance of payments problems

According to the Keynesians, "..contemporaneous movements in the fiscal deficit and the inflation rate are not always in the direction predicted by the theory of inflation control by demand management. The inflation rate follows closely upon the behaviour of primary prices in the economy. The defiationary fiscal stance may have contributed indirectly, if at all, by slowing down activity in the non-agricultural ,i.e. manufacturing, sector of the economy." [42] This school's view of inflation is more 'structuralist' in nature.

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40 Rajaraman and Mukhopadhyay (2000), p. 217.

41 Rakshit (2000), pp. 43-44.

42 Balakrishnan (1997), pp. 23-24.

The Keynesians have their doubts about the link between deficit and balance of payments. From the resource balance side, interpreting the fiscal deficit as public dis-saving, following Feldstein (1992), they claim that there need not be any spill-over of the fiscal deficit to the current account of the balance of payments. The fiscal deficit could be compensated by a decline in investment as well. They cite the cases ".. of economies as diverse as the U.K. and Mexico, where success reducing their budget deficit has actually been accompanied by increasing current account deficits. More egregiously, when in early 1995 the Mexican economy faced a balance of payments crisis the government budget was in surplus."[43]

f. Debt is measured wrongly

In many countries, including India, public debt refers to all financial liabilities of the government, irrespective of to whom they are owed. For examining the sustainability and related issues, the Keynesians argue, government securities held by the central bank should be excluded from public debt. The central bank is an organ of the state, and there is no government liability corresponding to bonds held by the central bank, and even interest paid thereon stand on a different footing as those paid on private holdings of government securities.[44] Rajaraman and Mukhopadhyay (2000) argue that "The reason for exclusion of monetised debt hinges .. not on the rate of interest issue, but rather on the fact that monetisation is a formal alternative to public debt. Since there is no expectation of an absolute decline in the money stock at any time, let alone a decline to zero, there is no possibility of a net claim for redemption from the monetised stock of securities."[45]

According to Rakshit (2000) "Government expenditure financed through credit from the central bank may well reduce the rate of interest. In this case the crowding-in effect is indubitable."[46] Instruments like the Statutory Liquidity Ratio (SLR) requirement, to the extent they act as effective constraints, produce a one-to-one financial crowding out. At the other extreme, monetised deficit raises aggregate flow of finance, within and outside the banking sector, by a multiple of the deficit. In this case there is financial crowding in, rather than crowding out. In between the two instruments stand various types of government borrowing some of which tend to raise, others lower, availability of finance to the private sector.[47]

Not only is the debt measured incorrectly, but there has been too little monetisation. According to Rakshit (2000), monetised financing of government expenditure does not add to the future interest burden of the government. In a growing economy, such financing (called seignorage) up to a point also produces no inflationary impact.[48] The greater the reliance on debt

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43 Balakrishnan (1997), p. 11.
44 Rakshit (2000), p. 25.
45 Rajaraman and Mukhopadhyay (2000), p. 211.
46 Rakshit (2000), p. 26.
47 Rakshit (2000), p. 27.
48 Rakshit (2000), p. 28.

financing, the larger will be the fall in private investment. Even under tax financing, investment tends to fall with an increase in interest rates (remembering that taxes reduce both consumption and private saving). Since borrowing per se does not reduce consumption, in this case the rise in interest rates is steeper and the fall in private investment is larger.[49]

According to the Keynesians, government reliance on monetised deficit, within limits, is one of the simplest and most effective means of reducing public expenditure (through reducing interest outgo) when the cost of additional tax collection is prohibitive. Given the fact that monetised deficit was below 1 per cent of GDP over 1996-2000 and its safe limit is about 2.5 per cent, there can be a 1 percentage point increase in this source of financing without putting too much constraint on the Reserve Bank in its conduct of monetary policy.[50]

g. High interest is liberalisation-policy induced

Sundararajan and Thakur (1990), Pradhan, Ratha and Sarma (1990), and Parker (1995) did not find any link between the deficit and the rate of interest in India.[51] Using monthly data on net borrowing requirement of the government (as a proxy for deficit) and the 91-day Treasury Bill rate (as a proxy for the rate of interest) for the period January 1993 to December 1999, by Hsiao's asymmetric vector autoregressive methodology, Chakraborty (2001) found that fiscal deficit did not Granger-cause interest rate, while interest rate did Granger-cause deficits.

The Government of India earned an average of at least 2.50 per cent of GDP annually in revenues from financial repression during the period 1980-85.[52] Borrowing through SLR at below market interest rates, the Keynesians concede, constitute taxation of financial saving. But, given that the problem of distributing saving between physical and financial assets does not arise for the vast majority of economic agents, the distortionary effect by way of substitution between the two types of assets is minor, they claim. They point out, however, that the main problem with borrowing through SLR and similar devices is from the increased cost of financial intermediation and its impact on production and private investment.[53]

The Keynesians argue that the government should reduce reliance on tax-free, high-interest borrowing instruments like PPF, NSCs, etc. These modes of financing have raised the interest burden on public debt and the

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49 Rakshit (2000), p. 27.

50 Rakshit (2000), pp. 51-52.

51 The relationship between interest rate and fiscal deficit is a controversial one. For the US, Evans (1985, 1987), Hoelscher (1986), Makin (1983), Mascaro and Meltzer (1983) found no significant impact of the deficit on the rate of interest, particularly with global integration of financial markets. On the other hand, Cebula (1988), and Ostrovsky (1979) found that the long term shortage of funds created by structural deficits – as opposed to deficits including the cyclical component – leads to an increase in the rate of interest.

52 Giovannini and de Melo (1993).

53 Rakshit (2000), p. 34.

associated increase in government transfer payments has only served to reduce aggregate saving in the economy without promoting distributional objectives.[54] Requiring banks to hold 20 per cent of their unencumbered deposits in government securities at 200 basis points below the market rate will not stand in the way of efficient financial intermediation.[55] Given the fact that the government's interest obligations currently amount to nearly 6 per cent of GDP, discontinuance of high cost borrowing and turning SLR into an effective instrument should improve the revenue balance of the government by 0.5 to 1.0 percentage point.[56]

h. Wrong apprehensions about crowding out

Popular perception regarding the crowding-out process is based on an extremely narrow view of the financial market and ignores the increasingly important role being played by the stock market and mutual or pension funds, and innovation of financial instruments. When an expansionary fiscal policy improves investors' sentiments, there will generally be an increase in the supply of funds to the private sector despite debt-financing by the government. So long as the economy has excess capacity, an increase in government expenditure supported by borrowing may thus raise private capital formation along with household consumption expenditure.[57] In the context of sluggish demand producing a sharp deceleration of industrial growth from 1996-97, it is the bugbear of fiscal deficit that has held the government back in following an expansionary fiscal programme.[58]

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54 Rakshit (2000), p. 52.
55 Rakshit (2000), p. 52.
56 Rakshit (2000), p. 52.
57 Rakshit (2000), p. 26.
58 Rakshit (2000), p. 47.

IV. Deficit, Debt, and Sustainability

Sustainability implies enduring without breaking down. Solvency, on the other hand, means to be able to discharge one's obligations in the long run. Fiscal policy is sustainable if the government is able to service the stock of public debt over the foreseeable future. If an entity is insolvent and still able to continue functioning without a break down – that is, sustain its stance – then it is playing a Ponzi game by borrowing more to repay old debts, that is resort to perpetual debt finance. The overall budget constraint or solvency can also be looked as the outstanding stock of government debt being bounded by the government's collateral, which is the present value of taxing capacity less non-interest expenditure. Sustainability without solvency is incompatible with our basic understanding of the functioning of an economy. Solvency is a necessary condition for sustainability.

Solvency, however, is a long-term concept. The current fiscal stance, if unchanged, may not be compatible with solvency. Fiscal consolidation in the future may make the stance consistent with solvency in the long run. The problem arises from time inconsistency and lack of credibility. Just the assurance of a fiscal correction in the future, but not now and here, may fail to convince creditors about the credit-worthiness of the government. It is in this context that the speed with which the country needs to carry out fiscal consolidation, and how, become important questions. Similarly, the fiscal stance may be compatible with solvency, but adverse expectations about slippages in the future may make it unsustainable. Expectational factors complicate the relationship between solvency and sustainability. In this section, the relation between debt on the one hand and deficit, rate of interest, growth, inflation and balance of payments on the other are discussed in brief.

i. Solvency and sustainability: Domar condition etc.

The question of sustainability of the fiscal stance is usually addressed by analysing the debt-to-GDP ratio. Given a time path of debt and a time path of GDP, the two crucial questions are (1) is the trajectory consistent with solvency, and (2) is the trajectory fiscal deficit consistent with sustainability.

If all variables in the economy, except real public debt, are growing at a rate of ρ per cent per annum, then growth of real public debt at a rate g higher than ρ is clearly not sustainable. The debt-to-GDP ratio would increase over time indefinitely, and for any positive rate of interest, r, interest on debt would more than exhaust GDP after a suitably long period of time. Hypothetically, the government could increase taxes indefinitely to meet the interest obligations, but deadweight losses and collection costs render an ever-growing debt-GDP ratio unsustainable. The growth of debt at a rate at most equal to the rate of growth of GDP is a necessary condition for solvency and sustainability. What is not intuitively obvious, however, is under what conditions the initial debt stock would be equal to the present discounted value

of primary surpluses in the future.[59] Is growth of debt at the same rate as GDP and other variables enough for solvency, or is there some other condition needed? It so turns out that the rate of interest being less than the rate of growth of GDP is a crucial condition – the celebrated Domar condition – for solvency is not consistent with solvency.

Solvency or the overall budget constraint or no Ponzi-game (NPG) condition implies that the initial debt stock equals the present discounted value of primary surpluses in the future, that is

$$D_0 = \sum_{t=1}^{\infty}[\tau_t / (1+r)^t] - \sum_{t=1}^{\infty}[G_t / (1+r)^t]$$

or,

$$D_0 = \sum_{t=1}^{\infty}[(\tau_t - G_t) / (1+r)^t] = -\sum_{t=1}^{\infty} \frac{DEF_t^p}{(1+r)^t} \qquad (1)$$

where G_t is real government expenditure, aside from interest payment on public debt, at time t, τ_t is real tax revenue at time t, D_t is real stock of public debt outstanding at the end of period t, $DEF_t^p = G_t - \tau_t$ is the primary deficit (deficit net of interest payments) and r is the real rate of interest. G_t and τ_t are exogenously given, while r is constant over time. It is important to note that "The equality of current debt and the present value of surpluses does not imply that debt is ultimately repaid or even that debt is ultimately constant. All it implies is that the debt ultimately grows less rapidly than the interest rate."[60] Let us try to explore further on this.

The primary deficit in period t itself can be expressed as the difference between the debt stock at the end of period t less the debt stock at the end of period t-1 augmented by a factor of one plus the rate of interest in period t. Thus, for period t, we can write

$$DEF_t^p = D_t - (1+r)D_{t-1} \qquad (2)$$

Substituting (2) in (1), we get

$$D_0 = -\sum_{t=1}^{\infty}\left[\left\{D_t - (1+r)D_{t-1}\right\} / (1+r)^t\right]. \qquad (3)$$

Now, let us consider the steady-state where all variables are growing at the rate of ρ, and

$$D_t = (1+\rho)D_{t-1}.$$

Note that the right hand side of (3) is

$$(r-\rho)\sum_{t=1}^{\infty}[D_{t-1} / (1+r)^t] = \left\{(r-\rho)/(1+\rho)\right\}D_0 \sum_{t=1}^{\infty}\left\{(1+\rho)/(1+r)\right\}^t \qquad (4)$$

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[59] The concept of solvency is simple in a finite time horizon. Intuition is particularly difficult in an infinite period where the concept is a limiting one.

[60] Blanchard and Fischer(1989), p.127.

as long as $\rho \neq r$. Now, there are three cases to be analysed: $\rho < r$, $\rho > r$, and $\rho = r$. For $\rho < r$, the right hand side of (3) equals D_0, and the solvency condition is satisfied.

For $\rho > r$, the infinite sum on the right hand side of (4), hence (3), does not converge. This leaves only the case of $\rho = r$, where debt grows exactly by the same amount as the interest payments on the outstanding stock. It is easy to see that the right hand side of (3) is zero in this case, there is primary balance, and the equality will hold only if $D_0 = 0$.

The above discussion about solvency starts with the assumption that both debt and GDP are growing at the same rate as ρ. With GDP growing at the rate of ρ per period, a given initial debt stock (D_0), and the primary deficit fixed as a proportion of GDP (def^p), let us examine the dynamics of the debt-GDP ratio. Intuitively, high deficits lead to high debt levels and high interest payments, and there should be a one-to-one relationship between debt and deficit, and between deficit and interest payments in steady-state equilibrium. We can write the debt stock in period t as the sum of the primary deficit and the debt stock in the previous period augmented by a factor of one plus the rate of interest, that is

$$D_t = (1 + r)D_{t-1} + DEF_t^p \qquad (5)$$

Dividing both sides of (5) by real GDP, Y_t, and using $Y_t = (1+\rho)Y_{t-1}$, we get

$$(D / Y)_t = \frac{1 + r}{1 + \rho}(D / Y)_{t-1} + (DEF^p / Y)_t. \qquad (6)$$

Writing $d_t = (D/Y)_t$ as the debt-GDP ratio, $def_t^p = (DEF^p / Y)_t$, and $\alpha = \frac{1 + r}{1 + \rho}$, we get

$$d_t = \alpha d_{t-1} + def_t^p$$

Assuming $def_t^p = def^p$, a constant in all periods, we have

$$d_t = \alpha d_{t-1} + def^p,$$

a first-order difference equation. The solution is given by[61]

$$\text{and} \begin{cases} d_t = (d_0 - \frac{def^p}{1-\alpha})\alpha^t + \frac{def^p}{1-\alpha} & \text{for } \alpha \neq 1, \\ d_t = d_0 + def^p t, & \text{for } \alpha = 1. \end{cases} \qquad (7)$$

Dynamic stability of the equilibrium clearly depends on whether $|\alpha| < 1$ or not. For ease of exposition, we shall assume that $r > 0$, and $\rho > 0$, and hence $\alpha > 0$, and focus on the three cases of $\alpha > 1$, $\alpha < 1$, and $\alpha = 1$.

[61] Chiang (1984).

For $\alpha > 1$, which holds when r > ρ, or the rate of interest is higher than the growth rate of GDP, debt-to-GDP ratio diverges unless $d_0 = \frac{def^p}{1-\alpha}$. Note that, for r > ρ > 0, $1-\alpha = -\frac{r-\rho}{1+\rho} < 0$, and $d_0 = \frac{def^p}{1-\alpha}$ holds if and only if there is (i) a combination of an initial debt stock ($d_0 > 0$) identically equal to a primary surplus ($def^p < 0$) adjusted by a factor of $\frac{1+\rho}{r-\rho}$, or (ii) a combination of an initial stock of government claim ($d_0 < 0$) equal to a primary deficit ($def^p > 0$) adjusted by a factor of $\frac{1+\rho}{r-\rho}$.

For $\alpha < 1$, which holds when r < ρ, that is the rate of interest to be lower than the growth rate of GDP, $\lim_{t\to\infty} d_t = \frac{def^p}{1-\alpha}$, and the debt-to-GDP ratio converges to the steady-state value of $d = \frac{1+\rho}{\rho - r} def$. Higher primary deficit leads to higher debt. But for ρ > r, we have already noted this is the case where the solvency condition is not satisfied.

That leaves us with the case of α = 1, or r = ρ. Note that, in this case $d_t = d_0 + def^p t$, and the debt-to-GDP ratio is stable if and only if $def^p = 0$, or there is a primary balance.

ii. Rate of interest lower than growth rate

Considerable attention has been paid to the case of the rate of interest being lower than the growth rate in India. This has led to the claim that "For any given tax-GDP ratio, financing part of public consumption expenditure through borrowing is sustainable so long as the interest rate on such borrowing is less than the GDP growth rate".[62] This claim, which appears too good to be true, however, has some problems associated with it.

If the rate of interest is less than the rate of growth of GDP, does it mean that any large primary deficit, is sustainable? For example, what if the rate of interest is 5 per cent, rate of growth is 6 per cent, is a primary deficit of 5 per cent of GDP sustainable? From (7), it is easy to calculate that debt will stabilise at 530 per cent of GDP and interest payment will constitute 26.5 per cent of GDP. Thus, while the primary deficit will be steady at 5 per cent of GDP right from the beginning, deficit inclusive of interest payments will increase over time and stabilise at 31.5 per cent of GDP. But, more importantly, the solvency condition, that is (1), is not satisfied with debt growing at a rate faster than the rate of interest. Every period, the government borrows not only for meeting the primary deficit but also for paying at least a

[62] Rakshit (2000), p. 23.

part of the interest obligations. The government never generates a primary surplus, and is playing a Ponzi game. Markets would not have much faith in the sustainability of the fiscal stance.[63] Any temporary increase in the rate of interest above the rate of growth will lead to a large surge in the deficit-GDP ratio, undermine confidence and lead to a collapse. And, if markets do sustain this fiscal stance, then questions can be raised about why not increase the primary deficit to 10 per cent, 15 per cent, or even more. The possibilities will be immense in this Alice in Wonderland world.

Second, there are considerable problems with the assumption of 'a rate of interest lower than the rate of growth' configuration. In a deterministic world, the Phelpsian golden rule for a golden age is that the rate of growth must equal the rate of profit, which is the rate of interest or marginal product of capital.[64] For $\rho > r$, in a deterministic world, there is capital overaccumulation. Furthermore, as pointed out by Barro (1976), this case of $\rho > r$ in the steady-state is ruled out in a competitive equilibrium. With $\rho > r$, as long as there is 'gift motive', transfer payments from young to old at a rate at least equal to r but not higher than g would raise present consumption level without reducing future consumption and without raising the ratio of transfers to income over time. If the rate of interest indeed continues to be lower than the rate of growth, there would be nothing wrong – in fact, it would be desirable – to continue with our pay-as-you-go pension system. We can borrow from the next generation, the next generation in turn can borrow from its next, and so on, and all generations would be better off.

An economy with too much capital, where the population growth rate exceeds the steady state marginal product of capital, is called a dynamically inefficient economy. There are problems with a dynamically inefficient economy both for positive as well as normative economic analysis. For example, there can not be a bequest motive in such an economy, and there can be speculative bubbles. A standard measure of dynamic efficiency is comparing the rate of interest with the growth rate of the economy. The rate of interest should equal the marginal productivity of capital and for dynamic efficiency, the rate of interest should not be below the rate of growth of the economy. However, several authors have pointed out that the 'safe' rate of interest is typically less than the growth rate in a variety of contexts.[65] Abel et. al. (1989) demonstrated that in an economy with uncertainty, where profitability, value of capital and the growth rate fluctuate, the rate of interest on a safe asset being less than the growth rate is not a proper way of testing for dynamic efficiency.[66]

Testing for dynamic efficiency of the Indian economy as suggested by Abel et. al. (1989) is beyond the scope of the paper. However, assuming that

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63 Tirole (1985) shows how speculative bubbles can arise as rational expectations equilibria in a dynamically inefficient economy.

64 Phelps (1961), p. 197.

65 See Abel, Mankiw, Summers and Zeckhauser (1989), p. 2.

66 They suggest that an economy that invests less than the return to capital is dynamically efficient.

the Indian economy is dynamically efficient, it is still doubtful that the 'safe' rate of interest on government paper can continue to be below the growth rate if the government is not solvent and continues to play a Ponzi-game. Thus, it is doubtful that high deficits will be sustained and the rate of interest on government paper will continue to be less than the growth rate.

As Auerbach (1994) noted "The current ratio of debt to GNP is about 0.65. While historically large for India, this is comparable to the United States and lower than many stable developed countries. If *ex-post* real interest rates fail to exceed the economy's growth rate by a significant amount in the near future, the debt-GNP ratio need not grow very fast. Thus, the fiscal problem ... could linger on for many years before exploding."[67] If solvency is not restored with fiscal consolidation, the explosion may not come in the near future, but it can not be avoided for long.

iii. What to do about monetised debt?

The definition of debt itself has been a matter of some controversy. Rakshit (2000) and Rajaraman and Mukhopadhyay (2000) prefer to keep monetised debt, i.e. debt held by the RBI, outside the calculation of debt. In conventional analysis of government statistics, (1) all units primarily engaged in both incurring liabilities and acquiring financial assets in the market; (2) any acceptance of demand, time, or savings deposits; and (3) any performance of monetary authorities' functions are kept outside the government.[68] According to the IMF (1986), the separation from government of any monetary authorities' transactions is 'necessary for appropriate measurement of the government's role in the evolution of monetary conditions and the balance of payments.'[69]

In this context, there are two more questions that are relevant. First, if government's liabilities to the RBI are going to be netted out of government's debt, what about adding the RBI's liabilities to the rest of the world (including domestic parties)? In the orthodox tradition, Buiter and Patel (1992) have looked at the budget identity of the consolidated public sector including that of the general government, the public enterprises and the central bank. In this consolidated view, the liabilities consist of the conventional public debt together with the monetary liabilities of the RBI net of foreign reserves. Buiter and Patel (1992) derive the dynamic relationship between conventional debt and the deficit.

Second, seignorage is an income to the RBI from the liabilities that it creates. If the liabilities are not going to be added to the government's' liabilities, should income be added to the government's receipts? In particular, increasing the rate of interest charged on RBI loans to the government would result in higher RBI profits, a large part of which would be ploughed back to

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67 Auerbach (1994), p. 133.
68 IMF(1986), p. 22.
69 IMF(1986), p. 62.

the government.[70] With the RBI loans not showing up as part of government debt, increasing the rate of interest on RBI's loans to the government would be the easiest way of improving the government's finances. The two components of public debt – the RBI component and the non-RBI component – are related to each other through the surpluses transferred to the government. There has indeed been an increase in the interest burden of the government after the rates of interest on government bonds held by even the RBI were raised and adjusted in line with the market. But, there has been a simultaneous increase in the surpluses of the RBI as well. Disregarding monetised debt runs the added danger of moving back to the days of financial repression, non-transparency and distortions.

Disregarding monetised debt from a discussion of public debt would be misleading. But at the same time, this is not to deny that the impact of monetised debt is different from non-monetised debt. It is important to look at total debt as well as the two components. In the orthodox school, for example, Rangarajan, et. al. (1994) distinguish between RBI credit to government (RG) and domestic credit debt held outside the RBI (B).[71] They clearly illustrate the differential impact of RBI-financed deficit from a deficit financed by borrowing from outside the RBI.

iv. Monetised debt, inflation and balance of payments

During 1997 and 1998, India was '..buffeted by the Asian crisis, sanctions following the nuclear tests in May 1998. and the turmoil in world financial markets following the Russian default in August 1998...'.[72] Yet, there was no major effect on economic growth and no external crisis. Growth averaged 6½ per cent, while foreign exchange reserves rose by $12 billion in three years to $38 billion March 2000. Questions have been raised as to 'how India has been able to achieve high growth and a relatively comfortable balance of payments position despite massive public sector deficits.'[73] The answer to this question is complicated, but it is definitely not that the balance of payments is impervious to the fiscal deficit or to the ways of financing it. High fiscal deficit or high debt is not a sufficient condition for a balance of payments crisis, neither it is a necessary condition. but there is a close link between the two in a 'ceteris paribus' sense. The link between the balance of payments and the fiscal stance is perhaps best illustrated by the monetary approach to the balance of payments.

The monetary approach to the balance of payments relies on the identity

$$RM_t \equiv NFA_t + NCG_t + CDMB_t + CPS_t + OIN_t$$

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70 The RBI transferred as much as Rs. 9,350 crore to the Central Government in 1999-2000.

71 Rangarajan, et. al. (1994).

72 Callen and Cashin (2001).

73 Towe (2001), p. 2.

where RM is reserve money, NFA is net foreign asset of the central bank, NCG is net claims on the government, CDMB gross claims on the deposit money banks, CPS is gross claims on other domestic economic sectors, and OIN is 'other items, net'.[74] In flow terms, the change in reserve money is the sum of the changes on the right hand side

$$\Delta RM_t \equiv \Delta NFA_t + \Delta NCG_t + \Delta CDMB_t + \Delta CPS_t + \Delta OIN_t \qquad (8)$$

where Δ denotes the change in a stock from the end of the preceding period to the end of the present period. When the government borrows from the RBI, or the RBI buys government securities through open market operations, RBI's holding of government securities rises. Initially, with government deposits with the RBI going up, NCG may not rise. "But, when the government uses the borrowed funds and makes a payment to the private sector, the government's check will likely be deposited, first, in a commercial bank, and subsequently in the commercial bank's account in the central bank. The reserve account of the deposit money of banks will increase (reserve money will increase on the books of the central bank), and the deposit balance of the government will be reduced (net credit to government increases). A fiscal deficit financed by borrowing from the central bank thus results in a one-to-one increase in reserve money. For this reason, financing a deficit by central bank borrowing is equivalent in its effects on the money supply to financing a deficit by printing currency (frequently referred to as *monetization* of the deficit)."[75]

Reserve money growth leads to increases in money supply through the money multiplier. The demand for money, like the demand for any other asset, is a function of its price, the price of related assets, income, wealth, tastes and expectations. An increase in money supply leads to changes in other variables in the economy so that demand adjusts to equal the supply of money. An excess of money supply relative to demand leads to a spill over into other markets. Spillovers into the commodity markets lead to increase in prices or output. Such spillovers also lead to higher imports or lower exports or a combination of both. Furthermore, the excess supply of money can directly spillover into foreign exchange markets and drive down the price of domestic money in terms of foreign currencies, i.e. lead to currency depreciation. The monetary approach to the balance of payments emphasises identity (8). An increase in RBI's net claim on the government has a tendency to result in a corresponding decrease in net foreign assets of the RBI. The displacement of NFA by NCG is not one-to-one, an increase in monetised public debt can also result in an increase in output, prices, and rates of interest, or a decrease in other domestic assets of the RBI. But, with external liberalisation, the link between monetised public debt and the balance of payments – including through the exchange rate – appears to be increasingly manifesting itself in India.

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74 In the Indian context, the equation disregards the government's currency liabilities and OIN refers to the asset item which is negative mainly because of the networth of the RBI.

75 Barth and Hemphill (2000), pp. 165-166

This growing link between monetary policy and the balance of payments is relevant for the answer to the question about how India managed to avert a balance of payments crisis at the end of the 1990s. The country had balance of payments crises at the end of the 1970s and the 1980s. The onset of the East Asian crisis in July 1997, and the post-Pokhran sanctions in May 1998 led to considerable pressures on the external front. Foreign direct investment inflows during 1998-99 at $2.5 billion were almost $1 billion less than in the previous year, while FII flows turned negative. Between July 1997 and early February 1999, the rupee depreciated by over 17½ per cent in nominal terms. In August 1998, the Government mobilised $4.23 billion through the Resurgent India Bonds, a scheme quite similar to the India Development Bonds of the crisis year of 1991-92.

As if the problems in 1997 and 1998 were not enough, oil prices in the international market jumped by 37.5 per cent and 47.5 per cent in calendar 1999 and 2000. Oil imports increased from $6.4 billion in 1998-99 to $10.5 billion in 1999-2000. Between the first half of 1999-2000 and that of 2000-01(that is, April-September 2000), such imports almost doubled to $8.3 billion. The trade deficit increased by more than $2½ billion to $9.2 billion. And, in spite of an increase in net invisibles receipt by $½ billion, the current account deficit soared by $1.1 billion to $4 billion. FII investment declined by $1 billion and turned negative. Net capital inflows declined from $3.7 billion to $2.5 billion. Consequently, in contrast to a build up of reserves of $0.8 billion in the first half of 1999-2000, there was a decline in foreign exchange reserves of $1.5 billion during April-September 2000.

How India averted a crisis at the end of the 1990s partly lies in the growing resilience of the Indian economy and partly in the prudent policies – including a very cautious policy regarding government debt monetisation – followed by the RBI. Cautious policies of the RBI averted problems. The exchange rate was allowed to adjust. In the aftermath of the East Asian crisis, in 1997-98, the rupee had appreciated significantly, particularly vis-à-vis the currencies of the troubled tigers. Starting from 1998-99, the RBI allowed the markets to correct much of the real appreciation. From the onset of the East Asian crisis in July 1997, in real effective terms, the rupee depreciated by a cumulative 23.4 per cent by December 2000. Furthermore, the India Millennium Deposits (IMD) were floated to mobilise $5.5 billion in October-November 2000. IMD restored confidence.

An important role was played by the strategy of minimising recourse to RBI credit for financing the deficit. An increasing reliance on credit from banks other than the RBI in financing the deficit and a relatively smaller recourse to RBI credit marked a welcome shift in the Government-RBI strategy for deficit management in 1996-97. Direct financing of the deficit by the RBI affects reserve money and has a multiplier effect on money supply. In 1995-96, as much as Rs. 19,871 crore or 56.2 per cent of the total banking system credit to the Government came from the RBI. In 1996-97, this proportion came down to 9.2 per cent. In the face of high pressure to reduce interest rates, there was an increase in the degree of RBI recourse in 1997-98 and 1998-99, and the proportion of banking system credit to the Government

coming from the RBI were 26.1 per cent and 30.7 per cent, respectively. In 1998-99 net RBI credit to Government accounted for 53 per cent of reserve money increase, but in 1999-00 net RBI credit turned negative (Rs. 4275 crore) whereas the reserve money increased by Rs. 20.969 crore in this year.

The argument that the safe limit of monetised deficit is 2.5 per cent of GDP is controversial at its best.[76] Indeed, as pointed out by Buiter and Patel (1992), in 1988-89 seignorage was 2.6 per cent of GDP. Buiter and Patel (1992) estimate a long-run velocity equation for reserve money as $V = 6.08 + 15.48\pi$ where $V = \frac{PY}{RM}$. In the steady-state, they write seignorage as a proportion of GDP as

$$\begin{aligned}\sigma &= \frac{\Delta RM}{PY} \\ &= \frac{RM_t}{P_t Y_t} - \frac{RM_{t-1}}{P_t Y_t} \\ &= V^{-1} - \frac{1}{(1+\pi)(1+\rho)} \frac{RM_{t-1}}{P_{t-1} Y_{t-1}} \qquad (9) \\ &= V^{-1}\left[1 - \frac{1}{(1+\rho)(1+\pi)}\right] \\ &\approx [(1+\rho)(1+\pi) - 1]V^{-1}\end{aligned}$$

Substituting $V = 6.08 + 15.48\pi$, we get

$$\pi = \frac{\rho - 6.08\sigma}{15.48\sigma - (1+\rho)}. \qquad (10)$$

The calculation of steady-state inflation for some combinations of GDP growth and seignorage presented in Table 9 shows that with growth below 9 per cent per year, inflation will be in double digits with seignorage at 2.5 per cent of GDP. With accelerated reforms, India may grow at 7-8 per year for a decade or two. But, assuming a rate of growth far above 5 per cent per year on a long-term basis, particularly in the steady-state sense, appears to be fraught with excessive optimism. Given the widespread aversion to inflation in India, the preference for relative stability in the exchange rate, the anti-poor impact of inflation, it appears that seignorage should be targeted at 1-1½ per cent of GDP. But, even with 1-1½ per cent of GDP as seignorage, extracting the entire seignorage through monetised debt or transfer of surpluses would lead to the RBI balance sheet having only government securities as cover for its monetary liabilities. Thus, prudence dictates that the monetised deficit target should be contained well below ¾ per cent of GDP.

[76] Rakshit (2000), pp. 51-52.

Table 9

Calculation of Steady-State Inflation for Combinations of GDP Growth and Seignorage

GDP growth	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
Seignorage									
0.010	5.94	4.72	3.52	2.35	1.21	0.09	-1.01	-2.08	-3.12
0.015	10.44	9.04	7.67	6.34	5.04	3.77	2.53	1.32	0.14
0.020	15.93	14.30	12.72	11.17	9.67	8.21	6.79	5.40	4.05
0.025	22.79	20.85	18.97	17.15	15.38	13.67	12.01	10.39	8.82
0.030	31.60	29.23	26.94	24.74	22.61	20.55	18.56	16.63	14.77
0.035	43.31	40.32	37.44	34.68	32.03	29.49	27.04	24.67	22.40
0.040	59.67	55.69	51.90	48.29	44.85	41.56	38.42	35.42	32.54
0.045	84.11	78.42	73.07	68.03	63.27	58.78	54.53	50.50	46.67

Source: Parameters from Buiter and Patel (1992).

Moorthy, et. al. (2000) have established that the move towards market borrowing for financing the deficit or bond finance has been beneficial. The reduction in monetisation has helped curb the fiscal deficit by inducing a fall in primary expenditure larger than the rise in interest payments.

v. Intergenerational impact of internal debt

Given that much of the public debt in India is of the internal variety, interest payment on such debt is a payment from one part of the population to another. Are we not borrowing from ourselves only and hence not borrowing at all in the net sense of the term? A crucial question in this context is the intergenerational impact of this internal debt finance.

Rangarajan, Basu and Jadhav (1994) provide a discussion of the historical context to this debate[77]. They point out that traditionally domestic debt was created during wars and emergencies and retired during peacetime. The questions typically were like 'how to pay for the war?'. With accumulation of debt even in peacetime, the nature of the controversies has changed. First is the issue of Ricardian equivalence, that states that under perfect certainty, perfect capital markets and 'immortal' individuals (or individuals with bequest motive), domestic debt and lump-sum taxes have identical effect on the individuals. Debt is postponed taxes, in present value terms, and is no different from taxes. Rational households anticipate higher taxes in the future. The relevance of Ricardian equivalence to developing countries, however, appears to be limited.

[77] Rangarajan, et. al. (1994), pp. 148-152.

The 'owing it to ourselves' argument emphasises that "..interest payments arising from domestic debt represent no more than transfers from taxpayers to bondholders, and so long as both groups are members of the same polity no macroeconomic cost is involved. .. As observed by Buchanan (1968), 'This conception of national debt contains a fundamental flaw in its failure to translate opportunity cost or burden from aggregative components into something that is meaningful for individual members'. According to him, 'The core of the fallacy lies in equating the community as a unit, in some aggregated national accounting sense, with the individuals in-the-community, in some political sense as participants, direct or indirect, in collective decision making'."[78] It is important to note in this context that, as pointed out by Rakshit (1989), 'the distribution of tax burden is not closely linked with the pattern of holding of public debt'.[79]

The intergenerational impact of the current fiscal stance is best illustrated by the pay-as-you-go pension system. According to the Eleventh Finance Commission, "The item that has registered very rapid growth in the government budgets in the nineties is 'Pensions'. At the Centre, pension expenditure grew at a compound rate of over 21 per cent per annum during the period 1990-2001. In the army, pension expenditure now exceeds the pay and allowance of serving officers. Pensions have been the fastest growing item in the State budgets too, the growth rates recorded were 19.6 per cent in 1990-95 and 26.6 per cent in 1995-99."[80] Frequent upward revision in the pension fixation formula, entitlements of dearness allowance, the revision in the ceiling for commutation and the extension of pension benefits to some uncovered employees have led to a burgeoning of the pension bill. Pensions constitute not only a source of vulnerability for the fiscal position of both the Centre and the States, but also a source of intergenerational inequity. The cost of pension revision for already retired and uncovered employees is borne by today's and tomorrow's employees and tax payers.

Generational accounting is a standard method of calculating how much current and future generations will have to pay, in present value, to cover the government's current and future spending, also valued in the present. The overlapping generations model of Auerbach and Kotlikoff (1987) – AK model, henceforth – can be used to illustrate the intergenerational impact of the fiscal stance. In the AK model, where all government debt is internal, individuals live for two periods (first when they are young and working and then when they are old and retired) and maximise a Cobb-Douglas utility function

$$U_t = C_{yt}^{\beta} C_{ot+1}^{1-\beta} \qquad (11)$$

The production technology is also Cobb-Douglas and

78 Rangarajan, Basu, and Jadhav (1994), p. 150.
79 Quoted in Rangarajan, Basu, and Jadhav (1994), p. 152.
80 Eleventh Finance Commission (2000), p.12.

$$Y_t = K_t^{\alpha} L_t^{1-\alpha} \tag{12}$$

where c_y and c_o are the consumption of the young and the old, Y, K and L are output, capital and labour per worker. The 'Government' levies a proportional income tax at the rate of τ and spends G^c and G^i on consumption and investment.

The lifetime budget constraint of a young worker is

$$\begin{aligned} C_{ot+1} &= [1 + r_{t+1}(1-\tau_{t+1})][(1-\tau_t)W_t - C_{yt}] \\ &= [1 + r_{t+1}(1-\tau_{t+1})]A^p_{t+1} \end{aligned} \tag{13}$$

where A^p_{t+1} the private assets of the old at time t+1. Maximising utility subject to (13) and profits yields

$$\left.\begin{aligned} A^p_{t+1} &= (1-\beta)(1-\tau_t)W_t \\ W_t &= (1-\alpha)K_t^{\alpha}, \text{ and} \\ r_t &= \alpha K_t^{\alpha-1} \end{aligned}\right\} \tag{14}$$

Simplifying (14), we get

$$A^p_{t+1} = (1-\alpha)(1-\beta)(1-\tau_t)K_t^{\alpha} \tag{15}$$

Now, note that the capital stock equals total assets, which in turn is private assets plus government assets, i.e.

$$K_t = A^p_t + \gamma A^g_t \tag{16}$$

where one unit of government capital equals γ units of private capital.[81] Government assets evolve as

$$A^g_{t+1} = A^g_t(1 + \theta r_t) + \tau_t Y_t - G^c_t \tag{17}$$

where θ is the proportion of the average rate of return on capital that government capital receives.[82] Note that government investment equals government savings, that is

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[81] Note that γ can be greater than one for some very beneficial investments such as in physical or social infrastructure, such as roads and primary education. It can also be less than unity when such investments are in a loss-making watch factory or bakery.

[82] If the government is debt-free, and all its investments are financed by its primary surpluses, θ may be expected to equal γ. However, the equality may not hold when part of such investment is debt financed, and debt carries a rate of interest equal to the market rate.

$$G_t^i = \theta r_{t-1} A_{t-1}^g + \tau_t Y_t - G_t^c$$

To close the model we need to bring in the dynamic behaviour of the government together with its overall budget constraint

$$A_t^g + \tau_t Y_t - G_t^c \geq \sum_{j=1}^{\infty} \frac{(G_{t+j}^c - \tau_{t+j} Y_{t+j})}{\prod_{m=1}^{j} (1 + r_{t+m})} \qquad (18)$$

that is the asset position (together with its savings in period t) at time t is at least equal to the discounted value of its dissavings in the future. For a government with negative net worth, $A_t^g < 0$ and savings would have to be generated to satisfy (18) and observe the NPG condition.

Auerbach and Kotlikoff (1987) assume $\gamma = \theta = 1$, and

$$\tau_{t+j} = \frac{(G_{t+j}^c - r_{t+j} A_{t+j}^g)}{Y_{t+j}} \qquad (19)$$

and $G_{t+j}^i = 0$, for all $j \geq 0$, that is net saving is zero in every period, and $A_{t+m}^g = A_t^g = \bar{A}^g$ for all periods. This is consistent with NPG condition as long as initial net worth is positive, that is $A_t^g > 0$. Under (19), using (15), (16), and (17), they obtain

$$K_{t+1} = (1-\alpha)(1-\beta) K_t^{\alpha} [1 - (G_t^c - \alpha K_t^{\alpha-1} \bar{A}^g) / K_t^{\alpha}] + \bar{A}^g \qquad (20)$$

Through simulation they show that government policies have an intergenerational impact. According to them, following a change in policy, ".. the transition path .. depends critically on the timing and manner in which the level of debt $\bar{A}^g$ is accumulated. ..analyses of fiscal policy's long-run outcome may provide little insight into short- and medium-term outcomes."[83]

Restoring solvency of the fiscal stance is something that the present and future generations in India would have to undertake. The burden of the adjustment would depend on the precise configuration and timing of policies. In so far as this burden is the outcome of the past debt overhang, the debt, even though it is of the internal variety, has an intergenerational impact. The presumption that internal debt does not have any intergenerational impact is fallacious. Simulating the exact nature of this impact, however, is beyond the scope of this paper.

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[83] Auerbach and Kotlikoff (1987), p. 22.

vi. Speed and quality of fiscal consolidation are important

The speed with which the country needs to carry out fiscal consolidation, and how, have become important questions in India with the presentation of the Fiscal Responsibility and Budget Management Bill to Parliament in December 2000.[84] What should be the target for fiscal deficit for 2005-06?[85] It is difficult to justify why the target should be a specific per cent of GDP and not 0.1 per cent more or less. But, there is a need to draw a line in the sand. Three magic numbers regarding targeted deficit in the year 2005-06 are on the table. The Government has suggested 2 per cent in the FRBM bill, the Committee constituted for drafting the bill suggested 3 per cent, and reportedly, the Shome Committee constituted by the Planning Commission has suggested 4 per cent. Is 2 per cent too restrictive? Is 4 per cent too liberal? There is need for an informed public debate on this issue.

There are a couple of points that are relevant in this context. First, the growth rate for India is likely to be around 6-8 per cent in the next few years. Higher the growth of GDP, the larger is the capacity of the system to incur a deficit without increasing the debt-to-GDP ratio. Second, what is being discussed is the deficit of the Centre alone. Apart from the deficit of the Centre, there are the deficits at the State and local government levels. What matters for macro-balance in the economy is the consolidated public sector deficit.

Apart from the speed of fiscal consolidation, its quality is equally important. According to the Report of the Committee on Fiscal Responsibility Legislation "There is near unanimity of views across a wide spectrum of opinion about the need to eliminate the revenue deficit and that the recommended option is desirable and feasible. Indeed, it is desirable to go beyond the elimination of the revenue deficit and to build up revenue surplus to open up fiscal space for redemption of liabilities not backed by assets or for non-debt financed public investment. Improvement in the revenue balance would require enhancement of the tax-to-GDP ratio and limiting the growth of fiscal deficit. For, interest payment is the single largest item of revenue expenditure and so containment of fiscal deficit is important to achieve containment of revenue deficit. Furthermore, it is observed that the brunt of fiscal correction is often borne by compression in capital expenditure and social sector expenditure. Revenue expenditure will have to be contained but expenditure compression has its own limitations and by itself may not be enough. The Committee is of the view that the quality of fiscal correction is as important as the level of fiscal correction. Thus, improvement in tax buoyancy has to necessarily form a part of any fiscal consolidation programme. The recommended limitations are internally consistent and impose a major challenge to the Government in controlling deficit. The recommended progressive reduction in revenue deficit will encompass a comprehensive fiscal agenda comprising of improving tax-GDP ratio, better debt and cash management to reduce interest burden, rationalisation of subsidies and user

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84 Ministry of Finance(2000a and 2000b).

85 See Lahiri (2001).

charges, downsizing and the pattern of parastatal funding. The legislation will provide a frame of reference to pursue further fiscal reforms in these areas."[86]

In this context, an increase in tax revenue mobilisation, mainly through better revenue administration and better compliance, appears to be essential. As Rakshit (2000) has pointed out, the problem is with the relation between growth rate, interest rate and the government's fiscal stance. Given the tax-GDP ratio, larger interest payments on public debt implies a higher ratio of private disposable income to gross domestic product. This (together with a larger wealth effect associated with a higher debt-GDP ratio) tends to raise household consumption. Maintenance of public consumption expenditure under these circumstances would then raise interest rates, reduce investment and hence the growth rate of the economy.[87] Thus, a public consumption-GDP ratio larger than some critical value becomes non-viable without an increase in the tax-GDP ratio.

Accelerated fiscal consolidation is important to open up fiscal space for the pursuit of contra-cyclical fiscal policy. There is broad conformity between the behaviour of government finances in India and the tax-smoothing hypothesis over the period 1950-51 to 1995-96. As demonstrated by Cashin, Olekins and Sahay (2001), in response to newly acquired information indicating a future change in government expenditure, the government smooths the implied tax change (required to meet the intertemporal budget constraint).[88] But as they also point out, the problem with verifying tax-smoothing in the central government's behaviour is that it is observationally equivalent to "the traditional inability of the government to satisfy its intertemporal budget constraint from conventional (tax and nontax) revenue sources, which resulted in changes in public borrowing as the preferred response to expected future shocks to government spending. This inability to garner sufficient revenue has stemmed largely from the narrowing of the tax base, widespread tax evasion and exemptions, weak tax administration, the poor economic performance of revenue-earning public enterprises, and the fact that a large part of economic activity is undertaken in the underground economy."[89] What is important is for the government to transcend this 'observational equivalence', reestablish solvency and sustainability, and then fine-tune policies, if it so desires, for tax-smoothing or contra-cyclical expenditure management.

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86 Ministry of Finance (2000b), para 39, p.11.

87 Rakshit (2000), p. 24.

88 Cashin, Olekhans and Sahay (2001).

89 Cashin, Olekhans and Sahay (2001), p. 68.

V. Policy Prescriptions and Conclusions

Using data for the 1970s and 1980s, Rangarajan, Basu and Jadhav (1994) had extrapolated that "...a passive fiscal stance is likely to result in enlargement of the net primary deficit to GDP ratio from 4.5 per cent in 1987-88 to as much as 11.1 per cent by the year 1999-2000...Contemporaneously, the 'debt-financing' to GDP ratio would increase very rapidly: from 28.6 per cent in 1986-87 to as much as 133.7 per cent, and the overall debt-GDP ratio would shoot up from 44.6 per cent in 1987-88 and, crossing the 100 per cent mark in 1995-96, would reach nearly 150 per cent by the turn of the century."[90] In 1999-2000, the fact that the primary deficit of the Centre and overall debt were 0.9 per cent and 61.6 per cent of GDP, respectively, demonstrates that the fiscal stance has not been a passive one and some adjustments have already taken place. The question is: Is it enough? What more needs to be done?

There appears to be a further need for fiscal consolidation. Such consolidation can not be done overnight. At the same time, it can not be postponed for long. With the integration of the country with global markets, restoring solvency and sustainability is critical for maintaining high growth, low inflation and orderly conditions in the foreign exchange markets for the rupee. As much attention needs to be paid to the quality of fiscal consolidation as to its speed. Inability to garner more revenues and contain inessential expenditures, including untargeted subsidies will make the burden of adjustment fall on capital expenditure and critical items such as non-wage operation and maintenance. It is critical to avoid the unnecessary cost in terms of growth and welfare of such an adjustment path.

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[90] Rangarajan, Basu, and Jadhav (1994), p. 159.

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