

# **The downward rigidity of Indian interest rates**

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## **Abstract**

This paper tries to assess why lowering interest rates is proving to be hard in India. It singles out the role of three factors: (i) high public debt and the structure of this debt, (ii) the overhang of non-performing assets; and (iii) the policy being pursued with respect to accumulation of foreign exchange reserves. These three factors are causally linked to each other and should not be looked upon as mutually exclusive contributors.

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## **I. Introduction**

As the industrial slowdown in India has stretched for months and shows no immediate signs of abating, there have been repeated calls for a softening of interest rates. The RBI has responded to these calls by cutting the bank rate and the CRR and has raised two points in defence of its interest rate stance. First, since interest rates are largely market-determined, surely the RBI can do little about them<sup>1</sup>. Further, the pressure of the fiscal deficit (already acknowledged to be in excess of its target for 2001-02) makes it difficult to sustain lower interest rates. Even if short-term interest rates can be brought down, the spectre of larger payments in the intermediate run hardens long rates. Some have argued that high interest rates discourage investment and that a viable strategy for industrial revival must involve reducing short and long-term interest rates but other economists have raised doubts about the interest sensitivity of private investment in India and point, instead, to the sensitivity of savings (particularly small savings) to interest rates. Notwithstanding this, the government is now reported to be thinking in terms of effecting tax breaks in the next budget to stimulate private investment<sup>2</sup>. However, while the impact of interest rates on private investment may be an issue for debate, the same cannot be said for interest payment on the public debt – the largest single item in the central

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<sup>1</sup> From the point of view of the investor the return on debt has persistently outperformed that on stocks. An *Economic Times* report on December 31, 2001 noted that investment in the Sensex five years ago would have resulted in a compounded annual return (CAR) of 2.7 per cent in nominal terms. The return in real terms was negative. A ten year investment in the Sensex would have given a CAR of 6 % whereas an investment in the stocks comprising the Dow Jones average would have yielded 13% over the same period.. Thus real rates of return on domestic stocks have consistently been lower than on domestic bonds and on stock markets abroad.

<sup>2</sup> An important question at this point is whether such a tax break is the best policy tool available for stimulating investment. It is well known that an increase in investment allowance will result in a larger increase in investment for the same loss in tax revenue. (See Jha (1998), chapter 9).

government's budget. It certainly would be helpful to have lower interest rates in order to reduce debt service obligations.

In recent months (short-term) interest rates have fallen in major countries including India. However, the drop in the Indian case has been less spectacular and the gap between Indian and world real interest rates remain large. Historically, the gap between Indian and US real interest rates, for instance, although fluctuating, has remained sizable (Table 1). The simple average of this difference over the period covered by Table 1 was 5.22%

**Table 1**

	Indian Real Interest Rate (% per annum)	US real Interest Rate (% per annum)	Indian real interest – US real interest
1992	7.05	0.72	6.33
1993	8.77	0.27	8.50
1994	4.21	2.05	2.16
1995	6.12	3.13	2.99
1996	10.07	2.48	7.59
1997	8.59	3.23	5.35
1998	6.63	3.79	2.84
1999	9.00	3.00	6.00

N.B. Real interest rate is computed as lending rate – inflation in WPI for the case of India; and lending rate – inflation in CPI for the US. All data are taken from various issues of *IMF Financial Statistics*.

This paper tries to assess why lowering interest rates is proving to be hard in India. It singles out the role of three factors: (i) high public debt and the structure of this debt, (ii) the overhang of non-performing assets; and (iii) the policy being pursued with respect to accumulation of foreign exchange reserves. These three factors are causally linked to each other and should not be looked upon as mutually exclusive contributors. The plan of

this paper is as follows. In the next section I briefly outline the contours of the three sources of pressure on interest rates. The final section concludes.

## **II. Sources of Upward Pressure on Interest rates**

### *II.1: The fiscal pressure on interest rates*

It has become almost routine in policy documents of researchers as well as agencies of the government as well as the RBI to bemoan the high level of fiscal – particularly revenue – deficits. These magnitudes are tracked closely by economy watchers as their movements are taken as indicators of fiscal stance and sustainability of the government debt.

Some points about this practice need to be clarified at the outset. First, the emphasis on the revenue deficit seems inappropriate to the extent that the productivity of government capital expenditure is suspect. Second, it does not seem appropriate to focus largely if not exclusively on the central government's deficit when the adjustment in the central government's deficit is linked to that in the state governments' deficits. Third the deficit as reported typically underestimates the true deficit since it excludes important constituents of the government's liabilities such as the oil pool deficit. Finally, in making a judgement about the sustainability of the public debt there is little point in taking a short-term view of the deficit. If the deficit goes up in some years and falls in others shall we say that the debt has become less or more sustainable? A reasonable view of the public debt can only be obtained over a time horizon – not just at a point of time.

Standard tests of sustainability (Jha (2001)) indeed take this view.

With this as background what can be said about the recent stance of public debt in India?

Some aspects of the behavior of public debt are outlined in Figure 1.

**Figure 1 here.**

As is evident from Figure 1, the combined liabilities of the central and state governments as a fraction of GNP grew steadily until about 1987-88 and then seemed to stabilize just below the 70% mark. This level proved to be unsustainable and the efforts to reduce the fiscal deficit in the early 1990s had their impact on the accumulated public debt only around 1993-94. Total public debt fell until 1996-97 after which it started to rise again and in 1999-2000 had, for the first time, crossed 70% of GNP. Had external liabilities of the central government not fallen off during this period, the growth in total public debt would have been even larger. State governments' public debt went over 20% of GNP in 1984-85. It fluctuated in a narrow range above 20% of GNP and fell below this figure only in 1996-97, only to rise the very next year to pursue an upward trend. The year 1996-97, thus, marks a milestone in the recent history of public debt in India. Fiscal discipline seems to have become a casualty since then and shows no sign of getting back on track.

The pattern of rise of public debt was different across central and state governments. In the pre-reform period central government securities typically carried a higher interest rate than state government securities. This reflected in part a subsidy from the central to the state governments as well as the relative denial of resource raising opportunities to state governments. Between 1997-98 and 1998-99 the domestic liability of the central government actually fell; but that of the state governments continued to rise. As a

consequence of this as well as the higher risk associated with state government bonds, prices of state government bonds fell below that of central government bonds, i.e., the interest payable on state government securities went above that on central government securities. It is interesting to note from Figure 2 that although public debt kept climbing up during the 1990s the interest rate on central government securities and that on state government securities was coming down. (These are weighted averages of interest rates on central and state government securities of different maturity periods). The fall in interest rates despite a rise in debt should be attributed to two factors (i) partial sterilization of improved capital inflows and (ii) improved capital market efficiency as a result of the financial market reforms initiated in 1992 and carried forward since then. Surely, without these two factors, the burden of the public debt would have been higher. Of course, the fall in interest rates did not lower debt-servicing charges as the effect of the accumulation of debt swamped the effects of the mild drop in interest rates. The ability to service this debt has been severely tested in the face of sluggish tax/GDP ratios.

**Figure 2 here.**

To complement this description of the public debt I examine the pattern of maturity of government securities in Figure 3. This has indeed undergone remarkable change.

**Figure 3 here.**

In 1971-72 the share of debt (in total government debt) of more than 10 years was approximately the same as that of less than five-year debt. There was then a sharp growth of the share of long-term debt to a peak of more than 85% in 1990-91. Public debt reform initiated in 1991 soon came to the realization that the bond market should mature from being little more than a captive enclave for public sector banks and the RBI. With open

market trading of government bonds it was soon realized that buyers would not be interested in long-term bonds especially at the prices at which such debt had been issued. As a result a large-scale shift toward shorter-term government bonds became essential. The share of long-term bonds came down sharply to a little over 16% in 1998-99 and then rose marginally. Hence, the burden of long-term debt accumulated during a regime of administered interest rates and being paid off in a regime of market-determined interest rates is indeed large and the current burden of the public debt is not only a consequence of high expenditures and inelastic tax revenues but also one of having to pay off long-term debt at unfavourable rates and rising share of shorter-term debt. In particular, it should be noted that Figure 2 gives little indication that long-term rates are coming down significantly.

With this background of government bond markets, it is instructive to examine the pattern of holding of government securities. This is reported in Figure 4, which gives ample indication of the “thinness” of the government bond market. “Official” lending agencies such as commercial banks and the RBI account for the overwhelming bulk of government bond holdings. Provident Fund, UTI, LIC and similar semi-public agencies account for only a small segment of the demand whereas the share of “other” agencies has rarely gone over 9%. The reforms saw RBI reducing its share in government bonds. Commercial banks – particularly SBI and associates and nationalized banks – had to step in to purchase government bonds. In fact the share of commercial banks in central government bonds was as high in 1999-2000 as it was in 1991. Hence, it is difficult to

escape the conclusion that government bond markets have been slow to develop and need urgent attention.

**Figure 4 here.**

From the point of view of commercial banks, however, a related important point emerges. Since their assets are so heavily biased in favour of government bonds, the yield on these would set a benchmark for bank investments. In particular, since government bonds carry low risk, the risk-adjusted rate of return on bank investment (bank lending as well as stock market investment) must match the yield on government bonds. This has been a tall order. The inability to do this has been constraining the fall of interest rates.

*II.2 Banks' Non-performing assets and interest rates*

A second reason why interest rates have been sluggish in the downward direction has been the high values of non-performing assets in the Indian banking sector. Table 2 below gives some indication of the scale of the problem. It should be remembered, however, that NPAs are underestimated in the Indian context. The RBI's norms are that loans in respect of which principal or at least interest repayments are not made for 180 days fall in the NPA category. However, the internationally accepted norm is 90 days. Even so, Table 2 indicates that the scale of the problem is worrying.

**Table 2**

Type of Bank	Gross NPAs/Total Assets				
	End March	End March	End March	End March	End March
	1997	1998	1999	2000	2001
Old Private Sector Banks (23)	10.7	10.9	13.1	11.2	11.3
New Private Sector Banks (8)	2.6	3.5	6.2	4.1	5.1



All Private Sector Banks (31)	8.5	8.7	10.8	8.5	8.5
Foreign banks (42)	4.3	6.4	7.6	7.0	6.8
Public Sector Banks (27)	17.8	16.0	15.5	14.0	12.4
Scheduled Commercial Banks	15.7	14.4	14.7	12.8	11.4
(100)					

Figures in brackets in the first column represent the number of each category of bank.

Source: Compiled from RBI *Report on Trends and Progress of Banking in India*; various issues.

Table 2 depicts a grim picture of the NPA situation especially since the RBI does not give figures for the quantum of NPAs within the 90-180 day group. With such high levels of NPAs it becomes imperative for banks to require higher returns on profitable assets in cross subsidization to compensate for the lack of income from NPAs. This again makes it difficult for banks to lower interest rates.

### II.3 Accumulating Foreign Exchange Reserves and Interest Rates

India has not been a major destination for capital flows in comparison to other emerging economies. However, by common consensus, there was a recovery of net capital inflows in 1997<sup>3</sup>.

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<sup>3</sup> The FDI component of financial inflows has been on the decline. This is similar to the experience of many Asian and Latin American economies – but the peak for FDI in the case of India was much smaller at 3.5 % of GDP in 1993-94 whereas the corresponding peak level for Malaysia was 20%; 13 % for Thailand, 10 % for the Philippines and almost 10% for Singapore (Glick (1998)). The composition of foreign financial flows into India has also followed standard patterns. In the early phase of the reforms portfolio investment exceeded FDI. FDI caught up later but started to drop after attaining a peak with some signs of revival in recent months. Administrative procedures associated with FDI may partly be responsible for the bias in favour of portfolio investment. Although most FDI approvals are supposed to be given “automatically” an element of discretion remains with clearance from the Foreign Investment Promotion Board being mandatory. In comparison a onetime, entry-point registration for portfolio investment in financial markets has made such investment faster and simpler.

An inflow of foreign capital has important implications for macroeconomic equilibrium. Such an inflow raises domestic expenditure, which would then lead to an increase in the demand for non tradable goods. This would lead to an appreciation of the real exchange rate. The demand for tradables (imports) goes up as well and this would tend to widen the trade deficit. The net effect on the domestic economy depends upon the exchange rate regime in place. If the central bank does not intervene and the exchange rate is floating, the nominal exchange rate will go up. If the exchange rate is pegged the accumulation of foreign assets will lead to an expansion of the monetary base and hence of the money supply. This would then have further effects on aggregate demand and inflation.

The path of adjustment of the Indian nominal and real effective exchange rate over a 36 country export weighted average is given in Figure 5. REER is constructed as a weighted average of NEER adjusted by the ratio of domestic WPI to foreign CPI. Both NEER and REER depreciated after 1985. At the time of the regime switch in 1993 the NEER depreciated – however the REER fluctuated around a constant value. In August 1995 and August 1997 there were sharp REER appreciations. It appears that the authorities have been reluctant to permit a nominal appreciation in the face of sustained capital inflows.

The fact that the monetary authorities have been reluctant to permit a nominal appreciation implies that they have been willing to absorb the capital inflows and pass these on. Either these would be accommodated as higher monetary base and result in higher money supply and inflation or be sterilized and result in a change in the

composition of the central bank's balance sheet – or a mix of the two. The precise form of the mix chosen is a policy option.

Figure 6 plots the balance on the current and capital accounts as well as the overall balance and foreign exchange reserves as percentages of the GDP and provides interesting evidence of the development of the Indian external sector. Confining ourselves to the period since the reforms the end of the 1980s and the beginning of the 1990s were associated with a deterioration of the current account as well as the overall balance. There was a dip in foreign exchange reserves. The subsequent revival in the current account saw an enhancement of reserves. What is most striking about the behaviour of the reserves is their sharp rise since 1992-93 – quite unrelated to current, capital or overall balance movements. In fact the capital account surplus and overall balance actually fell while the reserves were rising sharply. Except for a mild downturn in 1994-95 this upward trend continued. By all accounts the foreign exchange reserves as a percentage of GDP are now hovering at or above the 10% of GDP mark<sup>4</sup>.

### **Figure 6 here.**

Although India has had a market-determined exchange rate since 1993, the flexibility permitted by the RBI has been limited. This feature has been common to many developing countries and has been called “fear of floating” by Calvo and Reinhart (2000).

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<sup>4</sup> The drive to acquire additional foreign exchange reserves even at rather unfavourable terms saw the issuance of the Resurgent India Bonds in the wake of sanctions placed on India after the nuclear tests as well as the India Millennium Deposit Bonds issued in 2000. On December 29, 2001 foreign exchange reserves had gone above \$48 billion according to newspaper reports.

But such a policy course has had its adverse effects. This accumulation of foreign exchange reserves in the face of restricted movements in the exchange rate has led to the money supply becoming endogenous. This is documented by Rath (2001) in the context of financial inflows but applies more directly to the case of accumulation of foreign exchange reserves. Only part of the inflows has been sterilized<sup>5</sup>. This is one important impact of the accumulation of reserves.

A second important implication follows from the link between fiscal and monetary policy in the presence of capital inflows. Sterilization is often a controversial issue and there are arguments both for and against it (Speigel (1995), Calvo (1991)). Sterilization involves an exchange of foreign currency assets for domestic assets; so that the rate of interest must be kept higher. However, this interest differential may cause further capital inflows and be destabilizing in extreme cases. Open market operations accompanying sterilizations would also exert pressure on short-term interest rates. Such pressures on interest rates aggravate the difficulty of servicing the public debt. The increased cost of servicing the public debt imposed by interest rate differentials needed to attract capital flows has been termed quasi-fiscal cost and has been estimated to be in the range of 0.25 to 0.5% of GDP for some Latin American countries. Although no firm estimates exist for India such costs could well be large in the context of the overwhelming importance of interest payments on the public debt. As Edwards, Gregorio and Valdes (2000) argue the best response from fiscal policy to a situation of increased capital inflows is to enforce fiscal austerity. In the Indian case not only is fiscal austerity hard to implement but also

<sup>5</sup> There is some evidence that the fraction of capital inflows absorbed as reserves by the RBI has increased from about 1/3 at the beginning of the 1990s to about 1/2 towards the end. The greater the desired stability in the exchange rate the greater would be the required extent of sterilization.

the perceived need for accumulating foreign exchange reserves helps keep interest rates high.

Why is it necessary to keep acquiring more foreign exchange reserves and, in the process, keep interest rates high? Surely the reason has to lie in the need to control the impact of sudden reversal of capital flows. As is well known this is more likely the greater the fragility of the banking system<sup>6</sup> and the greater the public debt burden. The high level of NPAs with Indian banks is, thus, a cause as well as a consequence of high interest rates since, as argued above, the high level of NPAs in itself makes it difficult to move to a lower interest rate regime. The high level of government debt and the thinness of the government bond market also make it difficult to lower interest rates. These factors also increase the perceived probability of a sudden capital outflow and necessitate a large reserve of foreign exchange, which in turn requires higher interest rates. Only financial sector reforms encompassing public debt restructuring, reduction of NPAs and reorientation of the sterilization of foreign inflows policy can help break this circle.

### **III. Conclusions**

It seems hard to escape the conclusion then that the policy of high foreign exchange reserves is a fire fighting measure. While it is good to have the benefits of such security it is important to understand that this is levying a cost on the economy – in terms of interest rates and debt service payments that are higher than they need be (and compounding the contribution of high public debt and NPAs) and partial loss of control over money supply. It is important to be cognizant of this tradeoff and to use this cost in designing an

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<sup>6</sup> For a theoretical analysis of why high NPAs may raise the chances of capital flow reversal see Detragiache (1999).

appropriate foreign exchange reserve policy. It could be the case that the cushion provided by high foreign exchange reserves reduces the incentive for effecting fundamental structural reforms needed in banks' balance sheets and public debt policy. However, as the Thai experience in 1997 vividly illustrates high foreign exchange reserves alone cannot provide security against macroeconomic downturns indefinitely.

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**Figure 1: Liabilities of Central and State Governments**  
**Source: Handbook of Statistics 2000, RBI**

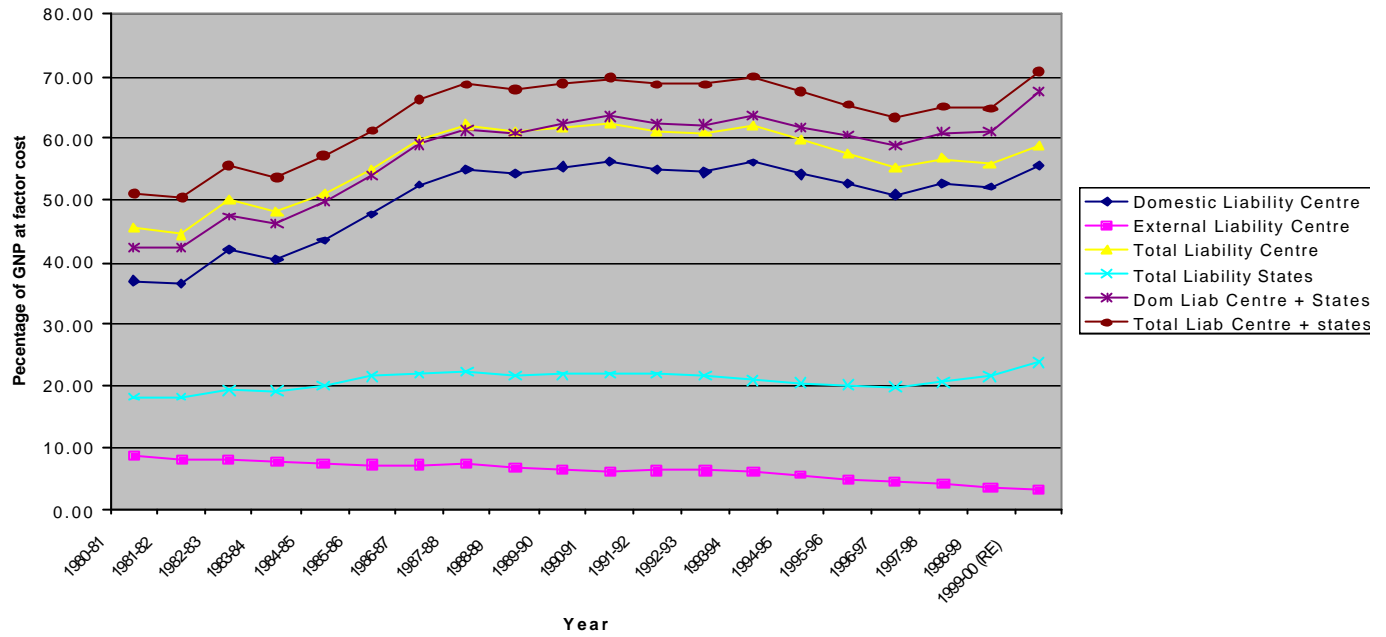
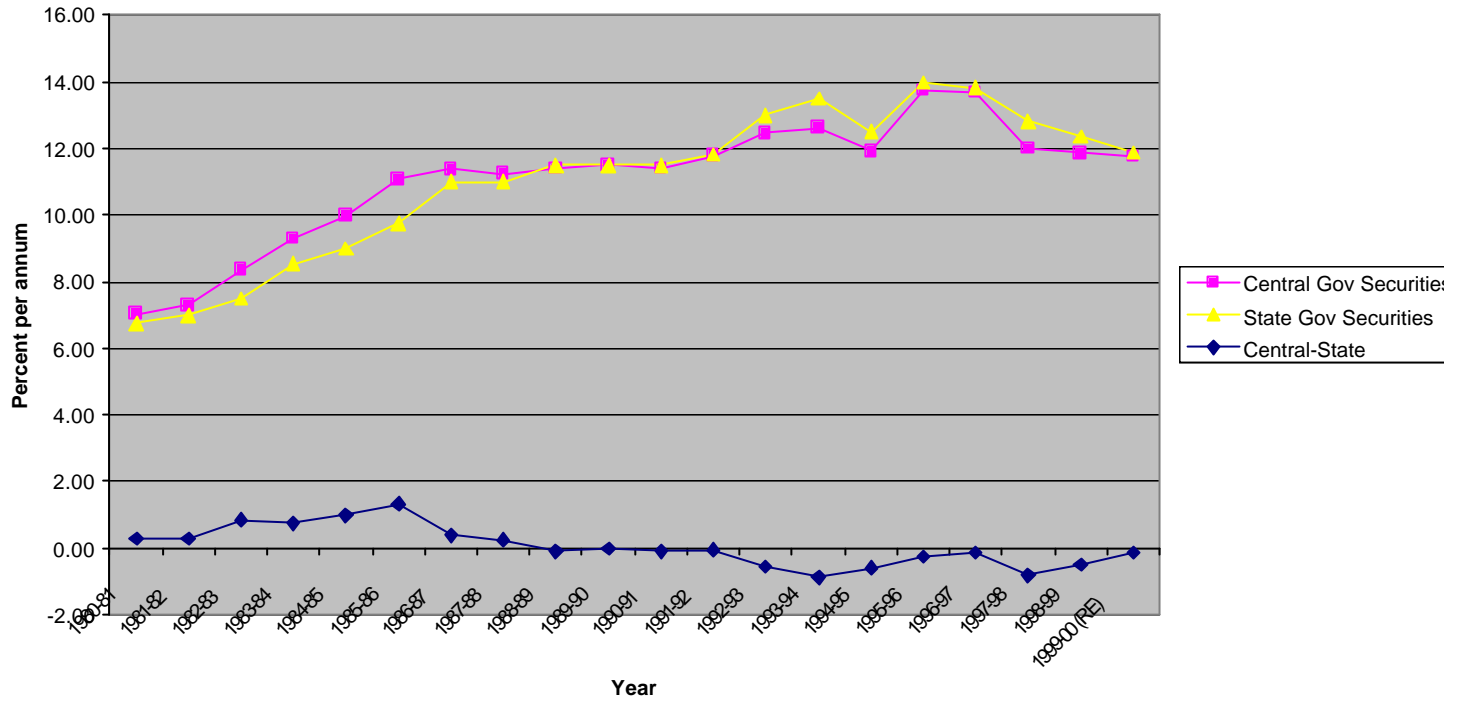
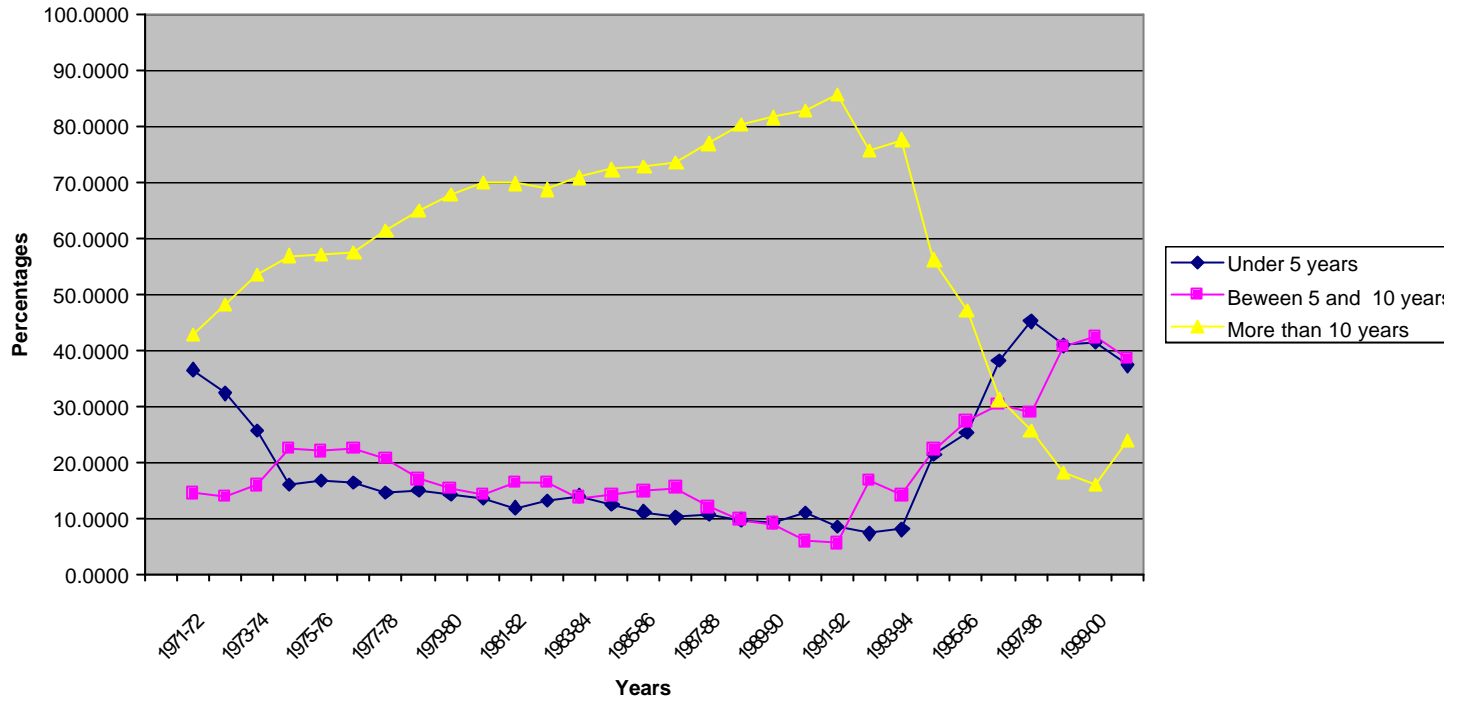




Figure 2: Interest rates on Central and State gov debt  
Source: Handbook of Statistics 2000, RBI



**Figure 3: Maturity Profile of Central Government Debt**  
**Source: Handbook of Statistics 2000, RBI**



**Figure 4: Pattern of Holding of Central and State Level Securities**  
**Source: Handbook of Statistics 2000, RBI**

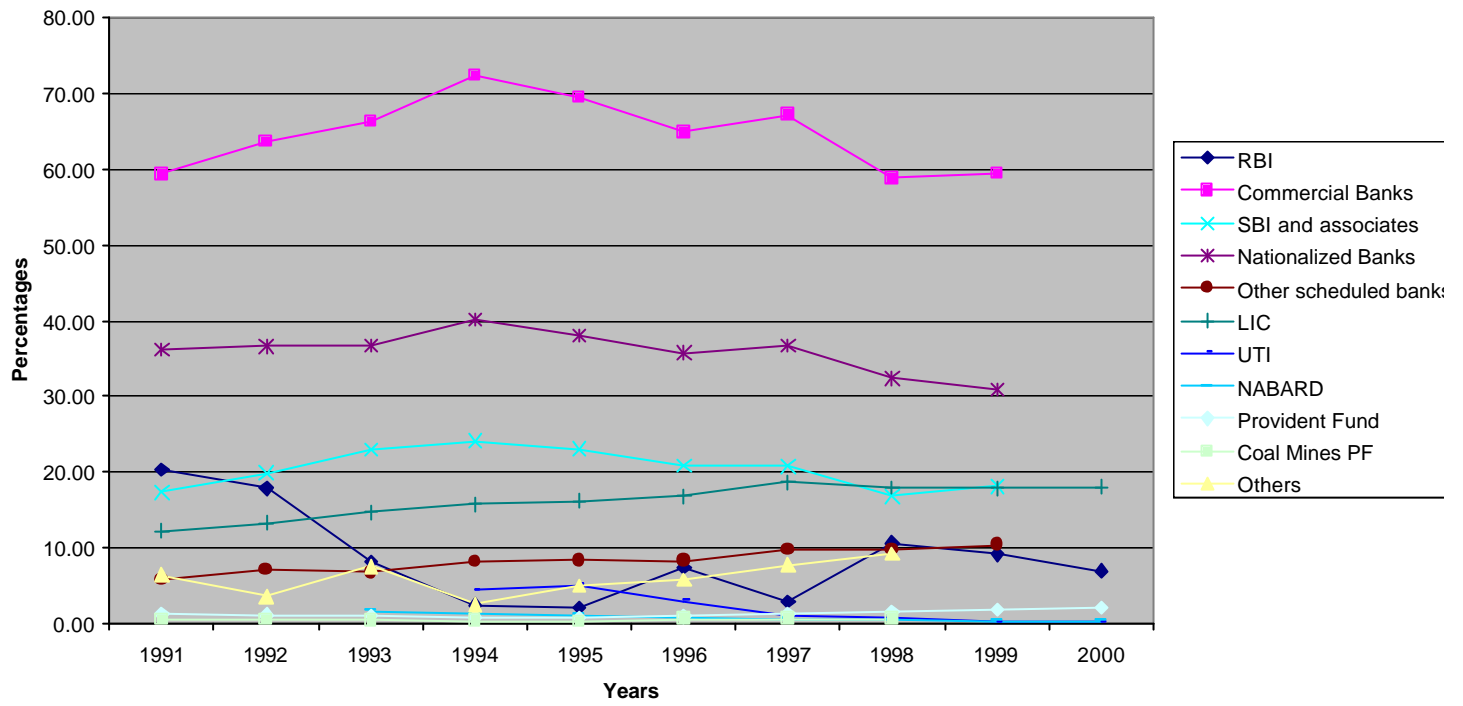


Figure 5: Nominal and Real Effective Exchange Rates (1985=100)  
Source: Handbook of Statistics 2000, RBI

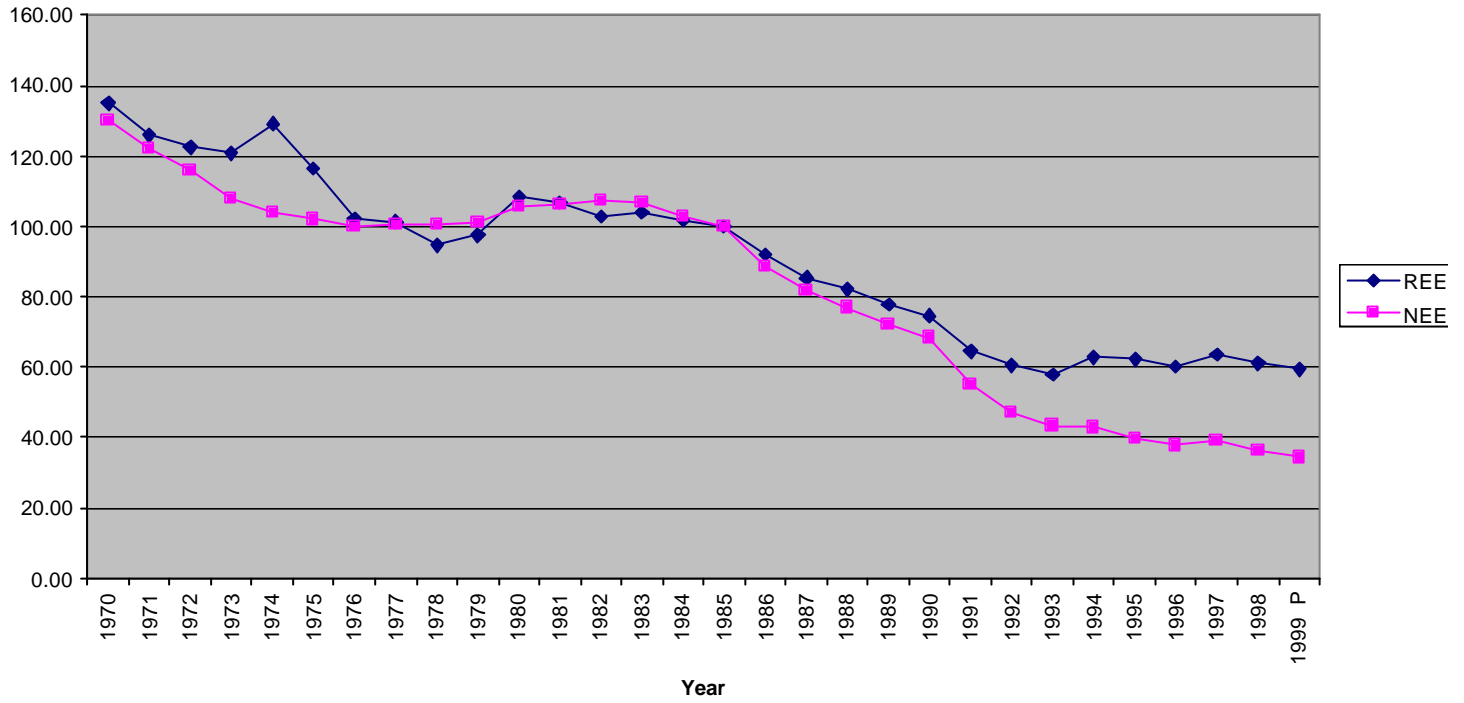


Figure 6: Current, Capital, overall balance and foreign exchange reserves as percentage of GDP; Source: Handbook of Statistics 2000, RBI

