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ABSTRACT

India's Public Finances: Excessive Budget Deficits, a Government-Abused Financial System and Fiscal Rules*

Capital formation is a key driver of the growth of potential output. With continuing widespread capital controls and persistently small inward FDI the volume of capital formation in India is constrained by domestic saving. The national saving rate in India (the sum of the saving rates of households, enterprises and the state) is depressed by the continuing large public sector deficits (and much below the near 40% of GDP saving rates achieved by China). Even this saving rate should be able to support a higher growth rate than has been achieved thus far. The reason it does not is that the intermediation of this saving into domestic capital formation is inefficient.

Since the middle of the 1990s, India's public debt has risen steadily as a share of GDP, but remains below the levels achieved at the time of the 1991 currency crisis. The composition of this debt is, however, significantly different from that in 1991: external public debt is modest and international gold and foreign exchange reserves stand at historically high levels. The domestic debt is rupee-denominated. For all these reasons, government solvency may not be a pressing issue at this stage. Globally, risk-free rates at all maturities and all imaginable credit risk spreads are extraordinarily and unsustainably low. Continuation of the pattern of recent years – a steady increase in the debt-GDP ratio – will sooner or later raise the public debt to unsustainable levels.

The fiscal rules adopted by the Indian Central Government under the Fiscal Responsibility and Budget Management Act do not address the key distortions imposed by the authorities on the private sector through financial repression, misguided regulations and inefficient ownership and incentive structures. Nor do they address the underlying fiscal sustainability problem faced by the Indian state. In addition, they create a mechanism for macroeconomic volatility-enhancing, pro-cyclical fiscal policy.

JEL Classification: E5, E6, G1, G2, H6 and O5
Keywords: financial intermediation, financial repression, fiscal sustainability and Indian public finance

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1. Introduction

Since its external crisis of the early nineties, India has witnessed a turnaround on most indicators of macroeconomic performance. The process of economic reform, including widespread liberalization and reduction in protectionism, launched in 1991, and steadily pursued thereafter has yielded positive results by eliminating some longstanding structural rigidities, and created potential for higher growth. Over the last decade or so India has made the transition from an onerous trade regime to a market-friendly system encompassing both trade and current payments – IMF Article 8 compliance was, at last, achieved. There also was some liberalization of cross-border capital account transactions, although significant constraints remain in place on cross-border intertemporal trade and cross-border risk trading.

Although average annual real GDP growth over the post-reform period has only been modestly higher than in the previous decade (6.2 percent over 1992/93-2004/05 versus 5.7 percent over 1981/82-1990/91), India continues to be one of the fastest growing economies in the world. The most far-reaching change has been its integration with the global market place after four decades of inward looking policies; the sum of external current payments and receipts as a ratio to GDP has doubled from about 19 percent in 1990/91 to around 40 percent at present.

After moderate improvement during the five years immediately following the crisis (1992/93-1996/97), fiscal fundamentals have deteriorated again, as exemplified by rising ratios of public sector debt and public sector financial deficit to GDP. This build-up of aggregate public debt has been accompanied by a sharp reduction in external indebtedness by the public sector. Although foreign currency indebtedness of the private sector has increased, it is still very small (less than 3 percent of GDP). Vulnerability to

external financial shocks consequently has eased to the point that an external financial crisis is not seriously countenanced by politicians, in policy circles, or, even among academic economists. Official foreign exchange reserves are more than adequate to cover (official and private) external debt. In addition, India continues to maintain selective (discretionary) capital controls, particularly those that keep arbitrage-type flows – for instance, external borrowing by domestic financial intermediaries, investment by foreign institutional investors in fixed income securities, or, borrowing of a short-term nature by practically anyone – in check. It is therefore fair to say that while India faced a combined internal (fiscal) and external transfer problem during the years leading up to the crisis of 1991, the weakening of the fiscal position in recent years represents an exclusively internal resource transfer problem.

After a peak of 11.2 percent of GDP in 1986/87 public sector gross domestic capital formation (investment) has declined from 9.5 percent in 1989/90 to 7.7 percent in 1995/96 and further to 6 percent at present. It is not a straightforward exercise to make inferences about the volume of investment in the provision of public goods and services on the basis of the behavior of the share of public sector gross domestic capital formation in GDP. On the one hand, the public sector investment figures include the behavior of a wide range of PSEs that produce private (rival and excludable) goods and services. On the other hand, there has been growing investment by private entities in the provision of certain public goods and services (especially in telecoms and ports). That notwithstanding, it is not an exaggeration to say that public investment in infrastructure, along with associated capital maintenance expenditures have been cut to the bone and the state of services (drinking water and sewerage, roads, power supply etc.)[1] are testimony to the lopsided fiscal "adjustment".

[1] There is, of course, also the growth aspect to infrastructure provision. These "network industries" are considered as "accelerators" for total factor productivity.

This infrastructure-unfriendly fiscal "correction" cannot be "seen" in overall fiscal deficit numbers; committed and "sacred cow" expenditure comprising interest payments, defense spending and salaries & pensions combined with declining indirect tax revenue have to a large extent offset cuts in public investment. In fact the overall public sector financial deficit as a share of GDP is around the same level in 2003/04 as in the crisis year of 1990/91; furthermore, the revenue (current) deficit is substantially higher.

Across the world, from the EU's (ill-fated) Stability and Growth Pact to the UK's Golden Rule and Sustainable Investment Rule there have been attempts to bind governments to fiscal rectitude through formal legal or even constitutional devices. India too in the last decade has enacted such mechanisms. In September 1994 an agreement was reached between the Reserve Bank of India and the Central Exchequer to phase out by 1997/98 the instrument of *ad hoc* Treasury Bills which hitherto facilitated automatic monetization of the budget deficit (the borrowing gap after all other financing instruments have been exhausted). This, in itself, did not preclude the RBI from participating in primary issues of central government securities or operating in the secondary markets for central government debt, but it leaves these decisions to the RBI's discretion. The Indian Parliament, in August 2003[2], voted for the Fiscal Responsibility and Budget Management Act (FRBMA) which requires that the central government's fiscal deficit should not exceed 3 percent of GDP by 2007/08, and that the deficit on the revenue account would be eliminated by the same date. The specified annual reductions in the two measures are ½ percentage point of GDP (or more) for the revenue deficit and 0.3 percentage point of GDP (or more) for the fiscal deficit. The FRBMA has since been amended in July 2004 to shift the terminal date – for achieving the numerical targets pertaining to fiscal indicators – by one year to 2008/09. The Act also requires that the

[2] The bill was first introduced in Parliament in December 2000.

RBI will not subscribe to government paper after March 31 2006. Nevertheless, borrowing from the RBI on account of "temporary excess of cash disbursement over cash receipts during any financial year", essentially Ways and Means Advances, is permitted. In February 2004, the government constituted a Task Force for scripting a strategy for implementing the Fiscal Responsibility and Budget Management Act. In July, the Ministry of Finance published the comprehensive analysis and recommendations of the Task Force in the form of a report. The critical recommendations are on the revenue side of the deficit equation, specifically measures to enhance direct taxes by 2 percentage points of GDP and to shift the revenue base of indirect taxes to include a greater share of services.

Under India's federal political structure, states are highly autonomous. Extending the framework of the FRBMA to the states therefore requires independent legislative action by the states. In addition to the Government of India, several states have passed fiscal responsibility acts; the first six (accounting for 45% of GDP) include Karnataka (as early as August 2002), Kerala, Punjab, Tamil Nadu, Uttar Pradesh and Maharashtra. The common features include imposition of quantitative and time-bound targets, multi-year fiscal plans and regular reporting to respective legislatures of progress towards annual targets.

India's overflowing foreign exchange coffers have created a different set of political economy consequences compared to most of the post-independence period. Specifically, they have mitigated pressures to rectify India's fiscal mismanagement. In the past, when external reserves were much more modest and external debt much higher, India's policy makers were quite aware that large fiscal deficits sustained over a long time period would either inevitably spill over into higher levels of inflation (if the deficit was monetized) or a balance of payment crisis (if the government relied increasingly on

external borrowing). Since both outcomes had harsh political repercussions, it forced policy makers to act with due caution (most of the time). Now with high levels of reserves and low external debt, politicians are much less worried about either concern. Market-based liberalization has eased (but not eliminated) supply side weaknesses and monetization has not yet been seriously resorted to, thereby attenuating inflationary pressures. Indeed the increasing disjuncture between large internal fiscal imbalances on the one hand and improving external balances on the other is analytically relatively unexplored territory in India.[3] [4]

The following "observations" broadly identify the picture that emerges:

- The country has no history of default or even restructuring on external (or internal) debt servicing.[5]
- The likelihood of an external payments crisis is universally considered to be remote. While the current configuration of the relevant fundamentals (large international reserves, low external debt and remaining capital controls) supports this confidence, complacency is certainly not warranted.
- Nevertheless, there is underlying disquiet: a public sector financial deficit that is very high and a (gross) public debt/GDP ratio of 90 percent. Commentaries that accompany regular reviews of international credit-rating agencies almost invariably make a song and dance about the fiscal stance, cautioning the government against fiscal misadventures (exhorting it to "*hold the line*", in a manner of speaking).

[3] See Kapur and Patel (2003).
[4] A lively debate on the analytic specifications of the Indian macro economy (in the context of liberalized trade and capital flows) is underway with notable contributions by Lal, Bery and Pant (2003), Sen (2004), and Singh and Srinivasan (2004).
[5] The country does have a long history of forcing domestic banks to absorb public debt at rates well below commercial levels.

- Large past, present and anticipated future government budget deficits have not given rise to monetary growth (actual or anticipated) of a sufficient magnitude to threaten price stability. At some point, however, excessive deficits would either lead to growing default risk or to Sargent-Wallace type unpleasant monetarist arithmetic and rising inflationary pressures. Even without the support of an explicit inflation target, the inflation aversion of the Indian polity has produced a form of implicit inflation targeting, where the monetary authorities tighten policy whenever inflation exceeds a fairly modest tolerance level. It would seem that Indian monetary policy uses the exchange rate as its main instrument, probably in part because financial repression and other financial distortions make for a relatively weak interest rate transmission channel.
- Political pressure to enhance government expenditure on social sectors and improve public (infrastructure or utility) services has increased in the aftermath of the May 2004 general election; an employment guarantee scheme is under implementation, whose (estimated) cost to the exchequer when fully executed could be as high as one percent of GDP. Governments at the federal level since 1996 have had to rely on coalitions of up to a dozen parties to stay in power with attendant (reported) instances of fiscal forbearance; the support of communist parties is critical for the longevity of the Congress-led coalition comprising a clutch of regional parties.

The remainder of the paper is organized as follows. In Section 2, we update our earlier work on the fiscal-financial sustainability of the Indian sovereign by providing a review of the evolution of public debt and reporting the results of some formal solvency tests. Sustainability (feasibility) is necessary but not sufficient for optimality. There are

bound to be many sustainable fiscal-financial programmes, most of which may well produce undesirable outcomes. An extreme example is Ceaucescu's policy during the 1980s to pay off the Romanian external debt in its entirety by starving the people of Romania. Nevertheless, a diagnosis of unsustainability would doom a fiscal-financial rule, so our investigation is of some modest interest.

Our conclusion is that government solvency is not today the pressing concern it was in the early 1990s. This leaves two potential areas of interest and concern about the impact of the government on the quantum and quality of capital formation in India. The first is financial crowding out – the negative effect of public borrowing on aggregate (private and public) saving. The second is the effects of government institutions, policies, actions and interventions, including public ownership, regulation, taxes, subsidies and other forms of public influence on private savers, private investors and the financial markets and institutions that intermediate between them. In Section 3, deploying a simple growth accounting framework for back-of-the-envelope calculations, a brief comparison is made of India's investment efficiency – *inter alia* affected by financial sector characteristics – with that of China. In Section 4, key aspects of the financial sector are brought out to convey that it still remains *"by, of and for the Indian state"*. We argue that India is paying an especially heavy price for its fiscal excesses because the standard financial crowding out of interest-sensitive private spending by government borrowing is intensified through deep-seated government-created distortions in the financial system. In Section 5 the fiscal rules that India has embraced – perhaps in recognition of the serious systemic inefficiency that the fiscal stance has engendered – are evaluated. We embed the rules in the basic budgetary arithmetic, and the operational outcomes that are envisaged in the FRBMA are brought out formally. Then we reflect on the likelihood of the rules being enforced, and scope for the FRBMA to create a

mechanism for macroeconomic volatility-enhancing, pro-cyclical fiscal policy – a fate that befell the EU's Stability and Growth Pact. We conclude that without a vocal and influential domestic constituency in favour of fiscal responsibility and restraint, the adoption of a formal set of fiscal-financial rules in India is likely to prove as ineffective in India as the Stability and Growth Pact has been in the EU for those member countries that either have achieved EMU membership (the 12 current Eurozone member states) or are not interested in achieving it (like the UK).

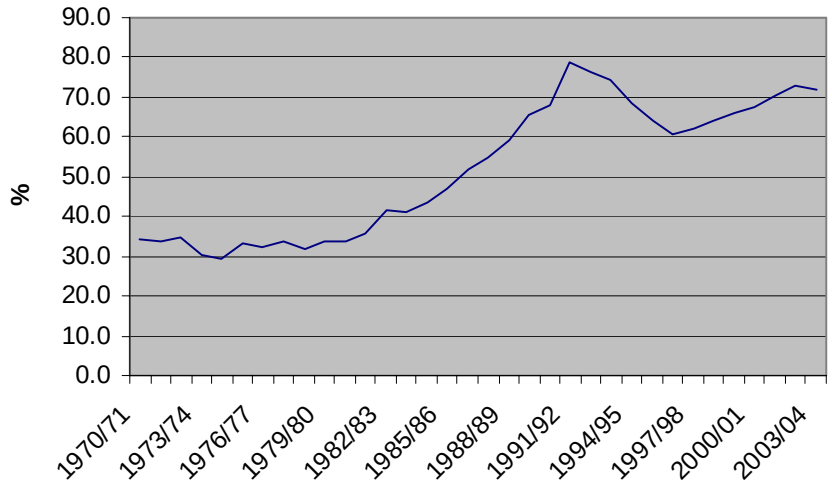
Our paper does not focus on the macroeconomic stabilization roles of fiscal and monetary policy. We do not believe that the nominal wage and price rigidities that make monetary and fiscal policy potentially important tools for macroeconomic stabilization policy are an important feature of the Indian macroeconomic transmission mechanism. Neither old Keynesian nor New-Keynesian specifications of the wage-price mechanism capture the reality of India's labour and product markets. We view output as supply-constrained rather than effective demand-constrained. The supply constraint binds, however, at far too low a level because of real rigidities and distortions in labour, product and financial markets. Financial crowding out therefore matters from our perspective not because of what it does to short-run aggregate demand and employment, but because of what it does to the level and composition of 'full employment' saving and investment.

2. Evolution of public debt and solvency tests

India pursued fiscal consolidation, albeit relatively briefly, in the aftermath of the 1991 balance-of-payments-crisis. Reflecting this, the net (public) total debt (NTD)-GDP ratio declined sharply – from a peak of about 80 percent of GDP – by almost one-fourth

during 1992/93-1996/97. Subsequently, there has been a reversal and the ratio has crept back up to over 70 percent of GDP (Figure 1 below).[6]

Figure 1: NTD/GDP, 1970/71-2003/04



Note: see Appendix Table A.1 for data and definitions.

The composition, however, has undergone substantial change. While public and publicly guaranteed external debt continues to decline in both gross and net terms (as a ratio to GDP), internal (i.e., domestic currency denominated) indebtedness of the government has shot up to 75 percent of GDP (Table A.1). In effect, there has been a swapping of creditors by Indian policy makers – hapless future generations of Indian citizens for a potent pressure group of foreigners. At least one major international rating agency recognizes this by evaluating India's foreign currency rating as investment-grade, but the long-term domestic currency rating is classified as below investment-grade. Within the internal debt aggregate, there has been a slight change in relative shares. In an indication of continuing fiscal stress on state governments, the proportion of state government debt in total domestic debt has inched up to about a fifth. In consonance

[6] It is noteworthy that although (recognized and explicit) guarantees outstanding of central and state governments have stabilized in recent years, they amount to 11.3 percent of GDP (2003).

with the compression in public capital expenditure, the share of state-owned enterprises in total liabilities has steadily fallen over the last decade. On the external side, official foreign exchange reserves now exceed foreign currency-denominated public debt (indeed, RBI reserves are in excess of all external (debt) liabilities, both public *and* private).

Our definition of the public sector includes public enterprises as well as central, state and local government, and the central bank. We do not include the publicly-owned commercial banks. That was a judgment call. Our reasoning was as follows. By consolidating the publicly-owned commercial banks with the public sector, we effectively assume that the government not only guarantees all the liabilities of the publicly-owned commercial banks, but that this guarantee is certain to be called. These liabilities are not just contingent liabilities of the government, they are actual liabilities. As it is not 100 percent certain that the government will be called upon to service the debt of the publicly-owned commercial banks in full, consolidation would overstate the true indebtedness of the public sector.

Publicly-owned commercial banks hold general government debt in an amount equal to around 40 percent of their deposits. Without consolidation, that debt is counted as public sector debt. It may well be a better approximation to the 'fair value' of all public sector debt (contingent and certain) not to consolidate – and therefore to count the value of the publicly-owned commercial banks' holdings of general government debt as a public sector liability – than to consolidate – and therefore to treat the difference between the liabilities of the publicly-owned commercial banks and their holdings of general government debt as a certain liability of the public sector.

It does not matter from the point of view of the analysis of the debt sustainability of the public sector whether the publicly-owned commercial banks act commercially or

emulate the bureaucratic behaviour of a general government department. There are, for instance, many ways of acting non-commercially without this involving 'soft budget constraints'. Ceaucescu's Romania was an example of ultra-hard budget constraints and utter economic irrationality.

As in our previous work on Indian public finance (Buiter and Patel (1997)), we conduct formal solvency tests on the debt series.[7] The formal definition of the discounted debt (strictly speaking the period *t* debt discounted to period *0)* is given in (2.1) below:

$$\mathrm{PDV}(B_t) \equiv \prod_{j=0}^{t-t_o}\left(\frac{1}{1+i_{t+j}}\right)B_t \qquad (2.1)$$

Here B_t is the 'notional' value of the national debt at time *t* measured in rupees. For variable rate debt the notional value at time *t* is the face value at time *t*. For fixed rate debt, it is the present value, at time *t,* of all current and future contractual debt payments, discounted at default risk-free nominal discount factors; i_{t+j} is the default risk free nominal interest rate in period *t+j*. A statistically testable implication of the solvency constraint is that the unconditional expectation of the discounted public debt should be zero (or non-positive). Since we have not put forward a formal structural political-economic model to explain the evolution of debt and deficits, we are restricted to a mechanical description of the time series properties of the debt stock in terms of reduced form data generating processes (DGPs). The statistical tests endeavor to shed light on two aspects: (i) whether the DGP describing the discounted public debt is stable in the sense of parameter constancy, that is, whether there are structural breaks in the process; (ii) conditional on an invariant structure having been identified, whether the discounted debt process is covariance stationary or not.

It should be kept in mind that non-stationarity need not be taken as evidence that the government will default; it only means that if extant fiscal policies continue then bankruptcy of the exchequer will occur. Covariance stationarity of the DGP implies that

[7] A recent contribution to the literature on Indian fiscal deficits and government debt is Rangarajan and

its unconditional mean will be zero if the univariate representation of the stochastic process governing it is strictly indeterministic. If the process is covariance stationary but has a deterministic component, its unconditional mean may of course be non-zero.

We deploy two methods to test for stationarity. The process describing $PDV(B_t)$ can be assumed to be represented by a multivariate ARIMA process:

$$(1-\rho(L))((1-L)^d X_t - \alpha_0) = (1-\theta(L))\varepsilon_t \qquad (2.2)$$

where $\rho(L)$ is a ρth-order polynomial, $\theta(L)$ is a qth-order polynomial, X_t is a random vector the first element of which is $PDV(B_t)$, α_0 is a vector of constants, and ε_t is a vector white noise process. $(1-L)^d X_t$ is a covariance stationary series, i.e., the series X_t is integrated of order d. It is assumed that both $(1-\rho(L))$ and $(1-\theta(L))$ have their roots outside the unit circle; under this assumption (2.2) has the AR representation

$$\eta(L)((1-L)^d X_t - \alpha_0 = \varepsilon_t \qquad (2.3)$$

where

$$\eta(L) = \sum_{i=0}^{\infty} \eta_i L_i = (1-\theta(L))^{-1}(1-\rho(L)). \qquad (2.4)$$

The univariate special case of (2.3) is implemented:

$$PDV(B_t) = \alpha_0 + \alpha_1 t + \beta(L)PDV(B_{t-1}) + u_t \qquad (2.5)$$

where $\{u_t\}_0^{\infty}$ is an infinite sequence of weakly stationary random variables, to test whether the discounted Indian public debt is covariance stationary or not. Eventual insolvency will occur if at least one of the following conditions hold:

1. The roots of $1-\beta(L)$ do not all lie outside the unit circle.

Srivastava (2005).

2. $\alpha_1 > 0$, that is, there is a positive deterministic time trend.

3. $\alpha_0 > 0$, that is even though the $PDV(B_t)$ process is stationary, its unconditional expectation is positive.

To allow for a wide class of error structures the Phillips-Perron test statistics $Z(\beta)$, $Z(t_\beta)$ and $Z(\phi_3)$ can be used to test for the null hypothesis that $\beta = 1$ and $\alpha_1 = 0$ within a maintained hypothesis that permits a non-zero drift α_0.

It is now widely appreciated that standard unit root tests (for example, Dickey-Fuller and Phillips-Perron) are not very powerful against relevant alternatives such as trend stationarity (linear or non-linear), fractionally integrated processes and even level stationarity. This is important since the manner in which classical statistical hypothesis testing is conducted results in the null hypothesis being accepted unless there is strong evidence against it. The null in case of the standard unit root tests is one of non-stationarity, i.e., the presence of a unit root. Although it is possible that the vast majority of aggregate economic time series do not have a unit root, it is probably preferable to formulate a statistical procedure that has stationarity as the null. This is especially relevant given the relatively small sample size available to us using annual data for India. Kwiatkowski, Phillips, Schmidt and Shin (1992), henceforth KPSS, is useful here. Using a parameterization which provides a reasonable representation of both stationary and nonstationary variables, KPSS have derived a test which has stationarity as the null hypothesis. The series under consideration X, is assumed to have the following decomposition:

$X_t = \xi t + \Gamma_t + \varepsilon_t$ where

$$\Gamma_t = \Gamma_{t-1} + u_t \quad ; \quad u_t \sim \text{i.i.d.}(0, \sigma_u^2) \tag{2.6}$$

X_t is modeled as the sum of a deterministic trend, a random walk and a stationary error, ε_t; the initial value of Γ_t is treated as fixed and serves the role of an intercept. The null hypothesis of trend stationarity can be stated in two equivalent ways:

(a) $\sigma_u{}^2 = 0$, or, (b) $\sigma_\Gamma{}^2 = 0$.

The disturbances ε_t being stationary, X_t is also trend-stationary under the null hypothesis and the test statistic is thus based on the estimated residuals. The distribution of the test statistic is derived under assumptions about the regression residuals, e_t, that allow for many weakly dependent and heterogeneously distributed time series, including a wide class of data generating mechanisms such as finite order ARMA models, under very general conditions (see Phillips and Perron (1988)). The statistic for testing trend stationarity is derived from the residuals of a regression of X_t on intercept and trend and takes the form:

$$\hat{\eta}_t = T^{-2} \sum_{t=1}^{T} \frac{S_t^2}{s^2(k)} \tag{2.7}$$

where

$$s^2(k) = T^{-1} \sum_{t=1}^{T} e_t^2 + 2T^{-1} \sum_{s=1}^{k} (1 - \frac{s}{(k+1)}) \sum_{t=s+k}^{T} e_t e_{t-s}$$

S is the partial sum process of the regression residuals, e_t, and $1-(s/(k+1))$ is an optional Bartlett spectral window to allow for residual correlations. To test for *level* stationarity instead of *trend* stationarity, ξ in (2.6) is set equal to zero and the residuals are from a regression of X on only the intercept. This statistic is denoted by $\hat{\eta}_\mu$.

Kwiatkowski, Phillips, Schmidt and Shin (1992) provide critical values for tests of both level and trend stationarity.

As tests both under the null hypothesis of a unit root and under the null hypothesis of (trend) stationarity are carried out, the following four outcomes are possible:

1. If the null of (trend) stationarity is accepted and the null of a unit root is rejected we can conclude that a series is (trend) stationary;
2. If the null of (trend) stationarity is rejected and that of a unit root cannot be rejected then the series is non-stationary;
3. If both the nulls are accepted then we cannot be sure whether or not there is stationarity;
4. If both nulls are rejected then we cannot reach any conclusion.

Obviously if either condition (3) or (4) prevails, we would be unable to conclusively interpret the stationarity properties of the time series under consideration, but that (1) and (2) are categorical.

The first three of the five test statistics given in Table 1 below are derived in Phillips and Perron (1988) for the null that $\beta = 1$ and $\alpha_1 = 0$.

Table 1: Unit root and stationarity tests for discounted debt and NTD/GDP[8]

	$Z(\beta)$	$Z(t_\beta)$	$Z(\phi_3)$	$\hat{\eta}_\mu$	$\hat{\eta}_t$
B_1	-6.796	-1.923	1.887	1.720	0.192
B_2	-6.064	-1.635	1.435	1.302	0.224
B_1^*	-8.536	-1.807	1.917	1.646	0.206
B_2^*	-9.750	-1.827	2.312	1.714	0.136
NTD/GDP	-7.228	-1.918	1.844	1.556	0.189
Critical values	**-18.508**	**-3.568**	**7.403**	**0.463**	**0.146**

Notes:
Tests cover the period 1970/71-2003/04. All tests have been run on RATS; the lag lengths for the KPSS tests have been chosen on the basis of the Schwartz method. [9]
B_1 is the debt measured in Rupees discounted at the Long-Term Government Bond Yield.
B_2 is the debt measured in Rupees discounted at the average Advance Rate.
B_1^* is the debt measured in US Dollars discounted at the Foreign All Creditors dollar interest rate.
B_2^* is the debt measured in US Dollars discounted at the Foreign Official Creditors dollar interest rate.
NTD/GDP is the ratio of net total debt to GDP.

$Z(\beta)$ makes use of the standardized and centered least squares estimates of β. $Z(t_\beta)$ makes use of the t-statistic on β, $t_\beta\ (\beta = 1)$, and $Z(\phi_3)$ is the regression F-test of Dickey and Fuller (1981). These three statistics possess for a very wide class of error processes the same limiting distributions as the statistics developed by Dickey and Fuller for the case of i.i.d. errors; therefore, the critical values of the three statistics are the same and can be found in Fuller (1976) and Dickey and Fuller (1981). Much, but not all, of the evidence for the null of unit root and the null of stationarity points to nonstationarity of

[8] Regarding the exercise of discounting net total debt, time series for the two Rupee interest rates are from the Handbook of Statistics on the Indian Economy (2003/04), Reserve Bank of India; and, time series for the two US Dollar interest rates are from Global Development Finance Report (various years), The World Bank. Net total debt is from Table A.1.

the debt series; the exception is the trend stationarity test, $\hat{\eta}_t$, for B_2^* (debt in foreign currency discounted at the Foreign Official Creditors dollar interest rate). The finding of stationarity for B_2^*, the total debt measured in US dollars discounted at the Foreign Official Creditors dollar interest rate but of non-stationarity for B_1^*, the same debt measured in US dollars but using the (higher) Foreign All Creditors dollar interest rate is probably on account of the behavior of B_1^* implying long-run 'super-solvency' rather than insolvency (Figure 2 below profiles the behavior of the discounted debt series).

On balance, our review (both informal and formal) indicates that the overall net public debt burden does not give cause for immediate alarm. There is also the possibility that the Indian sovereign has been helped to some extent by high GDP growth raising the denominator of the public debt (in Rupees) to (nominal) GDP ratio ($B_t / P_t Y_t$) rather than by fiscal consolidation and restraint lowering the numerator; the change in the ratio can be decomposed as follows:

$$\frac{B_t}{P_t Y_t} - \frac{B_{t-1}}{P_{t-1} Y_{t-1}} \equiv \frac{B_t - B_{t-1}}{P_t Y_t} - \frac{B_{t-1}}{P_{t-1} Y_t}\left[\frac{Y_t - Y_{t-1}}{Y_{t-1}}\right] - \frac{B_{t-1}}{P_t Y_t}\left[\frac{P_t - P_{t-1}}{P_{t-1}}\right] \qquad (2.8)$$

The decomposition of changes since 1990/91 in the net total debt-GDP ratio is given in Figure 3 below[10]. Negative growth surprises, whether for cyclical or structural reasons, could cause the recent increases in the debt to GDP ratio to become explosive. There can be no rest for the wicked.

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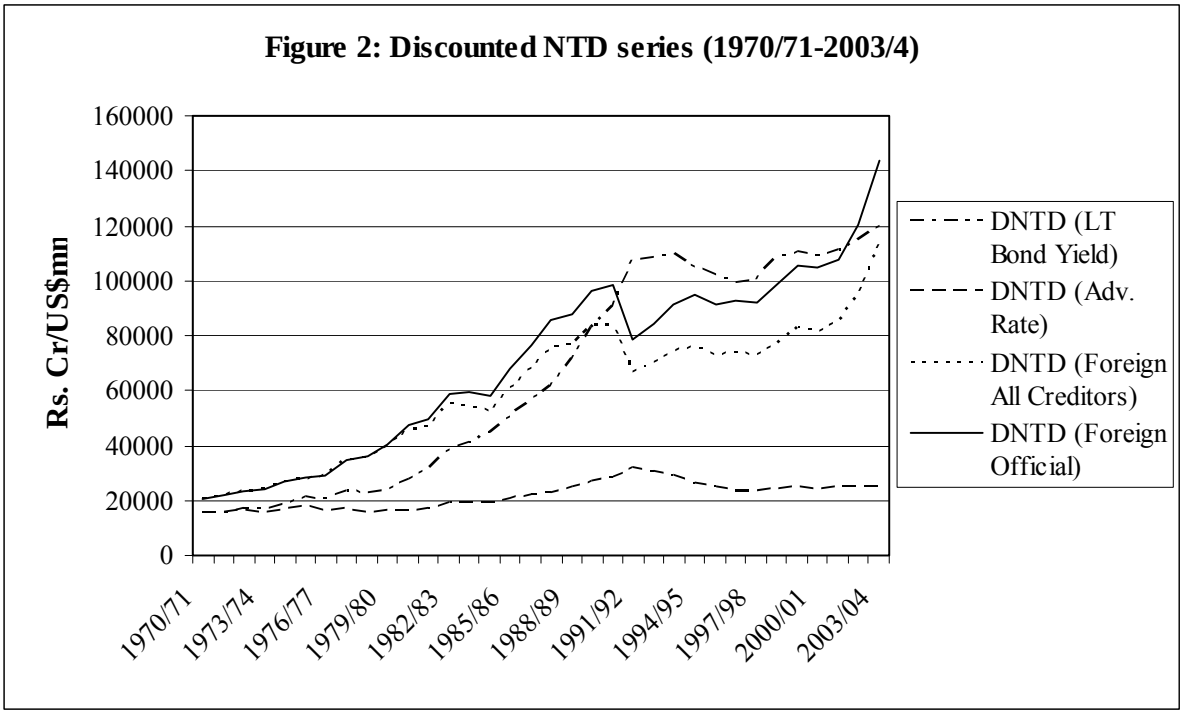
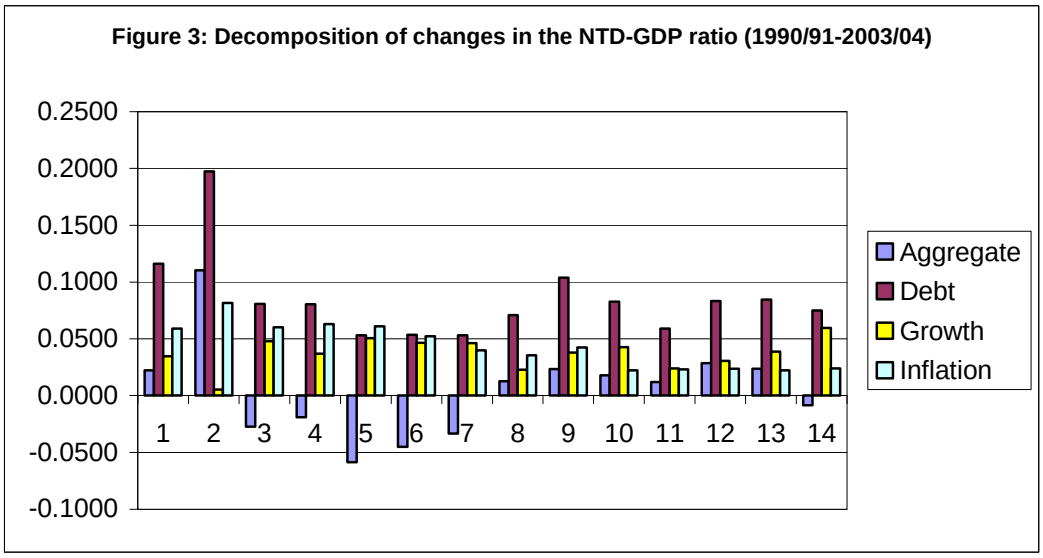
[9] We would like to thank Alok Kumar for his help in programming the tests.

[10] Inflation and positive real growth would help to reduce the (nominal) debt-to-(nominal) GDP ratio for a given nominal debt; conversely, deflation and negative growth shocks would increase the ratio. Obviously,



Source: see footnote 8.



Source: see footnote 10.

The reasons India has remained fundamentally solvent despite the sustained fiscal deficits of the past twenty years are fast nominal GDP growth and financial repression.

in practice, changes in all three variables contribute to the (aggregate) temporal variation in the NTD-GDP ratio (of Table A.1), hence the four "bars" for each year in Figure 3.

The rate of change of the debt to GDP ratio, *b,* can in continuous time be written in the following two equivalent ways:

$$\dot{b} = -s + (r - n)b \tag{2.9}$$

$$\dot{b} = -s + (r - n)b \tag{2.10}$$

where

$$d = -s + ib \tag{2.11}$$

and

$$i = r + \pi \tag{2.12}$$

Here *d* is the conventional public sector financial deficit as a fraction of GDP, *s* is the public sector primary (non-interest) surplus as a fraction of GDP, π is the rate of inflation, *n* is the growth rate of real GDP, *i* is the short nominal interest rate and *r* the short real interest rate. Equations (2.9) and (2.10) assume that Indian public debt is rupee-denominated.

Equation (2.9) shows that with a 12 percent annual growth rate of nominal GDP ($\pi + n = 0.12$) and an 80 percent of annual GDP stock of public debt ($b = 0.80$), India's debt to GDP ratio will be constant (fall) if the deficit is equal to (less than) 9.6 percent of GDP ($d = (<)0.096$). Financial repression means that both the nominal and the real interest rates on the public debt are kept artificially low. From equation (2.11), this means that, for any given primary surplus, *s,* the conventionally measured deficit *d* will be lower as the cost of debt servicing is lower than in would have been had market interest rates prevailed, and the debt dynamics will be more benign. The difference between the actual interest rate bill, ib and the interest bill at market interest rates, i^*b is a (quasi-fiscal) tax on the holders of the public debt, with $(i - i^*)b < 0$. In terms of

equation (2.10), financial repression reduces the intrinsic growth rate of the debt-GDP ratio, $r-n$. The debt-GDP ratio stabilizing value of the primary surplus falls by 0.8 percent of GDP for every 100bps increase in financial repression. Elimination of the market distortions that produce the gap between i and $i*$ will have adverse effects on the sustainability of the government's fiscal-financial program because they will raise the interest bill on the public debt, unless the resulting efficiency gains boost the growth rate of GDP by a compensating amount, something that cannot be taken for granted. It is important that the pursuit of macroeconomic virtue not be at the expense of fiscal-financial sustainability.

3. Financial intermediation, efficient capital accumulation and economic growth

We believe that the available evidence supports the view that borrowing to finance government deficits depresses private saving (see Federal Reserve Bank of Boston (2006), especially Cotis (2006) and Friedman (2006)). With international capital mobility far from perfect (see e.g. Shah and Patnaik (2004)), lower private saving is translated into lower private investment. However, the heavy hand of the state not only reduces the quantum of private investment, it also reduces the efficiency of both private and public investment.

Although it is not easy to reach a conclusion about the magnitude of the cost, in terms of GDP growth foregone, of inefficient financial intermediation, there is not much doubt that India is inefficient in transforming its domestic savings into productive capital investment.

Let $Y \geq 0$ denote real GDP, $K \geq 0$ the stock of physical capital, i real gross investment as a share of GDP, $\delta > 0$ the proportional rate of depreciation; $v \equiv \frac{\partial K}{\partial Y}$ is the

ICOR or incremental capital-output ratio. It follows that the proportional growth rate of real output, $n \equiv \frac{\dot{Y}}{Y}$ can be written as follows:

$$n = v^{-1}(i - \delta \frac{K}{Y}) \tag{3.1}$$

Assume the aggregate production function takes the Cobb-Douglas form $Y = \mathrm{A}K^{\alpha}$; $A, \alpha, > 0$. Here A stands for everything other than the physical capital stock that influences potential output (labor and land inputs, technical and managerial efficiency etc.). It follows that $v^{-1}\frac{K}{Y} = \alpha$, so equation (3.1) can be written as:

$$n = v^{-1}i - \delta\alpha \tag{3.2}$$

While α is always the elasticity of output with respect to the capital stock, it will equal the share of net capital income in GDP only in a competitive constant returns to scale economy.

Financial intermediation and financial development can, using the framework of equation (3.2), influence the growth of output either by changing the investment rate i or by changing the ICOR, v.

Let s be the national saving rate (private plus public) as a share of GDP and ca the current account surplus on the balance of payments as a share of GDP. Since $i \equiv s - ca$, the growth equation can be written as

$$n = v^{-1}(s - ca) - \delta\alpha \tag{3.3}$$

Thus, assuming that δ and α are independent of the stage of development of the financial sector, financial development raises the growth rate of potential output either by raising the national saving rate, or by permitting a larger volume of net capital inflows or by lowering the ICOR, that is, by increasing the marginal product of economy-wide capital in terms of aggregate GDP.

Net capital inflows is the sum of net FDI inflows, FDI, net portfolio inflows, ΔP, net external commercial borrowing, ECB, minus the net increase in official international reserves, ΔR, that is,[11]

$$-ca \equiv FDI + \Delta P + ECB - \Delta R \tag{3.4}$$

We can therefore rewrite equation (3.2) as

$$n = v^{-1}(s + FDI + \Delta P + ECB - \Delta R) - \delta\alpha \tag{3.5}$$

Can enhanced domestic financial intermediation raise the domestic saving rate, s? More effective intermediation reduces lending borrowing spreads, raising the rate of return for lenders while reducing the cost of borrowing. The evidence on the sensitivity of the aggregate saving rate to changes in the return to saving is mixed at best. The greater than unitary elasticity of intertemporal substitution assumed in much of the theoretical and numerical calibration literature cannot be easily extracted from the available empirical evidence. Opening up the capital account allows the domestic investment decision to be decoupled from the domestic saving decision. By running a current account deficit, a nation can invest more than it saves. A fair number of transition countries have taken advantage of this opportunity since the mid 1990s and continue to do so today. Russia, on the other hand, has run current account surpluses every year since the collapse of the Soviet Union. Ukraine, too, has frequently run sizeable current account surpluses.

Domestic financial development can be expected to reduce the nation's ICOR, or to raise the marginal efficiency of investment. It does so by ensuring that funds owned by domestic households or domestic enterprises with poor investment prospects are

[11] All flows are expressed as fractions of GDP.

transferred to domestic enterprises with better investment prospects. Opening up the capital account may also reduce the ICOR. Foreign Direct Investment (FDI) brings not only additional funds to domestic residents, it tends to come bundled with technology, know-how and managerial skills that are superior to what is available domestically.

The simple growth accounting framework of equation (3.2) hides a lot of important institutional, technological and behavioural features of the economy behind the four parameters v, s, δ and α. The great virtue of its simplicity is that it does not require the availability of data on the stock of capital or the stocks of other productive inputs that are required for a Solow-style growth accounting exercise.[12] And despite its simplicity, equation (3.2) permits some interesting observations.

First, for any reasonable values of $\delta\alpha$, India's ICOR these past two decades has been much lower than China's. With India's ICOR as one's benchmark, the obvious question about China's recent economic performance must be: "given its spectacular saving and investment rates, why has China's growth rate been so low these past two decades?" The only really surprising feature of the Chinese economic miracle is the sustained high levels of domestic saving and domestic capital formation. Chinese growth has been and continues to be, woefully inefficient, indeed more inefficient than India's.

Consider the following illustrative stylized facts for China: $n = 0.09$, $i = 0.45$, $\alpha = 0.25$ and $\delta = 0.08$. It follows that China's ICOR is high ($v \approx 4.1$), or equivalently, that on average China uses its investment very inefficiently. The 5 percent to 6 percent of GDP that come into China as FDI are probably used efficiently, but the bulk of

[12] While it would be better to be able to back out estimates of total factor productivity (TFP) growth, this requires the accurate measurement of all relevant factor inputs – labour, capital, land and imported primary and intermediate inputs. We lack the data to do this.

investment by state enterprises and of infrastructure investment is inefficient and unproductive.

For India, for the past 10 years, the following stylized facts apply: $n = 0.062$ and $i = 0.25$; with an appeal to the principle of insufficient reason we assume the same values for the capital elasticity of output and the depreciation rate as was assumed for China ($\alpha = 0.25$ and $\delta = 0.08$). If follows that India's ICOR, with $v \approx 3.0$, is significantly lower than China's.

Of course, China, a model of inefficient growth, does not set a tough standard to beat. Nevertheless, we believe that the inefficient intermediation of domestic savings into domestic capital formation is likely to be an important part of the explanation of the high ICOR of India and the extremely high ICOR of China.

4. Aspects of the financial sector

"… the public sector continues to dominate the financial system through public sector banks and financial institutions… [which has] important consequences for the allocative efficiency of the financial system and for corporate governance…"

-The Economic Survey, 2001/02[13]

"With the gradual disappearance of development banks…., a gap in credit availability is emerging. There is some concern that adequate long-term finance is not available to the medium and more particularly small industries."

-Prime Minister, June 2005[14]

The financial sector in India, comprising, *inter alia*, commercial banks, mutual funds and insurance, has changed during the decade of reform of the nineties, in some instances beyond recognition. However, although many changes have supposedly been effected, these have been relatively narrow in scope. The strategy (introduced as a

[13] Annual publication of the Economic Division, Ministry of Finance, Government of India.
[14] Address at the State Bank of India's bicentennial celebrations in Bombay (*The Hindu* newspaper of June 5, 2005).

cornerstone of safety) has been ratio-centric, underpinned around loosely interconnected strands of a Basle regulatory framework, encompassing capital adequacy and other "hard" parameters; these are only a subset of wide ranging institutional changes essential for "effective" reform and market discipline. The outcomes of these actions thus far have not been as far-reaching as required because, while the sector is probably more robust than at the beginning of reforms,[15] it is still characterised by substantial inefficiencies born of the blunted incentives (underlined by stylized facts and anecdotal evidence) associated with large public sector presence in the sector.

Involvement of the government in India's financial (banking and capital markets) sector remains high; for most of India's post-independence period intermediaries have been used by the government for directing and allocating financial resources to favoured recipients in both the public and private sectors. Until 1992, in practically all areas of non-agricultural economic activity, the state's involvement in the financial sector included the implicit assumption of counter-party risks. Currently, 70 percent of the financial sector's assets are held by government-owned or sponsored entities (Table 2 below is a summary for key segments). In fact this figure is higher (around 73 percent) once institutions like the Employees Provident Fund Organization[16] and the National Small Savings Scheme[17], both operating essentially from within the government with not even a semblance of arms-length relationship, are factored in (official calculations ignore them). Within the Indian financial sector, banks are the dominant intermediaries accounting for about 63 percent of assets. (The extent of government ownership of banks

[15] In September 2003, Standard and Poor's revised upwards their outlook on the Indian banking sector from negative to stable and Fitch Ratings assessed that economic reforms have considerably "strengthened" financial sector fundamentals.

in India is quite high compared to international levels.) Moreover, the Reserve Bank of India (RBI) has majority ownership in the State Bank of India (SBI), the largest Public Sector Bank (PSB).[18]

Table 2: Share of public sector institutions in specific segments of the financial sector (end-March 2004)

	Public sector (%)	Private (%)	Total (Rs. Billions)
Scheduled Commercial Banks (SCBs)	71.9	28.1	20,457
Mutual Funds (MFs)	24.8	75.2	1,396
Life Insurance	99.5	0.5	3,231

Sources: Report on Currency and Finance (2003/04), Reserve Bank of India; Insurance Regulatory and Development Authority Annual Report (2003/04).
Definition of shares:
SCBs: Total assets; Private banks include foreign banks.
MFs: Total assets of domestic schemes of MFs (public sector includes UTI).
Life insurance: Policy liabilities; public sector insurance includes LIC and SBI Life.

Experience suggests that the government as owner typically lacks both the incentive and the means to ensure an adequate return on its investment (La Porta, *et al.* (2002)); the pursuit of adequate rates of return is compromised, with political considerations often dominating hard-nosed risk-return trade-offs in determining resource allocation. Also, beside the standard problems that result from information asymmetry and "agency" issues, moral hazard might be *aggravated*[19] because both depositors and lenders count on explicit and implicit government guarantees[20] (see Bhattacharya and Patel (2002), Patel and Bhattacharya (2003)). Across the world, such pathological forms of government involvement in the financial sector, far from ensuring greater stability, has

[16] For contractual and pension savings.
[17] A series of post office schemes that finance government fiscal deficits.
[18] Parts of the rest of this section draw heavily on Bhattacharya and Patel (2005).
[19] The term "aggravated" is distinct from "enhanced". The former may be considered as a parametric shift of the underlying variables as opposed to a functional dependence in the case of the latter. More explicitly, increasing moral hazard enhances the incentives of banks to accumulate riskier portfolios, whereas an aggravated moral hazard results in a failure to initiate corrective steps to mitigate the enhanced hazard, for example, increasing requirements of capital, proper risk weighting, project monitoring, etc.
[20] In this regard, India's decision not to provide deposit insurance, *ex post*, to non-bank financial intermediaries was commendable.

led to greater fragility of the sector, with macroeconomic turbulence often not too far behind.

The government's involvement in India is more extensive (and deeper) than mere ownership numbers can express (Patel (2004)). The scope ranges across appointment of management, regulation, mobilization of resources, providing "comfort and support" to depositors, as well as influencing lending practices of all intermediaries and the investment incentives of private corporations. An array of instruments (formal and informal) are deployed, which comprise treating banks as quasi-fiscal instruments (including instances of *de facto* sovereign borrowing by these banks), the pre-emption of resources through statutory requirements, directed lending, bail-outs, encouraging imprudent practices like cross-holding of capital between intermediaries (so called "double-gearing") and unjustifiable levels of government-controlled and -guaranteed deposit insurance, etc. A multiplicity of regulators (with varying degrees of independence) covering the full financial spectrum is in place, but enforcement of directives has been patchy.[21]

The implications, in India, of a government-dominated financial system are well known. A proximate outcome is the unwarranted, intrusive and onerous oversight by a multitude of government inspection and (criminal) investigative agencies – Parliament, CAG, CBI, CVC, ED, etc. – in audits of decisions taken by managers at banks thereby undermining "normal" risk taking intrinsic to lending (see Banerjee *et al*. (2004)).[22] This is compounded by institutional rigidities that include weak foreclosure systems, deficient

[21] For instance, cooperative banks were lax in implementing RBI notifications on lending to brokers.
[22] Acts of commission can come under the scrutiny of enforcement agencies, but acts of omission are ignored (regardless of whether they result in profit or loss).

legal recourse for recovering bad debts, and ineffective exit procedures for firms. Furthermore, during difficult times, fiscal stress is sought to be relieved through regulatory forbearance; there are demands for (and occasionally actual instances of) lax enforcement (or dilution) of income recognition and asset classification norms (see Box 1 below). The conjunction of these characteristics contribute towards "incentivising" intermediaries to, *inter alia*, roll over existing sub-standard debt, usually by swapping sub-standard debt for equity (an example of the reportedly widespread practice of "ever-greening" assets), thereby building up the riskiness of their asset portfolio and further diluting equity-debt norms.

Box 1: Regulatory Forbearance

- Loopholes in the treatment of distressed assets persist. Projects deemed to be "under implementation" may not be classified as NPAs despite interest and principal repayments remaining overdue for more than 90 (even 180) days. An Independent Group constituted in 2002 to look into such projects, and establish deemed completion dates, has estimated that intermediaries have already disbursed about Rs. 360 bn to 26 such projects with a total cost of Rs. 560 bn (including a debt component of Rs. 390 bn).

- As domestic interest rates hardened in the second half of 2004, commercial banks' holding of government securities which should have been marked-to-market (downwards) were allowed (by the RBI) to be re-designated as held-to-maturity (rather than "available-for-sale") to insulate them from rate rises; this happened after banks booked huge gains in immediately preceding years during a period of falling interest rates, thereby imparting a (what may turn out to be temporary) sheen to their financial health.

Distortions in intermediaries' cost of borrowing and lending structures persist on account of continuing interest rate restrictions. Floors on banks' short-term deposits and high administered rates on bank deposit-like small savings instruments and provident funds contribute to artificially raising the cost of funds (see Appendix Table A.2). On the lending side, constraints apply to various PLR related guidelines for Small Scale

Industries (SSIs) and other priority sector lending. In recent years a declining interest rate environment combined with the structural factors discussed above has made treasury operations an important activity in improving banks' profitability.[23] The consequence of this environment is "lazy banking"[24]. It is felt that banks in India have curtailed their credit creation role and have, if anything, intensified their role of predominantly being passive conduits for resources rather than active risk management intermediaries that offer appropriate priced capital to firms (Box 2 below is an example of anecdotal evidence in this regard from the perspective of entrepreneurs).

Because of these many distortions, government borrowing imposes costs on the private sector over and above the financial crowding out of private agents that occurs even in well-functioning, undistorted financial markets. In addition to direct government borrowing, the government, for example, is also facilitating (or distorting) economy-wide lending and borrowing activity through credit enhancements and guarantees. Despite being cognizant of the inherent dangers regarding contingent liabilities coming home to roost, outstanding government guarantees continue to be in excess of 11 percent of GDP (2002/03); furthermore, the 2005/06 Union Budget has new proposals for adding to this through an off-budget financial vehicle.

[23] Declining interest rates increased trading profits (in securities) of PSBs in 2001/02 more than two and a half times that of the previous year and accounted for 28 percent of operating profits. While growth of trading profit has subsided in the following two years, its share in operating profit had increased to 39 percent by 2003/04 (Report on Trend and Progress of Banking in India, Reserve Bank of India (various years)).

[24] A term attributed to a Deputy Governor of the RBI.

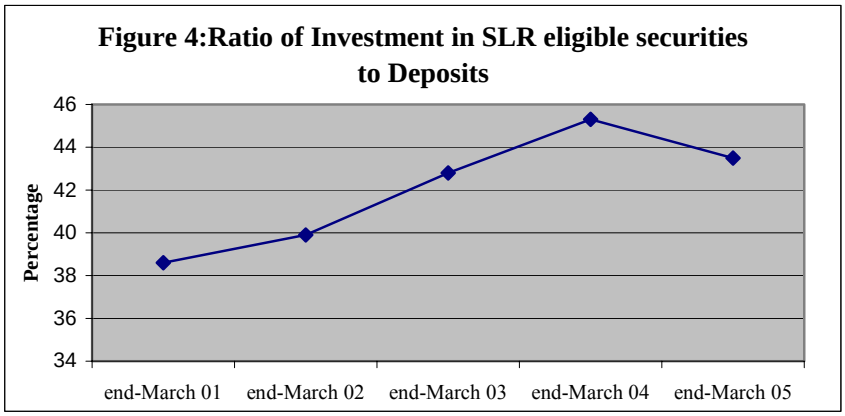
Box 2

India is likely to miss the opportunity offered by the end of the Multi Fibre Agreement. To achieve scale economies, consolidation and investment are essential. However, banks, the main source of institutional finance, are disinclined to support the necessary evolution in the sector because loans made to textile companies during past export booms turned sour; habit-based risk aversion has been substituted for prudent risk management. Should he wish to issue equity instead, a textile manufacturer looking for risk capital is highly likely to be frustrated and constrained; if he attempts to raise more than five times his pre-issue net worth he has to find Qualified Institutional Buyers (which include the same Bombay-headquartered commercial banks, life insurance companies, NBFCs, etc.) for 60 percent of the issue amount. For many entrepreneurs this is a hard sell.

Source*: Textiles will fail us – and why*, Ashok Desai, Business World, October 18, 2004.

Commercial banks holdings of government securities are much higher than the mandatory minimum levels. As Figure 4 and Table 3 below show, a large fraction of bank deposits (estimated at 43.2 percent as of March 2005) are being deployed for holding government (and other approved) securities, (mis-)perceived to be free of default risk (and indeed of market risk). Despite a strong economic rebound, the ratio (on a flow basis) is higher than the statutory requirements[25] (25 percent) even during 2003/04 and 2004/05[26] – peak of the current business cycle – when average annual GDP growth was in excess of 7 1/2 percent. The government, it would seem, has somehow (inadvertently, to give the benefit of doubt) managed to extend the makeover of weak banks into "narrow" banks mooted earlier to the banking sector as a whole; the banks have even exceeded the statutory 38.5 percent preemptions of the pre-reform days.

[25] Called Statutory Liquidity Ratio (SLR).
[26] 59 percent and 30 percent respectively.



Source: Weekly Statistical Bulletins, Reserve Bank of India.

Table 3: Portfolio allocation of lendable resources of Commercial Banks (as % of deposits)

	Balances with RBI	Non-food credit	Investments in government securities
1980s	12.6	60.3	24.2
1990s	11.6	52.6	30.6
2000-04	5.3	51.1	41.5
2005*	5.1	61.1	43.2

Source: Report on Currency and Finance (various years), Reserve Bank of India; and, Report on Trend and Progress of Banking in India (various years), Reserve Bank of India.

Notes: * Till March 2005; decadal figures are annual averages.

There are implications for the financial health of public sector banks also. It has to be recognized that the only sustainable method of ensuring capital adequacy in the long run is through improvement in earnings profile, not government capitalization or even mobilization of private capital from the market[27] (for given profits both these options only dilute the return on equity). Conceptually, a bank can sustain its capital adequacy at the existing level (or improve upon it) if it can generate retained earnings sufficient for its capital base to grow at the same rate as its risk-weighted asset base (or

[27] The additional "charges" on capital are for operational risk and for market risk (the latter captures mainly the interest rate risk on trading and available for sale bond portfolio based on the duration of bond holdings).

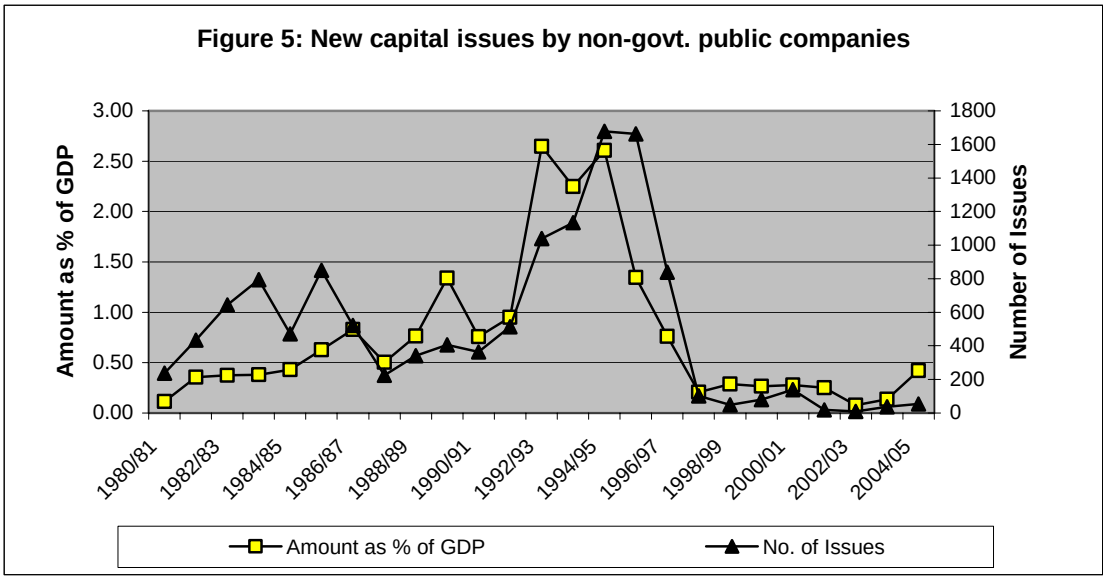
higher). While capital adequacy ratios of most PSBs are in excess of the minimum 9 percent, fresh capital will be necessary on account of new regulatory obligations and for funding credit expansion. It is estimated that Basle 2 will shave off about 2 percentage points from PSBs current capital adequacy ratios, i.e., going forward a fair amount of capital will be needed to support existing balance sheets. Given the government's explicit (and oft-repeated) policy of not reducing its shareholding below 50% and the fact that the fiscal situation is not conducive to the government subscribing fresh equity, the authorities may revert to the deceptive practice of forcing banks to subscribe to each other's Tier 2 capital, i.e., "double gearing" that took place in 1999/2000 (a la Japanese banks); or, non-voting preference shares may be issued.

On the capital markets side, the share of the public sector in resources raised has increased over the last decade; the average share over the last three years has been in excess of 60 percent (Table 4 below). Not surprisingly, on the face of it, there is little evidence that public issues of capital market instruments (equity and debt) have supported growth of *non-government* public limited companies; in fact, both the number of companies and the quantum raised in the market have declined since the mid-nineties (Figure 5 below).

Table 4: Resource mobilization through capital markets (Rs bn)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Public issues of debt & equity:	296.5	307.8	206.4	154.2	46.2	93.6	77.0	63.6	71.1	48.7	78.0	218.9
By Private sector	195.0	264.4	161.7	104.2	31.4	50.1	51.5	48.9	56.9	18.8	36.8	134.8
Public Sector (incl. PSBs & FIs)	101.5	43.4	44.7	50	14.8	43.5	25.5	14.7	14.2	29.9	41.2	84.1
Public issues of equity by private corporations and banks	99.6	174.1	118.8	61.0	11.6	25.6	27.5	26.1	8.6	4.6	24.7	114.5
Of which IPOs	60.1	137.5	85.8	41.7	3.8	3.4	16.6	23.7	8.5	2.1	14.7	83.9
Private placements	NA	NA	133.6	150.7	301.0	496.8	612.6	678.4	648.8	669.5	639.0	840.5
Of which Private sector	NA	NA	40.7	24.9	92.0	170.0	194.0	231.1	286.2	250.8	187.6	357.4
Public sector	NA	NA	92.9	125.7	209.0	326.8	418.6	447.3	362.6	418.7	451.5	483.1
Share of public sector in capital mkt. resources mobilized (%)	34.2	14.1	40.5	57.6	64.5	62.7	64.4	62.3	52.3	62.5	68.7	53.5

Sources: Handbook of Statistics on the Indian Economy (2004/05); Annual Report (various issues), Reserve Bank of India.
Notes: Public issues are through prospectus and rights; NA: not available.



Sources: Same as Table 4.

Financial crowding out of productive private expenditure (especially private investment) by government borrowing *is* a clear and present problem. The costs may be

higher than is *prima facie* evident because distorted incentives caused by the public ownership of a significant share of India's financial sector and unnecessary constraints on lending and borrowing rates amount to a (covert) form of "financial repression" of the private sector. This impairs the capacity of the financial sector to intermediate resources efficiently for private investment since, for practical purposes, even after a decade of reforms, many distortions persist that allow banks to simultaneously avoid taking "prudent risks" and sidestep desirable regulatory norms.

Furthermore, the moral hazard in the sector is palpable. There is a conviction among depositors and investors that there is no downside and that the system is insulated from market risk and default crises. A sense of confidence has permeated both depositors and intermediaries because of the government's deep involvement, thus making deposit runs somehow unlikely, even when insolvency is a possibility. "In effect, has the government "signed a social contract" with depositors that substitutes "support and comfort" to intermediaries in lieu of market discipline in attempting to mitigate systemic risk?" (Bhattacharya and Patel (2005)).

Although the focus of prudential regulations has been the banking sector, the proximate source of serious problems in the Indian financial sector have often been other intermediaries. Even if, *prima facie*, the situation presently is not precarious, the potential for turbulence is there. The stream of problems that have plagued Indian intermediaries in the recent past have originated in the group of investment and financial institutions. The most well known of these was Unit Trust of India (UTI), the largest mutual fund in India, and to a lesser extent, Industrial Finance Corporation of India

(IFCI) and Industrial Development Bank of India (IDBI). After dithering on UTI's troubles for some time, these have been contained.

Possible future problems may emanate from other government-owned intermediaries with very large asset portfolios. Total cumulative investments of the three Employees Provident Fund Organization (EPFO) schemes are Rs 1,700 bn (6.1% of GDP), with the Employees Provident Fund being the largest scheme. The bailout by the government has commenced with Rs.10 bn paid out of the exchequer in 2005 to meet members provident fund dues. The Employees Pension Scheme (EPS) – a defined contribution-defined benefit scheme – for which valuation had not been done until relatively recently, on the other hand, has an (estimated) actuarial deficit of Rs.193 bn. The asset portfolio of India's largest life insurer, Life Insurance Corporation (LIC), is even larger, 12.3% GDP in 2003/04; and the book value of its "socially oriented investments" – mainly comprising government securities holdings and social sector investments – amounted to Rs 2,561 bn, i.e., 75% of total investments of Rs 3,431 bn. The LIC's Annual Report contains little by way of information on its actuarial asset-liability balance. These are the Systemically Important Financial Institutions (SIFIs) that contribute to uneasiness.

The central contention of our paper is that the combination of fiscal excesses (a shift of the saving schedule to the left) with financial repression and distortions in the formal financial system and with poor investment choices by publicly owned financial institutions weakens the quantity and quality of private investment and thus retards growth. An alternative interpretation of the weakness of investment is a shift to the left in the private investment schedule, perhaps reflecting problems in the regulatory

environment, for example in infrastructure. While such regulatory problems are indeed present and persistent (and may account for the enduringly low investment rates), it is hard to argue that they have been getting worse since the early nineties, and that they can therefore account for a weakening of investment.

5. Extant fiscal rules

(a) Overview

In August 2003, 2 ½ years after being introduced in Parliament, Indian lawmakers voted in favor of the Fiscal Responsibility and Budget Management Act (FRBMA), which requires that the central government's fiscal deficit should not exceed 3 percent of GDP by 2007/08 and that the deficit on the revenue account would be eliminated by the same date. The stipulated annual reductions in the two measures are ½ percentage point of GDP (or more) for the revenue deficit and 0.3 percentage point of GDP (or more) for the fiscal deficit[28]. There are clauses with regard to guarantees (increase restricted to 0.5 percent of GDP per annum) and debt (additional liabilities capped at 9 percent of GDP for 2004/05, and for subsequent years an annual reduction in the limit of one percentage point of GDP). The Act also requires that the RBI will not subscribe to government paper after March 31 2006. However, borrowing from the RBI on account of "temporary excess of cash disbursement over cash receipts during any financial year", essentially Ways and Means Advances is permitted. The RBI may also buy and sell central government securities in the secondary market.

[28] The terminal target for the fiscal deficit is stipulated in the rules (framed in July 2004) to the 2003 Act. The target of balance on the revenue account is enshrined in the Act itself.

The FRBMA was amended in July 2004. The terminal date for achieving the numerical targets pertaining to fiscal indicators was extended by one year to 2008/09 (see panel (a) of Table 5 below). Furthermore, in his presentation of the 2005/06 Union budget in February, the Finance Minister remarked that he was "left with no option but to press the `pause' button vis-à-vis the FRBM Act". In early June, an update for the 2004/05 fiscal outturn indicates that both the fiscal and revenue deficits are within the targets established in July 2004 (panel (b) of Table 5). However, it is not yet clear whether medium-term targets for subsequent years will be revisited in light of latest numbers for 2004/05.

Regarding outstanding liabilities, we have two observations. First, government securities held by the RBI are included, which would have to be netted out if the central bank and the government are consolidated. Second, "reserve funds and deposits" are added to the stock of outstanding debt; these liabilities are on account of borrowing from statutory funds within the government and therefore are not strictly in the nature of IOUs to entities external to the government.

Table 5: Central Govt's. FRBMA-stipulated (rolling) fiscal indicators as % of GDP

(a) July 2004 (budget)

	03/04 (R.E.)	04/05 (B.E.)	Targets		08/09 (terminal year)
			05/06	06/07	
Revenue Deficit	3.6	2.5	1.8	1.1	Nil
Fiscal Deficit	4.8	4.4	4.0	3.6	3.0
Outstanding liabilities	67.3	68.5	68.2	67.8	-

(b) February 2005 (budget)

	03/04 (actual)	04/05 (R.E.) Feb. data	04/05 (latest est. June data)	05/06 (B.E.)	Targets		08/09 (terminal year)
					06/07	07/08	
Revenue Deficit	3.6	2.7	2.5	2.7	2.0	1.1	Nil
Fiscal Deficit	4.5	4.5	4.1	4.3	3.8	3.1	3.0
Outstanding liabilities		68.8	NA	68.6	68.2	67.3	-

B.E.: Budget Estimate; R.E.: Revised Estimate; Source: Medium Term Fiscal Policy Statement, 2004/05 and 2005/06, except for June data.

We will now briefly review the fiscal responsibility legislations (FRLs) of the first half a dozen states – Kerala, Maharashtra, Karnataka (the forerunner), Tamil Nadu, Uttar Pradesh and Punjab – that have passed them. All of them impose quantitative and time-bound (4-6 year) targets on revenue and fiscal deficits, viz., elimination of the former and reduction of the latter to 3 percentage points of gross state domestic product (GSDP).[29] However, there is one notable exception in this regard; Kerala has a ceiling of 2 percent of GSDP for the fiscal deficit. In addition, a couple of states have deployed atypical measures. The Maharashtra legislation, enacted in April 2005, stipulates that "The State Government shall by rules specify the targets for reduction of fiscal deficit", with the fiscal deficit target "interpreted" in a somewhat novel manner as a "ratio of expenditure on interest to revenue receipts". Regarding its revenue deficit, Tamil Nadu enjoins the government to reduce the ratio of revenue deficit to revenue receipts every year by 3-5

percent ("depending on the economic situation in that year") to a level below 5 percent by end-March 2008 (see Appendix Table A.3 for state-wise summary of FRLs and performance with regard to revenue and fiscal deficits). Two states have legislated ceilings for official debt. Karnataka and Punjab, respectively, have capped their outstanding total liabilities at 25 percent and 40 percent of their respective GSDP. On the other hand, the Tamil Nadu Act has placed a limit on total outstanding guarantees of one hundred percent of total revenue receipts in the preceding year or at 10 percent of GSDP, whichever is lower. It is noteworthy that Karnataka, according to revised estimates for 2004/05, has eliminated its revenue deficit and achieved the fiscal deficit target one year ahead of schedule.

There are a couple of laudable initiatives pertaining to fiscal planning and transparency that are embedded in the legislations. The Acts require some form of a medium term fiscal policy statement (encompassing three-year rolling targets) that, *inter alia*, lays out the time path for attaining the fiscal goals, and they also call for those changes in accounting standards, government policies and practices that are likely to affect the calculation of the fiscal indicators to be disclosed in the respective state assembly. Although the Acts oblige the respective government to take steps for enhancing revenue and/or reducing expenditure ("appropriate measures") in the event of either a shortfall in revenue or excess of expenditure over pre-specified levels for a given year, leeway is allowed for targets going awry on account of natural calamities and/or national security.

[29] See Rajaraman and Majumdar (2005) for implications for states of FRLs in the context of recommendations of the Twelfth Finance Commission.

(b) Basic arithmetic of the FRBMA

What difference will the fiscal rules embodied in the FRBMA make to the short-term and long-run behaviour of the government debt burden? We shall first consider the implications of the rules on the assumption that they are indeed implemented and enforced. Then we shall reflect on the likelihood of them being enforced. We define the following further notation: d is the conventional central government financial deficit as a fraction of GDP, i^* is the average effective nominal interest rate on foreign-currency-denominated central government debt, g^c central government consumption spending as a share of GDP (excluding depreciation of the central government capital stock), g^I gross central government capital formation as a share of GDP, δ the proportional depreciation rate of the central government capital stock, k the central government capital stock as a share of GDP, θ the gross financial rate of return (which can of course be negative) on central government capital, α the share of foreign currency debt in total central government debt, ε the proportional rate of nominal depreciation of the rupee, τ central government taxes net of transfers as a share of GDP. Note that $d \equiv g^C + g^I + ib + (i^* - i)\alpha b - \theta k - \tau$. It follows that the evolution over time of the central government net debt to GDP ratio evolves as follows:

$$\dot{b} \equiv d + \varepsilon\alpha b - (n + \pi)b \tag{5.1}$$

or, equivalently,

$$\dot{b} \equiv (r - n)b + g^C + g^I - \theta k - \tau + (i^* + \varepsilon - i)\alpha b \tag{5.2}$$

Two key features of the FRBMA are the restriction that (by 2008/09) the overall central government financial deficit be not more than three percent of GDP (a number

plucked out of the thin or at least rarefied air of the Maastricht Criteria for EMU membership and the EU's Stability and Growth Pact):

$$d \leq 0.03 \tag{5.3}$$

and the 'golden rule' restriction that the revenue budget be in balance or surplus. It is unclear whether this means that central government borrowing should not exceed gross central government investment (including depreciation) or net central government investment (net of depreciation). In the first case the (gross) golden rule can be written as

$$d \leq g^I \tag{5.4}$$

In the second case, the (net) golden rule can be written as

$$d \leq g^I - \delta k \tag{5.5}$$

If the deficit ceiling (5.3) is rigorously enforced, there will never be a solvency or fiscal-financial sustainability problem for the central government. Of course, the rest of the general government sector (states and municipalities) may undo what ever fiscal restraint the central government exercises. Ignoring foreign currency-denominated debt for simplicity, the consistent application of (5.3) implies that

$$\begin{aligned} b(t) &\equiv b(0)e^{-\int_0^t [n(u)+\pi(u)]ds} + \int_0^t d(s)e^{-\int_s^t [n(u)+\pi(u)]du} ds \\ &\leq b(0)e^{-\int_0^t [n(u)+\pi(u)]ds} + 0.03\int_0^t e^{-\int_s^t [n(u)+\pi(u)]du} ds \end{aligned} \tag{5.6}$$

As long as the long-run average growth rate of nominal GDP, $\bar{n} + \bar{\pi}$ is positive, $\lim_{t\to\infty} b(0)e^{-\int_0^t [n(u)+\pi(u)]ds} = 0$ and the long-run debt to GDP ratio will satisfy

$$\lim_{t\to\infty} b(t) \leq \frac{0.03}{\bar{n} + \bar{\pi}} \tag{5.7}$$

Were India to maintain its real GDP growth rate of, say, 6.2 percent per annum ($\bar{n} = 0.062$) and an average inflation rate of, say, 4 percent per annum ($\bar{\pi} = 0.04$), the central government's long-run debt to annual GDP ratio would be less than 30 percent – a comfortable level.

The requirement that the revenue budget be in balance or surplus is very likely to be the binding constraint on the central government, with the 3 percent ceiling on its overall financial deficit a non-binding constraint. Even if the gross investment (equation (5.4)) version of the golden rule is the operative one, India's central government's gross capital formation programme amounted to no more than 1.5 percent of GDP in 2003/4.[30] Net central government capital formation is even less than that and may well be negative in years that economic depreciation is high. We suspect that a lot of current expenditure will be reclassified as capital expenditure if the golden rule were ever to be enforced seriously.

Any limit on the magnitude of the permissible deficit, regardless of whether it applies to the overall deficit or just to the revenue (current) deficit, will restrict the government's ability to engage in countercyclical deficit financing during economic downturns, unless during normal and prosperous times the government generates sufficiently large surpluses to avoid hitting the deficit ceiling during bad times.

Is there any feature of the FRBMA that encourages or cajoles governments to act countercyclically during periods of above-normal economic activity or (as in India during these past 3 to 4 years), exceptionally low interest rates? The EU's Stability and Growth Pact (SGP) failed precisely because of the absence of carrots to run larger surpluses (or

[30] This excludes central government loans to states. Net lending by the central government to the states is about 0.5 percent of GDP.

smaller deficits) during upswings and the failure to enforce the penalties (including fines) that were, in principle, part of the collective arsenal of SGP enforcement. The failure to exercise fiscal restraint during the upswing by France, Germany and Italy was not penalized by the EU's Council of Ministers because the political cost-benefit analysis of naming, shaming and fining a leading member of the European Union Club militated against collective enforcement of these penalties. How much harder will it be for the Indian government to impose counter-cyclical discipline during good times *on itself*? What are the arrangements, institutions, laws, rules, regulations or conventions, that make fiscal restraint during periods of high conjuncture incentive-compatible for political decision makers with short electoral horizons and severely restricted capacity for credible commitment? Political opportunism calls for the postponement of painful expenditure cuts or tax increases – there is always the chance that the political cost of painful fiscal retrenchment will be born by the opposition, when its turn in office comes around. A tentative picture that we can draw, albeit from a short history, is that non-compliance by governments is unlikely to be politically costly; there has been little attention by the electorate, the media, or, even opposition parties to the subject matter! In fact it is widely felt that supplementary bills that boost expenditure from budgeted levels are unlikely to be rejected. Against this background, obtaining parliamentary waivers for missed targets should not be too difficult.

Fiscal virtue cannot be legislated. It must be implemented and enforced – it must be incentive-compatible even for myopic and opportunistic governments. Unless India discovers a way of tying its fiscal Ulysses to the mast, the siren song of fiscal

retrenchment tomorrow but fiscal expansion today will continue to lead the policy makers astray.

As regards increasing the efficiency and scope of financial intermediation, the problem is not just public ownership. The poor quality of financial intermediation by the formal financial system is also due to the absence of effective competitive threats to inefficient incumbents. The sure, quick and effective way to address this is to open up India's financial sector fully and without discriminatory constraints to foreign competition.

Further liberalization of the capital account could be a part of this additional opening up of India's financial sector to foreign competition, but even without this, much could be achieved by further easing the entry of foreign enterprises in the Indian markets for finance and financial services, as long as the service account of the balance of payments, including the remittance of profits abroad, is unconstrained. Foreign know-how, management and control, through the cross-border movement of enterprises and other corporate entities intensify competition and thereby boost efficiency even in markets for non-traded goods and services (such as retailing and the management of public utilities). *A fortiori* foreign competition will boost productivity in sectors and industries where both local provision by foreign-owned firms and targeted exports by firms located abroad make life uncomfortable for established domestic suppliers. For the supply-side failures that limit and distort domestic intermediation, globalization is an important part of the answer.

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Table A.1: Indian public debt as % of GDP

	CDD	SDD	PEDD	STPEDD*	NTDD	TFD	GTD	R	NTFD	NTD
1970/71	17.4	4.3	0.3	NA	22.0	13.7	35.7	1.6	12.1	34.1
1971/72	17.0	4.4	0.3	NA	21.6	13.8	35.5	1.8	12.0	33.6
1972/73	17.4	4.2	0.3	NA	22.0	14.5	36.5	1.7	12.8	34.8
1973/74	14.7	3.9	0.2	NA	18.7	13.1	31.9	1.6	11.5	30.3
1974/75	13.9	3.6	0.5	NA	18.1	12.6	30.7	1.4	11.2	29.3
1975/76	16.4	4.0	0.7	NA	21.1	14.6	35.7	2.3	12.3	33.5
1976/77	16.7	4.2	1.0	NA	21.9	14.0	36.0	3.7	10.3	32.2
1977/78	20.9	4.1	0.9	NA	25.9	12.7	38.6	4.9	7.8	33.7
1978/79	19.6	4.4	0.2	NA	25.2	12.0	37.2	5.4	6.6	31.8
1979/80	20.8	4.3	1.6	NA	26.6	12.0	38.6	4.9	7.0	33.6
1980/81	20.5	4.0	1.6	NA	26.1	11.6	37.7	3.8	7.8	33.9
1981/82	20.0	4.3	1.5	NA	25.8	12.1	37.9	2.3	9.7	35.5
1982/83	23.9	4.4	1.9	NA	30.2	14.0	44.2	2.5	11.5	41.7
1983/84	22.0	4.6	2.1	NA	28.7	15.0	43.7	2.7	12.4	41.0
1984/85	23.0	4.6	2.2	NA	29.8	16.5	46.2	2.9	13.6	43.4
1985/86	25.1	5.1	2.3	NA	32.6	17.4	50.0	2.9	14.5	47.1
1986/87	27.7	5.1	2.6	NA	35.4	19.3	54.7	2.7	16.6	52.0
1987/88	28.6	5.5	3.1	NA	37.3	19.8	57.0	2.3	17.5	54.7
1988/89	29.6	5.5	3.9	NA	39.0	21.9	60.9	1.6	20.2	59.2
1989/90	30.5	5.8	4.4	NA	40.8	26.3	67.0	1.4	24.9	65.7
1990/91	30.7	6.0	4.8	1.6	41.4	28.3	69.7	1.8	26.5	67.9
1991/92	30.9	6.3	5.2	0.9	42.4	40.0	82.4	3.5	36.6	79.0
1992/93	32.0	6.4	4.8	2.3	43.2	37.1	80.3	4.0	33.1	76.3
1993/94	36.0	6.5	5.2	1.9	47.7	33.8	81.4	7.0	26.7	74.4
1994/95	35.5	6.4	4.5	1.6	46.5	29.8	76.3	7.8	22.0	68.5
1995/96	33.9	6.6	4.2	1.6	44.7	25.3	70.0	6.1	19.2	63.9
1996/97	33.8	6.7	4.6	1.9	45.1	22.4	67.5	6.9	15.6	60.7
1997/98	35.9	7.0	4.3	1.9	47.2	21.9	69.2	7.2	14.8	62.0
1998/99	37.2	7.5	5.8	2.5	50.5	21.7	72.2	7.9	13.8	64.3
1999/00	40.0	8.7	5.5	2.5	54.3	20.3	74.6	8.5	11.8	66.1
2000/01	43.0	9.9	4.4	2.8	57.3	19.2	76.5	9.2	10.0	67.3
2001/02	47.6	10.8	4.9	3.0	63.3	18.4	81.7	11.4	7.0	70.3
2002/03	53.0	12.1	4.7	2.6	69.8	17.8	87.6	14.8	3.0	72.7
2003/04	56.6	13.8	4.7	2.6	75.1	15.2	90.4	18.6	-3.4	71.8
2004/05	57.4	14.1	NA	NA	NA	NA	NA	20.1	NA	NA

Definitions

NTDD = CDD + SDD + PEDD (excluding Rupee short term Public Enterprise Domestic Debt (*STPEDD) reported above, for which data is unavailable prior to 1990/91.)

GTD = NTDD + TFD

NTFD = TFD – R

NTD = NTDD + NTFD

NTDD: Net total domestic debt.

TFD: Foreign currency public and publicly guaranteed long-term debt plus use of IMF credit plus imputed short-term public debt.

GTD: Gross total debt.

NTFD: Net total foreign debt.

(Table A.1 cont'd…)

Table A.1 cont'd…

CDD: Internal debt of the central government less net credit outstanding from the Reserve Bank of India; plus liabilities on account of small savings fund and other accounts.

SDD: Rupee denominated market and other loans of state governments (excluding loans and advances from the central government) less net credit outstanding from the Reserve Bank of India; plus provident funds etc.

PEDD: Long-term Rupee denominated debt of public enterprises not held by government.

R: Official foreign exchange reserves including gold and SDRs.

Sources: Handbook of Statistics on the Indian Economy (2003/04 and 2004/05), Reserve Bank of India; Report on Currency and Finance, Volume II (various years), Reserve Bank of India; Budget Documents, Statement of Liabilities of the Central Government, Receipts Budget (2002/03 and 2005/06), Government of India; Public Enterprises Survey (volumes for 1970/71-2003/04), Bureau of Public Enterprises, Government of India; Weekly Statistical Bulletins of the Reserve Bank of India; Global Development Finance Report (various years), The World Bank. (GDP, used in the denominator for computing the ratios, is at current market prices.)

Table A.2: Administered interest rates on savings instruments

	Name of the scheme	Limits of investment	Maturity period (years)			Rate of interest (per cent per annum)							Deductions under Sec. 80 C of Income Tax Act	Amount outstanding at end-March, 2005 (Rs billions)
			April-92	Since Sep. 2, 1993	Since Jan.1, 1999	Since April 1992	Since Sept. 2, 1993	Since Jan.1, 1999	Since Jan.15, 2000	Since Mar.1, 2001	Since Mar.1, 2002	Since Mar.1, 2003		
1	Employees Provident Fund	12% of base salary by both employee & employer				12.00	12.00	12.00	11.00 (since July)	9.50	9.50	9.50		1134 (31/3/04)
2	Comm. Bank Savings Acct. (akin to checking acct.)	No limit				5.00 prior to Nov 94	4.50 since Nov94	4.50	4.00 April 2000	4.00	4.00	3.50 (Floor Rate)	No	4431
3	Post Office Savings Bank Accounts	Minimum Rs.20 and maximum Rs.1,00,000 for an individual account (Rs.2 lakh jointly; No limit on group, institutional or official capacity accounts).				5.50	5.50	4.50	4.50	3.50	3.50	3.50	No	149
4	Public Provident Fund 1968	Minimum Rs.100 and maximum Rs.60,000 in a fiscal year.	15	15	15	12.00	12.00	12.00	11.00	9.50	9.00	8.00	Yes	143*
5	Post Office (PO) Time Deposit Account	Minimum Rs.50 and no maximum limit.	1,2,3 and 5	1,2,3 and 5	1,2,3 and 5	12.00 to 13.50 +	10.50 to 12.50 ++	9.00 to 11.50 +++	8.00 to 10.50 **	7.50 to 9.00 $	7.25 to 8.50 $$	6.25 to 7.50 $$$	No	320
6	PO Rec. Dep. Account	Minimum Rs.10 per month or any amount in multiples of Rs.5 and no maximum limit.	5	5	5	13.50	12.50	11.50	10.50	9.00	8.50	7.50	No	411
7	National Savings Scheme 1992	Minimum Rs.100 and no maximum limit.	4	4	4	11.00	11.00	11.00	10.50	9.00	8.50	-	Yes	7
8	PO Monthly Income Scheme	Minimum Rs.1,000 and maximum Rs.3 lakh in single account and Rs.6 lakh in joint account.	6	6	6	14.00	13.00	12.00	11.00	9.50	9.00	8.00	No	1510
9	NSC VIII Issue	Minimum Rs.100 and no maximum limit.	6	6	6	12.00	12.00	11.50	11.00	9.50	9.00	8.00	Yes	551
10	Indira Vikas Patra	No limit.	5	5 1/2	6	14.87@	13.43@	12.25@	-	-	-	-	No	8
11	Kisan Vikas Patra	No limit.	5	5 1/2	6 @@	14.87 @	13.43 @	12.25 @	11.25 @	10.03 @	9.57 @	8.41 @	No	1364
12	Dep. Scheme for retiring govt./PSU employees	Minimum Rs.1,000 and maximum not exceeding the total retirement benefits.	3	3	3	9.00	10.00	9.00	9.00	8.50	8.00	7.00	No	12
13	Senior Citizens Saving Scheme	Minimum Rs.1,000 and maximum Rs.15 lakhs	-	-	5^^	-	-	-	-	-	-	9.00^^	No	54

* Relate to post office transactions only.

\+ 1 Year -12%, 2 Years -12.5%, 3 Years -13% and 5 Years -13.5%.

++ 1 Year -10.5%, 2 Years -11%, 3 Years -12% and 5 Years -12.5%.

+++ 1 Year - 9%, 2 Years -10%, 3 Years -11% and 5 Years -11.5%.

** 1 Year - 8%, 2 Years - 9%, 3 Years - 10% and 5 Years – 10.5%.

$ 1 Year - 7.5%, 2 Years - 8%, 3 Years - 9% and 5 Years - 9%.

$$ 1 Year - 7.25%, 2 Years - 7.5%, 3 Years - 8.25% and 5 Years - 8.5%.

$$$ 1 Year - 6.25%, 2 Years - 6.5%, 3 Years - 7.25% and 5 Years - 7.5%.

@ Compounded interest rate.

^^ Introduced in August 2004.

@@ Maturity period has been raised to 6 1/2 years with effect from January 15, 2000, 7 years 3 months from March 1, 2001, 7 years 8 months from March 1, 2002 and 8 years 7 months from March 1, 2003.

Source : 1. National Savings Organization. 2. Receipts Budget, Government of India. 3. Accountant General, Posts & Telegraph. 4. Government of India Press releases. 5. Report of the Advisory Committeee to Advice on the Administered Interest Rates. 6. Ministry of Labor. 7. Handbook of Statistics on the Indian Economy (2004/05), Reserve Bank of India

Table A.3: State-wise Fiscal Responsibility Legislation Targets and Performance

State	Karnataka		Kerala		Tamil Nadu		Punjab		Uttar Pradesh		Maharashtra	
Effective from	2002/03		2003/04		2002/03		2003/04		2004/05		2005/06	
Fiscal Deficit (F.D.) as % of GSDP	Not more than 3% by end-March 2006		2% by end-March 2007.		Not more than 3% by end-March 2008.		Contain rate of growth of FD to 2% per annum in nominal terms, until brought down to 3% of GSDP.		Not more than 3% by end-March 2009.		Rules to be specified for reduction of fiscal deficit, with the target "interpreted in the form of a ratio of expenditure on interest to revenue receipts."	
Revenue Deficit (R.D.)	Nil by end-March 2006.		Nil by end-March 2007.		Ratio of RD to revenue receipts (RR) not to exceed 5% by end-March 2008.		Reduce RD as per cent of RR by at least 5 percentage points each year until revenue balance is achieved.		Nil by end-March 2009.		Revenue surplus from 2009/10 onwards.	
Debt as % of GSDP	Total liabilities not to exceed 25% of GSDP by end-March 2015.		-		-		Not to exceed 40% by end-March 2007.		Not to exceed 25% by end-March 2018.		-	
as % of GSDP	R.D.	F.D.	R.D.	F.D.	R.D.	F.D.	R.D.	F.D.	R.D.	F.D.	R.D.	F.D.
2001/02	3.1	5.6	3.6	4.5	1.9	3.3	5.4	7.1	3.3	5.2	3.1	4.1
2002/03	2.3	4.6	5.1	6.2	3.1	4.4	5.2	6.1	2.5	4.7	3.2	4.9
2003/04	0.6	4.6	4.1	6.3	2.2	4.5	4.5	7.4	NA	NA	2.7	5.9
2004/05	+0.4	2.8	4.6	5.4	0.9	3.0	NA	NA	2.4	4.4	2.5	3.8

Sources for data: State Finances – A Study of Budgets (2004/05), Reserve Bank of India, December 2004; and summary of state budget documents for 2004/05 revised estimates. NA: Not available.