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Excessive Budget Deficits, a Government-Abused Financial System, and Fiscal Rules

Capital formation is a key driver of the growth of potential output. With India's continuing widespread capital controls and persistently small inward foreign direct investment, the volume of capital formation in the country is constrained by domestic saving. Depressed by the continuing large public sector deficits, the national saving rate in India (the sum of the saving rates of households, enterprises and the state) is much below China's saving rate of nearly 40 percent of gross domestic product (GDP). Even the extant Indian saving rate should be able to support a higher growth rate than has been achieved thus far. An important reason it does not is that the intermediation of savings, by the formal financial system, into domestic capital formation is inefficient.

Since its external crisis of the early 1990s, India has witnessed a turn-around on most indicators of macroeconomic performance. The process of economic reform, including widespread general liberalization and reduction in protectionism, launched in 1991 and steadily pursued thereafter, has yielded positive results by eliminating some longstanding structural rigidities and has thus created potential for higher growth. During that period India 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

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capital account transactions, although significant constraints remain in place on cross-border intertemporal trade and cross-border risk trading.

Average annual real growth in GDP since the 1991 crisis has been only modestly higher than in the previous decade (6.2 percent over 1992–93—2004–05 compared with 5.7 percent over 1981–82—1990–91). Yet 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 currently.

After improving moderately during the five years immediately following the crisis, fiscal fundamentals have deteriorated again, as exemplified by rising ratios of public sector debt and financial deficit to GDP. This buildup of aggregate public debt has been accompanied by a sharp reduction in external indebtedness by the public sector. Although the private sector's foreign currency indebtedness 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 considered much of a possibility 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 in check 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. 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 peaking at 11.2 percent of GDP in 1986–87, public sector investment (gross domestic capital formation) declined, to 9.5 percent in 1989–90, to 7.7 percent in 1995–96, and to about 6 percent currently. 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 public sector enterprises (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 telecommunications and ports). That notwithstanding,

it is no exaggeration to say that public investment in infrastructure, along with associated capital maintenance expenditures, has been cut to the bone, and the state of services (drinking water and sewerage, roads, power supplies, and the like) are testimony to the lopsided fiscal “adjustment.”¹

This infrastructure-unfriendly fiscal “correction” cannot be “seen” in overall fiscal deficit numbers; to a large extent, committed and “sacred cow” expenditures, comprising interest payments, defense spending, and salaries and 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 was about the same in 2003–04 as it was in the crisis year of 1990–91; furthermore, the revenue (current) deficit is substantially higher than it was.

Across the world, from the European Union’s (ill-fated) Stability and Growth Pact to the United Kingdom’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 (RBI) and the Central Exchequer to phase out by 1997–98 the 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 left these decisions to the RBI’s discretion. The Indian Parliament, in August 2003, passed the Fiscal Responsibility and Budget Management Act (FRBMA), which requires that the fiscal deficit of the central government 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 0.5 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 was 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 barred the RBI from subscribing to government paper after March 31, 2006. Nevertheless, borrowing from the RBI to cover “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 to

1. One must, of course, consider the growth aspect of infrastructure provision. These “network industries” are considered to be “accelerators” for total factor productivity.

devise a strategy for implementing the FRBMA; the task force analysis and recommendations were made public in July 2004. The critical recommendations were on the revenue side of the deficit equation and included 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 to do so (accounting for 45 percent of GDP) include Karnataka (which acted as early as August 2002), Kerala, Punjab, Tamil Nadu, Uttar Pradesh, and Maharashtra. The common features include imposition of quantitative and time-bound targets for fiscal consolidation, multiyear fiscal plans, and regular reporting to respective legislatures of progress toward annual targets.

India's overflowing foreign exchange coffers have created a set of political economy consequences different from those that were faced during most of the postindependence period. Specifically, the foreign exchange reserves have eased pressures to rectify India's fiscal mismanagement. In the past, when external reserves were much more modest and external debt much higher, India's policymakers were quite aware that large fiscal deficits sustained over a long time period would either 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, policymakers were forced 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.²

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.³

2. Kapur and Patel (2003). A lively debate on the analytical specifications of the Indian macroeconomy in the context of liberalized trade and capital flows is under way, with notable contributions by Lal, Bery, and Pant (2003), Sen (2004), and Singh and Srinivasan (2004).

3. The country does have a long history of forcing domestic banks to absorb public debt at rates well below commercial levels.

- The likelihood of an external payments crisis is universally considered to be remote. The current configuration of the relevant fundamentals (large international reserves, low external debt, and remaining capital controls) supports this confidence.
- Nevertheless, complacency is not warranted. There is underlying disquiet: a public sector financial deficit that is very high, and a (gross) public-debt-to-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).
- 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 lead either to growing default risk or to unpleasant, Sargent-Wallace-type 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 and utility) services has increased in the aftermath of the May 2004 general election. An employment guarantee scheme is being implemented; its (estimated) cost to the exchequer when fully executed could be as high as 1 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 the next section we update our earlier work on the fiscal-financial sustainability of the Indian government by reviewing 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 programs, most of which may well produce undesirable outcomes. An extreme example is Ceausescu'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 quantity 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 effect 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. After reviewing these two areas, we make a brief comparison, deploying a growth accounting framework, of India's investment efficiency (as it is affected by financial sector characteristics, among other things) with that of China. The next section looks at key aspects of the financial sector to convey that the sector 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. Next we evaluate the fiscal rules that India has embraced, perhaps in recognition of the serious systemic inefficiency that the fiscal stance has engendered. 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 on the scope for the FRBMA to create a mechanism that enhances macroeconomic volatility and promotes a procyclical fiscal policy—a fate that befell the EU's Stability and Growth Pact. We conclude that without a vocal and influential domestic constituency in favor 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 the twelve countries that have achieved membership in the European Monetary Union or for those countries, like the United Kingdom, that are not interested in achieving it.

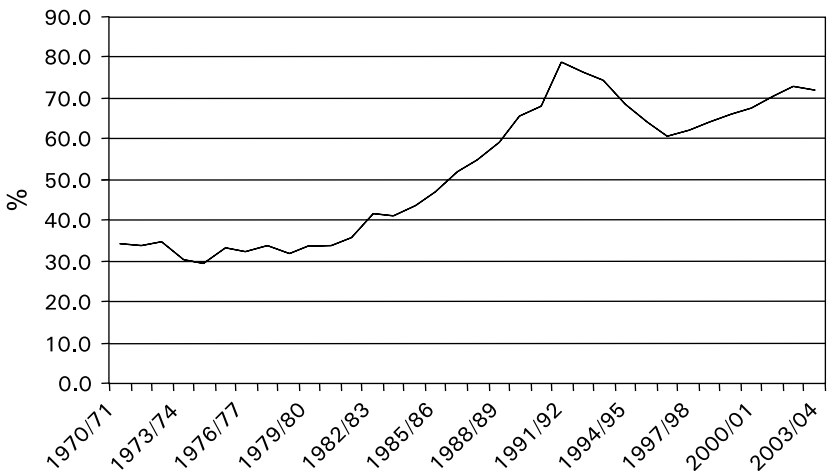
Our paper does not focus on the macroeconomic stabilization roles of fiscal and monetary policy. We do not believe that the nominal wage and price rigidities that make monetary and fiscal policy potentially important tools for macroeconomic stabilization policy are an important feature of

the Indian macroeconomic transmission mechanism. Neither old nor new Keynesian specifications of the wage-price mechanism capture the reality of India's labor and product markets. We view output as constrained by supply rather than by effective demand. The supply constraint binds, however, at far too low a level because of real rigidities and distortions in labor, 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.

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 ratio of net public total debt (NTD) to GDP declined sharply—from a peak of about 80 percent of GDP in 1991–92 to about 60 percent in 1996–97. Since then, the ratio has crept back up to over 70 percent of GDP (figure 1).⁴

FIGURE 1. NTD/GDP, 1907/71–2003/04



Source: See appendix table A-1 for data and definitions.

4. Although recognized and explicit guarantees outstanding of central and state governments have stabilized in recent years, in 2003 they still amounted to 11.2 percent of GDP.

The composition of the public debt, 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 indebtedness of the government (that is, debt denominated in domestic currency) has shot up to 75 percent of GDP (table A-1). In effect, Indian policymakers have swapped creditors—replacing a potent pressure group of foreigners with hapless future generations of Indian citizens. At least one major international rating agency recognizes this shift by evaluating India's foreign currency rating as investment grade but classifying the long-term domestic currency rating as below investment grade. Within the internal debt aggregate, relative shares have shifted slightly. 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 one-fifth. On the external side, official foreign exchange reserves now exceed public debt denominated in foreign currency (indeed, RBI reserves exceed all external debt liabilities, both public *and* private).

Our definition of the public sector includes public enterprises as well as central, state, and local governments, 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 of 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).

The analysis of the debt sustainability of the public sector does not turn on whether the publicly owned commercial banks act commercially or

emulate the bureaucratic behavior of a general government department. A country can act noncommercially in many ways that do not involve “soft budget constraints.” Ceausescu’s Romania was an example of ultra-hard budget constraints and utter economic irrationality.

As in our previous work on Indian public finance, we conduct formal solvency tests on the debt series.⁵ The formal definition of the discounted debt (strictly speaking, the period t debt discounted to period 0) is given in equation 1:

$$(1) \quad \text{PDV}(B_t) = \prod_{j=0}^{t-t_0} \left(\frac{1}{1+i_{t+j}} \right) B_t$$

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 nonpositive). 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. The statistical tests endeavor to shed light on two aspects: whether the data-generating process describing the discounted public debt is stable in the sense of parameter constancy, that is, whether there are structural breaks in the process; and, conditional on an invariant structure having been identified, whether the discounted debt process is covariance stationary or not.

A discounted debt process that is not stationary need not be taken as evidence that the government will default; it only means that if extant fiscal policies continue, then the exchequer will go bankrupt. Covariance stationarity of the data-generating process implies that 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 nonzero.

5. Buiter and Patel (1997). A recent contribution to the literature on Indian fiscal deficits and government debt is Rangarajan and Srivastava (2005).

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

$$(2) \quad (1 - \rho(L))((1 - L)^d X_t - \alpha_0) = (1 - \theta(L))\varepsilon_t$$

where $\rho(L)$ is a p^{th} -order polynomial, $\theta(L)$ is a q^{th} -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, that is, 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 equation 2 has the autoregressive representation

$$(3) \quad \eta(L)((1 - L)^d X_t - \alpha_0) = \varepsilon_t$$

where

$$(4) \quad \eta(L) = \sum_{i=0}^{\infty} \eta_i L^i = (1 - \theta(L))^{-1} (1 - \rho(L)).$$

The univariate special case of equation 3 is implemented:

$$(5) \quad PDV(B_t) = \alpha_0 + \alpha_1 t + \beta(L)PDV(B_{t-1}) + u_t$$

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 holds:

1. The roots of $1 - \beta(L)$ do not all lie outside the unit circle.
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 nonzero 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 nonlinear), fractionally integrated processes, and even level stationarity. This is important because 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 nonstationarity, that is, a unit root is present. 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 and others are useful here.⁶ Using a parameterization that provides a reasonable representation of both stationary and nonstationary variables, they have derived a test that has stationarity as the null hypothesis. The series under consideration X_t , is assumed to have the following decomposition:

$$X_t = \xi t + \Gamma_t + \varepsilon_t \text{ where}$$

$$(6) \quad \Gamma_t = \Gamma_{t-1} + u_t; u_t \square \text{i.i.d.}(0, \sigma_u^2)$$

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: $\sigma_u^2 = 0$, or, and $\sigma_\Gamma^2 = 0$.

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, autoregressive, moving-average models, under very general conditions.⁷ 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:

$$(7) \quad \hat{\eta}_t = T^{-2} \sum_{t=1}^T \frac{S_t^2}{s^2(k)}$$

where

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

6. Kwiatkowski and others (1992).

7. Phillips and Perron (1988).

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 equation 6 is set equal to zero and the residuals are from a regression of X on only the intercept. This statistic is denoted by $\hat{\eta}_\mu$.⁸

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 nonstationary;
3. If both the nulls are accepted, then we cannot be sure whether there is stationarity;
4. If both nulls are rejected, then we cannot reach any conclusion.

Obviously if either of the last two conditions prevails, we would be unable to conclusively interpret the stationarity properties of the time series under consideration, but the first two conditions are categorical.

The first three of the five test statistics given in table 1 are derived in Phillips and Perron for the null that $\beta = 1$ and $\alpha_1 = 0$.⁹

$Z(\beta)$ makes use of the standardized and centered least squares estimates of β . $Z(t_\beta)$ makes use of the t statistic on β , t_β ($\beta = 1$), and $Z(\phi_3)$ is the regression F test of Dickey and Fuller.¹⁰ 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 and in Dickey and Fuller.¹¹ Much, but not all, of the evidence for the null of unit root and the null of stationarity points to nonstationarity of the debt series; the exception is the trend stationarity test, $\hat{\eta}_1$, 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 U.S. dollars discounted at the foreign-official-creditors dollar interest rate, but of nonstationarity for B_1^* , the same debt measured in U.S. dollars but using the higher foreign-all-creditors dollar interest rate, is probably

8. Kwiatkowski and others (1992) provide critical values for tests of both level and trend stationarity.

9. Phillips and Perron (1988)

10. Dickey and Fuller (1981).

11. Fuller (1976); Dickey and Fuller (1981).

TABLE 1. Unit Root and Stationarity Tests for Discounted Debt and NTD-to-GDP Ratio

	$Z(\beta)$	$Z(t_{\beta})$	$Z(\phi_2)$	$\hat{\eta}_{\mu}$	$\hat{\eta}_t$
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

Source: Regarding the exercise of discounting net total debt, time series for the two rupee interest rates are from the Reserve Bank of India, *Handbook of Statistics on the Indian Economy (2003-04)*; and time series for the two U.S. dollar interest rates are from World Bank, *Global Development Finance Report* (various years). Net total debt is from table A.1. We would like to thank Alok Kumar for his help in programming the tests.

Notes: NTD-GDP is the ratio of net total debt to GDP. Tests cover the period 1970-71 to 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.

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 U.S. 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.

explained by the behavior of B_1^* implying long-run "super-solvency" rather than insolvency (figure 2 profiles the behavior of the discounted debt series).

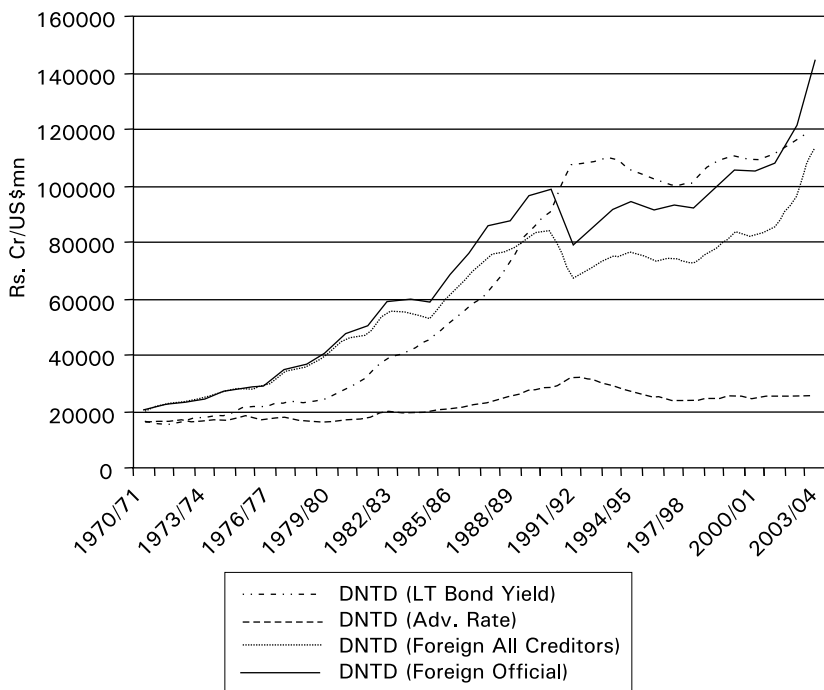
On balance, our review (both informal and formal) indicates that the overall net public debt burden does not give cause for immediate alarm. There is also the possibility that the Indian sovereign has been helped to some extent by high GDP growth raising the denominator of the public debt (in rupees)-to-(nominal)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

$$(8) \quad \frac{B_t}{P_t Y_t} - \frac{B_{t-1}}{P_{t-1} Y_{t-1}} - \frac{B_t - B_{t-1}}{P_t Y_t} \equiv \frac{B_{t-1}}{P_{t-1} Y_t} \left[\frac{Y_t - Y_{t-1}}{Y_{t-1}} \right] - \frac{B_{t-1}}{P_t Y_t} \left[\frac{P_t - P_{t-1}}{P_{t-1}} \right]$$

The decomposition of changes since 1990-91 in the net total debt-GDP ratio is given in figure 3.¹² Negative growth surprises, whether for cyclical

12. 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, 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.

FIGURE 2. Discounted NTD Series (1970/71–2003/4)



Source: See appendix table A-1 for data and definitions.

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.

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

$$(9) \quad \dot{b} = d - (\pi + n)b$$

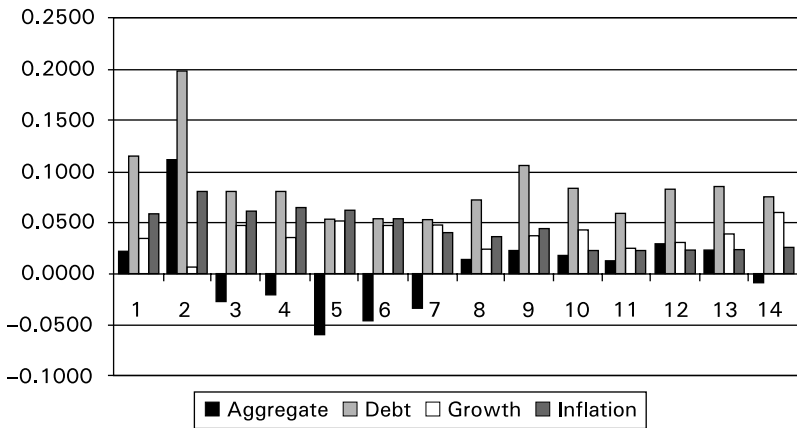
$$(10) \quad \dot{b} = -s + (r - n)b$$

where

$$(11) \quad d = -s + ib$$

and

$$(12) \quad i = r + \pi$$

FIGURE 3. Decomposition of Changes in the NTD-GDP Ratio (1990/91–2003/04)


Source: See appendix table A-1; also see footnote 12.

Here d is the conventional public sector financial deficit as a fraction of GDP, s is the public sector primary (noninterest) 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 is the short real interest rate. Equations 9 and 10 assume that Indian public debt is rupee-denominated.

Equation 9 shows that with an annual growth rate of 12 percent in nominal GDP ($\pi + n = 0.12$) and with the stock of public debt equal to 80 percent of annual GDP ($b = 0.80$), 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 11, this means that for any given primary surplus s , the conventionally measured deficit d will be lower because the cost of debt servicing is lower than it 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 10, financial repression reduces the intrinsic growth rate of the debt-to-GDP ratio, $r - n$. The debt-to-GDP ratio stabilizing value of the primary surplus falls by 0.8 percent of GDP for every 100 basis points 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 the elimination 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. The pursuit of macroeconomic virtue must not occur at the expense of fiscal-financial sustainability.

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.¹³ With international capital mobility far from perfect, lower private saving is translated into lower private investment.¹⁴ However, the heavy hand of the state not only reduces the amount 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 of inefficient financial intermediation in terms of forgone GDP growth, 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, and $\delta > 0$ 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:

$$(13) \quad n = v^{-1} \left(i - \delta \frac{K}{Y} \right)$$

Assume the aggregate production function takes the Cobb-Douglas form $Y = AK^\alpha$; $A, \alpha > 0$. Here A stands for everything other than the physical capital stock that influences potential output (labor and land inputs, technical and managerial efficiency, and the like). It follows that $v^{-1} \frac{K}{Y} = \alpha$, so equation 13 can be written as:

$$(14) \quad n = v^{-1} i - \delta \alpha$$

13. See Federal Reserve Bank of Boston (2006), especially the chapters by Cotis and Friedman.

14. See, for example, Shah and Patnaik (2004).

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 14, 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

$$(15) \quad n = v^{-1}(s - ca) - \delta\alpha$$

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 economywide capital in terms of aggregate GDP.

Net capital inflows are the sum of net inflows of foreign direct investment, FDI , net portfolio inflows, ΔP , net external commercial borrowing, ECB , minus the net increase in official international reserves, ΔR , that is,¹⁵

$$(16) \quad -ca \equiv FDI + \Delta P + ECB - \Delta R$$

We can therefore rewrite equation 14 as

$$(17) \quad n = v^{-1}(s + FDI + \Delta P + ECB - \Delta R) - \delta\alpha$$

Can enhanced domestic financial intermediation raise the domestic saving rate, s ? More effective intermediation reduces borrowing spreads on lending, 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, in contrast, has run current

15. All flows are expressed as fractions of GDP.

account surpluses every year since the collapse of the Soviet Union. Ukraine, too, has frequently run sizable 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 transferred to domestic enterprises with better investment prospects. Opening up the capital account may also reduce the ICOR. Foreign direct investment not only brings additional funds to domestic residents, it tends to come bundled with technology, know-how, and managerial skills that are superior to those available domestically.

The simple growth accounting framework of equation 14 hides a lot of important institutional, technological, and behavioral 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.¹⁶ And despite its simplicity, equation 14 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 5–6 percent of GDP that comes into China as foreign direct investment is probably used efficiently, but the bulk of investment by state enterprises and of infrastructure investment is inefficient and unproductive.

For India, for the past ten 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 $\delta = 0.08$). It follows that India's ICOR, with $v \approx 3.0$, is significantly lower than China's.

16. While we would like to be able to back out estimates of total factor productivity growth, we lack the data to make accurate measurements of *all* relevant factor inputs—labor, capital, land, and imported primary and intermediate inputs.

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.

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*, 2001–02¹⁷

“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
Manmohan Singh, June 2005¹⁸

The financial sector in India, which includes commercial banks, mutual funds, and insurance companies among other institutions, changed during the reform period of the 1990s. Although many changes were supposedly effected, these have been relatively narrow in scope. The strategy (introduced as a cornerstone of safety) has been ratio-centric, underpinned by 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; while the financial sector is probably more robust than it was before the reforms, it is still characterized by substantial inefficiencies born of the blunted incentives (underlined by stylized facts and anecdotal evidence) associated with large public sector presence in the sector.¹⁹

17. Annual publication of the Economic Division, Ministry of Finance, Government of India.

18. Address at the State Bank of India’s bicentennial celebrations in Mumbai (reported in *The Hindu* newspaper of June 5, 2005).

19. In September 2003, Standard and Poor’s revised its outlook on the Indian banking sector upward, from negative to stable, and Fitch Ratings assessed that economic reforms have considerably “strengthened” financial sector fundamentals.

Involvement of the government in India's financial sector remains high; for most of India's postindependence period, the government has used intermediaries to direct and allocate financial resources to favored recipients in both the public and private sectors. Until 1992, in practically all areas of nonagricultural economic activity, the state's involvement in the financial sector included the implicit assumption of counterparty risks. Currently, 70 percent of the financial sector's assets are held by government-owned or sponsored entities (table 2 gives a summary for key segments). In fact this figure is higher (around 73 percent) once institutions like the Employees Provident Fund Organization (for contractual and pension savings) and the National Small Savings Scheme (post office savings plans used to finance the government deficit), both operating essentially from within the government with not even a semblance of arms-length relationship, are factored in. Within the Indian financial sector, banks are the dominant intermediaries accounting for about 63 percent of assets. (The extent of government ownership of banks in India is quite high compared with international levels.) Moreover, the Reserve Bank of India has majority ownership in the State Bank of India (SBI), the largest public sector bank.²⁰

TABLE 2. Share of Public Sector Institutions in Specific Segments of the Financial Sector (March 31, 2004)

<i>Institution type</i>	<i>Public sector (percent)</i>	<i>Private (percent)</i>	<i>Total (Rs. billions)</i>
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

Source: Reserve Bank of India, *Report on Currency and Finance (2003-04)*; *Insurance Regulatory and Development Authority Annual Report (2003-04)*.

Note: SCBs include total assets; private banks include foreign banks; MFs include total assets of domestic schemes of MFs (public sector includes Unit Trust of India); life insurance includes policy liabilities (public sector insurance includes Life Insurance Corporation 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.²¹ As a result, 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, besides the standard problems that result from information asymmetry and "agency" issues, moral hazard

20. Parts of the rest of this section draw heavily on Bhattacharya and Patel (2005).

21. La Porta, Lopez-de-Silanes, and Shleifer (2002).

might be *aggravated* because both depositors and lenders count on explicit and implicit government guarantees.²² Across the world, such pathological forms of government involvement in the financial sector, far from ensuring greater stability, have 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.²³ The scope ranges across appointment of management, regulation, mobilization of resources, and provision of "comfort and support" to depositors; moreover, the government influences lending practices of all intermediaries and the investment incentives of private corporations. The government deploys an array of formal and informal instruments, including treating banks as quasi-fiscal instruments (including instances of *de facto* sovereign borrowing from these banks), preempting resources through statutory requirements, directed lending and bailouts, encouraging imprudent practices such as cross-holding of capital between intermediaries (so called "double-gearing"), and allowing unjustifiable levels of government-controlled and -guaranteed deposit insurance. A multiplicity of regulators (with varying degrees of independence) covering the full financial spectrum is in place, but enforcement of directives has been patchy.²⁴

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—such as Parliament, the comptroller and auditor general, the central bureau of investigation, the central vigilance commission, and the enforcement directorate—in audits of decisions made by bank managers, thereby undermining "normal" risk taking intrinsic to lending.²⁵ This

22. See Bhattacharya and Patel (2002), and Patel and Bhattacharya (2003). Note that *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, such as increasing requirements of capital, proper risk weighting or project monitoring. India's decision not to provide deposit insurance after the fact to nonbank financial intermediaries was commendable in this context.

23. Patel (2004).

24. For instance, cooperative banks were lax in implementing RBI notifications on lending to brokers.

25. Banerjee, Cole, and Dufo (2004). 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).

sort of intrusion is compounded by institutional rigidities that include weak foreclosure systems, deficient legal recourse for recovering bad debts, and ineffective exit procedures for firms. Furthermore, during difficult times, relief for fiscal stress is sought through regulatory forbearance; there are demands for (and occasionally instances of) lax enforcement (or dilution) of income recognition and asset classification norms (box 1). The conjunction of these characteristics contributes toward giving financial intermediaries incentives to, among other things, roll over existing substandard debt, usually by swapping substandard 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 in the Indian Financial Sector

- Loopholes in the treatment of distressed assets persist. Projects deemed to be “under implementation” may not be classified as nonperforming assets despite interest and principal repayments remaining overdue for more than 90 or even 180 days. An independent group constituted in 2002 to look into such projects and establish deemed completion dates, estimated that intermediaries had already disbursed about Rs. 360 billion to twenty-six such nonperforming projects with a total cost of Rs. 560 billion (including a debt component of Rs. 390 billion).
- As domestic interest rates hardened in the second half of 2004, commercial banks’ holding of government securities that should have been marked-to-market (downward) were allowed (by the Reserve Bank of India) to be redesignated as held-to-maturity (rather than as “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 because of continuing restrictions on interest rates. 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 (appendix table A-2). On the lending side, constraints apply to various prime lending rate-related guidelines for small-scale industries and other priority sector lending. In recent years an environment of declining interest rates combined with the structural factors discussed above has made treasury operations an important activity in improving banks’ profitability.²⁶

26. Declining interest rates increased trading profits (in securities) of public sector banks 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 subsided in the following

The consequence of this environment is “lazy banking.”²⁷ 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 appropriately priced capital to firms. (Box 2 gives anecdotal evidence on this subject from the perspective of entrepreneurs in the textile industry.)

BOX 2. Anecdotal Evidence on Financial Intermediation in the Textile Industry

India is likely to miss the opportunity offered by the demise of the WTO Agreement on Textiles and Clothing at the end of 2004. To achieve scale economies, consolidation and investment are essential. However, banks, the main source of institutional finance, have been disinclined to support the necessary evolution in the textile 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 Mumbai-headquartered commercial banks, life insurance companies, and nonbank financial companies) for 60 percent of the issue amount. For many entrepreneurs this is a hard sell.

Source: Ashok Desai, “Textiles Will Fail Us—and Why,” *Business World*, October 18, 2004.

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. Although policymakers are cognizant of the inherent dangers regarding contingent liabilities that could come home to roost, outstanding government guarantees exceeded 11 percent of GDP in 2002–03; furthermore, the 2005–06 Union budget has new proposals for adding to these guarantees through an off-budget financial vehicle.

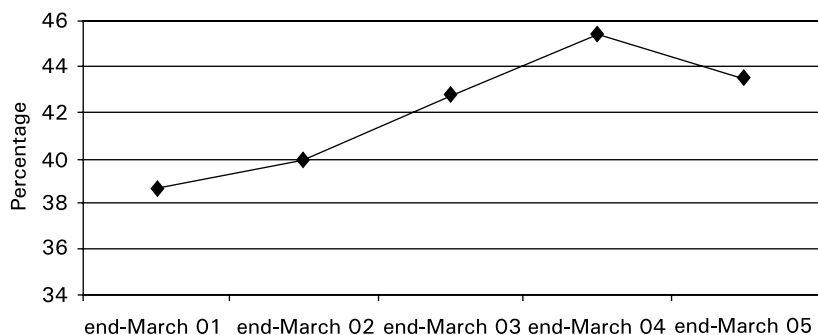
Commercial bank holdings of government securities are much higher than the mandatory minimum levels. As figure 4 and table 3 show, a large fraction of bank deposits (estimated at 43.2 percent as of March 2005) are being deployed for holding government (and other approved) securities, (mis-)perceived to be free of default risk (and indeed of market risk). Despite

two years, its share in operating profit had increased to 39 percent by 2003–04. See Reserve Bank of India (various years).

27. A term attributed to a deputy governor of the RBI.

a strong economic rebound, the statutory liquidity ratio (on a flow basis) was higher than the regulatory requirement (25 percent) even during 2003–04 (59 percent) and 2004–05 (30 percent)—the peak of the current business cycle—when average annual GDP growth was in excess of 7.5 percent. The government, it would seem, has somehow (inadvertently, to give the benefit of doubt) managed to extend its makeover of weak banks into “narrow” banks to the banking sector as a whole; the banks have even exceeded the statutory 38.5 percent preemptions of the prereform days.

FIGURE 4. Ratio of Investment in SLR Eligible Securities to Deposits



Source: Reserve Bank of India, *Weekly Statistical Bulletin*.

TABLE 3. Portfolio Allocation of Lendable Resources of Commercial Banks
Percent of deposits

Period	Balances with RBI	Nonfood 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 ^a	5.1	61.1	43.2

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

a. Through March 2005; decadal figures are annual averages.

These actions also have implications for the financial health of public sector banks. It has to be recognized that the only sustainable method of ensuring capital adequacy in the long run is through improvement in earnings profiles, not government capitalization or even mobilization of private capital from the market (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 (or higher) as its risk-weighted asset base. While capital adequacy ratios of most public sector banks are in excess of the minimum 9 percent, fresh capital will be necessary to cover new regulatory obligations and for funding credit expansion.²⁸ It is estimated that new regulations under the Basle 2 accord will shave off about two percentage points from current capital adequacy ratios for public sector banks; that means a fair amount of capital will be needed, going forward, to support existing balance sheets. Given the government's explicit (and oft-repeated) policy of not reducing its shareholding below 50 percent 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, similar to the "double gearing" that took place in 1999–2000 (à la Japanese banks); alternatively, nonvoting 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). 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 *nongovernment* public limited companies; in fact, both the number of companies and the amount raised in the market have declined since the mid-1990s (figure 5).

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. The capacity of the financial sector to intermediate resources efficiently for private investment is impaired since, for practical purposes, even after a decade of reforms, many distortions persist that allow banks to avoid taking "prudent risks" and sidestep desirable regulatory norms at the same time.

Furthermore, the moral hazard in the sector is palpable. There is a conviction among depositors and investors alike 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 unlikely,

28. 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).

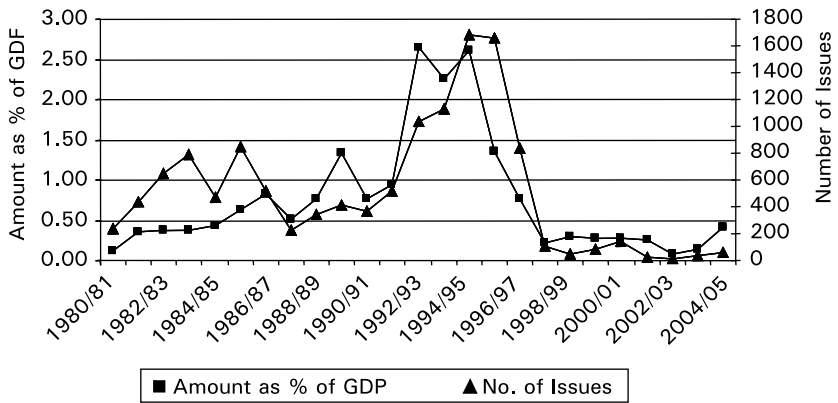
TABLE 4. Resource Mobilization through Capital Markets

Billions of rupees

	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 and 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
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	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
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	n.a.	n.a.	133.6	150.7	301.0	496.8	612.6	678.4	648.8	669.5	639.0	840.5
Private sector	n.a.	n.a.	40.7	24.9	92.0	170.0	194.0	231.1	286.2	250.8	187.6	357.4
Public sector	n.a.	n.a.	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 (percent)	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: Reserve Bank of India, *Handbook of Statistics on the Indian Economy (2004-05)*; *Annual Report* (various issues).
 Notes: Public sector includes public sector banks and financial institutions. Public issues are through prospectus and rights.
 n.a. Not available.

FIGURE 5. New Capital Issues by Non-govt. Public Companies



Source: Reserve Bank of India, *Weekly Statistical Bulletin*.

even when insolvency is a possibility. As Bhattacharya and Patel conclude, “In effect,” the government has “‘signed a social contract’ with depositors that substitutes ‘support and comfort’ to intermediaries in lieu of market discipline in attempting to mitigate systemic risk.”²⁹

Although the focus of prudential regulations has been the banking sector, other intermediaries have often been the proximate source of serious problems in the Indian financial sector. Even if the current situation does not appear to be precarious, the potential for turbulence is there. The stream of problems that have plagued Indian intermediaries in the recent past has 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; others involved to a lesser extent were Industrial Finance Corporation of India and Industrial Development Bank of India. After some dithering UTI’s troubles 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 billion (6.1 percent of GDP), with the employees provident fund (EPF) being the largest scheme.³⁰ A government bailout of the largest fund

29. Bhattacharya and Patel (2005).

30. Three schemes are administered by the employees provident fund organization, which in turn comes under the ambit of the Ministry of Labor; the schemes are the employees provident fund scheme (began in 1952); employees pension scheme (1995); and employees deposit linked insurance scheme (1976).

began in 2005 when Rs.10 billion were paid out of the exchequer to meet members' dues. The employees pension scheme—a defined contribution–defined benefit scheme—for which valuation had not been done until relatively recently, has an (estimated) actuarial deficit of Rs.193 billion. The asset portfolio of India's largest life insurer, Life Insurance Corporation, is even larger, accounting for 12.3 percent of GDP in 2003–04; and the book value of its “socially oriented investments”—mainly composed of government securities holdings and social sector investments—amounted to Rs. 2,561 billion, or 75 percent of total investments of Rs. 3,431 billion. The corporation's annual report contains little information on its actuarial asset-liability balance. These are the so-called systemically important financial institutions 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 1990s and that they can therefore account for a weakening of investment.

Extant Fiscal Rules

In August 2003, two and a half years after being introduced in Parliament in December 2000, Indian lawmakers approved the Fiscal Responsibility and Budget Management Act, 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 be eliminated by the same date. The stipulated annual reductions in the two measures are 0.5 percentage point of GDP (or more) for the revenue deficit and 0.3 percentage point of GDP (or more) for the fiscal deficit.³¹ Increases in guarantees are restricted to 0.5 percent

31. 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.

of GDP a year. Additional liabilities are capped at 9 percent of GDP for 2004–05; the cap is reduced by 1 percentage point of GDP each year thereafter. The law also bars the RBI from subscribing 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, are permitted. The RBI may also buy and sell central government securities in the secondary market.

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 (the top panel of table 5). 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 2004, an update for the 2004–05 fiscal outturn indicates that both the fiscal and revenue deficits are within the targets established in July 2004 (the bottom panel 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.

TABLE 5. Central Government’s FRBMA-Stipulated (Rolling) Fiscal Indicators as a Percent of GDP

(a) July 2004 (budget)			
<i>Indicator</i>	<i>Revenue deficit</i>	<i>Fiscal deficit</i>	<i>Outstanding liabilities</i>
2003–04 (R.E.)	3.6	4.8	67.3
2004–05 (B.E.)	2.5	4.4	68.5
Targets			
2005–06	1.8	4.0	68.2
2006–07	1.1	3.6	67.8
2008–09 (terminal year)	Nil	3.0	...
(b) February 2005 (budget)			
	<i>Revenue deficit</i>	<i>Fiscal deficit</i>	<i>Outstanding liabilities</i>
2003–04 (actual)	3.6	4.5	
2004–05 (R.E.) Feb. data	2.7	4.5	68.8
2004–05 (latest est. June data)	2.5	4.1	NA
2005–06 (B.E.)	2.7	4.3	68.6
Targets			
2006–07	2.0	3.8	68.2
2007–08	1.1	3.1	67.3
2008–09 (terminal year)	Nil	3.0	...

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

Regarding outstanding liabilities, we have two observations. First, government securities held by the RBI are included; these 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 created by borrowing from statutory funds within the government and therefore are not strictly in the nature of IOUs to entities external to the government.

Fiscal Responsibility Laws in the States

We now briefly review the fiscal responsibility laws of the first six states that have enacted them—Karnataka (the forerunner), Kerala, Maharashtra, Punjab, Tamil Nadu, and Uttar Pradesh. All six states impose quantitative and time-bound targets (four to six years) on revenue and fiscal deficits; specifically they eliminate revenue deficits and reduce fiscal deficits to 3 percent of gross state domestic product (GSDP).³² (Notably, 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 defined in a somewhat novel manner as a “ratio of expenditure on interest to revenue receipts.” Tamil Nadu requires 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 in this ratio by the end of March 2008 (see appendix table A-3 for a summary of the laws and the performance under them). Two states have legislated ceilings for official debt. Karnataka and Punjab have capped their outstanding total liabilities at 25 percent and 40 percent, respectively, of their respective GSDP. In contrast, Tamil Nadu has placed a limit on total outstanding guarantees of 100 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, eliminated its revenue deficit and achieved the fiscal deficit target one year ahead of schedule.

A couple of laudable initiatives pertaining to fiscal planning and transparency are embedded in these laws. The acts require some form of a medium-term fiscal policy statement (encompassing three-year rolling targets) that

32. See Rajaraman and Majumdar (2005) for implications for states of fiscal responsibility laws in the context of recommendations of the Twelfth Finance Commission.

lays out the time path for attaining the fiscal goals, and they also call for 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 assemblies. Although the acts oblige the respective governments to take “appropriate measures” (enhancing revenue, reducing expenditure, or both) in the event of either a shortfall in revenue or excess of expenditure over specified levels for a given year, leeway is allowed for targets going awry because of natural calamities or national security.

Basic Arithmetic of the FRBMA

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

$$(18) \quad \dot{b} = d - \varepsilon\alpha b - (n + \pi)b$$

or, equivalently,

$$(19) \quad \dot{b} = (r - n)b + g^c + g^l + \theta k - \tau + (i^* + \varepsilon - i)\alpha b$$

Two key features of the FRBMA are the restriction that the overall central government financial deficit be no more than 3 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) by 2008–09:

$$(20) \quad d \leq 0.03$$

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

$$(21) \quad d \leq g^l$$

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

$$(22) \quad d \leq g^l - \delta k$$

If the deficit ceiling (equation 20) is rigorously enforced, the central government will never face a solvency or fiscal-financial sustainability problem. 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 equation 20 implies that

$$(23) \quad \begin{aligned} b(t) &\equiv b(0)e^{-\int_0^t [n(u)+\pi(u)]ds} + \int_0^t d(s)e^{-\int_s^t [n(u)+\pi(u)]du} ds \\ &\leq b(0)e^{-\int_0^t [n(u)+\pi(u)]ds} + 0.03 \int_0^t e^{-\int_s^t [n(u)+\pi(u)]du} ds \end{aligned}$$

As long as the long-run average growth rate of nominal GDP, $\bar{n} + \bar{\pi}$ is positive, and the long-run debt-to-GDP ratio will satisfy

$$(24) \quad \lim_{t \rightarrow \infty} b(t) \leq \frac{0.03}{\bar{n} + \bar{\pi}}$$

Were India to maintain its real, annual GDP growth rate of, say, 6.2 percent ($\bar{n} = 0.0062$) and an average annual inflation rate of, say, 4 percent ($\bar{\pi} = 0.04$), the central government’s ratio of long-run debt to annual GDP 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 nonbinding constraint.

Even if the gross investment version of the golden rule (equation 21) is the operative one, India's central government's gross capital formation program amounted to no more than 1.5 percent of GDP in 2003–4.³³ 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 the government generates sufficiently large surpluses during normal and prosperous times 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 since 2001–02) exceptionally low interest rates? The European Union's Stability and Growth Pact failed precisely because of the absence of "carrots" to run larger surpluses (or smaller deficits) during upswings and because the penalties (including fines) that were, in principle, part of the collective arsenal of pact enforcement were not imposed. 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 militated against collective enforcement of these penalties. How much harder would it be for the Indian government to impose countercyclical discipline *on itself* during good times? What are the arrangements, institutions, laws, rules, regulations, or conventions that make fiscal restraint during periods of high conjuncture incentive-compatible for political decisionmakers 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 borne by the opposition when its turn in office comes around. A tentative picture that we can draw, albeit from a short history, is that noncompliance by governments is unlikely to be politically costly; the electorate, the media, or even opposition parties have paid little attention to the subject matter! In fact it is widely felt that supplementary bills that boost expenditure from

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

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 policymakers astray.

As for 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 also results from the absence of effective competitive threats to inefficient incumbents. The sure, quick, and effective way to address this issue 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 into 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 nontraded goods and services (such as retailing and the management of public utilities). Foreign competition, a fortiori, 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.

TABLE A-1. Indian Public Debt as a Percent of GDP

	<i>CDD</i>	<i>SDD</i>	<i>PEDD</i>	<i>STPEDD</i> *	<i>NTDD</i>	<i>TFD</i>	<i>GTD</i>	<i>R</i>	<i>NTFD</i>	<i>NTD</i>
1970-71	17.4	4.3	0.3	n.a.	22.0	13.7	35.7	1.6	12.1	34.1
1971-72	17.0	4.4	0.3	n.a.	21.6	13.8	35.5	1.8	12.0	33.6
1972-73	17.4	4.2	0.3	n.a.	22.0	14.5	36.5	1.7	12.8	34.8
1973-74	14.7	3.9	0.2	n.a.	18.7	13.1	31.9	1.6	11.5	30.3
1974-75	13.9	3.6	0.5	n.a.	18.1	12.6	30.7	1.4	11.2	29.3
1975-76	16.4	4.0	0.7	n.a.	21.1	14.6	35.7	2.3	12.3	33.5
1976-77	16.7	4.2	1.0	n.a.	21.9	14.0	36.0	3.7	10.3	32.2
1977-78	20.9	4.1	0.9	n.a.	25.9	12.7	38.6	4.9	7.8	33.7
1978-79	19.6	4.4	0.2	n.a.	25.2	12.0	37.2	5.4	6.6	31.8
1979-80	20.8	4.3	1.6	n.a.	26.6	12.0	38.6	4.9	7.0	33.6

(Table A.1)

(Table A.1)

	CDD	SDD	PEDD	STPEDD*	NTDD	TFD	GTD	R	NTFD	NTD
1980-81	20.5	4.0	1.6	n.a.	26.1	11.6	37.7	3.8	7.8	33.9
1981-82	20.0	4.3	1.5	n.a.	25.8	12.1	37.9	2.3	9.7	35.5
1982-83	23.9	4.4	1.9	n.a.	30.2	14.0	44.2	2.5	11.5	41.7
1983-84	22.0	4.6	2.1	n.a.	28.7	15.0	43.7	2.7	12.4	41.0
1984-85	23.0	4.6	2.2	n.a.	29.8	16.5	46.2	2.9	13.6	43.4
1985-86	25.1	5.1	2.3	n.a.	32.6	17.4	50.0	2.9	14.5	47.1
1986-87	27.7	5.1	2.6	n.a.	35.4	19.3	54.7	2.7	16.6	52.0
1987-88	28.6	5.5	3.1	n.a.	37.3	19.8	57.0	2.3	17.5	54.7
1988-89	29.6	5.5	3.9	n.a.	39.0	21.9	60.9	1.6	20.2	59.2
1989-90	30.5	5.8	4.4	n.a.	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
1999-2000	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	n.a.	n.a.	n.a.	n.a.	n.a.	20.1	n.a.	n.a.

Source: Reserve Bank of India, *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); Government of India, *Budget Documents, Statement of Liabilities of the Central Government, Receipts Budget* (2002-03 and 2005-06); Government of India, Bureau of Public Enterprises, *Public Enterprises Survey* (volumes for 1970-71-2003-04); Reserve Bank of India, *Weekly Statistical Bulletin*; World Bank, *Global Development Finance Report* (various years). (GDP, used in the denominator for computing the ratios, is at current market prices.)

Definitions

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.

NTDD: CDD + SDD + PEDD (excluding Rupee short-term public enterprise domestic debt, or STPEDD, reported above, for which data is unavailable prior to 1990-91.)

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 (NTDD + TFD)

R: Official foreign exchange reserves including gold and special drawing rights

NTFD: Net total foreign debt (TFD - R)

NTD: Net total debt (NTDD + NTFD)

T A B L E A - 2 . Administered Interest Rates on Savings Instruments

Name of the scheme	Limits of investment	Maturity period (years)				Rate of interest (percent per year)				Deductions under Sec. 80 C of Income Tax Act (Rs billions)	Amount outstanding at end-March, 2005 (Rs billions)		
		Since April 1992	Since Jan. 1, 1999	Since Sept. 2, 1993	Since April 1992	Since Jan. 1, 1999	Since Sept. 2, 1993	Since April 1992	Since Jan. 1, 2001			Since Mar. 1, 2002	Since Mar. 1, 2003
		Since April 1992	Since Jan. 1, 1999	Since Sept. 2, 1993	Since April 1992	Since Jan. 1, 1999	Since Sept. 2, 1993	Since April 1992	Since Jan. 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	12.00	11.00 (since July)	4.00	4.00	9.50	9.50	9.50	1,134 (as of 331-3-04)	
2 Commercial Bank Savings Account (akin to checking acct.)	No limit	5.00 prior to Nov 94	4.50 since Nov94	4.50	4.50	4.00	4.00	4.00	3.50	3.50	3.50	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	4.50	4.50	3.50	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	11.00	9.50	9.50	9.00	8.00	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	12.00 to 13.50*	10.50 to 12.50**	8.00 to 10.50***	8.00 to 10.50**	7.50 to 9.00*	7.25 to 8.50**	6.25 to 7.50***	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	13.50	12.50	10.50	9.00	9.00	8.50	7.50	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	14.87 [@]	13.43 [@]	12.25 [@]	-	-	-	-	No	8
11	Kisan Vikas Patra	No limit.	5	5	1-2	14.87 ^{@@}	13.43 [@]	12.25 [@]	11.25 [@]	10.03 [@]	9.57 [@]	8.41 [@]	No	1364
12	Deposit 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

* Relates 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%.
 @@ 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: National Savings Organization; Receipts Budget, Government of India; Accountant General, Posts & Telegraph; Government of India press releases; Report of the Advisory Committee to Advise on the Administered Interest Rates; Ministry of Labor; Reserved Bank of India, *Handbook of Statistics on the Indian Economy (2004-05)*.

T A B L E A - 3 . State 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 (FD) 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 (RD)	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.	...	
<i>As % of GSDP</i>	<i>RD</i>	<i>RD</i>	<i>FD</i>	<i>RD</i>	<i>FD</i>	<i>RD</i>	<i>FD</i>
2001-02	3.1	5.6	4.5	3.3	5.4	7.1	3.3
2002-03	2.3	4.6	6.2	4.4	5.2	6.1	2.5
2003-04	0.6	4.6	6.3	4.5	4.5	7.4	n.a.
2004-05	+0.4	2.8	5.4	3.0	n.a.	n.a.	2.4
							4.4
							2.5
							3.8

Sources: Reserve Bank of India, *State Finances - A Study of Budgets (2004-05)*, December 2004; and summary of state budget documents for 2004-05 revised estimates. n.a. Not available.

Comments and Discussion

Abhijit V. Banerjee: The paper argues that while deficits in India are large, at least in the short run the risk of a deficit-induced crisis is minimal. The main reason to worry about deficits is that they crowd out private investment and give the government reason to want the financial sector to remain inefficient, so that there is less competition for the savings. This, in turn, distorts the allocation of savings within the private sector, discourages entry and exit, and reduces the overall growth of the economy.

Buiter and Patel are not optimistic about the current efforts to rein in the deficit. In particular they believe that the recent efforts to bind the hands of the governments, through the Fiscal Responsibility and Budget Management Acts at the center and the fiscal responsibility laws at the state level, will be renegotiated when the crunch comes, because right now, there is no real constituency for shrinking the deficit nor any mechanism for automatically punishing delinquent governments (as there would be, for example, if most of the debt was foreign currency debt).

They seem less pessimistic about improving the performance of the financial markets. Their recipe is to make the financial markets more competitive by permitting more liberal entry by foreign intermediaries into the Indian market. They note in passing that this would also make it harder for the government to borrow and, interestingly, they see this as a two-edged sword: It would of course cost more for the government to be profligate, which would have salutary effects, but if the deficit remains large, the economy could be more prone to crises.

I tend to broadly agree with their conclusions, with one important exception. Let me start however with a few points of clarification. First, while the Fiscal Responsibility and Budget Management Acts may not in the end bind, they are very important steps toward enhancing the political salience of the deficit. By announcing a target, the government is setting up to fail in public, whereas before it used to fail in private—the press and the opposition can now attack it for reneging on its explicit promise.

Second, the deficit has remained stubbornly high in the face of improved tax performance by both the state and central governments; this fact suggests that the real problem is the government's inability to resist populist demands.

Hence, while a case could be made for further tax effort (one could argue that India is still an undertaxed economy), one worries that any extra tax collection would only feed further profligacy until the discourse of public expenditures is altered. Here I do not yet sense any progress—I do not hear anybody speaking the language of trade-offs. When a new initiative is proposed, we do not hear the government saying: “That was a bad program, all the money was going to the rich; let us get rid of it and replace it by this other better program.” Instead, the program being introduced is always portrayed as a new gift from the ever-generous government, even though additional programs are often funded by quietly diverting money from existing programs.

Third, whatever the history, it is not clear that the banking system today is bailing out the government. In fact the reverse seems true: it is the government that is bailing out the banks—the government could easily lower interest rates further if it wanted. The political economy of this is complex. The problem is that most middle-class people in India like to have their savings in safe assets, and they have historically been able to get decent returns by putting their money in bank deposits. At the same time, the banks could always lend to the government, and the government paid generously. This particular cozy arrangement has been unraveling over the last decade, as the government became more and more interested in reducing its interest costs.

Lowering interest rates further and borrowing less would force the banks to cut the rates they pay on deposits, which would be politically unpopular. Moreover given that the banks still have a large amount of high-interest liabilities on their books (fixed deposits and the like), cutting interest rates further might endanger the stability of some of the weaker banks. One can therefore understand why the government may be reluctant to move faster.

Which brings me to the one place where I disagree with Buitert and Patel. They end their piece with a plea for allowing the entry of foreign players into the banking sector as a way of making the sector more competitive and efficient. We now have a bit of evidence on the impact of the foreign banks that have already entered. Gormley shows that in the districts in India where foreign banks entered, the probability of getting a loan went up for the 10 percent most profitable firms, but the average firm was actually 7.6 percent less likely to have a long-term loan of any sort.¹ Gormley interprets this as an effect of “cherry-picking” by the foreign banks. The domestic banks, having lost their most profitable clients to the foreign banks, shrank away from risk taking and cut their lending to the more marginal firms.

1. Gormley (2005).

All the accumulated evidence suggests that smaller firms in India are already underserved by the banking system. Banerjee and Duflo exploit two changes in the definition of the priority sector (it was expanded in 1998 and shrunk in 2000), as a natural experiment on credit access.² The results from both experiments are almost identical. They both suggest that for the firms that get more (less) credit in the expansion (contraction)—the medium-sized firms in the organized sector—the marginal product of capital exceeds 80 percent.

The evidence from Gormley suggests that just the fact of entry by foreign banks spoils the climate for the smaller firms. There is reason to suspect that in this respect things would only get worse if, in addition, there were takeovers of domestic banks by foreign banks. The core problem in banking is how to make sure that loan officers are lending responsibly; in smaller banks, the loan officers can be monitored more closely and therefore can be given more discretion. As the bank gets larger and the chain of control becomes longer, more and more rigid lending rules replace discretion. This, as Berger and others show for the United States, means that the smaller and more marginal firms, which are the firms where judgment really plays a role in the lending decisions, tend to get less credit once a small bank is amalgamated with a larger one.³ It seems very likely that something very similar would happen if an Indian bank were taken over by a foreign bank (we already know that the extant foreign banks do not lend to small firms).

This is not to say that no action should be taken to galvanize the Indian banking system. It is indeed true that the structure of growth in Indian banking under nationalization was not aimed at generating competition. Every district was assigned a lead bank, and it was assumed that the lead bank would dominate lending in that region. Vestiges of this system still persist, and in many districts, it is not uncommon to find that the dominant bank is one of the weaker and less dynamic public banks and that the better public banks hardly have a presence.

The natural solution to this problem is consolidation. The government should force the public sector banks to come together into a small number of much bigger banks, each under the leadership of one of the best public banks. It probably pays to involve some of the best “private” banks in this process as well. This will give each of these new “big” banks access to an established network of branches almost everywhere in the country and the

2. Banerjee and Duflo (2004).

3. Berger and others (2002).

ability to tap into the cheapest sources of savings. This will create a situation where multiple dynamic banks compete for clients in every location.

Consolidation is also an advantage from the point of view of selling off some of these banks to private buyers (or even foreign buyers), since there is less risk that the government will end up holding on to the weakest banks just when competition heats up. This is especially important because, as Buiter and Patel note, everybody in the system assumes that the government is liable if any of the banks collapse.

Even with consolidation, however, this assumption of liability remains a major problem for a government that is thinking of selling off the controlling shares in the banks to the private sector (or foreign private sector). The danger is that the Indian state will continue to be liable after control has been sold, because this is what the public expects. This would mean that the gains from risk taking go to the owners of the bank, but that the government would have to foot the bill in the event of a disaster. Let me end with two suggestions about how to deal with this issue: first, the government should hold on to a significant amount of equity in these banks even after the control rights have been transferred, to make sure that it shares in the gains from increased risk taking. Second, the liability should be structured to make sure that a substantial part of the buyer's total assets (and not just the assets of the Indian subsidiary of the foreign company), are backing the purchase. What we want to avoid is an Argentina-like situation where the foreign owners of the failed Argentine banks could walk away with their non-Argentine assets intact.

Robert Lawrence: This informative paper makes three basic points. The first is that while the Indian government has been running large government deficits—and has experienced a rising debt-to-GDP ratio—the situation is not unsustainable. Instead India appears to be on a path in which, with plausible assumptions about growth, inflation, and interest rates, it could settle into a long-term equilibrium with high and steady levels of debt to GDP and sustainable budget deficit levels. Second, the deficits reinforce the dominance of the state in Indian financial markets with adverse consequences for the efficiency of capital allocation. Government financial institutions fail to carry out their role as intermediaries between private sector borrowers and lenders and instead devote large amounts of their portfolios to holding government securities. In addition, incentives in many dimensions of behavior are severely distorted, resulting in moral hazard, regulatory forbearance, and generally poor credit allocation decisions. And third, the

Indian government has officially recognized the desirability of increased fiscal discipline and embarked on a program to achieve it through the Fiscal Responsibility and Budget Management Act. However, this program fails to impose the needed discipline on the national government, fails to address the role of states in generating deficits, and could lead to procyclical fiscal policy.

I found this paper very interesting and I learned a lot from it. In these observations I will discuss each of the major points in turn. The time series analysis on stability is compelling. India is not about to run into an explosive situation. Indeed, despite the reemergence of large internal deficits, there is little evidence of upward pressures on either inflation or interest rates. Apparently, Indian households have raised their saving rates sufficiently to finance the deficit and the increased demand for investment without the need for foreign borrowing. In the United States our deficit syndrome is often called twin deficits. In India's case, however, the government deficit is an orphan—because foreign debt is low and foreign reserves high—in essence low government saving is offset by high net private saving. It is particularly interesting that the analysis suggests that the internal debt situation is sustainable when it looks quite similar to the situation in the early 1990s when there was a crisis. This suggests that the source of the problem at that time was really the external constraint.

Nonetheless it is important not to confuse a situation that is sustainable with one that is desirable. Indeed, as the paper makes clear, it is relatively easier to persuade people to change their behavior when you can show they are heading for disaster than when you have to argue that if they changed things, it would be tougher in the short run but better in the long run. Assuming interest rates remain at current levels and the deficit a constant share of GDP, we know that each year until the debt-to-GDP ratio stabilizes, interest payments will rise as a share of GDP, thereby crowding out other government spending. To be sure, if the money goes to public investments with a high social return, borrowing could be justified. But this is not what is happening. It appears that, on the contrary, government investment has borne the brunt of the adjustment. Again, it is interesting to ask about history. What has changed? Why was India able to maintain fiscal discipline until the 1980s, and yet today, even though incomes are rising, the government is apparently less able to resist the pressures for bigger deficits?

The authors also argue that large budget deficits have reduced Indian capital formation and thus Indian growth. They claim that the deficits have a negative impact on private saving, and also reduce the efficiency of the financial system in allocating capital. The authors cite several papers to

support their claim that borrowing to finance public debts depresses private saving, but they present no proof that this has actually happened in India, and they offer no discussion of why, in theory, bigger government deficits should be expected to reduce private saving. The more traditional debate, is of course, whether private savings *rise sufficiently* to offset the deficit (as suggested by a Barro-Ricardian framework) and thus whether *national* saving is depressed by government deficits. It would have strengthened the paper if a theoretical explanation for the anticipated negative impact on private saving had been offered.

The second part of the paper is also focused on the distortions in capital allocation that result from extensive state ownership of banks. The need to finance the deficits in part by having banks hold the debt reduces the banks' need to invest in the private sector. One might have hoped that this would at least have meant that banks are highly creditworthy and liquid. But the authors argue that other behavior attributable to government influence, such as regulatory forbearance, actually leads the banks to accumulate substandard debt. The net result is therefore too much debt that is safe and too much that is unsafe. One might have expected nonbank capital markets to flourish under these circumstances, but again the authors present us with evidence that suggests they have not. The authors do offer reasons why incentives are distorted and financial intermediation is inefficient, but they also offer one piece of empirical evidence to support their claim that Indian investment is inefficient that is not very convincing. They make much of the fact that India has a capital-output ratio of three to one. But they also report that the Chinese capital-output ratio is considerably higher, at four to one. While this may indicate that China is even less efficient than India it does not really demonstrate the point they are making about India. Indeed, my sense is that a capital-output ratio of three to one is actually quite typical, suggesting the investment inefficiency problems may not be as great as they imply. Their argument would have been more compelling had they provided evidence that other countries have much lower capital-output ratios.

The third issue raised in the paper relates to efforts to control budget deficits through fiscal rules. The paper describes efforts at both the central and the state level to impose such rules. These reflect good intentions, but it is not clear that beyond helping to focus on the medium-term budget outlook, they will actually achieve their objectives. Indeed, the fact that the finance minister felt compelled to delay implementation of the FRBMA even before it became effective does not exactly inspire confidence in its efficacy. At the end of the day, the authors conclude that unfortunately fiscal virtue cannot simply be legislated. While that may well be the case,

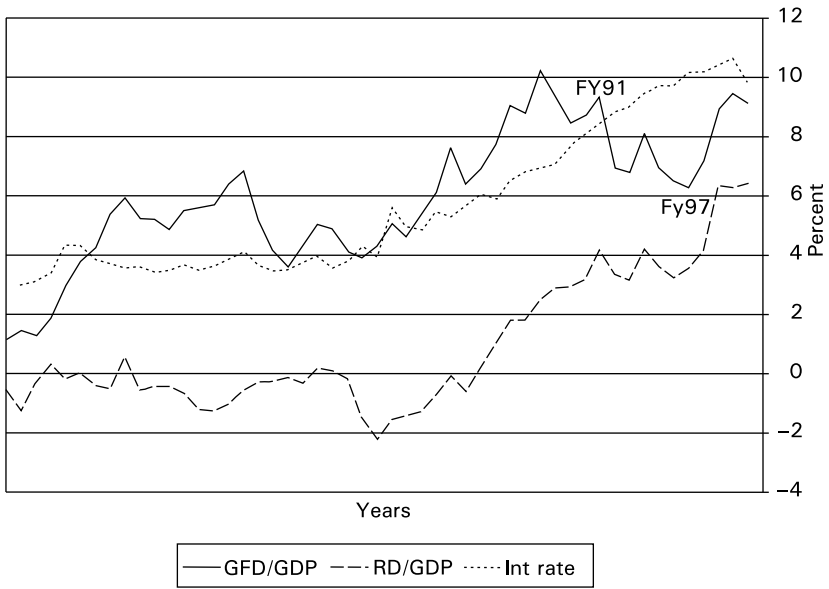
given current institutional arrangements, I do not see why it should automatically be taken as given. In particular, I would have liked some consideration of a constitutional provision that would prohibit state governments from running deficits. Such a prohibition would avoid the free-rider problem that currently exists because the states can rely on the central government to bail them out. Yes, there should be fiscal redistribution from the central government, but the whole point is that fiscal federalism should force the states to internalize the costs of their own expenditures. By the way, as I understand it, a significant amount of the state budget deficits is funded through small savings—and this suggests another way to impose discipline on the states: eliminate these programs. Indeed they are probably another important way in which the government is reducing the effectiveness of the private sector by inhibiting the development of private intermediaries that compete for savings deposits.

Indira Rajaraman: My comments on the paper are grouped under three heads. The first is the fiscal stance in India; the second, blunted incentives implicit in public ownership of banks; and the third, fiscal rules.

The Fiscal Stance

The title of the paper is somewhat value laden, with the wording prejudging the issues. The term *excessive budget deficits* suggests that a less excessive budget deficit is preferable, by definition, regardless of how the correction is achieved. This was the message beamed at the Indian government at the start of reform in 1991, and in the mad scramble to bring down the fiscal deficit, there were huge cuts in public expenditure on capital formation. The paper acknowledges what it calls “infrastructure-unfriendly cuts” in public capital expenditure but says that these cuts “cannot be seen” in the fiscal deficit numbers because of compensating increases in current expenditure. That is factually incorrect. Figure 6 shows the consolidated fiscal and revenue (current) deficits aggregated across central and state levels of government, over the fifty-year period 1951–2001 as a percent of GDP, along with the (average) interest rate on public debt. The vertical distance between the fiscal and revenue deficits measures the budgetary capital expenditure as a percent of GDP (unless there are substantial privatization receipts, which was not the case over this period). Capital expenditure fell sharply between 1991 and 1997, and brought the fiscal deficit down with it, by 3 percentage points of GDP. Only after 1997 was the vertical difference not

FIGURE 6. Fiscal and Revenue Deficits and Interest Rates on Public Debt Consolidated across Central and State Governments, 1951–2001



Source: Rajaraman (2006).

reduced any further. The revenue deficit rose after that point, and the fiscal deficit rose with it.

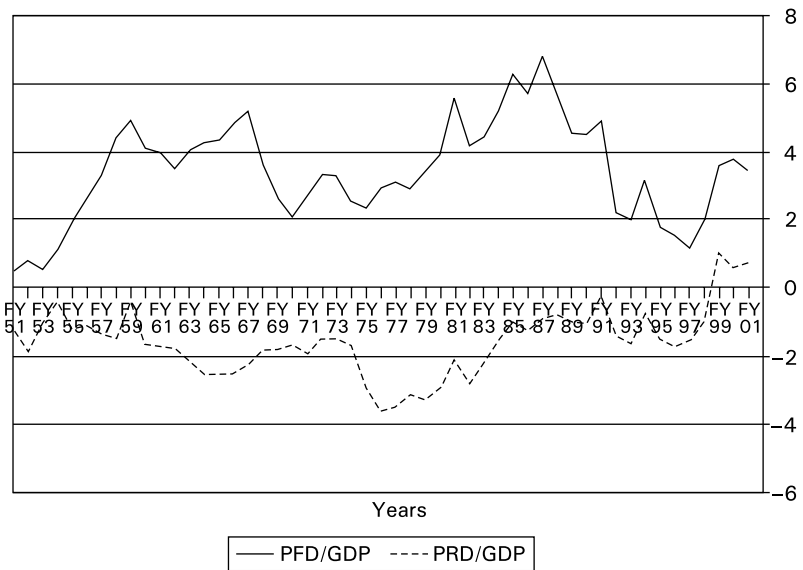
The paper could have made a lasting contribution if it had calibrated the net impact, through a computable general equilibrium model, of fiscal correction achieved through cuts in expenditure on capital formation. In the absence of such estimates, there remains the possibility that during the past fifteen years since the start of reform, the years in which the budget deficit was less excessive through capital expenditure cuts might have inflicted more lasting damage on the growth prospects of the economy than years in which the deficit was more excessive. The introduction of fiscal rules will, it is hoped, put a stop to the capital expenditure route to fiscal correction.

The deficits were clearly driven by the rate of interest on public debt. From 1951 until 1975, when financial suppression kept the interest rate on public debt down at the 4 percent level, the fiscal deficit rarely crossed 6 percent of GDP, and the current deficit (or the revenue deficit, as it is termed in India), was at zero or in surplus. After 1975, when financial suppression was lifted, the interest rate rose steadily and carried the fiscal

and revenue deficits up with it until 1991. Interest rates finally turned down only starting in fiscal 2000.

For any responsible evaluation of the fiscal stance over this period, it is clear that the interest rate has to be cleaned out of the fiscal and revenue deficits, to obtain the corresponding primary aggregates. This is shown in figure 7. The primary fiscal deficit shows a stable pattern around a constant trend. The primary revenue deficit was substantially negative during much of the period, which is to say that there was a primary revenue surplus, until post-reform, when it began to hug the zero axis more closely, and finally pushed through into a positive deficit after 1997. The two primary deficits together do not convey a portrait of a fiscally profligate state, at least over the period 1951–97.

FIGURE 7. Primary Fiscal and Revenue Deficits Consolidated across Central and State Governments, 1951–2001



Source: Rajaraman (2006).

The issue of why the primary revenue deficit worsened after the start of reform is an important one. When trade tax reform was initiated in 1991 along with other reforms, revenues from trade taxes declined sharply (table 6). This shortfall was not fully compensated by revenue from other

sources. The tax-to-GDP ratio fell from 16 percent (1989–90) to a low of 13.4 percent (1998–99), before rising to 14.5 percent (2002–03), a fall of 1.46 percentage points from its prereform high. This fall in overall taxes was lower than that of customs revenue, which fell by 1.89 percentage points. Thus, revenue compensation from other sources totaled 0.43 percent of GDP. The overall fiscal deficit between the two years 1989–90 and 2002–03 shows a rise by 0.77 percent, but the compensated deficit for 2002–03, which subtracts the total revenue decline from the crude deficit, shows a fall of 0.69 percent. What this means is that the fiscal system responded to the fall in the tax-to-GDP ratio by reducing expenditure by 0.69 percent, and allowing the deficit to rise by 0.77 percent, while also compensating for the customs revenue decline from other taxes by 0.43 percent. This fiscal difficulty faced by India as a direct outcome of trade reform is common to many other developing countries.⁴

TABLE 6. Actual and Compensated Revenue (Center and States), 1989–90 and 2002–03

<i>Years</i>	<i>Tax revenue</i>		<i>Overall fiscal deficit</i>	
	<i>Total</i>	<i>Customs</i>	<i>Actual</i>	<i>Compensated</i>
As a percent of GDP				
1989–90	15.98	3.71	8.74	8.74
2002–03	14.52	1.82	9.51	8.05
Difference	-1.46	-1.89	0.77	-0.69

As to sustainability tests on the public debt, it is not a good idea in general to club public sector commercial enterprises together with core government.⁵ When the assets subtracted from such a gross aggregate to get the net series are confined to official reserves (not including reserves of public sector enterprises), the resulting series is conceptually unclear. The twin tests performed for the null of a unit root and the null of (trend) stationarity point to nonstationarity of the discounted debt series in the case of all except B_2^* (although the reason for this exception is not visually clear from figure 2). Also, the graph of B_1^* does not suggest supersolvency, as the authors suggest.

4. The larger issue, and the failure of the literature to address the issue adequately, is set out in detail in Rajaraman (2004).

5. Rajaraman and Mukhopadhyay (2004).

Blunted Incentives

The section on the financial sector speaks of blunted incentives implicit in public ownership of the commercial banks and other financial institutions. Although publicly owned commercial banks account for 78 percent of total deposits, there are only twenty-eight publicly owned commercial banks (PSU banks) in a field of eighty-eight banks overall.⁶

When going into the ownership issue, theory about blunted incentives should not blind us into not looking at actual outcomes. Although the mean performance of publicly owned banks is lower than that of all other banks, the dispersion within the set of PSU banks is very wide. Regardless of the financial indicator used, whether it is nonperforming assets, or any indicator of operational efficiency, some PSU banks handily outperform other banks, whether foreign or domestic. A panel regression exercise for the twenty-seven PSU banks, over the period 1995–2000, shows fixed, bank-specific effects indicative of systematic differences within the set, although the fixed effects do not say anything about why these differences exist.⁷ What the findings do show is that ownership is not destiny, and that it would be more fruitful to focus on the many critical regulatory and other reforms needed in the financial sector, which still remains precariously poised, rather than to focus exclusively on the ownership issue.

The paper mentions the persistence of financial suppression. The suppression of interest rates in the system, which was slowly lifted starting in 1975, is now virtually complete, barring a few interest rates on small loans. Rates on small savings continue to be administratively set, the political economy of which is set out in detail elsewhere.⁸ This intervention serves to hold up interest rates, rather than hold them down. I am not sure the term *financial suppression* can be applied to such a situation, although I concede that this is a definitional issue.

Fiscal Rules

In the study of the consolidated deficit, which is the source for the figures and table displayed in my comment, the econometric results show evidence that the fiscal deficit in India responds to both the political cycle and the business cycle. There is an inherent tension therefore in the design of fiscal

6. At the end of March 2005, according to the RBI (2005), down from a total of 101 in 2000.

7. Rajaraman and Vasishtha (2002).

8. Rajaraman (2006).

rules for India, whether at national or subnational level, between providing enough flexibility to respond to the business cycle, while constraining pre-election profligacy. The Punjab FRBMA has an explicit provision for barring fiscal profligacy in the six-month period leading up to elections. Clearly this still leaves room for endogenous fixing of election dates so as to subvert the intent of the provision. There is always an enforcement problem, but fiscal rules in India are a start, and a very necessary one, toward requiring that fiscal correction should focus on the current account rather than on capital expenditure.

After the report of the Twelfth Finance Commission (TFC) was made public in March 2005, there is on offer a reward of a substantial reduction by 300 basis points on the interest rate on state debt owed to the national government, for states that enact FRBMAs with five required features. One of the features is elimination of the revenue deficit by 2008–09, with a stated path to that target, and another is reduction of the fiscal deficit to 3 percent (with no stipulated year). States responded immediately to this incentive. As a result, the number of states that had enacted fiscal rules had grown to eighteen by the end of 2005, and is continuing to rise.⁹ The TFC has had the salutary effect of making states respond voluntarily to the incentive to enact FRBMAs with a commitment to elimination of revenue deficits by a specific date. The enforcement issue remains.

General Discussion

Ashok Lahiri, as chair, addressed Robert Lawrence's question as to why India's culture of fiscal sobriety had deteriorated after the 1980s. In Lahiri's view, this was in part due to the arrival of coalition politics at the center and the end of the monopoly of the Congress Party. He agreed with Indira Rajaraman that the underlying cause of fiscal stress was less spending profligacy and more the liberalization of interest rates on government debt. While agreeing that even better performance was needed, he observed that India's ICOR as measured by the paper was similar to that of most developed countries, better than India's past performance and better than that of China. On crowding out, he noted that significant demand for government paper remained in the system, as indicated by the Reserve Bank's use of special securities for sterilization operations under the so-called market stabilization

9. A detailed discussion of the incentives offered by the TFC, and the problems with them, is in Rajaraman and Majumdar (2005).

scheme (MSS). Lahiri saw the “lazy banking” episode of excessive commercial bank purchases of government debt as largely cyclical and already unwinding. Finally, he felt the paper’s critique of the FRBMA was somewhat harsh: the postponement of deadlines was a response to the delay in promulgating the law and announcing the rules; the existence of a law could be useful and was unlikely to do any harm.

T. N. Srinivasan judged that the paper’s presentation of crowding out of private investment was too sweeping. His own reading of the experience of the 1990s suggested that there was a break around 1996–97, after which growth rates stopped rising and began fluctuating around an average significantly lower than the 6.8 percent attained during 1992–93 to 1996–97 and private investment weakened. He favored the hypothesis that after the break the private investment schedule had shifted to the left; it appeared now that it was in the process once again of moving back to the right.

On public dissaving crowding out private saving, Srinivasan said the weakness of the Indian private saving data simply did not allow meaningful statements to be made about Ricardian equivalence. He also did not agree that trade liberalization was substantially responsible for fiscal stress and thereby for a collapse of public investment, nor that this reduction had been particularly harmful for economic growth. Public domination of infrastructure had in the past crowded out private investment; as the public sector withdrew, the private sector was expected to step in. Its inability to do so was for a set of regulatory failures (exemplified by the ill-fated power plant at Dabhol) and not for macroeconomic reasons.

The remainder of the discussion focused on the inefficient (or suboptimal) allocation of resources by the financial sector and policy responses to remedy this. Kaushik Basu was troubled by the conclusions reached by Abhijit Banerjee on misallocation of resources by the financial system. He did not consider it inefficient or irrational for banks to lend to cash-rich borrowers. This was an effective marker of a person with the necessary range of contacts needed to realize an entrepreneurial opportunity. Banerjee disagreed: his study suggested that the beneficiaries of bank credit were actually producing very little. Others asked what the penalties were for nonperformance by both borrowers and banks, and the role of the supervisors in enforcing such penalties, particularly where publicly owned banks were concerned.

Action by the regulators in recent cases suggested that 100 percent deposit insurance was in effect irrespective of the ownership of the commercial bank. Ajay Shah noted that where the dominant shareholder was the government, private shareholders were not dispossessed: government was willing to undertake full recapitalization of any capital deficit that might arise. In the

case of a so-called “new” private sector bank, however, existing shareholders had indeed lost all their equity. Thus there was the beginning of some incentive by shareholders to monitor bank asset quality, but none as yet by depositors.

The issue was how to change the lending behavior of banks. Shah agreed that privatization of existing public sector banks was extremely unlikely in the current political environment. There was also no reason to be unduly pessimistic; even in the current environment of moral hazard, new private banks had shown themselves to be capable of disciplined, innovative lending. But their expansion continued to be hindered by a range of regulations whose effect, if not intention, was to limit competition. Enhanced freedom of entry was thus important to improve commercial bank performance. Furthermore, at least for major corporations, the capital markets were now providing an alternative source of funding. Banerjee countered that the evidence available from banks that were and were not nationalized in 1980 is that competition per se did not significantly influence bank behavior.

Surjit Bhalla believed that the willingness of the banks to prefer government debt over loans was perfectly rational in an environment of disinflation; he also pointed to the role of high administered interest rates on small savings schemes as an important explanation for high real interest rates and reduced appetite for borrowing. Banerjee believed that there was an important qualitative difference between commercial banks deploying resources in credit operations versus securities, since the former generated valuable information, particularly regarding the opportunities facing new firms. Suman Bery asked whether anybody still believed in the McKinnon-Shaw view of financial repression; in that view, high real interest rates were a positive, not a negative. He also asked if the government had gone overboard in eliminating its recourse to foreign net financing; an optimal debt management strategy would presumably provide some role for foreign debt, reducing the draft on domestic savings. Finally he asked if there was a clear agenda of institutional innovations (such as credit bureaus) that could help improve access to the financial system, as had happened so successfully in the United States over the past fifty years.

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