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India: Selected Issues

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INDIA

Selected Issues

Prepared by T. Callen, M. Mühleisen, D. Tzanninis (all APD),
and N. Mohanty (India Resident Representative's Office)

Approved by the Asia and Pacific Department

August 11, 1998

Contents Page

Tables

Charts

Text Boxes

I. Tax Revenue Performance in the Post–Reform Period[1]

Abstract: *This paper reviews the revenue impact of tax reforms implemented by the central government since 1991. Overall revenue has declined relative to GDP, owing to substantial tax cuts in recent years, but elasticity estimates point to small improvements in the revenue–generating capacity of the tax system. Partly based on a comparison with taxation in other Asian economies, the paper concludes by outlining elements of the remaining reform agenda to raise India's tax revenue above the pre–reform level. In the short–term, the priority should be on base–broadening measures, while longer–term steps would include moving to a VAT, improving taxation of agriculture, and strengthening tax administration.*

1. Since 1991, tax reforms have been an integral part of economic reforms in India. Following a blueprint laid out by a Tax Reforms Committee, the system of central government taxation has been streamlined as rates have been reduced and rationalized, while some base–broadening measures were implemented and new tax categories have been introduced.[2] The overall objective of the reforms has been to increase the revenue–generating capacity of the tax system, while at the same time facilitating economic growth by rendering the system more efficient, setting stronger incentives for saving and investment, and making taxation more equitable. States have also begun to reform their individual tax systems along similar lines, but the pace of implementation has been considerably slower and more uneven.[3]

2. In conjunction with other reform measures, changes in taxation have contributed to a rise in India's long–term growth potential in recent years. The reform measures have also contributed to some improvements in tax elasticity. Nevertheless, overall tax revenue has fallen relative to GDP in the post–reform period as small gains in income tax revenue have been insufficient to offset losses on the indirect tax side. This, stronger revenue growth will require a decisive breakthrough in a number of areas where tax reforms have been lagging. In particular, there is considerable scope for removing tax exemptions for various key sectors of the economy; exploiting more fully the potential for presumptive taxation; and further streamlining the structure of indirect taxes. In addition, continued priority needs to be given to further strengthening tax administration, especially if progress should be made towards the introduction of a VAT.

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[1]Prepared by Martin Mühleisen.

[2]The Tax Reforms Committee was chaired by Prof. Raja Chelliah. It submitted its interim report to the government in 1991, with final reports in 1992 and 1993.

[3]States have the constitutional prerogative to levy taxes on a range of activities, including agriculture, retail sales, and certain services. For a discussion of reforms and revenue performance at the state level, see Chapter III of *India—Selected Issues* (IMF Staff Country Report No. 97/74, September 1997).

3. This chapter focusses on reforms at the central government level where the thrust of recent reforms has taken place. Section A reviews the need for tax reform in India. Section B describes the measures that were introduced since 1991. Section C discusses the revenue performance in recent years, focussing on four major tax categories that constitute the bulk of central government tax revenue in India. Section D compares India's tax system with other developing countries, and section E concludes by listing options for further reform.

A. Introduction: The Need for Tax Reform

4. The macroeconomic crisis of 1991/92 had its roots in the deteriorating fiscal situation of the late 1980s. By 1990/91, the fiscal deficit of the central government had risen to 8½ percent of GDP, and the overall public sector deficit reached well above 10 percent. The increase in the deficit originated mainly on the spending side and was not directly related to a weakening of tax revenue collections. In fact, gross tax revenue of the central government was at relatively high during the latter half of the 1980s (11 percent of GDP; Chart I.1). However, it had already become obvious that the tax system was in need of major reforms.

5. India's tax revenue has not only been low by international standards, but the tax system prior to 1991 also posed two fundamental macroeconomic problems for the Indian economy. First, even during the strong growth phase of the late 1980s, the tax system lacked the elasticity to generate sufficient revenue to keep up with public spending and thus prevent the fiscal deficit from soaring. Second, the distortionary nature of Indian taxes reduced overall economic efficiency and led to wide–spread tax evasion, driving a large part of the economy underground (Acharya et al. 1986).

6. These problems were caused primarily by the following:

- **High tax rates.** Marginal income tax rates were at around 50 percent for both corporate and private income (albeit reduced from almost 100 percent in the early 1970s); excise taxes could reach as high as 125 percent, and import duties averaged above 80 percent (with the bulk of imports falling in a range of 50–150 percent).

- **A nontransparent tax structure.** There were about 20–30 excise tax rates and tariff bands, and both tax categories had a number of auxiliary and specific duties. Different rates applied depending on the use (or user) of a particular product, and concessions and exemptions were widespread. Direct taxes were subject to surcharges that applied across different tax brackets. Moreover, with frequent changes in regulations, in practice it was all but impossible for economic agents to keep track of developments in the tax system, creating uncertainty and opening inroads for corruption (Tax Reforms Committee, 1991).

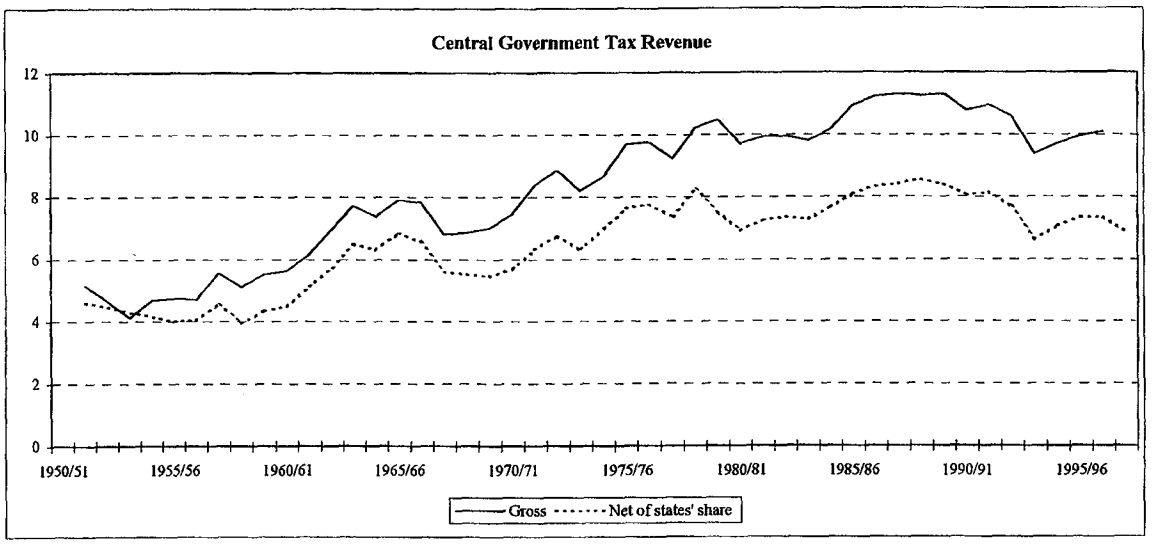
- **Insufficient coordination among tax authorities.** On historical grounds, there has been a multitude of taxes levied by all government levels in India, including central and state governments as well as local authorities. Although the bulk of public revenues has been generated by only a few major tax categories (Table I.1), the lack

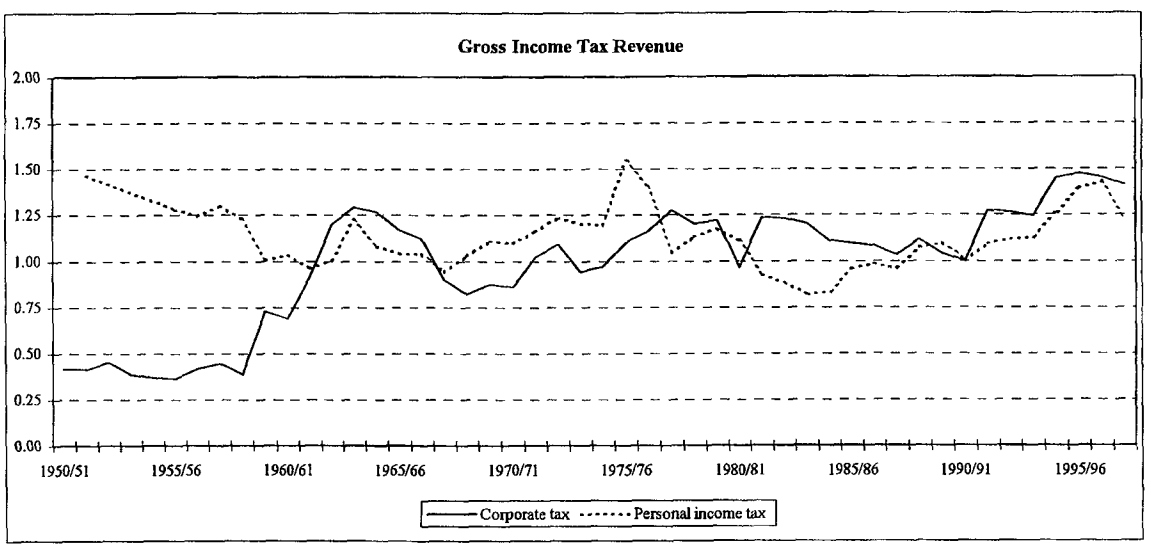
CHART I.1

INDIA

Components of Central Government Tax Revenue

(In percent of GDP)





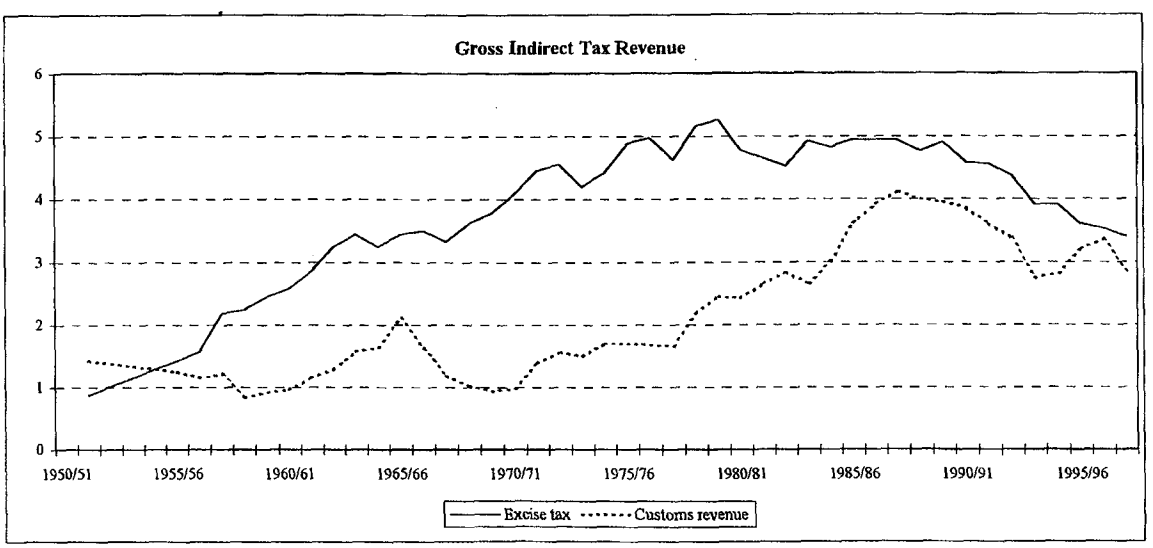


Table I.1. India: Combined Tax Revenue of Central and State Governments, 1990/91-1996/97

(in billions of rupees)

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	R. E. 1/ 1996/97
Taxes on Income and Expenditure	114.2	155.3	182.6	207.9	275.6	343.2	398.1
Corporate income tax	53.4	78.5	89.0	100.6	138.2	164.9	185.7
Personal income tax 2/	53.7	67.3	78.9	91.2	120.3	156.0	182.3
Agricultural income tax 3/	2.0	2.0	1.1	1.1	1.0	1.5	2.1
Expenditure tax	0.8	...	1.5	2.3	2.0	2.3	2.9
Interest tax	...	3.1	7.2	7.3	8.0	11.7	17.1
Tax on Professions, Trades, etc. 3/	4.4	4.4	4.9	5.4	6.2	6.8	7.9
Taxes on Property and Capital Transactions	29.8	36.3	41.0	44.8	64.1	73.6	79.8
Wealth tax	2.3	3.1	4.7	1.5	1.1	0.7	0.8
Estate duty 2/	0.0	0.0	0.0	...	0.0	0.0	0.0
Gift tax	0.0	0.1	0.1	0.1	0.2	0.1	0.1
Stamps and registration fees 3/	21.1	26.5	29.8	35.5	50.9	59.0	67.9
Land revenue 3/	6.1	6.4	6.2	7.3	11.4	13.3	10.4
Urban immovable property tax 3/	0.2	0.2	0.3	0.4	0.6	0.5	0.6
Taxes on Commodities and Services	724.0	826.9	906.3	957.0	1,138.6	1,331.9	1,530.5
Union excise duties 2/	245.1	281.1	308.3	317.0	373.5	401.9	450.1
State excise duties 3/	48.0	54.4	62.6	71.1	77.5	85.2	87.7
State sales taxes 3/	176.7	210.6	233.5	276.4	331.5	354.8	445.1
Customs revenue	206.4	222.6	237.8	221.9	267.9	357.6	428.5
Service tax	...	...	...	...	4.1	8.6	10.6
Other central taxes	2.8	5.2	3.8	3.5	5.8	6.3	6.7
Taxes on vehicles 3/	15.7	18.4	21.9	25.8	30.8	37.3	40.3
Taxes on passengers and goods 3/	10.6	11.4	12.8	14.8	14.8	15.1	17.8
Electricity duties 3/	11.8	16.0	17.5	17.3	22.4	23.8	29.8
Entertainment tax 3/	4.1	3.5	4.6	4.3	4.5	4.4	4.4
Other state taxes 3/	2.8	3.8	3.4	4.9	5.7	37.1	9.6
Taxes of Union Territories	11.2	12.7	15.2	12.0	2.0	2.2	2.8
Total tax revenue	879.2	1,031.2	1,145.1	1,221.7	1,480.3	1,751.0	2,011.1
(in percent of GDP)	(16.4)	(16.7)	(16.2)	(15.1)	(15.5)	(15.6)	(15.7)
Memorandum item							
GDP at market prices	5,355.3	6,168.0	7,059.2	8,097.7	9,536.8	11,189.6	12,769.7

Sources: Union Budget Documents; RBI Reports on Currency and Finance.

1/ Central government revenues are actual data, revised estimates for state revenues only.
2/ Revenue shared between central and state governments.
3/ State taxes.

of tax coordination with and across states has added to the economic burden of taxation.

7. Efforts to address weaknesses in the tax system were already underway in the 1980s, primarily through the introduction of a modified value–added tax (Modvat) in 1986.[4] However, it was the 1991 crisis that eventually gave the impetus for a broad–based and systematic review of the Indian tax system.

B. Tax Reforms Since 1991

The blueprint for reform

8. As part of its overall reform agenda, the government in August 1991 set up a Tax Reforms Committee (Chelliah Committee), charged with a comprehensive review of central government taxation. The objective was to propose a far–reaching reform agenda that, while initially being revenue–neutral, was to improve the elasticity of tax revenue and also increase the share of direct tax revenue as a proportion of both total revenue and GDP.

9. In taking up these objectives, the thrust of the Committee's proposals was to simplify the tax system by rationalizing and lowering tax rates, while at the same time eliminating exemptions and widening the tax net (Tax Reforms Committee 1991, 1992, and 1993). The proposals centered around the following elements (Table I.2):

- **Transparency and burden sharing.** A simple tax system with fewer and lower rates (both for direct and indirect taxes) would reduce economic distortions, become more acceptable to taxpayers, and diminish the discretionary power of lower tax officials. Moreover, the tax burden was to be distributed more equally through a widening of the tax net. This was to be achieved mainly through the elimination of exemptions, but the report also recommended presumptive taxation schemes for small traders and businesses. A broad range of services also was to be brought under the tax net.

- **Production incentives**. The excise tax was to be gradually transformed into a VAT (with a minimum number of rates), beginning with a full expansion to the manufacturing and wholesale stage. Similarly, tariff rates were to be reduced and streamlined, while providing for an escalating tariff structure and maintaining some protection to domestic industry.

- **Saving incentives**. The taxation of long–term capital gains and wealth held in productive assets was to be reduced to encourage saving and assist the development of capital markets.

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[4]The Modvat (a synonym for the current central excise tax) was introduced to overcome the cascading nature of the old excise tax and to prepare for a general VAT. However, the Modvat is largely limited to the production stage, with retail sales being taxed by the states.

Table I.2. India: Tax Reform At a Glance, 1991/92-1998/99

	Tax Reforms Committee Recommendations	Tax Reform Measures
Corporate tax	• Reduction of corporate tax rate from around 50 percent to 40 percent (and at most 50 percent for foreign-owned companies).	• Corporate tax rate reduced to 35 percent (48 percent for foreign-owned companies), with exemptions for infrastructure funds.
	• Presumptive and estimated income taxation for traders and small businesses.	• Presumptive and estimated income taxation for traders and small businesses introduced (partly withdrawn after generating insufficient revenue)
	• Rate of depreciation on plant and machinery of 25 percent.	• Rate of depreciation on plant and machinery of 25 percent.
		• Introduction of Minimum Alternative Tax (MAT) at 12 percent of book profits (with export profits and companies in power and infrastructure sectors excluded).
Personal income tax	• Reduction of marginal tax rates to slabs of 20, 30, and 40 percent. Inclusion of fringe benefits (rent subsidies, etc.) in taxable income.	• Marginal tax rates reduced to slabs of 10, 20, and 30 percent. Increase in standard deduction to Rs 20,000; tax deduction of contributions to life insurance and pension; mortgage relief for homeowners.
	• Rationalization of capital gains tax.	• Long-term capital gains taxed separately at 20 percent.
	• Wealth taxation confined to "unproductive assets" (residential houses, private cars, jewelry, etc.).	• Productive assets (incl. financial assets) excluded from wealth tax, threshold raised to Rs 1.5 million, rate lowered to one percent from eight percent.
	• Abolition of interest tax	• Abolition of gift tax.
Excise tax	• Gradual transformation of excise tax system to VAT at manufacturing level and wholesale stage. As a first step, reduce exemptions and extend excise tax to cover most manufacturing products.	• Excise tax fully extended to manufacturing and wholesale stage, but numerous exemptions remain
	• Extension of Modvat credits to most inputs.	• Modvat credit extended to capital goods and most inputs, including textiles and petroleum products.
	• Reduction and rationalization of excise tax rates between 10 and 20 percent. Selective excise on nonessential commodities at 30, 40, and 50 percent.	• Maximum rate lowered to 40 percent, and reduction in number of rates to eight (with some exceptions for necessities and luxury goods).
	• Switch from specific to *ad valorem* taxation.	• Most taxes switched to *ad valorem* basis.
	• Introduction of excise tax on selected services (advertising, stock brokerage, insurance, and residential telephones).	• Service tax on selected services (mainly financial and professional services); subsequently withdrawn on road transport and tour operators.

Table I.2. India: Tax Reform At a Glance, 1991/92-1998/99 (concl.)

	Tax Reforms Committee Recommendations	Tax Reform Measures
Customs revenue	• Rationalization of tariff system (reduction in number of tariff rates, elimination of exemptions, etc.)	• Auxiliary duties abolished, but 5 percent surcharge and 4 percent additional surcharge introduced on most imports. Reduction in number of tariff rates to about 10 (excluding special tariffs).
	• Reduction of import-weighted average tariff rate to 25 percent.	• Import-weighted average tariff rate reduced to 20 percent (excluding surcharges).
	• Maximum tariff rates to be reduced to 50 percent for consumer goods, 30 percent for non-consumer goods.	• Maximum tariff rate reduced to 40 percent (excluding surcharge).
	• Escalation of tariff rates from essential agricultural goods (nil) and basic inputs (5 percent) to finished products (50 percent).	• Significant tariff escalation from unprocessed to fully processed goods.
Tax administration	• Computerization	• Partial computerization of tax records
	• Improved taxpayer identification and verification.	• Tax filing requirement for persons meeting certain wealth indicators (in urban areas). Allocation of personal tax numbers to begin in 1998/99.
	• Better targeting of tax audits and prosecution.	• Significant increase in tax deduction at source.
	• Improving human capital in tax collection departments through higher pay, better training, and more selective promotion.	• Incentives for shortening litigation (*Samadhan*).
		• Introduction of one-page tax return form (*Saral*).

- **Tax administration and enforcement**. The report called for more efficient tax collection, including through improved taxpayer identification and more focussed efforts to combat tax evasion. Tax collectors were to be better paid and receive more training to boost morale, build human capital, and reduce incentives for corruption.

10. The Chelliah Committee reports have served as blueprint for reform in recent years, and many of its recommendations were implemented particularly in the 1992/93–1995/96 budgets. Tax and tariff cuts in the 1997/98 budget went even deeper than what had been proposed by the Committee. The following discussion summarizes the resulting changes in major central government tax categories and outlines the remaining agenda for reform.

Income tax reform

11. Changes in the system of direct taxes included the scaling back of the tax rate structure towards a maximum rate of 30 percent (35 percent for corporates) and reductions in the number of rates, including the elimination of surcharges (Chart I.2). Moreover, the lower limit for personal income taxation was raised in several steps to reach Rs 50,000 in 1998/99. A new long–term capital gains tax was introduced (at a 20 percent tax rate), the scope of the wealth tax was reduced to non–productive assets, the rate being lowered from 8 percent to 1 percent, and the gift tax was abolished in the 1998/99 budget.

12. Significant steps were also taken to broaden the tax net, combat tax evasion and strengthen tax administration. The scope of tax deduction at source was expanded in several stages, and an "estimated income tax" was introduced for small businesses and traders that have generally been hard to tax.[5] The 1996/97 budget also introduced a minimum alternative tax (MAT) for companies that would otherwise have avoided paying taxes altogether. Moreover, efforts have begun to fully computerize tax collection agencies, allocate unique tax identification numbers, and (in the 1997/98 budget) widen the scope of compulsory tax filing requirements based on certain wealth indicators. Finally, the 1998/99 budget introduced an incentive scheme to shorten tax litigation, aiming at reducing the large number of cases currently held up in tax arbitration or in the courts.[6]

13. While these measures have generally strengthened collection efforts, a wide range of tax exemptions still remains. For example, a vast array of tax incentives are still in place for promoting exports, foreign capital inflows, or small–scale industries (Shome 1997). In the 1997/98 and 1998/99 budgets, new tax holidays have been added for firms involved in infrastructure and housing projects, or the financing thereof, and export profits have again

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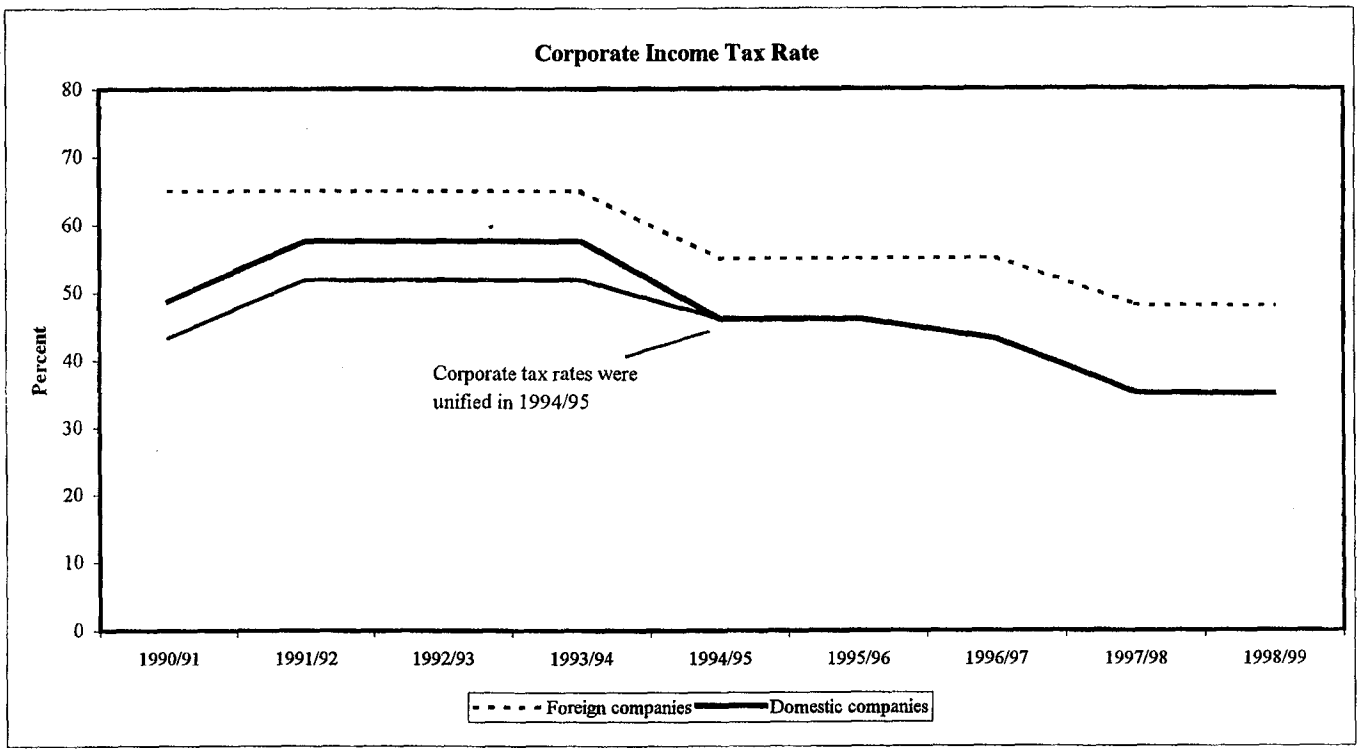
[5]The estimated income tax and an earlier flat tax scheme have generated little revenue. These taxes initially had a presumptive element (taxable income for retail traders was fixed at 7 percent of turnover), but this element was dropped in 1993.

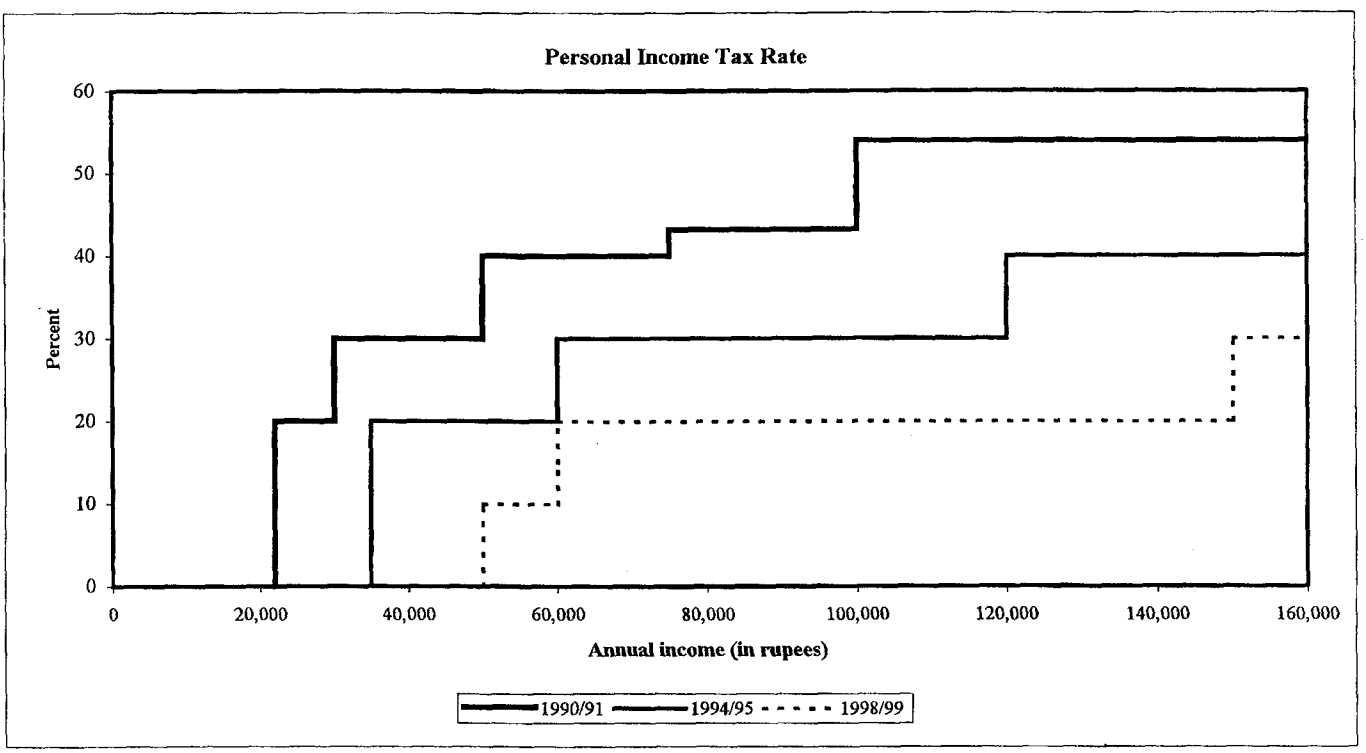
[6]There are 500,000 income tax cases under litigation, and around 100,000 cases related to indirect taxes. The gross amount of taxes under dispute is Rs 540 billion (4 percent of GDP).

CHART I.2

INDIA

Recent Developments in Income Tax Rates 1/





Source: Ministry of Finance, Economic Survey, various issues.

1/ Including surcharges.

been excluded from the MAT (which is only calculated on book profits, and not on a presumptive rate of return on assets). The introduction of new depreciation schedules also had a perceptible negative impact on the tax base, and two tax amnesty schemes in 1991/92 and 1997/98—while partly successful in generating short–term revenue—have dented the credibility of the tax collection process.

Excise tax reform

14. Excise taxes on most manufactured goods have been converted to incorporate Modvat credits for taxes paid on inputs, including raw materials and capital goods.[7] Wholesale dealers that fall within the chain of manufacturers have also become eligible for Modvat credits. The number of excise rates has been reduced to eight (with a maximum rate of 40 percent), including through a unification of basic and special excise duties; and the bulk of goods earlier subject to specific taxes have been converted to *ad valorem* rates.

15. Although these measures have brought about a simplification of the excise tax system, some major shortcomings have not yet been addressed. A number of important sectors remain fully exempt from excise taxation, including the small–scale industry sector, particularly in the areas of food processing and (hand–operated) textile manufacturing. In addition, a host of new exemptions have been granted in recent years, amounting to a revenue loss of almost Rs 20 billion, and the 1998/99 budget has further enlarged the exemption limit for small–scale sector enterprises from a turnover of Rs 300 million to Rs 500 million.[8] Moreover, the remaining number of excise tax rates is still high, and progress still needs to be made to achieve the authorities' objective of a streamlined system with a maximum of 2–3 rates.

16. The government has begun to levy a 5 percent tax on services, which had generally not been taxed before the 1994/95 budget. The service tax net has been somewhat expanded, and now includes most financial services, telephone, car rentals, and a few other selected services. A tax on road transportation was withdrawn in the latest budget following strong resistance from transport operators. The service tax is not part of the Modvat system, and a large number of services still remain untaxed.

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[7]The 1998/99 budget restricted Modvat credits to 95 percent of duty paid on inputs, partly to offset revenue losses through fraudulent claims.

[8]See Shome, 1997, for a comprehensive list of indirect tax exemptions.

Tariff reform[9]

17. Domestic tax reforms have been complemented by progressive tariff reductions. The maximum tariff rate (excluding auxiliary duties and surcharges) was lowered in several steps from 400 percent in 1991 to 40 percent in April 1997. Initially, particular emphasis was given to reducing tariffs on capital goods to give impetus to investment; subsequently, rates have also been brought down substantially on other products, maintaining an escalating tariff structure with duties sequentially increasing on raw materials, intermediate and finished goods. As a result of the tariff reductions, the import–weighted average tariff has declined from 87 percent in 1990/91 to below 25 percent in 1996/97, while the tariff collection rate has declined from 42 percent to around 30 percent over the same period (Chart I.3).[10]

18. Along with reductions in tariff rates, the structure of import taxation has also been somewhat simplified. Since 1991, the number of tariff bands has fallen from 40 to about 10, auxiliary customs duties were merged with basic customs duties, and surcharges were initially eliminated. However, the 1996/97 budget introduced a new surcharge of 2 percent to raise additional resources for financing increased investment in infrastructure, which was raised to 5 percent in September 1997 to offset a major increase in the government's wage bill. Although the average tariff increased as a result, the tariff collection rate declined further to 27 percent. The 1998/99 budget imposed an additional 4 percent tariff on most imports, with the intention to offset a perceived disadvantage from local taxation for domestic producers, and thus create a level playing field between the taxation of domestic and imported goods.

19. With the partial reversal of earlier reform measures, the tariff structure has remained complex, particularly as tariff concessions and exemptions are still widespread—the result of attempts to encourage production and export of selected products and foster infrastructure development (Bhattacharyya and Palaha 1996). The complexity has been compounded by exemptions that apply only to portions of tariff lines, and by the reintroduction of surcharges with specific exemptions. As a consequence, the scope for inefficiencies and resource misallocation remains large, and officials are still vested with substantial discretionary powers (e.g., relating to the classification of imported goods) that encourage rent–seeking behavior.

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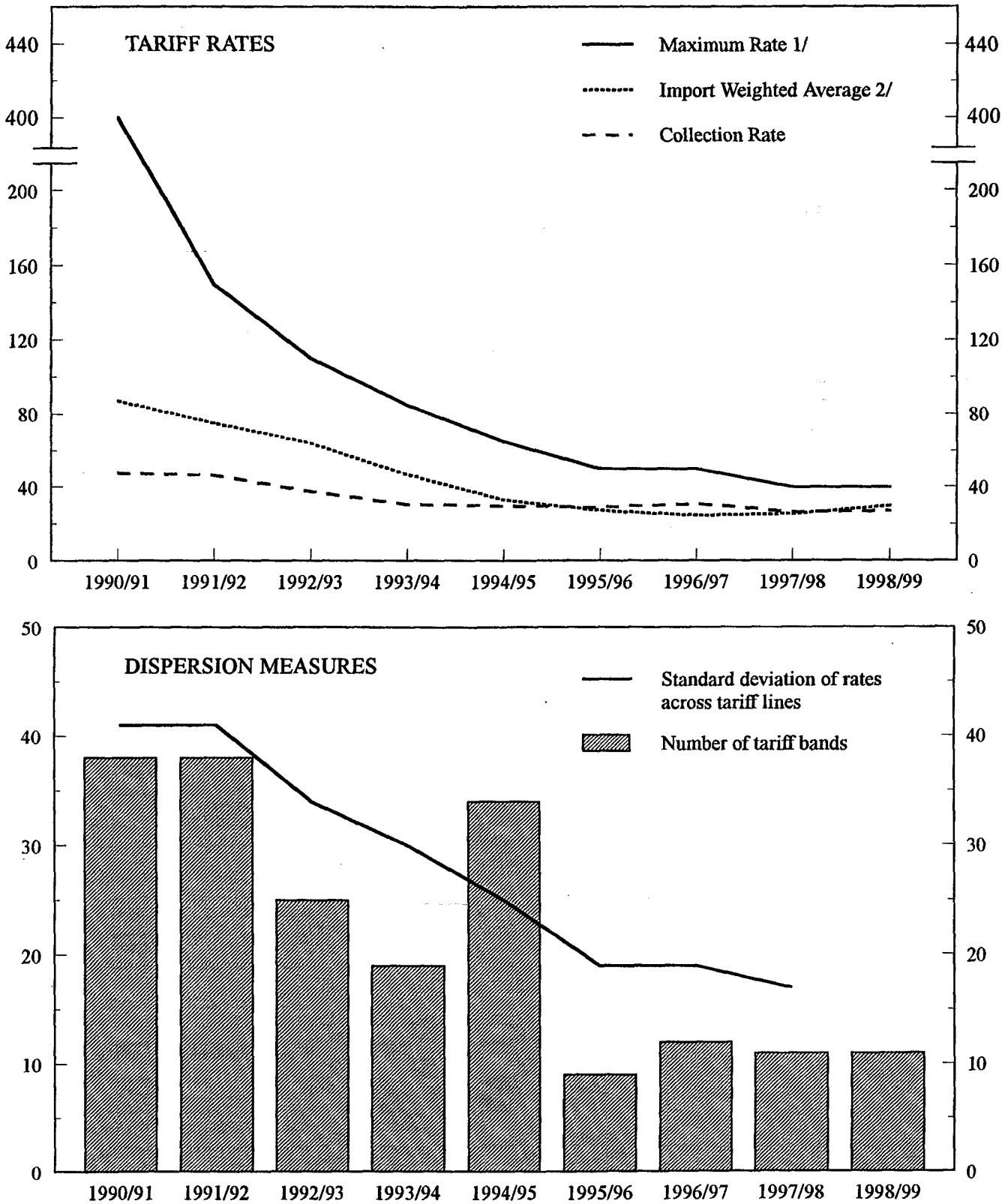
[9]A detailed discussion of tariff reforms and trade liberalization is contained in Chapter IV of *India—Selected Issues* (IMF Staff Country Report No. 97/74, September 1997).

[10]Average tariff rates are based on 1992/93 import weights. The tariff collection rate (customs revenue divided by customs imports) includes special customs duties and a few other items but should move broadly in line with average tariffs. However, since 1991, a large number of items were moved off the restricted import list and have typically become subject to the maximum tariff. This process, together with a phasing–out of some end–use exemptions, has helped limit the decline in the tariff collection rate.

CHART I.3

INDIA

TARIFF REFORMS, 1990/91 - 98/99



Source: World Bank staff estimates; and staff calculations.

1/ Excluding auxiliary duties and surcharges.
2/ Based on 1992/93 import weights.

Center–state relations

20. At present, 77½ percent of income taxes and 47½ percent of excise taxes collected by the center are transferred to the states. This system has resulted in the center's preference for tax measures that are revenue neutral or revenue positive for the center, and is a major reason for the excessive reliance on customs duties. Under a proposed new revenue–sharing agreement, a proportion (tentatively 29 percent) of all taxes collected by the center will be transferred to the states. This proposal has been accepted in principle, but requires a constitutional amendment before being implemented.

C. The Revenue Impact of the Reforms

21. Apart from their contribution to higher economic efficiency and growth (which is not covered in this paper), the success of the tax reforms should be measured against the original objectives of the Chelliah Committee agenda.[11] The following assesses the performance of tax revenue relative to these objectives, with a particular focus on developments in individual tax categories, including through the use of econometric time–series analysis.

Have the original reform objectives been achieved?

22. The main objectives of the tax reform agenda included: (i) to keep the reforms revenue–neutral; (ii) to bring about a shift from indirect to direct taxation; and, most importantly, (iii) to achieve an increase in total tax elasticity.

(i) **Revenue neutrality**. The overall impact of the reforms on revenue collection has so far been negative. Gross tax revenue of the central government fell from 11 percent of GDP in 1990/91 to 9 ½ percent of GDP in 1993/94, and has only partly recovered since, despite GDP growth being above 7 percent for three years in a row (Table I.3).

Revenue performance in 1997/98 has been particularly disappointing, partly related to a cyclical downswing in imports (particularly oil imports), but also because expected supply–side effects in reaction to substantial tax cuts have not been as large as expected. After subtracting the receipts from the Voluntary Disclosure of Income Scheme (VDIS)—a one–off tax amnesty scheme that yielded 0.7 percent of GDP—traditional tax revenues amounted to only 9½ percent of GDP in 1997/98. Although there is likely to have been some substitution between regular tax payments and VDIS receipts, the overall revenue loss since 1990/91 amounts to 1–1½ percent of GDP by this account.

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[11]Economic reforms since 1991 have led to efficiency gains and a subsequent increase in growth rates (Chopra et al. 1995). There has been no study that attributed productivity growth to individual components of the reform program. Recent cross–country studies, however, point to a generally positive impact of fiscal reforms on growth (Gerson 1998).

Table I.3. India: Central Government Tax Revenue, 1990/91–1997/98

(In percent of GDP)

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	R.E. 1/ 1997/98
Gross tax revenue	10.8	10.9	10.6	9.4	9.7	9.9	10.0	10.1
Corporate tax	1.0	1.3	1.3	1.2	1.4	1.5	1.5	1.5
Income tax	1.0	1.1	1.1	1.1	1.3	1.4	1.3	1.3
Excise taxes	4.6	4.6	4.4	3.9	3.9	3.6	3.5	3.4
Customs duties	3.9	3.6	3.4	2.7	2.8	3.2	3.4	2.9
Other taxes	0.3	0.4	0.5	0.3	0.2	0.3	0.3	0.3
VDIS	...	...	...	...	...	...	...	0.7
Less: States' share	2.7	2.8	2.9	2.7	2.6	2.6	2.6	3.1
Net tax revenue	8.0	8.1	7.7	6.6	7.1	7.3	7.3	7.0
Memorandum item:								
Budget tax measures	0.3	0.4	0.1	-0.6	-0.4	-0.2	0.2	-0.7
Tax elasticity	0.5	0.8	0.7	0.5	1.5	1.3	0.9	1.1
GDP growth	5.7	0.4	5.4	4.8	7.6	8.0	7.4	5.0

Source: Union budget documents

1/ Indications are that actual gross collections will be ¼ percent of GDP below revised estimates.

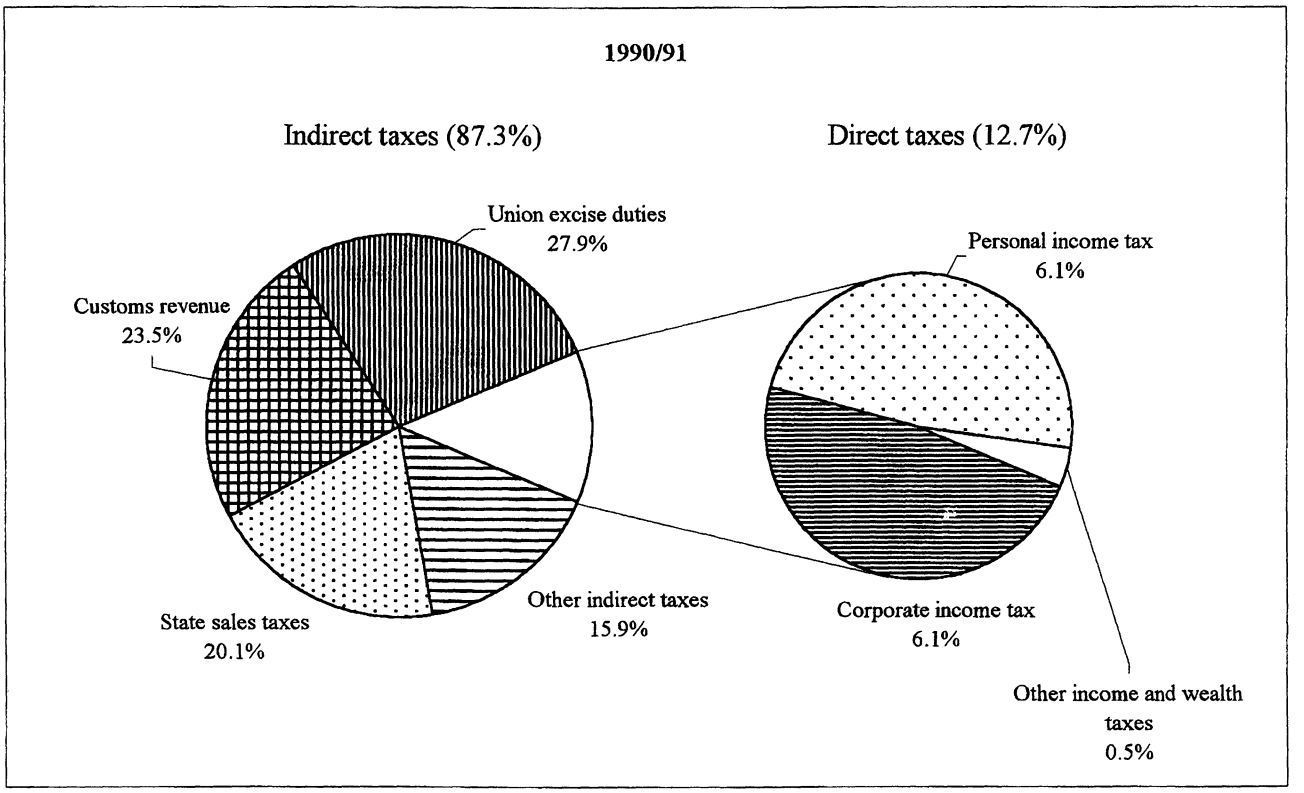
(ii) **Composition of tax revenue**. A striking development in the post–reform period has been the strong decline in indirect tax revenue, both in excise taxes which fell by 1¼ percent of GDP since 1990/91, and in customs duties which declined by 1 percent of GDP over the same period. By contrast, revenue from income taxes rose by ¾ percent of GDP since 1990/91. The share of direct taxes relative to indirect taxes has thus markedly increased in the post–reform period, as intended by the Chelliah Committee (Chart I.4); however, given the steep fall in indirect tax revenue, this has not been achieved in a way the Committee would have envisaged.

(iii) **Tax elasticity**. Although total tax elasticity (see Box I.1 for conceptual details) has improved in the post–reform period, returning to above unity in 1994/95, there has been a noticeable decline after 1995/96 (Chart I.5). With an average around 1.1 in recent years, tax elasticity would still fall short of boosting tax revenues sufficiently to create room for expenditure requirements. For example, at current growth rates, it

CHART I.4

INDIA

Composition of Central and State Government Tax Revenues, 1990/91-96/97



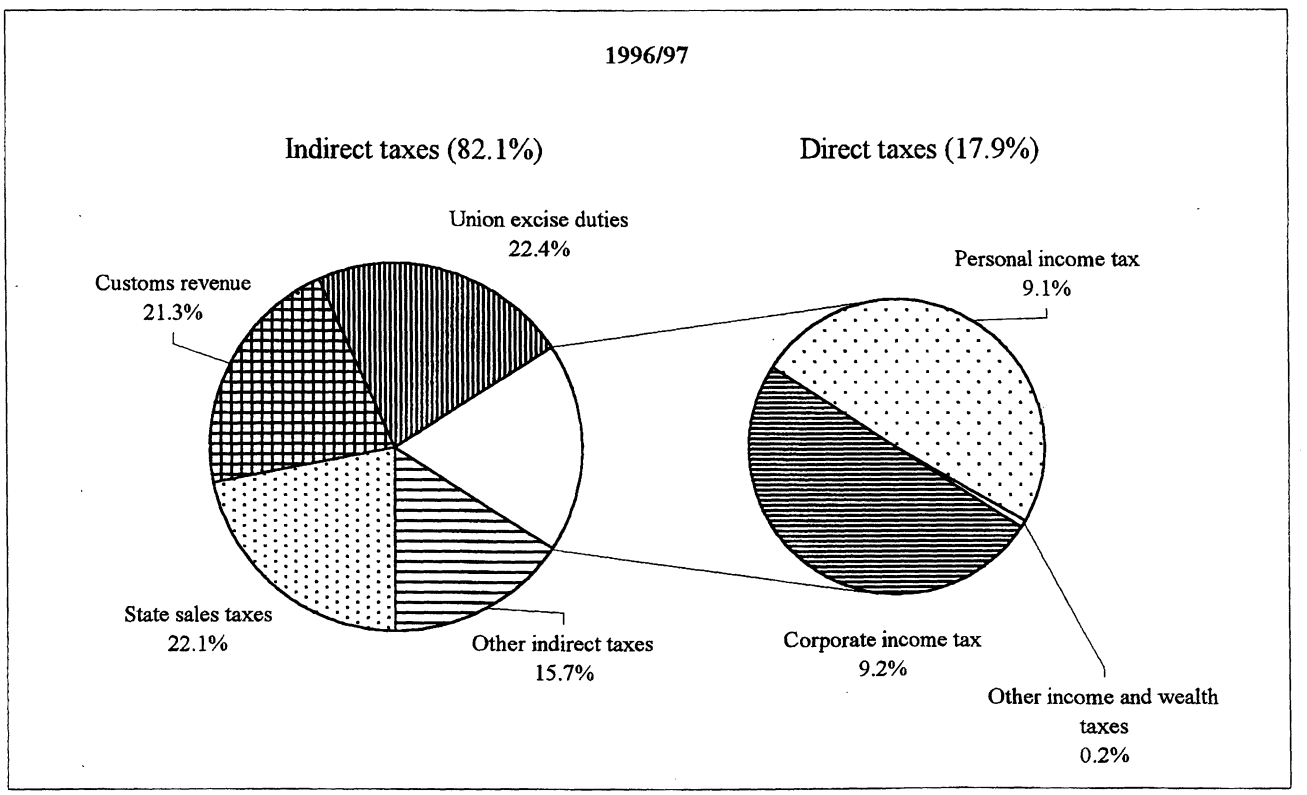
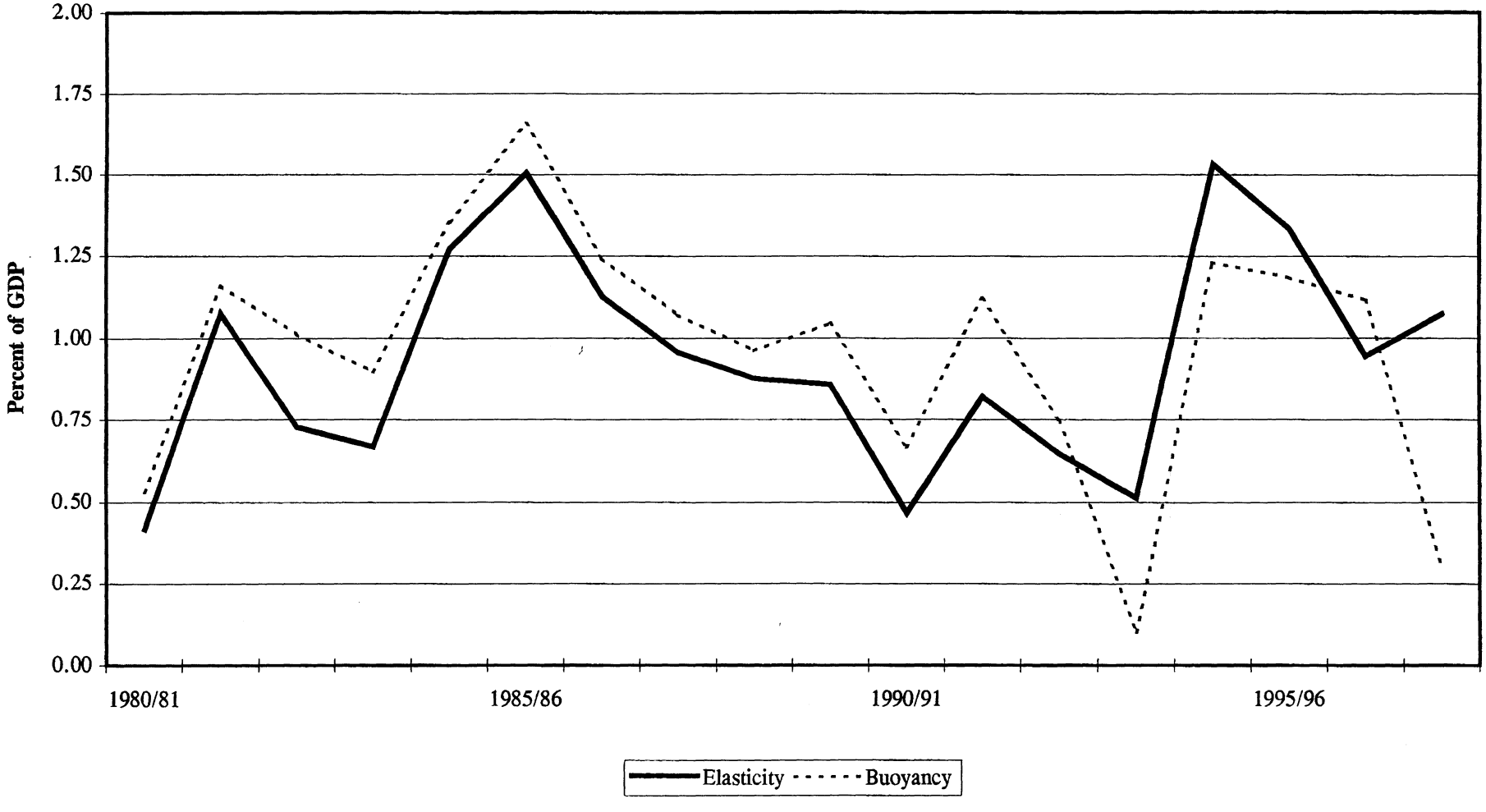


CHART I.5

INDIA

Gross Tax Revenue Elasticity 1/



Source: Data provided by the Indian authorities; and staff estimates.

1/ Excluding VDIS receipts.

Box I.1. Tax Elasticity

Tax elasticity measures the response of tax revenue to changes in the tax base that occur independent of changes in the tax system. In an elastic tax system (i.e., elasticity being greater than one), tax revenue would increase at a higher rate than national income—which would be particularly important for India, given its high needs for spending on physical and social infrastructure development.

The elasticity concept is closely related to the concept of tax **buoyancy**, which compares the change in overall tax revenue to the change in the tax base:

$$Buoyancy = \frac{\Delta T / T_{-1}}{\Delta Base / Base_{-1}}$$

However, tax buoyancy would not adjust tax revenue for changes that were made to the tax system. For example, if it is estimated that tax increases would yield an additional revenue of M in the current year, the adjusted tax revenue would be equal to $T^a = T - M$, and tax **elasticity** would be defined as:

$$Elasticity = \frac{\Delta T^a / T_{-1}}{\Delta Base / Base_{-1}} = \frac{(\Delta T - M) / T_{-1}}{\Delta Base / Base_{-1}}$$

would take about 6–7 years to increase the tax–to–GDP ratio by one percentage point (and thus return to the pre–reform revenue level) without additional tax measures.

The performance of major tax components

23. Tax reform measures have focussed to a large extent on four major categories: corporate and personal income tax, excise tax, and customs revenues. To better understand the impact of the reforms, the performance of these categories are discussed separately.

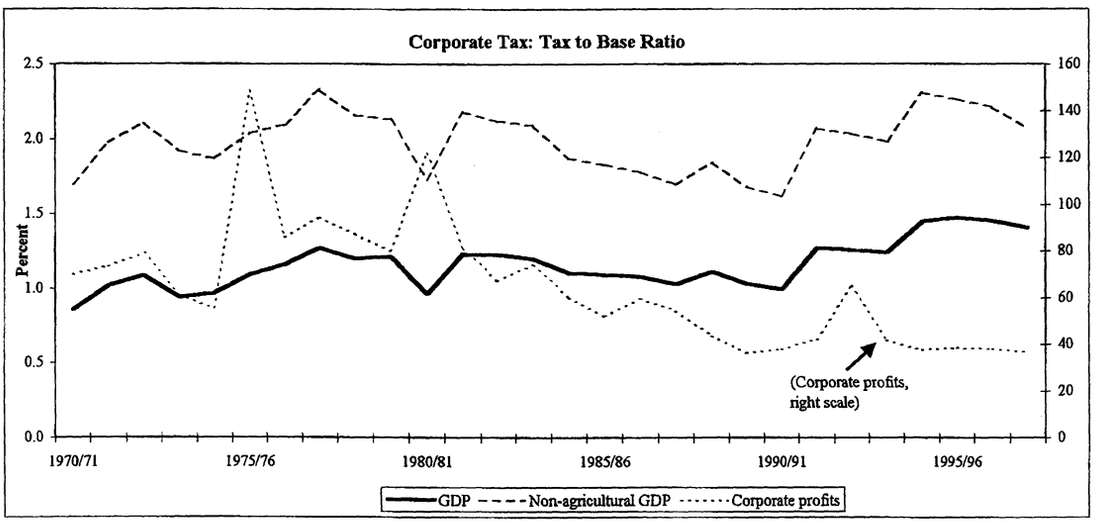
24. **Income tax**. The elasticity of corporate tax revenue has shown a clear upward trend in the post–reform period (Chart I.6). The elasticity measures improved strongly in the early years after 1991, but revenues have also responded well to tax relief measures in 1994/95 and 1997/98. Measured against corporate profits (derived from the national accounts), the corporate tax elasticity has shown a significant rebound since the mid–1980s—however, this is likely to be overstated as the national accounts appear to underestimate the increase in profits during that period. Nevertheless, independent of the tax base chosen, the elasticity is now well above one, compared to below unity values for most of the past decade.

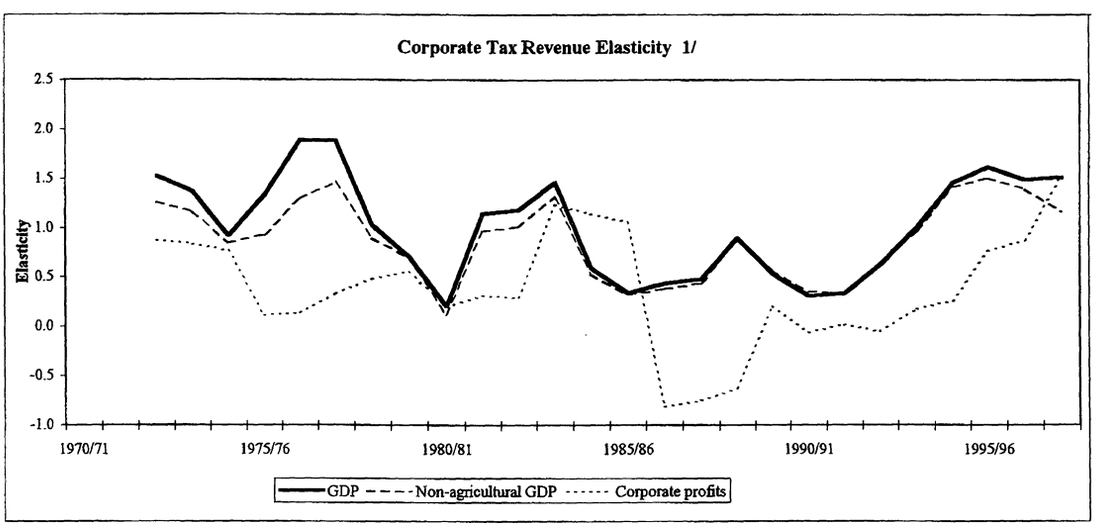
25. Similarly, personal income tax elasticity has improved sharply after 1992/93, rising from unity to a range of 1½–2, depending on the base chosen (Chart I.7). The cumulative revenue loss caused by cutting tax rates almost in half has amounted to some ½ percent of GDP, but revenues have nevertheless been growing strongly, including in 1997/98 when

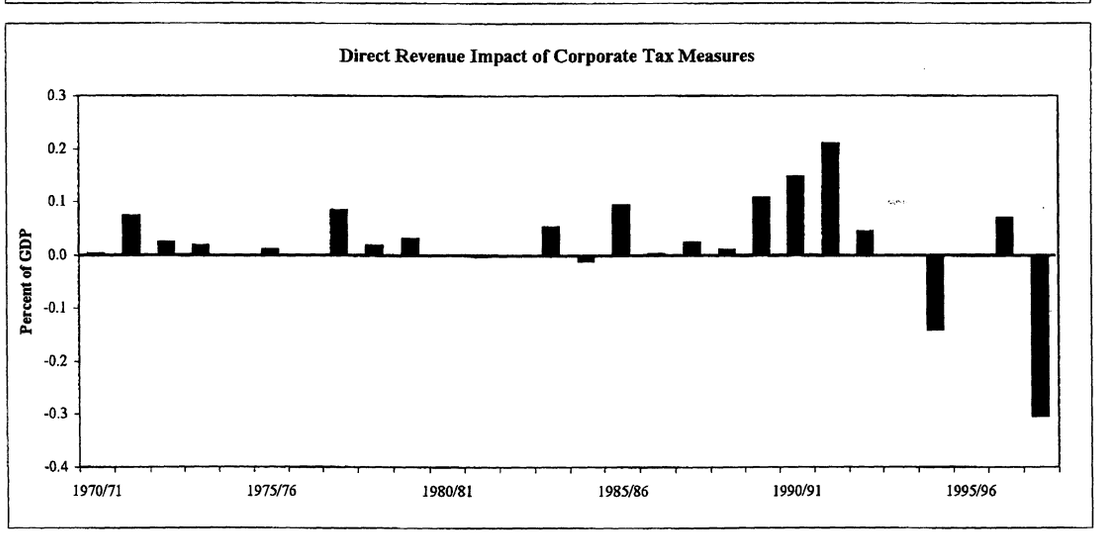
CHART I.6

INDIA

Developments in Corporate Income Tax Revenue







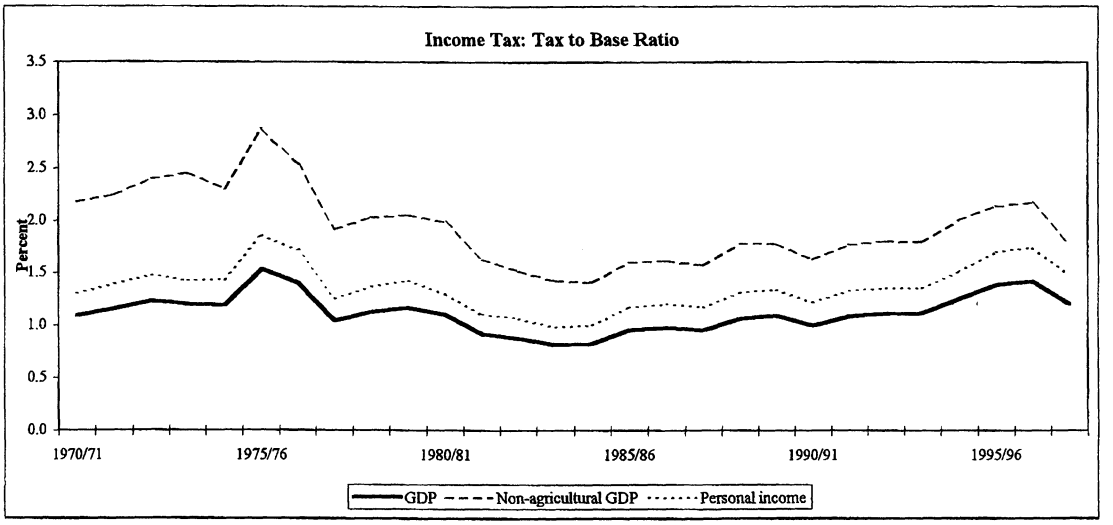
Source: Data provided by the Indian authorities; and staff calculations.

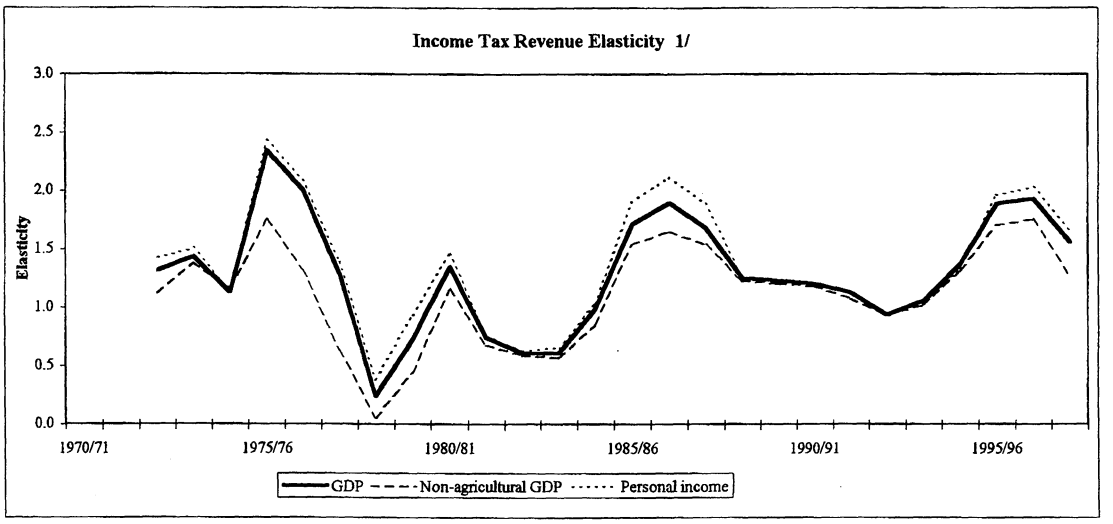
1/ Three-year moving average.

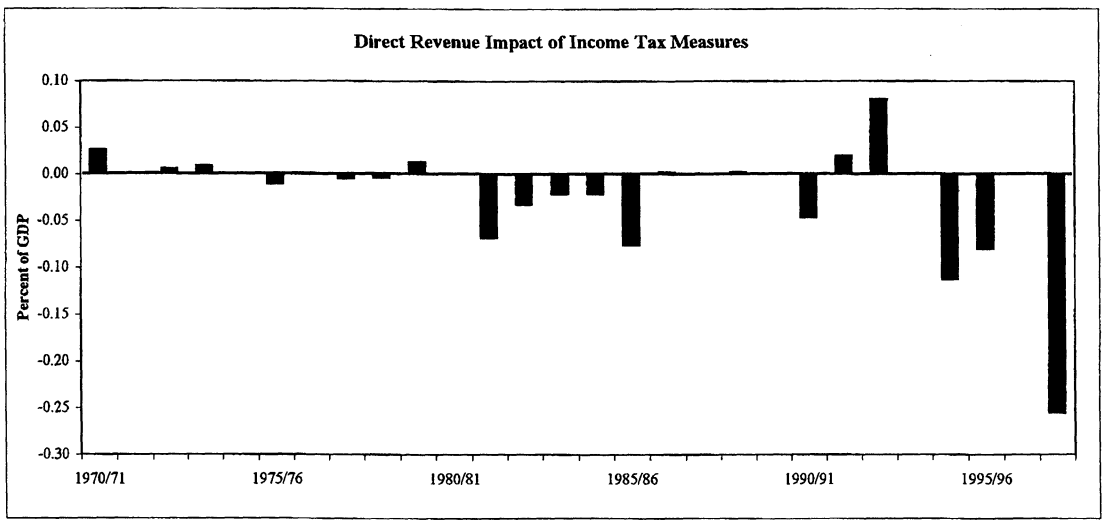
CHART I.7

INDIA

India: Developments in Personal Income Tax Revenue







Source: Data provided by the Indian authorities; and staff calculations.

1/ Three-year moving average.

other taxes have performed relatively poorly. Elasticity has recently declined, but since VDIS receipts are not included in income tax revenue, this is probably somewhat exaggerated.The overall performance improvement in income taxes can to a large extent be linked to stronger administrative enforcement, such as through improved tax deduction at source (TDS) and presumptive filing requirements (Shome 1997). For example, the share of revenue collected through TDS increased from 37 percent in 1994/95 to 42 percent in 1996/97, and the introduction of MAT on corporate profits brought a number of the largest Indian companies under the tax net for the first time in several years.

26. **Excise tax** (Chart I.8). Excise tax revenues have declined relative to any of the tax bases used, and tax elasticity does not appear to have decisively broken a secular downward trend that began in the 1970s. Excise tax elasticity has generally been below unity, and revenues therefore had to be kept up through a steady sequence of tax measures. Since 1993/94, however, reform measures have been largely revenue–neutral, leading to an overall decline in revenue as tax elasticity has failed to improve.

27. The poor elasticity of excise revenues is related to the expansion of tax credit under the Modvat scheme that has led to sharp revenue losses in recent years, with Modvat claims increasing over–proportionally relative to gross receipts (Table I.4). Initially, this was mainly the result of not having adjusted excise rates sufficiently upwards to account for the loss of cascading revenues following the introduction of the scheme. However, there is also strong evidence for an increasing misuse of the credit system, facilitated by (i) procedural simplifications, particularly in relation to the extension of Modvat credit to capital goods and wholesale trade; (ii) poor verification facilities, resulting from lack of computerization; and (iii) insufficient determination on the part of lower tax enforcement levels to verify the validity of claims (Shome et al. 1997). Moreover, tax elasticity has been affected negatively by the increasing amount of tax exemptions for the small–scale sector which accounts for a major part of growth in the manufacturing sector. Along with other remaining exemptions, this has effectively offset a good part of recent efforts to widen the excise tax base.

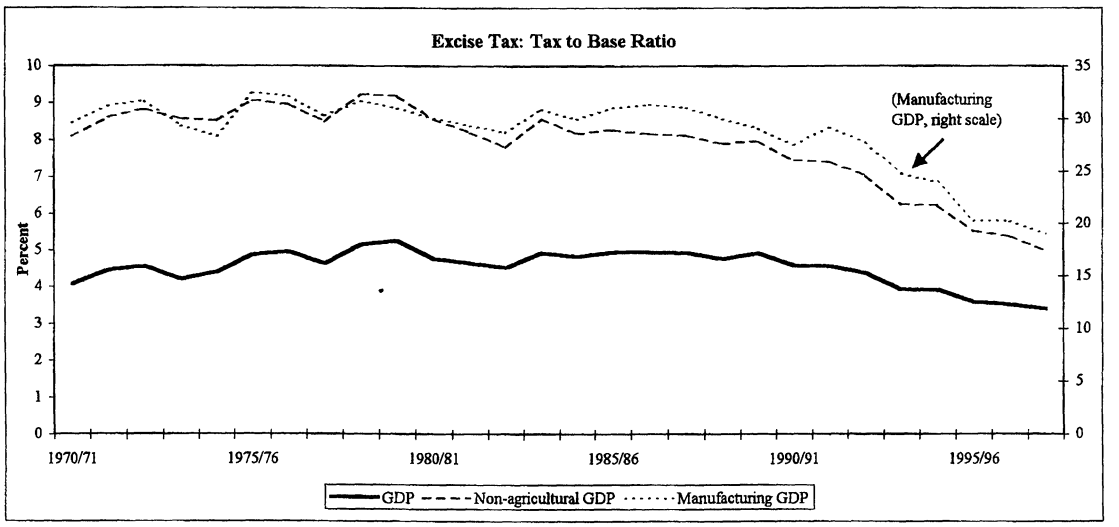
28. **Customs duties** (Chart I.9). Customs revenues have been most strongly affected by the reforms, with tariff cuts leading to direct revenue losses of about 1 percent of GDP since 1990/91. As the share of imports at higher tariff rates has increased, customs revenue elasticity has improved somewhat after 1993/94—however, this has not yet led to a sustained increase beyond unity, and the overall revenue collection rate has declined strongly as a result.

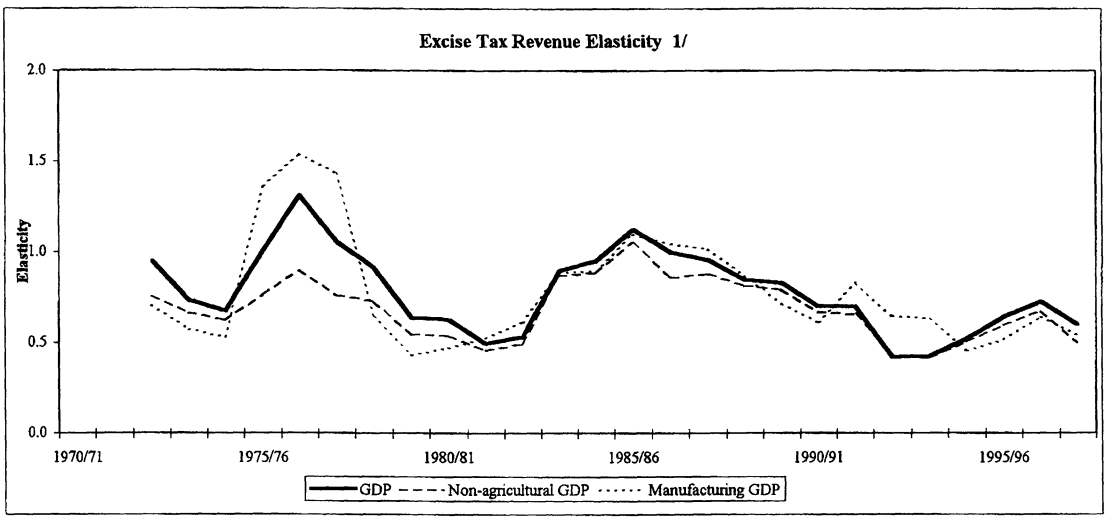
29. The relatively low elasticity in customs revenue is partly related to an ongoing shift in the composition of imports towards non dutiable goods or goods at zero–import tariff. For example, the share of non–dutiable goods increased from 17.1 percent of all imports in 1996/97 to 25.7 percent in 1997/98. Although this is partly explained by developments in international fertilizer prices and a shortfall in domestic cotton production that have led to

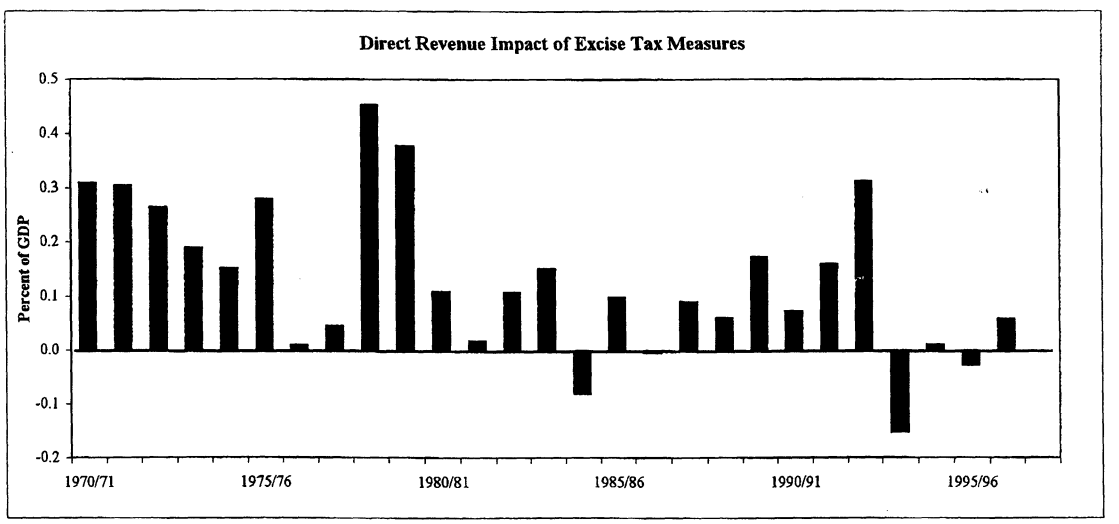
CHART I.8

INDIA

India: Developments in Excise Tax Revenue







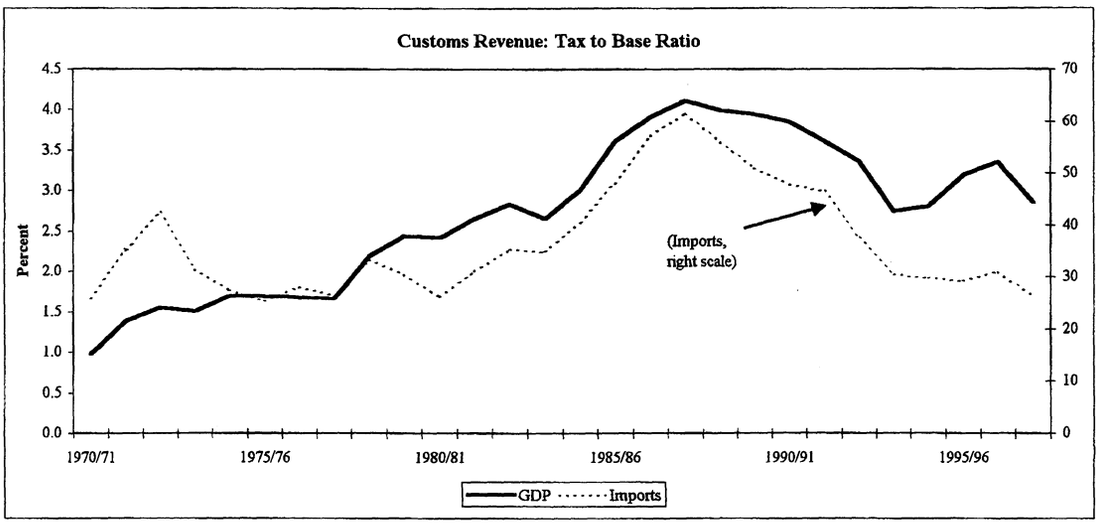
Source: Data provided by the Indian authorities; and staff calculations.

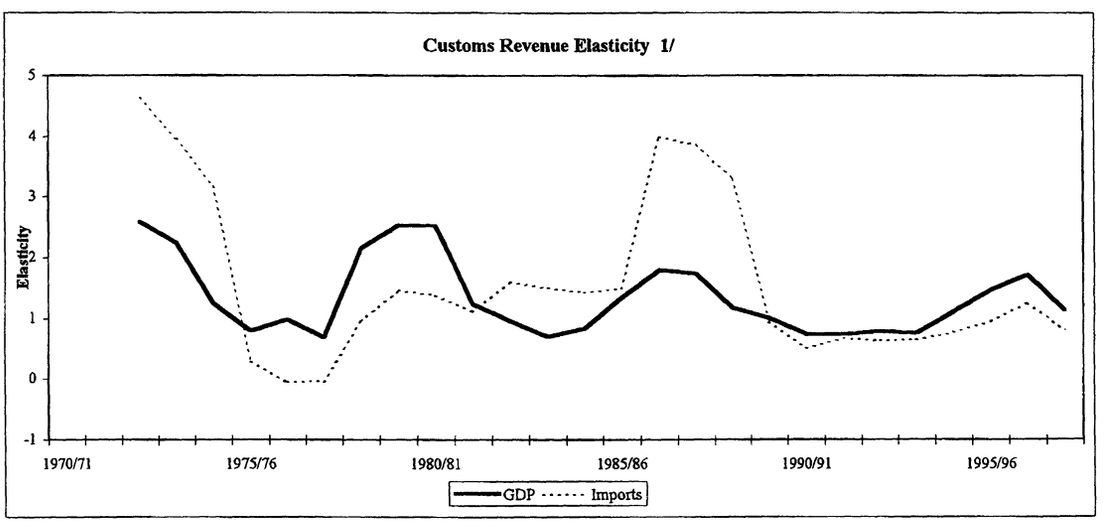
1/ Three-year moving average.

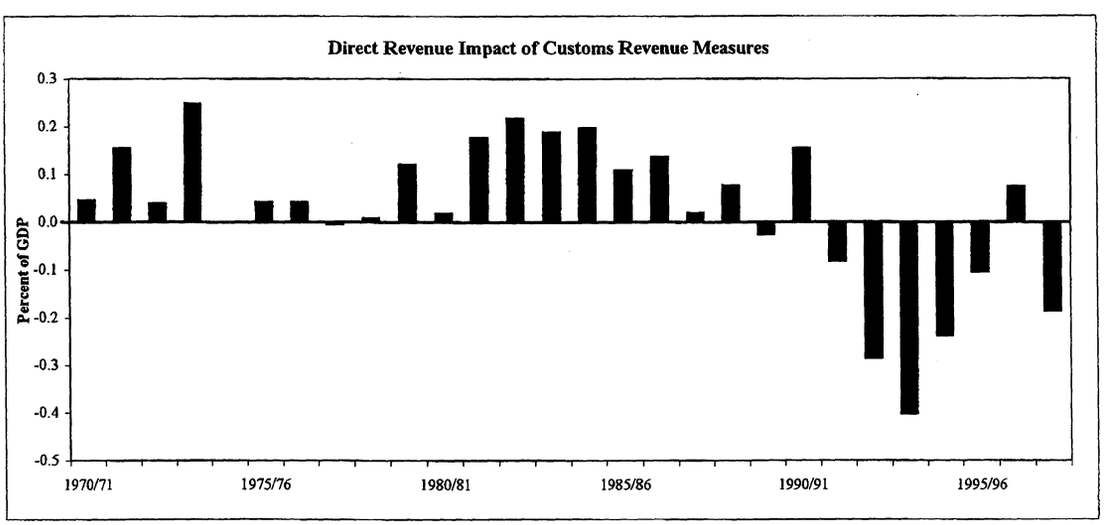
CHART I.9

INDIA

India: Developments in Customs Revenue







Source: Data provided by the Indian authorities; and staff calculations.

1/ Three-year moving average.

Table I.4. India: Excise Revenue and Modvat Credit

(in millions of rupees)

	Gross excise revenue	Modvat credit	Net excise revenue	Modvat credit (in percent of gross revenue)	Net revenue (in percent of manufact. GDP)
1986/87	163.2	19.1	144.1	11.7	30.2
1990/91	308.3	65.0	243.4	21.1	27.3
1993/94	436.1	119.0	317.1	27.3	24.8
1995/96	703.3	295.5	407.8	42.0	20.3
1996/97	791.4	342.2	449.2	43.2	20.2
1997/98 (p)	844.9	367.1	477.8	43.4	19.0

Source: Data provided by the authorities; Shome (1997); and staff calculations.

strong increases in (non–dutiable) imports of these goods, it also appears that tariff concessions granted in past years have led to an excessive weakening of revenues.[12]

Econometric analysis of revenue determinants

30. What quantitative impact did tax reforms and changes in the economic framework have on tax performance and tax elasticity? In trying to answer this question, an econometric analysis was conducted to identify tax revenue determinants in each of the four major revenue components. The results indicate that the elasticity increase in the post–reform period has been statistically significant. However, it has not been possible to determine particular factors that have contributed to this increase, except that some tax policy variables were shown to have a significant short–run impact.

31. The approach followed the Engle–Granger (1987) two–step cointegration procedure (a more detailed discussion of data requirements and methodology is contained in the Annex):

[12]For example, there are tariff incentives for the import of capital goods, provided the importer accepts the obligation to export goods of at least four times the import value of the capital good (the so–called EPCG scheme). Owing to a lack of controls, this incentive is frequently misused to import capital goods at low duty rates.

- In the first step, a regression of tax revenue on its economic tax base and other variables was used to estimate long–run revenue elasticities and possibly identify other long–run tax determinants.

- The second step was to analyze changes in tax revenue in a regression with residuals from the first step and economic variables with short–term impact (including policy–related variables) as independent variables.

32. **Long–run equation**. The results for the first step are given in Table I.5, showing elasticities for each tax category over several periods. The relatively good performance of both income taxes is evident, while the elasticity of excise revenue is shown to have declined in the post–reform period. The elasticity of customs revenue has remained around unity which suggests that, in effect, the deep tariff cuts in recent years have not been offset by any base–widening measures.[13]

33. The regressions have been disappointing in the sense that, except for a strong link between tax revenue and base for all revenue categories, no significant long–run relationships with other economic variables were found.[14] However, model specification tests have consistently identified the post–reform period (beginning in 1991/92) as a period with significantly different tax elasticities, necessitating a split of the regression into pre– and post–reform periods through the introduction of dummy variables. The presence of structural breaks is by itself evidence that the fiscal framework has changed after 1991. However, owing to the lack of significant explanatory variables, it is unclear whether this change reflects budgetary measures or economic reforms more generally.

34. **Short–run behavior**. The second step of the Engle–Granger approach consists of an equation that specifies the short–term movement of cointegrated variables (Table I.6). Explanatory variables include the residual of the first–step regression and lagged first differences of tax revenue, as required by the error correction mechanism of the Engle–Granger approach. These variables are generally significant, showing a strong adjustment of corporate tax revenue to the underlying long–run relationship, and a weaker one for personal income tax and excise duties.[15] The short–term equation for customs revenue yielded an insignificant error–correction coefficient and is therefore not presented.

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[13]There are indications that the customs equation is not co–integrated (see Annex). However, the estimated elasticities have been broadly consistent with results from the 2SLS approach.

[14]The search extended to variables that could have either direct or indirect effects on tax revenue (e.g., growth, inflation, and financial variables), and also included other model specifications (e.g., two–stage least squares).

[15]The error–correction coefficient for corporate tax revenue is larger than one, which could have economic reasons (e.g., changes in the adjustment process due to structural breaks) but would warrant further analysis.

Table I.5. Average Tax Revenue Elasticities by Period 1/

(Results of cointegration equation)

	Corporate income tax	Personal income tax	Excise tax	Customs revenue
	Pre-1991 elasticities			
Periods identifed by structural breaks				3.09 (1969-72)
	0.90 (1969-80)	1.15 (1969-76)	0.68 (1969-82)	0.95 (1973-85)
	0.49 (1981-90)	1.09 (1977-90)	0.78 (1983-90)	0.99 (1986-90)
	Post-reform elasticities (1991-97)			
	1.36	1.64	0.68	0.96
Cointegration test 2/	-4.92	-3.35	-3.35	-3.22
Base	Non-agricultural GDP	Non-agricultural GDP	Non-agricultural GDP	Goods imports

Source: Staff calculations.

1/ Periods refer to fiscal years, with 1969 equal to 1969/70.
2/ Phillips-Perron test.

The estimated OLS-regression was: $T = \alpha_0 + \beta_0 B + \Sigma (\alpha_i \delta_i + \beta_i \delta_i B)$. T is adjusted tax revenue, B is the tax base (all in natural logs). Structural breaks were have been identified in various years t_1, t_2, etc.; δ_i is a dummy variable with $\delta_i = 1$ for $t > t_i$. The revenue elasticity for the first period is β_0, $\beta_0 + \beta_1$ for the second period, etc.

Table I.6. Results of Error-Correction Model

Regression (OLS): $\Delta T = \gamma + \gamma_0 ECM_{-1} + \Sigma \gamma_i \Delta T_{-i} + \delta x$ 1/

	Corporate income tax	Personal income tax	Excise tax
ECM_{-1}	-1.88 (6.04)	-0.48 (2.02)	-0.50 (2.02)
$\Delta\log(T_{-1})$	1.27 (3.22)	0.29 (1.75)	
$\Delta\log(T_{-2})$	0.36 (2.20)	-0.31 (1.84)	
$\Delta B^* / \Delta B$	-0.01 2/ (2.09)	0.01 (2.67)	0.03 (2.26)
$(T / T^*)_{-1}$	-0.91 (2.49)		
ΔIm			0.10 (2.08)
R^2	0.68	0.48	0.43
Base	Non-agricultural GDP	Non-agricultural GDP	Non-agricultural GDP

Source: Staff calculations.

1/ T is adjusted tax revenue, ECM is the cointegration residual. The vector x comprises other variables, e.g. the proxy for base-broadening measures ($\Delta B^* / \Delta B$; ie. budgeted growth rate of tax base relative to growth rate of economic base), a measure for past tax revenue realization relative to budget ($(T / T^*)_{-1}$), and changes in imports (Im). All variables in logs. Numbers between parentheses indicate t-values.

2/ Lagged once.

35. Two fiscal proxy variables were employed to capture the effects of budget policies (see Annex for the definition of the variables):

- The first variable ($\Delta B^* / \Delta B$) that relates budgeted base growth to actual base growth, has been found positive and significant for personal income tax and excise duties. This appears to confirm the positive impact of administrative tightening in income taxation, while also pointing to some short–term success in widening the excise tax net. As evident from the decline of elasticity in the long–run equation, however, these short–term effects were offset by factors that led to the large increase in claims under Modvat. For corporate income tax, a negative coefficient indicates that expectations of business profits have systematically been over–optimistic.

- The second variable (T_{-1} / T_{-1}^*) has only been significant in the case of corporate income tax revenue, indicating that revenue shortfalls in this category have typically prompted efforts to recoup some of these losses in the following period (this is consistent with the strong error correction mechanism noted above).

36. Finally, most other variables that were included have not contributed to the explanatory power of the regressions. A notable exception was that an increase in imports would lead to an increase in excise tax revenue, presumably because imported goods tend to include relatively more high value added items than domestic goods.

D. Tax Revenue in an International Context

37. In addition to analyzing India's revenue performance separately, what lessons can be drawn from comparing India with other developing economies? This section argues that, even after accounting for a number of adverse structural factors, the present tax collection ratio in India is low by international standards, and could be improved by adopting reform measures similar to those in other emerging economies.

Revenue comparison

38. India's low tax revenue ratio is to some extent related to the structure of its economy. As outlined by Tanzi (1992, 1994), economies with a high share of agriculture (and, typically, low per–capita incomes) and a low share of imports relative to GDP tend to generate relatively less tax revenue:

- The **share of agriculture** in India's GDP is about 30 percent—a medium to high share among developing countries. Relative to other countries, India thus faces greater difficulties in generating revenue, given widespread difficulties in taxing the agricultural sector. Moreover, a larger share of rural population is also often associated with relatively lower pressures on spending on, e.g., urban infrastructure, housing, or the urban poor.

- The **share of imports** in GDP has increased to 13 percent in recent years, but India still has a relatively closed economy. With imports constituting an easily accessible tax base, India is therefore at a relative disadvantage compared to other countries.

39. These two factors, together with the external debt ratio, explain statistically more than half of the variance among tax ratios in developing countries.[16] Therefore, even among that group of countries, India's tax revenues would not *a priori* be expected to be very high.

40. However, even after these factors have been taken into account, central government tax revenue in India is low relative to other countries. Based on a regression formula given by Tanzi (1994) that is applied to India's structural characteristics, central government tax revenue would be projected above 13 percent of GDP, as opposed to the present level of below 10 percent of GDP.[17] Indeed, the revenue increase over the medium–term would need to be even higher as India aims at improving average incomes. As shown in Table I.7, tax revenues in countries with a low to middle per–capita income level were almost double those of low–income countries. Thus, even if India's tax revenue was raised by 3 percent of GDP, it would still be on the low side relative to countries with similar income levels.

Tax base and tax rates

41. A detailed comparison of India's tax system with other countries is beyond the scope of this paper, and hence the following discussion is limited to a comparison of tax rates and tax coverage with a selected group of Asian countries—namely China, Korea, and the Asean–4 countries (Indonesia, Malaysia, the Philippines, and Thailand).

- **Corporate income tax.** Despite the tax cut in 1997/98, India's corporate tax rate still remains higher than that of these countries, with the exception of the Philippines and Thailand which also have a tax rate of 35 percent.[18] By contrast, the Indian tax base is fairly narrow—comprising mainly trade, commerce, and manufacturing—compared

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[16]A high ratio of external debt to GDP creates pressure to generate revenues for debt servicing. India's external debt has been well managed in the 1990s, and its external debt ratio was relatively low at 25 percent in 1997/98.

[17]This result needs to be qualified in two respects. First, state and local taxes in India account for about 6 percent of GDP (see Table I.1) which is higher than in many other developing countries. A comparison of central government revenues therefore does not fully reflect India's revenue position. Second, however, official GDP estimates in India are widely believed to under–report economic activity by a factor of 20 percent or more. According to such estimates, central government tax revenue could be as low as 8–8½ percent of GDP, and total public sector tax revenue would be around 12½ percent of GDP.

[18]India's tax rate on foreign companies is 48 percent, with other countries either taxing foreign companies at the same rate as domestic companies, or at a lower rate (Indonesia).

Table I.7. Level and Composition of Central Government Tax Revenue in Low and Middle Per–Capita Income Countries, 1994

Countries	Tax revenue (in percent of GDP)	Share of current revenue (in percent)		
		Taxes on goods and services	Taxes on income	Taxes on intern. trade
Low and middle income	15.0	29.2	19.8	15.3
Low income	8.0	...	...	...
Lower middle income	16.5	28.0	20.6	11.8
High income	25.0	26.6	30.7	0.8
India (1994/95) 1/	9.7	32.3	21.3	22.1

Source: World Bank, World Development Indicators; Union Budget documents.

1/ Central government gross tax revenue (first column). Share in current central government revenue, including central taxes shared with states (last three columns).

to the other countries which cover most business activities carried out by commercial entities and private entrepreneurs, as well as independent professionals. India also has a fairly complex depreciation allowance and withholding system compared to these countries. However, the use of tax incentives favoring labor–intensive exports is fairly widespread, with the exception of Indonesia which perhaps has the most modern business tax, based on a broad base with only a few exemptions.

- **Personal income tax**. The Indian rate structure is largely comparable to those in the Asean countries, while other Asian countries, for equity reasons, have chosen a higher degree of progressivity. However, the effective tax base in India is far less comprehensive than those of other countries, with the exception of China to which it is roughly comparable. For example, taxable income in Indonesia, Malaysia, and Korea covers employment income (including professional income) and most fringe benefits, with only relatively few and well–defined exemptions and deductions. India also has a relatively high minimum threshold for taxable income (Rs 50,000, or 3½ times per capita GDP) which compares to below ¼ times per capita GDP in Malaysia and the Philippines.

- **Excise tax**. With the exception of Malaysia, all sample countries have a fairly well–designed and broad–based VAT in place. Their standard rates are generally low (7 percent for Thailand, and 10 percent for Indonesia, the Philippines, and Korea), with China at the high end with 17 percent. The excise systems in these countries cover a relatively small group of products and are relatively simple to administer. For

example, Thailand and Malaysia only have 10–20 product groups that are excisable, and few exemptions are available.

- **Customs tariffs**. Indian tariff levels remain significantly above those in most emerging markets. Following the introduction of tariff surcharges in recent budgets, the import–weighted tariff average in India has increased to around 30 percent from 25 percent in 1997/98, compared with levels around 10 percent or below in most of the Asean countries. Moreover, India's tariff dispersion (representing the complexity of the tariff structure) also remains about twice as high as that of the other countries.

Reform trends in emerging economies

42. India's tax structure shows a pattern broadly comparable to other developing countries (see Table I.7), but this structure has been relatively constant over the past years. By contrast, the tax structure in other developing countries has begun to change significantly during the 1990s: (i) the share of domestic taxes on goods and services has generally increased, partly as a consequence of a growing number of countries switching to a VAT; and (ii) in a number of countries in Asia and Latin America, the relative importance of customs duties has declined, reflecting progress in trade liberalization and other domestic reforms (IMF 1996):

- The widespread increase in the use of the **VAT** has probably been the most striking development in the recent decade. The VAT has become fairly common in Latin American countries and has also progressed—at a slower pace—in Asia (Tanzi 1994). Most countries have been able to generate higher revenues following the introduction of the VAT, with Indonesia being regarded as a particularly successful case. In Indonesia, revenues from indirect taxes more than tripled relative to GDP in the 1980s after the country switched to a VAT in 1985 (World Bank 1991). At the same time, concerns that the VAT would lead to a regressive (and difficult to administer) tax structure were generally unfounded. Indeed, a range of countries managed to make their indirect tax structure more progressive through a well–designed structure of basic goods exemptions and supplementary excises on luxury goods; and the self–policing nature of the VAT has generally contributed to a strengthening of tax administration.

- Trade taxes, and particularly **import duties**, still account for up to a third or more of total tax revenue in developing countries. This stability, however, hides important structural changes that have occurred in recent years. As in India, many countries have sharply reduced the level of import duties to encourage greater openness. At the same time, however, other countries have widened their tax base by imposing minimum tariffs on imports (e.g., Argentina, Chile, Morocco, and Turkey), or replacing quantitative import restrictions with import tariffs close to the maximum rate.

43. Other important reform areas include **income taxation**, which has also seen a trend towards base widening, particularly through reduction or elimination of tax incentives that have generally proven ineffective in achieving their stated objectives, while at the same time stimulating corruption and tax evasion (Tanzi 1994). There has also been a marked increase in the use of **presumptive taxes**, especially in taxing small businesses and agriculture, and **minimum taxes** on enterprises (Rajaraman 1995). These taxes are designed to yield revenue from entities that would otherwise be able to avoid tax payments through either evasion or loopholes in the tax law. Countries with presumptive tax schemes are located mainly in Latin America and the Middle East, but also include Italy, France, and the United States.

44. There have also been widespread attempts to improve **tax administration**, based on the realization that tax reforms need to be compatible with administrative capacity. Besides aiming at reducing the complexity of tax laws, such efforts have focussed on reducing the role of tax officials in tax assessment to minimize collusion between assessors and tax payers. For example, self assessment of tax payers has proved successful in the case of Indonesia, which has also streamlined its tax laws at the same time. Tax deduction at source has been highly effective, not only in India, but also in other countries that have implemented it on a larger scale. Finally, an important lesson from earlier tax reforms has been that insufficient computerization, low management skills, and a lack of morale among tax officials can have a significant impact on revenue collection, and need to be addressed in a comprehensive manner for improvements in the tax system to take hold (World Bank 1991).

E. The Remaining Agenda: Options for Reform

45. India's disappointing revenue performance so far reflects the partial nature of the reforms. Although the Chelliah Committee had emphasized the need for a more streamlined tax system, the broad emphasis on tax measures has been to provide economic incentives and encourage better compliance through rate reductions, and less on the need to reduce exemptions and widen the tax base (see Table I.2). Although rate reductions have been desirable from an efficiency perspective—largely eliminating the rationale for exemptions—fiscal prudence would have necessitated stronger steps on the base–broadening part to ensure that revenues be maintained. Indeed, there are a large number of countries, primarily in Latin America, that have used tax reforms to increase revenue (Shome 1994).

46. The unfinished portion of the Chelliah Committee agenda contains many of the measures that are necessary to reverse the decline in the tax–to–GDP ratio and eventually increase revenues. The immediate focus of future reforms would thus need to be on base–broadening and accelerating the process of tax simplification and streamlining of rates. There also are a number of longer term issues that would put both central and state government revenues on a sustainable upward trend, including the introduction of a VAT, improved taxation of agriculture, and improvements in tax administration.

Base–broadening measures

- **Direct tax reform** would aim at eliminating tax incentives for promoting exports, inflow of foreign exchange, and other exemptions (e.g., as contained in Section 80 of the Income Tax Act), as well as reducing the still vast scope for corporate income tax deductions. Moreover, tax concessions to small–scale sector enterprises could be largely abolished, and tax incentives to promote selected economic activities should be used more sparingly.

- **Use of presumptive schemes**. Given the existing administrative difficulties to enforce regular tax laws for small businesses, better designed presumptive schemes would be a feasible way to enlarge the small corporate taxpayer base relatively quickly. Moreover, the existing Minimum Alternative Tax (MAT) could be strengthened by shifting the tax base from book profits to corporate assets, and by again including export income.

- **Tax payer identification**. Efforts are underway to implement the presumptive tax filing scheme across the whole country, and allocate unique tax payer identification numbers which are to be quoted for major financial transactions. There is, however, a danger that these efforts might result in a large administrative burden without yielding much revenue.[19] Therefore, the focus should be on measures to identify larger tax payers, such as through improving the compatibility of existing databases and upgrading computerization.

- Reform of **excise taxes** would focus on eliminating exemptions for particular industries (in particular for the small–scale sector) while further reducing the large number of excise tax rates. The bulk of products would be taxed at a single rate, with special lower or higher rates for a limited number of mass consumption goods and luxury items. At the same time, traditional excise taxes (which would not allow for input tax credit) could be strengthened to address revenue needs. For example, envisaged changes in the tariffication and taxation of petroleum products should be reviewed to raise total revenue from the oil sector.

- The **service tax net** could be expanded at a faster pace. The service sector has grown strongly in recent years and now contributes about 40 percent of GDP, but only a few selected services are taxed. Therefore, instead of gradually adding services to the tax net, the tax could be introduced on a universal basis, with a few exceptions specified in a negative list. Constitutional issues regarding responsibilities of the center and states in the taxation of services would also need to be clarified.

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[19]Under the current presumptive filing scheme, persons who fulfill one out of six wealth indicators (ownership of a house, car, telephone, credit card, or club membership; foreign travel) are required to file income tax declarations. This includes, e.g., many elderly people who have no taxable income.

- **Tariff reforms** should aim at minimizing tariff dispersion by reducing the number of tariff bands (including through the elimination of surcharges) and eliminating most tariff concessions, including those available under export–promotion and other incentive schemes. Replacing zero–rate duties by a minimum tariff would raise overall revenue and reduce incentives for rent–seeking. For efficiency reasons, the process of tariff reduction should continue with the objective of lowering rates to global levels over the next few years.

Longer–term issues

- **VAT**. The introduction of a general VAT to consolidate consumption and production taxation at central and state levels—highly desirable for both revenue and efficiency reasons—would have to be preceded by a significant streamlining of the central excise tax and a sufficient number of states with own VAT systems in place. So far, however, the VAT experience in the states has been mixed (Box I.2), while progress towards a simplified central excise tax has been slow. Both center and states have so far not been able to avoid large revenue losses caused by the misuse of tax credits on inputs, necessitating stronger administrative efforts in this area.

- **Agriculture**. As the implicit taxation of agriculture through import–protected industrialization and distorted terms of trade is increasingly being dismantled, the case for an explicit tax on agriculture is being strengthened. The states have so far considerably under–utilized their constitutional prerogative to tax agriculture, generating only minor revenues from land taxes and—in a few states—agricultural income taxes. Although the taxation of agriculture is both politically controversial and difficult to administer, there are examples of a successful implementation of land taxes, e.g., in Taiwan and Singapore. Khan and Khan (1998) and Rajaraman and Bhende (1998) discuss how a presumptive land–based taxation scheme could be implemented.

- **Tax administration**. While there are immediate steps that could be taken to simplify tax administration (such as, e.g., widening the scope for tax deduction at source), measures would also need to address—over a longer term horizon—insufficiencies in the internal organization, functioning and management of tax collection agencies. In the public perception, the tax administration is not effective and delivers unsatisfactory services, with delayed refunds, harassment of tax payers, and protracted litigation being common experiences (Shome 1997). As this contributes to widespread unwillingness on the part of the public to cooperate with tax authorities, and thus feeds into tax evasion, improvements in these areas could go a long way in boosting tax morale and eventually improving tax compliance.

Box I.2. Experience with the VAT in Maharashtra and Andhra Pradesh

Maharashtra and Andhra Pradesh (AP) are among the first states to introduce elements of a VAT to supplement or replace state sales taxes. The experience of these two states has been mixed as revenue growth has remained weak, and problems with the administration of the tax have surfaced. However, many of the problems have been related to the partial nature of the VAT, and could be resolved if the tax base would encompass a wider range of products, and if tax harmonization with the center and other states would improve.

The design of the VAT

- **Maharashtra** launched the VAT in 1995, with the aim of completely transforming its system of sales taxation within a period of five years. The initial moves consisted of (i) introducing the principle of VAT to traders; and (ii) extending the scope of credit for taxes paid by manufacturers on inputs. In 1996/97, the first full year with a VAT in place, growth of overall sales tax revenue (incl. VAT) slowed considerably, although this was partly caused by lower inflation and a decline in industrial output growth. The shortfall attributed to the VAT was about Rs 5.5 billion, or ½ percent of state GDP.

- **Andhra Pradesh** opted to introduce an experimental VAT (EVAT) on trade margins in 1995/96, covering some 20 commodities and about 8,000 dealers (2.5 percent of all registered dealers). The revenue performance in 1996/97 was weaker than expected, with collections reaching only about Rs 100 million (¼ percent of total sales tax receipts), or about half of what was targeted.

Lessons

The experience of these initial attempts, although broadly encouraging, point to a number of shortcomings that need to be addressed in order to turn the VAT into a success.

- First, the gradual manner in which the VAT was introduced has helped to keep legislative and administrative requirements to a minimum, and overcome resistance from taxpayers who were about to face a higher tax incidence. However, the gradual extension of the tax net to an increasing number of dealers and a greater range of commodities, along with an array of exemptions that have been maintained, resulted in an **increased complexity** of the tax system that has partly undermined the success of the measures.

- Second, revenue efforts were partly inhibited by intense **inter-state tax competition**. Although state finance ministers agreed to harmonize sales tax rates in December 1995, progress in this area has been slow. As a result, tax rates could not be adjusted upward in response to low revenue growth.

- Third, especially in AP, the amount of **transitional relief** granted (e.g., through a tax credit on stock on hand at the introduction of the VAT) was significantly larger than planned, mainly because dealers were not required to maintain inventories and subsequent tax assessments were ineffective in uncovering wrongdoing.

- Fourth, there were shortcomings in the **preparing for the implementation** of the VAT, such as a failure to introduce standard tax forms and adequately prepare dealers for the introduction of the VAT. In addition, cases of evasion or suspected evasion have not been dealt with promptly, hurting tax compliance in the initial phase.

- Finally, **administrative procedures** have as of yet not been adjusted sufficiently to move to a full-fledged VAT in the near future. The most imminent measures required would be to beef up computerization (with the overarching aim to provide for a verification of invoice-based tax credits), and to properly educate and reorient staff across all levels, as opposed to only select groups as of now.

Sources: A. Bagchi (1997), **VAT in Maharashtra**, Report prepared for the World Bank; and World Bank (1997), **India—Andhra Pradesh: Agenda for Economic Reforms**, Report No. 15901-IN.

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Data Adjustments and Econometric Methodology

Data adjustments

47. To calculate the revenue impact of tax reforms, it is necessary to separate changes in revenue that take place in response to growth in the tax base from changes that occur as the result of discretionary measures. Actual revenue data need to be converted into a series that shows what the revenues would have been had there be no changes in the tax system.

48. One method would be to apply current tax rates to the bases of earlier years, thus simulating a revenue series that corresponds to the current tax structure. However, this method imposes heavy data requirements, including detailed information on the distribution of the base by brackets or rate categories (Chand 1975). A more readily useable procedure requires only information on the revenue impact of tax measures, which is provided by the Indian budget documents. This method is described in the following.

Basic definitions

49. Revenue for a particular tax category is given by $T_0 = t_0 B_0$, with t being the tax collection rate and B the tax base. The budget revenue estimate for year 1 is given by

$$T_1^* = t_1^* B_1^* = t_0 B_1^* + \Delta t_1^* B_1^* . \quad (1)$$

50. The first term of the right hand side is tax revenue at unchanged rates. The second term is the expected revenue impact of tax measures, defined as $M = \Delta t_1^* B_1^*$, i.e., the change in the collection rate resulting from tax measures, times the new base. Indian budget documents contain estimates for M, but information on expected collection rates and the size of the actual tax base is generally not available.[20]

51. This information can be used to compute tax elasticities and construct a time series for econometric analysis. Define tax revenue elasticity as

$$\eta = \frac{(T_1 - M - T_0)/T_0}{(B_1 - B_0)/B_0} = \frac{(\Delta T_1 - M)/T_0}{\Delta B_1 / B_0} , \quad (2)$$

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[20]In recent years, estimates for the revenue loss from tax cuts have frequently included offsetting revenue increases resulting from improved compliance and stronger collection efforts. Such effects would lead to higher tax elasticity and should not be included in M; however, the budget speech usually gives estimates for the direct loss caused by tax measures.

where $T_1 - M$ is the part of tax revenue that is unaffected by tax changes. Unfortunately, this formula gives only an approximation for the true elasticity because M is just an estimate for the budgetary impact of tax measures. This is illustrated by comparing budgeted revenue T_1^* with actual tax revenue T_1:

$$T_1 = t_0 B_1 + \Delta t_1^* B_1 + (t_1 - t_1^*) B_1 . \quad (3)$$

52. The effect of the discretionary change in the tax system is $D = \Delta t_1^* B_1$, which cannot be calculated since there is generally no information on either tax base or collection rates.

53. If the base projection in the budget is close to the final outcome (ie., B_1^* is approximately equal to B_1), M is likely to be a good approximation for D. In that case, the elasticity can be calculated reasonably well. Should base projections be overly optimistic or overly cautious, it would become difficult to calculate elasticities because M would not be a good estimate for the yield of tax measures. Therefore, the quality of elasticity calculations is closely linked to the quality of base projections and revenue forecasts in the budget.

Constructing adjusted time series

54. As noted above, an econometric approach to measuring elasticities requires time series that show tax revenue under an unchanged tax structure. Such series are generally calculated by a simple "proportional method" (see Chand 1975). The current year (year 0) is set as the reference year. Tax revenues of previous years are then adjusted according to:

$$T_{-i}^a = T_{-i} \prod_{j=0}^{i-1} \left(\frac{T_{-j}}{T_{-j} - M_{-j}} \right) . \quad (4)$$

55. While this remains a practical way of obtaining adjusted time series, the disadvantages of this method are clear. Forecasting errors contained in M accumulate over time, and the proportional adjustment is a rather crude way of taking changes in the tax system into account. These shortcomings should be kept in mind when analyzing the results.

Choosing a base

56. A further problem in calculating elasticities is the choice of a tax base. Data on the size of actual tax bases (e.g., total taxable income) are typically not available in India, at least not in historical form. However, the actual base is generally related to a macroeconomic aggregate (economic tax base), such as GDP or industrial production. As an obvious exception, actual and economic base coincide for customs duties, and data for customs imports are readily available. For the other tax categories, several time series were considered in choosing adequate bases. The final selection was based on goodness–of–fit measures from

the econometric models, which led to choosing "non–agricultural GDP" (GDP from manufacturing and services) as economic base for both income taxes and excise duties.

The econometric approach

57. The standard regression approach to calculating tax elasticities is to estimate the following logarithmic equation:

$$\log T^a = \alpha + \beta \log B \qquad (5)$$

where B is the chosen tax base. Since adjusted revenues are used on the left hand side, the estimated β–coefficient is equal to the average tax elasticity over the period.

Model specification

58. To take into account other possible revenue determinants, and to allow for the impact of tax measures on base growth (simultaneity), a wider model specification process was undertaken. Both co–integration and other model specifications (such as 2SLS) were tested, and a number of variables were included that could have either direct or indirect effects on tax revenue (e.g., growth, inflation, and financial variables). However, except for a strong link between tax revenue and tax base across all revenue categories, no significant long–run relationships with other economic variables were found. In addition, there was strong evidence of structural breaks in the estimated relationships.

Cointegration

59. In view of the data shortcomings and the structural breaks in the data, the preferred model specification was the Engle–Granger two–step cointegration method.[21] This approach offered the advantage of obtaining separate elasticities for different periods in a first step, using dummy variables to take account of structural breaks. The estimated model was:

$$\log T^a = \alpha_0 + \beta_0 \log B + \sum_{i=1}^{I} (\alpha_i \delta_i + \beta_i \delta_i \log B) \qquad (6)$$

with δ_i a dummy variable denoting $t > t_i$, t_i being the i–th structural break. The elasticities are calculated as β_0, $\beta_0 + \beta_1$, $\beta_0 + \beta_1 + \beta_2$, etc.

60. Subsequent tests on this regression did not reject cointegration (except probably for customs revenue), and thus the impact of tax policy variables and other regressors could be

[21] All variables included in the analysis have been found integrated of order one, using a Phillips–Perron test with critical values adjusted to allow for structural breaks.

analyzed in a second step.[22] In that step, residuals and differenced variables from the first step were included to account for the error–correction mechanism within the cointegration model. Besides, a number of variables were included that were found stationary and could not be included in the first step. Among those were two proxy variables to capture the effect of budget policies on revenue.

Proxy variables

61. The first of these proxy variables takes into account the important role of base projections contained in budget forecasts (see above). Exploiting equation (1) for the budget revenue forecast, and using $t_0 = T_0 / B_0$, one obtains

$$\frac{B_1^*}{B_0} = \frac{T_1^* - M}{T_0} \qquad (7)$$

62. In other words, although the actual tax base is unknown, budget data on revenue and expected impact of tax measures reveal the implicit assumption on tax base growth. In hindsight, this growth rate can be set in relation to the growth rate of the economic tax base, and thus **the first proxy variable is $\Delta B^* / \Delta B$, ie. budgeted base growth over actual base growth** (in logs).

63. If the coefficient on this variable is significant and negative, budgetary assumptions are most likely excessively optimistic, and this variable would correct for the resulting shortfall in actual revenue. If the coefficient was positive, however, assumptions could either be overly pessimistic, or the coefficient would pick up short–term revenue gains from base–widening measures that would not be captured otherwise.

64. The **second proxy variable relates actual tax revenue to budget estimates**: (T_{-1} / T_{-1}^*), which reinforces the estimation of the error–correction mechanism. A negative coefficient would indicate that current revenue would be boosted by a shortfall in the previous period (presumably through improved collection efforts and other adjustment measures).

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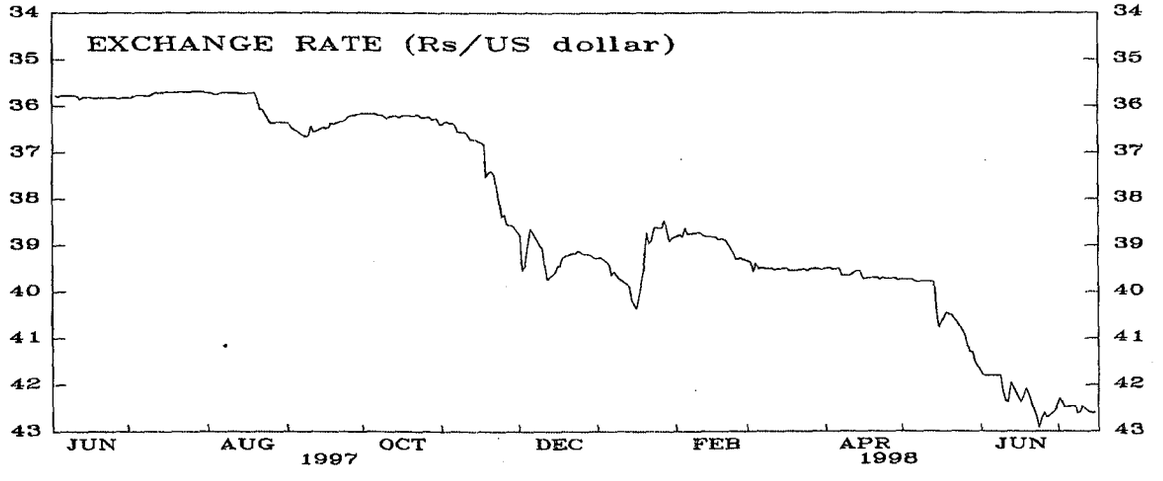
[22]There are no critical test variables for cointegration with imposed structural breaks in the literature. However, the critical value for the cointegration test should lie between the standard Phillips–Ouliaris values and those presented by Gregory and Hansen (1996) who tested for cointegration with unknown structural breaks. This would suggest a range between -3.07 and -4.68 at the 10 percent level of significance. Since the error correction term is significant in all short-term models except for the customs equation, a level around -3.30 appears likely.

II. Foreign Exchange Markets: Developments and Issues[1]

Abstract: *This paper describes recent developments in India's foreign exchange markets, where participants operated in an environment of increased volatility for most of the past year. The paper reviews the role of market reforms and policy measures in containing exchange rate volatility, and in this context discusses the Reserve Bank's intervention in spot and forward markets. The paper outlines a broad agenda for further reform, focusing on measures that would increase the integration of the foreign exchange market with domestic money markets.*

1. The rupee has depreciated by almost 20 percent against the dollar since August 1997 (Chart II.1) and, partly in reaction to the Asian crisis, the Indian foreign exchange market has become significantly more volatile in recent months (Table II.1). Despite the turmoil in Asian markets, the depreciation has largely taken place in an orderly fashion, notwithstanding a period of increased market uncertainty in late 1997 that was accompanied by sharp increases in forward premia and overnight interest rates. As these events have occurred amid ongoing structural change in India's foreign exchange market, the focus of this chapter is on how market reforms and exchange rate movements have affected each other, and on the lessons that can be drawn for further market development.

Chart II.1. Rupee/Dollar Exchange Rate



2. The chapter is organized as follows: section A provides a brief overview of the market environment (see also the Annex for technical details) and section B describes the two major phases of the recent rupee depreciation. Section C discusses some general lessons for

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[1]Prepared by Martin Mühleisen. Section D on the role of forward intervention was initially drafted by Peter Dattels.

Table II.1. Rupee/Dollar Exchange Rate Volatility

(Standard deviation of daily changes in RBI reference rate; in percent)

Jan 97–Jul 97	Aug–97 Oct 97	Nov 97–Jan 98	Feb 98–Apr 98	May 98–Jul 98
1.87	6.63	26.38	6.79	17.86

containing exchange rate volatility, while section D discusses the role of forward intervention in greater detail. The concluding section lists options for further market reform.

A. The Market Environment

3. For most of the recent past, foreign exchange dealers in India were largely constrained to trade–related activities and not allowed to engage in forward or swap transactions. However, as capital account restrictions have been gradually relaxed over the last few years, the scope for trading in forward markets was also increased. For example, banks were given permission to provide forward cover for foreign loans, and restrictions on forward cover for trade–related transactions were eased. Moreover, currency exposure limits (so called "gap limits") were enlarged on a bank–by–bank basis, and forward cover was introduced for FII investment in debt instruments and certain NRI deposits.[2] Perhaps the most significant move took place in the October 1997 credit policy statement, when banks were allowed to invest or borrow up to the equivalent of 15 percent of their core capital abroad. In response to the reforms, market turnover in foreign exchange markets has substantially increased, particularly in the forward and swap markets.[3]

4. Nevertheless, exchange rate movements remain substantially driven by leads and lags in trade–related transactions. Normal turnover on the spot foreign exchange market typically amounts to US$1–2 billion per day (Chart II.2), but speculative pressures can lead to US$5 billion being added to either demand or supply within a few days (as exporters and importers are able to advance or delay foreign exchange transactions typically by about 1 month). As

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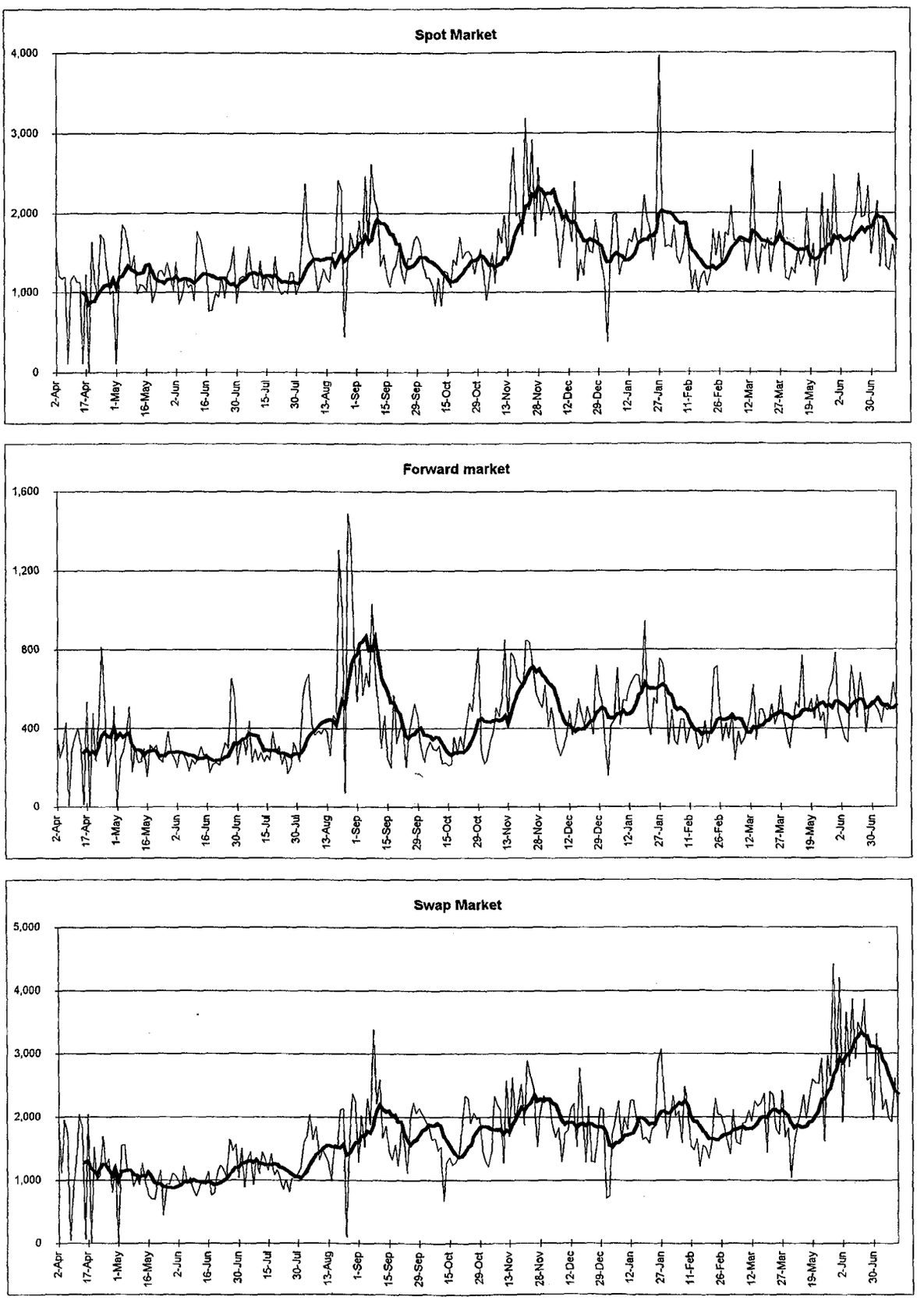
[2]Trading in nondeliverable forwards (NDF) and futures is not permitted in India. There are, however, NDF offshore markets in Singapore and Hongkong. Although detailed information is not available, the offshore market is reportedly small, driven primarily by a few international banks represented both in India and abroad.

[3]Although significant, these steps still limit the scope for arbitrage between domestic money markets and international markets. Both the ceiling on international borrowing and gap limits remain small by international standards. The RBI has also on occasion resorted to moral suasion by advising banks not to engage in arbitrage activities.

CHART II.2

India: Daily Foreign Exchange Market Turnover (April 1997-July 1998) 1/

(In millions of U.S. dollars)



1/ Thick lines indicate 10-day moving average. Data for April 1998 through July 1998 are incomplete.

importers have often chosen not to hedge their foreign exchange exposure in times of stable exchange rates, exchange rate adjustments in the past have frequently been accompanied by bandwagon effects that led to overshooting.

5. Despite the reforms and increase in turnover, the foreign exchange market has remained thin, in the sense that transactions by large market players can significantly exceed normal market turnover and cause noticeable shifts in the exchange rate:

- The State Bank of India (SBI) is by far the largest participant in the foreign exchange market as it conducts foreign exchange transactions for large public sector enterprises.[4] Although the SBI, according to market participants, is using its market power in a responsible way, it would be in a position to move the market in a particular direction if it chose to do so.

- Market developments can also be disrupted by single large transactions, e.g., payments for oil imports by the Indian Oil Corporation. Transactions of that size are on occasion made directly through the RBI (i.e., not through the regular foreign exchange market) in order not to increase market volatility.

B. Recent Developments in Foreign Exchange Markets

6. The rupee depreciation over the past months can be separated into two distinct phases. The initial phase, from August 1997 to mid–January 1998, was characterized by relatively strong market uncertainty that culminated in three episodes of exchange rate adjustments amid bandwagons effects and overshooting. In the second phase, after the RBI had calmed expectations with a strong package in mid–January, the rupee has embarked on a smoother adjustment path. Although the rupee declined again after international sanctions were imposed on India for conducting nuclear tests in May, there was considerably less RBI involvement in exchange markets. The two phases are described in the following.

The initial depreciation

7. **August/September 1997**. Prior to August 1997, the rupee had been stable around Rs 36 vis–à–vis the dollar for more than a year, reflecting strong capital inflows that led to an accumulation of foreign exchange reserves by the RBI. However, with rising exchange rate pressures in several Asian countries (Thailand, Malaysia, Indonesia, the Philippines, and Singapore), continued slow growth in exports, and increasing concerns about the rupee's

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[4]The SBI and its associate banks also account for 30 percent of assets of domestic and foreign commercial banks in India.

overvaluation, a slide in the rupee exchange rate in mid–August triggered panic reactions by importers and speculative dollar buying.[5]

8. Notwithstanding the relatively small decline in the exchange rate, data on foreign exchange turnover reveal a significant shift in market positions (Chart II.3). Similar to earlier depreciation episodes (e.g., in 1995/96), market activity shifted from spot to forward markets as merchants scrambled for forward cover, buying some US$2 billion in forward markets between mid–August and mid–September.[6] However, excess demand for spot currency remained relatively low, and market expectations of the amount of depreciation necessary to restore competitiveness appeared limited. Therefore, with FII inflows remaining relatively strong, and helped by some RBI intervention, market confidence was quickly restored. The overall depreciation amounted to some 2½ percent against the dollar but the rupee recovered some of this loss to close around Rs 36.40 by the end of September. In fact, the RBI purchased dollars in late September to prevent further appreciation.

9. **November 1997**. As conditions in Southeast Asia deteriorated during November 1997, and the currency crisis spread to Korea, depressed market sentiment towards emerging markets led to the cancellation of planned GDR issues by Indian companies, and foreign portfolio investors also began to withdraw funds (although the net outflow during November was only US$110 million). These developments coincided with heightened domestic political uncertainty preceding the fall of the United Front government later in the month. Currency depreciations of other Asian countries deepened concerns about a possible overvaluation of the rupee, and the exchange rate began to decline amid another strong shift in market sentiments. Forward premia came under renewed pressure from importers, but there was a also substantial demand for spot dollars as expectations of a stronger fall in the rupee gained hold (see Chart II.3). Eventually, the rupee depreciated sharply (by 8 percent) during November, particularly in the last week as the fall of the government was imminent.

10. The exchange rate firmed around Rs 39.20 per dollar after the RBI announced two packages of measures on November 28 and December 2, including increases in the CRR (reversing the most recent Credit Policy Statement), the repo rate (together with the introduction of fixed rate repo auctions), and the interest rate on import and post–shipment export credit to discourage arbitraging by merchants (Table II.2). Moreover, forward market activities were curbed by the reintroduction of an earlier regulation requiring banks to ensure that forward contracts were backed by documentary evidence of a customer's future exposure.

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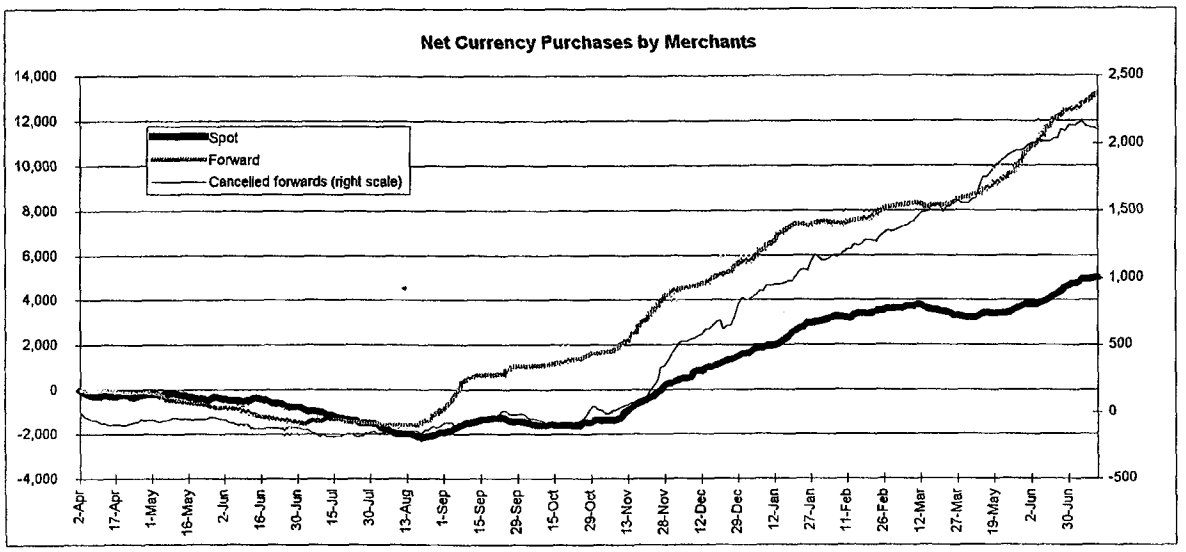
[5]This behavioral pattern of importers, which has been observed frequently in recent years, is described in more detail in the section on forward intervention.

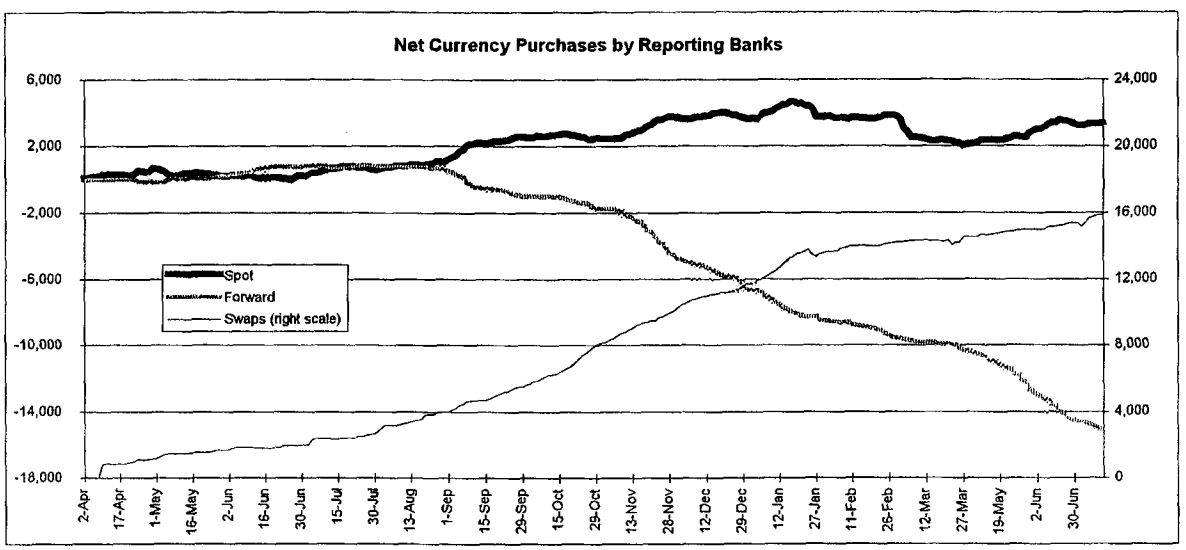
[6]This analysis is based on transaction data for interbank and retail markets published by the RBI. The interbank market consists of commercial banks authorized by the RBI as foreign exchange dealers. Merchants—corporates, foreign investors, etc.—buy and sell currency through banks in the retail segment. The RBI's information is based on data provided by major banks that account for some 80–85 percent of foreign exchange turnover (see Annex).

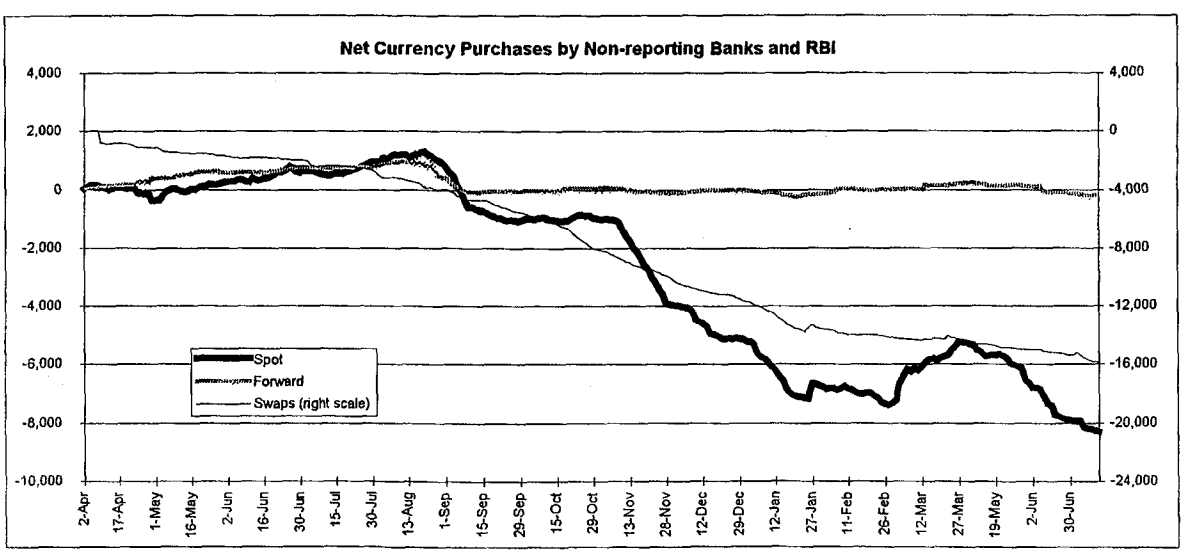
CHART II.3

India: Foreign Exchange Market Activity (April 1997-July 1998)

(In millions of U.S. dollars; cumulative since April 1, 1997) 1/







1/ Data for April 1998 through July 1998 are incomplete.

Table II.2. Recent RBI Policy Measures

Date	Measures
April 3, 1997	• Individual banks allowed to fix their own overnight exposure limit, subject to RBI approval.
April 15 (Credit Policy Statement)	• Forward cover to be extended on the basis of business projections (as opposed to documentary evidence) • Bank allowed to engage in swap activities without prior RBI approval.
October 21 (Credit Policy Statement)	• CRR to be reduced in eight steps from 10 to 8 percent by March 1998. • Banks allowed to borrow and invest abroad up to a maximum of 15 percent of their Tier I capital. • Individual Indian funds allowed to invest up to US$50 million abroad.
November 28	• CRR reduction schedule suspended for 6 weeks. • Fixed rate repos introduced at 4.5 percent, and interest rate on post shipment rupee export credit (for first 90 days) increased from 13 to 15 percent.
December 1	• Rebooking of canceled forward contracts prohibited if not related to trade exposure.
December 2	• CRR increase from 9 ½ to 10 percent, further reductions held in abeyance. • Fixed repo rate increase to 5 percent (raised to 7 percent by December 12) • Forward contracts to be extended only against documentary evidence.
December 18	• Interest rate on overdue export bills raised to 20 percent. • Interest rate surcharge of 15 percent on import finance imposed.
December 19	• Nostro accounts included in overseas investment limit.
December 31	• Interest rate on post shipment rupee export credit reduced to 13 percent.
January 6, 1998	• Banks to square overnight exposure on a daily basis.
January 16	• CRR increase from 10 to 10 ½ percent. • Increase in bank rate from 9 to 11 percent, in fixed repo from 7 to 9 percent. • Interest rate surcharge on import finance increased from 15 to 30 percent. • Requirement of banks running square overnight position removed, and limits on nostro accounts relaxed on a bank–by–bank basis.
March 28	• CRR reduced to 10.25 percent (and further to 10 percent on April 11).
April 29 (Credit Policy Statement)	• Bank rate reduced to 9 percent. • Increase in export refinance limit, and reduction in interest rate on pre–shipment export credit.
June 11	• Exporters urged not to delay repatriation of export proceeds, banks advised not to engage in arbitrage between money and foreign exchange markets. • Reduction in interest rate on pre–shipment credit for incremental exports. • Forward cover facility extended to incremental FII investments.

11. **December 1997/January 1998**. During the remainder of December, the RBI took additional administrative steps to reduce the scope for commercial bank activity in exchange markets. To curb what was perceived to be speculative pressure from banks, the RBI tightened overnight exposure limits and, eventually, prohibited taking any overnight currency position at all on January 6. However, with currency traders barred from taking open rupee positions, the lack of dollar supply in the market contributed to a slow but continuous slide in the exchange rate. At the same time, the Asian crisis intensified and expectations of a more significant rupee depreciation grew stronger, leading to an increase in forward premia by 400–500 basis points in early January despite RBI intervention.

12. To arrest a further decline in sentiments and pressure on the rupee, the RBI on January 16 forcefully tightened domestic monetary conditions, announcing increases in the CRR, bank rate, and fixed rate repos, as well as further administrative measures to discourage trade–related speculation (see Table II.2). Call money rates briefly shot up to 50–100 percent (Chart II.4), and as arbitrage opportunities against the rupee diminished with the rise in domestic interest rates, the RBI largely abandoned the requirement for banks to square overnight positions, and overnight exposure limits were again widened on a bank–by–bank basis. The measures were designed to take markets by surprise, restore market confidence and reverse the expectations of a further decline. These objectives were achieved, and the exchange rate stabilized between Rs 38.50 and Rs 39 per dollar despite a significant re–injection of liquidity around the end of January.

Developments in the first half of 1998

13. As conditions in exchange markets calmed in January, domestic liquidity conditions also began to improve. Although the increases in interest rates and the CRR were not immediately reversed, funds that had been taken out of the market by the RBI on January 16 were essentially re–injected by the end of the month, including through a substantial rollover of maturing swap liabilities by the Reserve Bank. Call money rates thus declined to below 10 percent by mid–February, and forward premia also came down significantly.

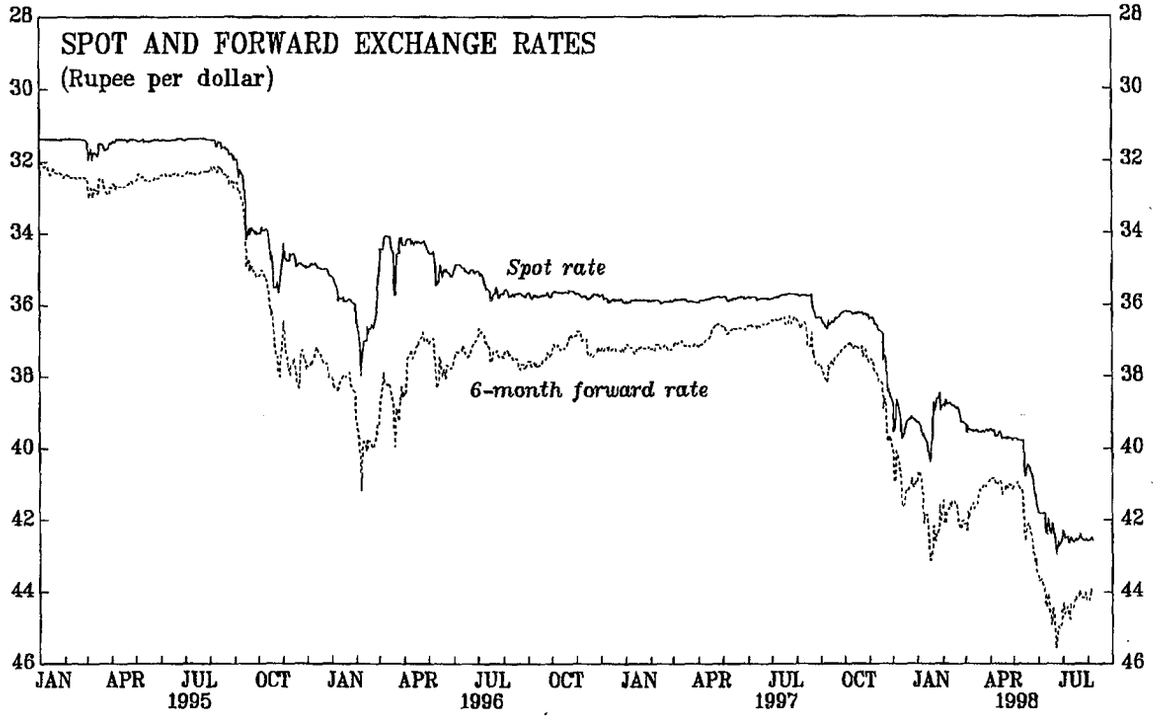
14. The rupee remained stable through May as market turnover returned to more normal levels, with the formation of a new government and the relative calm in Asian markets contributing to lower volatility. The RBI replenished foreign exchange reserves and substantially unwound its forward obligations, with the result that net foreign exchange reserves rose by almost US$ 3 billion between January and May (Table II.3). However, market trading remained more active than before, and increased particularly in the swap market, with turnover averaging US$ 2–3 billion per day between May and July (see Annex Table II.4). The higher level of activity, especially in forward markets, reflected increased consciousness about proactive foreign exchange management on the part of commercial entities. According to market participants, importers, in particular, were hedging forward exposure to a greater degree.

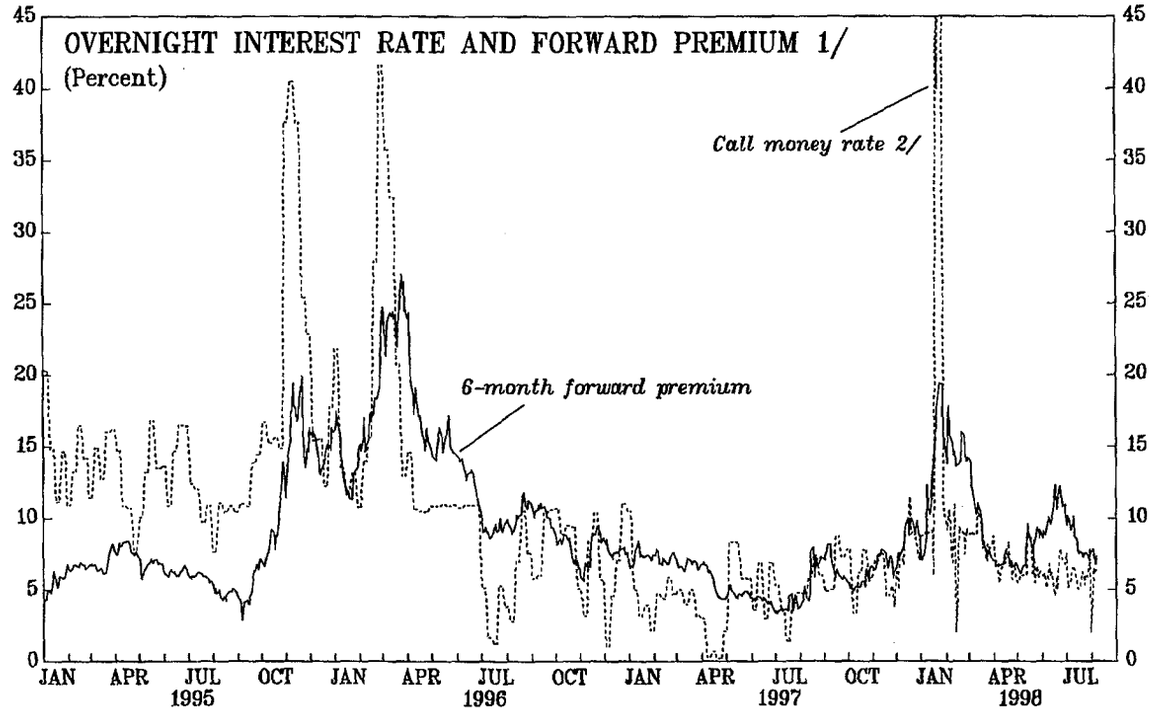
15. Partly as a result of improved risk management, the subsequent rupee depreciation in May took place under substantially less volatile conditions as compared to November 1997.

CHART II.4

INDIA

INTEREST AND EXCHANGE RATE DEVELOPMENTS, 1995-1998





Sources: Data provided by the Indian authorities; IMF, Information Notice System; and WEFA.

1/ Annualized rates.
2/ Call money rates for January 22, 23 and 26, 1998 were 60 percent, 60 percent and 70 percent, respectively.

Table II.3. India: Sale/Purchase of U.S. Dollars by the Reserve Bank of India, 1996-98 1/

(In millions of U.S. dollars)

	Purchase 2/ (+)	Sale 2/ (-)	Net 2/ (+/-)	Outstanding net forward sales (-)/ Purchase (+) at the end of month	International Reserves	International Reserves Net of Forward Position
1996						
January	1,368	1,770	-402	-2,236	16,310	14,074
February	140	468	-328	-2,316	15,943	13,627
March	1,135	175	960	-2,216	17,044	14,828
April	577	209	368	-2,007	17,088	15,081
May	336	235	101	-2,058	17,105	15,047
June	1,150	365	785	-1,799	17,526	15,727
July	1,192	898	294	-1,732	17,940	16,208
August	823	575	248	-1,107	17,976	16,869
September	672	--	672	-1,157	18,433	17,276
October	841	--	841	-1,157	19,177	18,020
November	416	283	133	-874	19,388	18,514
December	1,410	859	551	-874	19,742	18,868
1997						
January	565	15	550	-859	19,848	18,989
February	930	--	930	-1,259	19,695	18,436
March	2,329	--	2,329	-345	22,367	22,022
April	641	--	641	25	22,675	22,700
May	1,759	366	1,393	112	24,139	24,251
June	1,828	493	1,335	158	25,404	25,562
July	1,185	--	1,185	40	26,022	26,062
August	1,363	491	872	-40	26,431	26,391
September	423	1,410	-987	-944	25,718	24,774
October	552	363	189	-663	26,246	25,583
November	724	2,314	-1,590	-1,396	24,378	22,982
December	812	1,219	-407	-1,956	24,176	22,220
1998						
January	2,532	2,110	422	-3,190	24,459	21,269
February	1,041	1,722	-681	-2,373	24,044	21,671
March	2,194	745	1,449	-1,792	25,900	24,108
April	1,159	958	201	-1,427	26,237	24,810
May	800	1,554	-754	-1,415	25,569	24,154
June	4,848	6,475	-1,627	-1,634	24,104	22,470
July	...	...	...	...	24,001	...

Source: RBI, *RBI Bulletin.*

1/ Figures are based on value dates.

2/ Includes spot, forward, and swap transactions which have been effected during the month.

Following the nuclear tests conducted by India in mid–May, the rupee fell by 4 percent against the U.S. dollar within two weeks, and by another 3 percent thereafter before stabilizing around Rs 42.50 to the dollar in early July. According to market participants, the depreciation was accompanied by substantially less RBI intervention than in late 1997 (net reserves fell by US$650 million in May); however, dollar sales by the SBI were frequently reported to have slowed down the pace of the rupee decline.

16. Volatility in forward markets was also largely contained. In early June, forward premia began to rise as sentiments were affected by the Moody's downgrade, uncertainty about the impact of international sanctions, and the decline in the Japanese yen. However, in a statement issued on June 11, the RBI reaffirmed its intention to support the rupee through monetary measures if necessary, while at the same time announcing a number of smaller measures to liberalize foreign exchange markets (see Table II.2). As volatility in other Asian markets subsided, this also contributed to a subsequent decline in forward premia.

C. Containing Exchange Rate Volatility

17. One of the major objectives of exchange rate management has been to contain exchange rate volatility (sharp movements in the exchange rate over a short period of the time) while allowing fundamental supply and demand factors determine the level of the rupee. To that end, the RBI has relied on a range of instruments, including monetary policy tools, market intervention and administrative measures. The impact of monetary policy instruments has proved successful in calming market sentiments in mid–January; the use of other instruments, however, has met with more mixed success. This section discusses the impact of RBI intervention and administrative measures on market volatility, and draws some lessons from the recent experience.

Intervention policy

18. Particularly in the initial phase of the depreciation, exchange market intervention by the RBI was sizeable (see Table II.3). Between August 1997 and January 1998, foreign exchange reserves (net of forward liabilities) declined by about US$5 billion. During that period, the RBI attempted to influence exchange rate movements with considerable intervention in forward markets (to check forward premia and thus dampen expectations of a further depreciation), and also at times strong intervention in spot markets.

19. However, the effectiveness of intervention proved limited amid turmoil in international markets and domestic political uncertainties. Although intervention in forward markets met with some success (see section D for a separate discussion of this issue), intervention in spot markets appeared at times unable to restore confidence to the market and slow the decline in the rupee. Several reasons for this were identified by market participants:

- Apparently, the RBI tended to intervene in relatively small transaction amounts that had only limited effect on market developments, and the resulting uncertainty about the RBI's policy objectives led to increased nervousness in the markets.

- The RBI tried to calm markets on several occasions through official statements saying that the level of the exchange rate at the time was broadly appropriate, and that the RBI would intervene only to smooth volatility. However, as the rupee continued to depreciate, markets were left uncertain about the RBI's motives.

- During November 1997, the RBI intervened frequently, and there were also sizeable dollar sales by the SBI. These transactions tended to suppress the information content carried by normal market transactions, and other market participants began to develop a sense of panic as they felt unable to predict the future direction of the market.

- Markets were left unclear about the amount of net foreign exchange reserves left with the RBI. Information on gross reserves became public on a weekly basis, but information on forward obligations incurred by the RBI was only available with a six–week lag. Consequently, the full extent of the RBI's involvement in the market was unknown to participants which gave rise to speculation and uncertainty.

20. Intervention has been more limited in recent months, despite a drop in the rupee since May 1998 (by 7 percent) that was comparable in size to the depreciation in November 1997. Although there were several market reports that the RBI was intervening indirectly through private transactions with the SBI, there was considerably less uncertainty among market participants as market signals generally appeared undisturbed. In part, however, the stronger market confidence also rested on the widespread expectation that the RBI would tighten monetary conditions again should the rupee threaten to fall too quickly.

Administrative measures

21. In late November 1997, in addition to market intervention, the RBI resorted to a tightening of administrative controls, aimed at calming exchange rate developments by deterring arbitrage between domestic and foreign markets. These controls were successful in the sense that foreign exchange markets dried up somewhat as banks were constrained in their trading activities, and daily exchange rate volatility declined. However, this eventually required the virtual elimination of overnight trading limits by early January.

22. As described above, although the measures led to relatively greater stability, they did not prevent the further decline in the rupee that led to the monetary tightening in mid–January. The measures had two main effects on market confidence that offset their potential success:

- The forward market came under renewed pressure. As the demand for forward cover by importers continued at a practically unchanged pace (see Chart II.3), the measures had limited the supply of forward dollars from commercial banks. The resulting increase in forward premia contributed to a deterioration in market sentiments.

- The measures proved detrimental as newly gained market flexibility was restricted, and banks were again reduced to merely providing cover for trade–related activities.

By reversing some of the recent liberalization measures, the process of market reform was interrupted and participants began to question the RBI's commitment to a more liberal foreign exchange market.

23. Administrative restrictions were cautiously eased after calm was restored in the markets by mid–January. However, the RBI has continued to emphasize that it discourages both speculative and arbitrage activities, and thus banks remain cautious in engaging in forward transactions or keeping open currency positions.[7] This has contributed to the relative stability of markets in the first half of 1998; however, forward premia have remained high as a result (see Chart II.4), making the purchase of forward cover more expensive.

Exchange rate volatility and transparency

24. Recent developments have shown that volatility in India's foreign exchange markets—with its limited avenues for position–taking by banks—still originates mainly from shifts in leads and lags of trade–related transactions. These shifts are partly speculative in nature, and partly reflect the absence of professional cash–flow management in commercial entities, which results in the emergence of bandwagon effects in response to shifts in the exchange rate. Such effects tend to be reinforced in times of an uncertain market environment, and particularly if there is uncertainty about the RBI's policy stance.

25. In light of this experience, two lessons can be drawn. First, efforts would need to focus on deepening exchange markets and further educating market participants about foreign exchange risk and instruments available to minimize that risk (notwithstanding improvements in risk management observed in the first half of 1998). Moreover, in moving to a more freely determined exchange rate in which swings in the exchange rate (both intra–day and over longer periods) may be greater than in the past, it will be important to ensure that the private sector has adequate means for managing and insuring against exchange rate risk. This places a very high premium on the rapid development of the forward exchange market. These issues are discussed in greater detail in the following sections.

26. Second, the effectiveness of the RBI's operations would be enhanced by a more transparent information policy of the RBI. Although there are valid operational reasons that would justify some lack of transparency in day–to–day operations, the increased disclosure of information within a shorter time span would allow market participants to verify that actual RBI operations were in line with announced policy intentions.[8] Such measures could include the following:

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[7]The RBI has not explicitly ruled out such operations; however, market participants have noted the absence of clear guidelines on which transactions are permitted.

[8]This argument is supported by Enoch, C. (1998) (*Transparency in Central Bank Operations in the Foreign Exchange Market*) IMF Paper on Policy Analysis and Assessment, PPAA/98/2.

- The RBI has already taken steps to enhance market transparency by publishing data on foreign exchange transactions, reserves, and forward obligations. However, there is still scope for providing more information to market participants, including on a more timely and disaggregated basis. In particular, there could be more rapid access to information on the RBI's net foreign reserves position, disaggregated information on intervention amounts, and on the size and composition of its forward book.

- The RBI at times conducts transactions directly with the SBI and/or larger public sector undertakings. As these transactions affect the RBI's reserve position, market uncertainty could be reduced by their timely disclosure.

D. The Role of Forward Intervention

27. The importance of forward exchange markets in India has grown as regulations on forward currency trading have been gradually relaxed. The RBI has traded heavily in swap and forward markets in recent periods of currency turmoil, with net forward obligations reaching up to US$3 billion in January 1998 (see Table II.3).[9] While partly a response to surges in demand for forward cover, the RBI's activities have also been prompted by the perceived need to correct temporary imbalances in demand and supply conditions, or bring about an alignment of forward premia with interest rate differentials between domestic and international money markets. This motives are discussed in the following.

Why does the RBI intervene in forward markets?

28. It would be a matter of indifference whether RBI intervention took place in spot or forward exchange markets if these markets were efficient and well integrated. Both markets would be deep and broad and forward premia would reflect differentials in interest rates between home and abroad. A yield curve would emerge from borrowing and lending activity at each term, and capital would move quickly to arbitrage away differences in covered parity.

29. However, conditions for efficient markets do not yet exist notwithstanding recent measures to liberalize financial markets. Barriers to institutional participation across domestic markets remain and various regulations and practices distort prices, limiting domestic market integration. As a result, government securities, interbank, and money markets are not well developed and benchmark interest rates and a market–based yield curve

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[9]As forward intervention has declined in the first half of 1998, this position has been substantially unwound.

are yet to emerge.[10] Foreign exchange controls limit free movement of capital owned by residents and, to a lesser extent, nonresidents. Scope for foreign exchange dealers to bring about an alignment of prices on money market assets with international prices is limited due to low ceilings on international borrowing and limits (so called "gap limits") restricting forward operations and position taking.

30. Under these conditions, the RBI has intervened in swap markets to achieve various objectives, depending on market circumstances, which are listed below.[11] In this paper, swap transactions are regarded as a form of forward intervention since—given market segmentation—the RBI has used swaps largely to influence both forward and spot exchange rates. In general, however, swaps should be regarded similar to domestic money market operations and not as a form of exchange market intervention.[12]

31. The RBI's objectives for forward intervention include:

- **Dampen expectations of downward exchange rate movement**. Importers and exporters track forward premiums carefully, both as the cost of acquiring and maintaining hedges, but also as a barometer of market sentiment and movement of the rupee in the period ahead. During periods of a stable rupee, importers have tended to forgo insurance (save the premia cost) and forward premia remain low and stable (see Chart II.4). However, in response to a sudden downward movement in the spot exchange rate, the forward market tends to react abruptly and with force. Importers rush to cover exposed positions (usually covering several months of business at once), while exporters cancel forwards, withdrawing the supply of forward dollars from foreign exchange markets. Forward premiums increase rapidly, fueling expectations of further depreciation. In such circumstances, the RBI has attempted to counter market sentiment by selling forward dollars—in addition to spot intervention—to prevent or limit dramatic swings in the forward market.

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[10]Primary market rates can be used to construct a yield for government securities, but these do not always represent market clearing rates while secondary markets in government securities are not sufficiently developed to construct a meaningful curve on a consistent basis, especially at longer maturities. Thus, pricing and arbitrage activities are made more difficult.

[11]Contrary to earlier years, the RBI appears to have ceased to engage in outright forward transactions (see bottom panel of Chart II.3).

[12]A swap transaction consists of two components—a spot and a forward leg. If the RBI wants to tighten domestic liquidity, it sells today dollars in exchange for rupees (spot leg), and commits to buy the same amount of dollars (from the same counterparty) for rupees on an agreed future date (forward leg) at a specified price. The swap has the same impact on domestic liquidity as a monetary operation (e.g., a repo) of the same size.

- **Bring forward premia into consistency with domestic money market conditions.** The RBI has employed foreign exchange swaps either to reinforce domestic monetary operations or substitute for domestic operations when forward premia have not reflected interest rate differentials between domestic and international markets. Other anomalies may arise. For example, segments (terms) of the forward market may shift out of alignment with interest rate differentials due to supply and demand conditions at each term. In these circumstances, the RBI may seek to bring various segments of the forward market into alignment by buying dollars at one term and selling dollars at another term in equal size (so–called switch operations).

- **Manage forward liabilities and assets.** Once sizeable forward positions are built up—for example in early 1998—they need to be managed. As market conditions permit, the RBI undertakes forward transactions to (i) reduce the extent of forward liabilities and (ii) smooth the profile of maturing forward liabilities. The aim is analogous to domestic debt management operations, namely to minimize market disruption while refunding or retiring liabilities.

32. There is no evidence to suggest that the RBI has used forward transactions for reasons typically associated with imprudent reserve management. For example, some central banks have used forward intervention to: (i) defer a reduction in gross reserves, buying time for market conditions to reverse; (ii) leverage over the gross reserve position to increase the size and scale of intervention; or (iii) "window dress" the gross reserve position. Indeed, the publication of the RBI's net reserve position (albeit with a delay of some weeks) has greatly reduced the scope and rationale for such transactions.

How effective has RBI forward intervention been?

33. Forward intervention should be assessed by whether policy objectives were achieved (in the context of the market situation) and at what risks. The RBI's experience paints a somewhat mixed picture:

- RBI intervention has been helpful to contain excessive fluctuations in forward premia, particularly during times of stress. The large size of forward intervention attests to the degree of order imbalance in forward markets during periods in which rate expectations shifted. Additionally, RBI operations—by being a counterpart to commercial banks—have assisted commercial banks in managing their foreign exchange positions. For example, RBI forward intervention has helped banks to remain within their exposure limits (although this could have been done equally in the spot market), and RBI swap and switch operations have assisted banks in managing the profile of forward assets and liabilities.

- Forward intervention has not been entirely successful in stemming downward expectations. Forward premia embarked on an upward trend between November 1997 and January 1998, and although forward intervention likely slowed that trend, it took

a strong monetary package to reverse expectations in mid–January. Thus, forward intervention by itself is likely to be insufficient to stem the tide of market sentiment.

- The RBI's swap activity has, at times, proved counterproductive. For example, in November 1997, the RBI attempted to stabilize the foreign exchange market by influencing forward rates, while leaving domestic interest rates unchanged. The attempt failed mainly because liquidity injected through the swaps added to pressure on the spot exchange rate.

Why the RBI should seek to limit forward intervention

34. Inefficient domestic and foreign exchange markets have been the main rationale for the RBI to intervene in forward markets. However, the following arguments suggest that large–scale forward intervention is at best a second–best instrument which reduces the efficiency of foreign exchange market signals, and carries substantial risks for the RBI's balance sheet:

- **Murky signal to market**. When the central bank enters the forward market to condition or influence expectations, the "signal" sent to the market can be difficult to interpret. For example, the market might read the intervention rate as the Central Bank's view of what the rate might be in the future, which could increase speculative pressure on the spot rate today. Moreover, forward intervention may be construed as the central bank attempting to manipulate the market, which again could increase speculation.

- **Counterproductive operations**. Forward intervention can conflict with monetary operations. To stabilize exchange market conditions, monetary operations which reduce the supply of domestic currency and raise domestic interest rates, will in turn put upward pressure on forward premiums. Intervention aimed at reducing forward premiums can undermine the original monetary tightening, and may create arbitrage opportunities, or worse, exchange rate guarantees.

- **Adds a risk premium**. Without timely information on forward intervention/positions, participants face greater potential for exchange rate volatility, and thus increase the risk premium on a country's currency. The risk premium is likely to increase at an inopportune time—during a period of currency turmoil. Although India already publishes such information, the timeliness of its reporting could be further improved.

- **Financial risk posed**. There are examples of central banks that have incurred losses through forward interventions, and/or had great difficulties in meeting their commitments at a later stage. Moreover, under increasingly open capital accounts, market players can exercise considerable leverage in the forward market against the central bank, which could result in the erosion of the net reserve position.

E. Reforms for Improved Market Efficiency

35. The scope for excessive exchange rate volatility, particular in forward markets, would be greatly reduced if domestic markets would become deeper and more efficient. Although India's foreign exchange markets have benefitted from various reforms that have been implemented in recent years, a large reform agenda nevertheless remains. Several outstanding issues are identified below.

Market access and functioning

36. With the progressive lifting of trade and capital account restrictions, Indian foreign exchange markets will eventually become deeper. However, market access could be improved in the short–term through liberalization measures that would also have the effect of making the market environment more competitive. Moreover, various regulations still impede efficient market functioning. Some of these stem from efforts to limit the scope of market activity during periods of market volatility; others originate from exchange controls. Liberalization measures that could be implemented would be:

- Opening more substantially the window for **high quality dealers to borrow on and lend to the international foreign exchange and money markets**, subject to regulation of position limits;

- Allowing qualified and competent **nonbank financial intermediaries** to obtain licences as authorized dealers;

- **Eliminating foreign exchange surrender requirements** for exporters; and

- **Eliminating regulatory linkages between sources and uses of funds** by authorized dealers and—to the extent consistent with the broader capital account liberalization—by corporates. For example, regulations that restrict end use of funds raised through NRI deposits could be further liberalized.

- **Exposing brokerage fees and prices for customer services and spreads to open competition**. Prices of foreign exchange services among banks should no longer be fixed by the Foreign Exchange Dealers Association (FEDAI).

Integration of domestic and foreign exchange markets

37. Policy–related impediments to the development of fully integrated and efficient money and foreign exchange markets should be removed quickly. Among the most important measures affecting both domestic and foreign exchange markets would be:

- **Liberalization of access to the forward foreign exchange market** (e.g., for FIIs and selected nonbank finance companies);

- **Further development of money and government securities markets**: addressing, in particular, issues of the reserve requirement regime and the functioning the interbank market; the deepening of primary auctions of government securities and the broadening of the primary dealer system; the efficiency of the payments and clearing and settlement system; and the regulatory framework, and the sound and efficient functioning of markets;

- **Reduction of the segmentation of domestic money markets** by: allowing selected nonbank financial institutions symmetric access to the interbank market; and further broadening access to the repo market as the government securities market is developed;

- **Liberalization of term interest rates**: transition from direct management of term interest rates through primary auctions to indirect management through government open market operations in secondary markets; and

- **Improvements in cash management practices** of both government and public sector enterprises to deepen term money markets across all maturities (inefficient cash management has contributed to a lumping of transactions in the call money market).

Foreign Exchange Market Structure and Central Bank Intervention

Market structure

38. The foreign exchange market in India is made up of two segments—the interbank and retail markets. The interbank market consists of commercial banks authorized by the RBI as foreign exchange dealers (ADs) and the Reserve Bank of India (RBI). The RBI intervenes through ADs. Merchants—importers and exporters—that require foreign exchange or local currency (for foreign exchange), buy and sell through ADs in the retail market segment, at bank counters or by telephone.

39. The types of foreign exchange transactions are driven by the needs of market participants to meet foreign currency obligations and hedge currency risk. Merchants sell or buy foreign exchange in the spot market (for delivery two days from the trade date), to meet foreign currency obligations and repatriate export earnings as they come due. Also, they may enter into forward transactions to guarantee the price for future delivery, hedging against currency movement between invoice billings and settlement. These forward transactions may be canceled (at a market-related cost) if merchants wishes to remove the hedge. In India, forward transactions are about 1/3 the size of spot transactions.

Central bank intervention

40. The RBI conducts transactions in the spot, forward and swap markets: what impact does each have on the exchange rate? Spot and outright forward intervention should have similar effects on the spot exchange rate because the impact on commercial banks' net foreign exchange position is the same. Whether intervention took place in the spot or forward markets, commercial banks would attempt to close the position in the spot market, and both would impact the spot rate similarly.[13]

41. By contrast, swap transactions do not have a direct effect on the spot exchange rate because they leave the net foreign exchange position unchanged. However, as swaps have an impact on domestic liquidity, and therefore money market conditions, they have an indirect effect on the spot exchange rate.

42. Do swaps impact on forward premia? If markets were efficient and capital was mobile the answer would be no. To illustrate, assume the central bank enters into a swap—buys dollars spot and sells them forward—with a view to reduce forward premia. If forward premia edge lower, market participants would quickly exploit the opportunity by borrowing dollars abroad and purchasing rupees in the spot market while simultaneously repurchasing dollars in the forward market. This action would push the forward premia up and balance the

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[13]The major difference is that intervention in the spot market would withdraw domestic liquidity away—if intervention is not sterilized—and thus tighten money market conditions, which would lend further support to the exchange rate.

central bank's spot and forward transactions. However, since such arbitrage possibilities in India are limited, swap intervention by the RBI tends to have a dampening impact on forward premia.

Data on foreign exchange transactions

43. The RBI has begun in April 1997 to publish monthly data on intervention and its net forward position, which are made available in the RBI Bulletin with about a six week lag (see Table II.3). Further detail on the composition of dollar sales and purchases, or the maturity structure of forward obligations is not provided. Weekly information on the RBI's gross reserve position has already been made available in the RBI's Weekly Statistical Supplement with a one week lag (both publications can be accessed from the RBI's web site).

44. The RBI has also begun in April to publish information on daily volumes of foreign exchange market activity, based on data provided by major banks that account for 80–85 percent of total private foreign transaction volumes (so–called "reporting banks"). These banks report daily foreign currency transactions (sales and purchases) in spot, forward, and swap markets. The data also show the split between transactions with corporates, foreign investors, and non–resident Indians (merchant transactions) and transactions with other commercial banks, financial institutions, and the RBI (interbank transactions).

45. The data can be used to observe total market turnover (see Chart II.1) as well as net foreign currency purchases for merchants, non–reporting banks and the RBI, and reporting banks (see Chart II.3; aggregated to monthly data in Table II.4):

(i) Net merchant purchases are calculated by netting sales to merchants with purchases from merchants.

(ii) Netting out interbank transactions yields net purchases by non–reporting banks and the RBI, because transactions with reporting banks cancel out.

(iii) Finally, by definition, the sum of net purchases by merchants and non–reporting banks and the RBI has to equal net sales by reporting banks.

46. Since transactions by non–reporting banks account for only a small share of all transactions (and because the RBI apparently conducts its transactions mainly with reporting banks), the second item should broadly equal RBI intervention in foreign exchange markets.[14]

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[14]Spot intervention by the RBI is not identical to the change in foreign exchange reserves. Reserves are also affected by swap transactions, maturing swap or forward deals, and transactions conducted outside the market.

Table II.4. India: Foreign Exchange Market Trading, 1997-98

(Net currency purchases by group; in millions of US dollars)

	Merchants			Reporting banks			Non-reporting banks and RBI			Average daily turnover		
	Spot	Forward	Forward Cancel	Spot	Forward	Swap	Spot	Forward	Swap	Spot	Forward	Swap
1997												
April	-242	-150	-61	633	-168	1,144	-391	378	-1,144	1,082	337	1,237
May	-160	-665	5	-455	431	543	615	229	-543	1,201	267	968
June	-390	-613	-61	51	508	290	339	166	-290	1,152	279	1,075
July	-736	-53	-27	339	40	849	397	40	-849	1,155	274	1,154
August	-392	524	38	473	-171	1,198	-81	-391	-1,198	1,505	633	1,610
September	480	2,015	86	1,481	-1,656	1,495	-1,961	-445	-1,495	1,601	492	1,870
October	24	568	59	-124	-722	2,572	100	95	-2,572	1,302	353	1,675
November	1,568	1,524	65	1,373	-1,463	1,370	-2,941	-126	-1,370	1,677	527	1,951
December	1,447	1,284	313	-151	-1,674	1,085	-1,296	77	-1,085	1,599	437	1,765
1998												
January	1,425	1,695	314	81	-1,870	1,867	-1,505	-139	-1,867	1,741	561	1,958
February	570	646	200	100	-1,014	557	-670	168	-557	1,422	414	1,829
March	-377	195	185	-562	-562	247	939	182	-247	1,669	457	2,068
April 1/	88	544	179	401	-628	142	-489	-95	-142	1,383	480	1,796
May 1/	383	1,510	202	430	-1,728	313	-813	16	-313	1,701	533	2,735
June 1/	834	1,928	175	518	-1,836	371	-1,352	-267	-371	2,134	605	3,723
July 1/	365	760	-35	53	-656	524	-418	-69	-524	1,273	409	1,908

Source: Data provided by the Indian authorities.

1/ Data only partially available.

III. Exports and Competitiveness[1]

Abstract: *This paper reviews the impact of currency movements in Asia over the past year on India's competitiveness, and examines the outlook for India's exports. First, real exchange rate indicators are used to assess the competitiveness of India's exports from several perspectives. Second, alternative econometric methods are used to estimate the equilibrium real exchange rate and measure the extent of misalignment of the rupee. The results, based on these backward–looking assessments, indicate that the rupee was not substantially overvalued in 1997/98, and that the likely impact of currency realignments in the region on India's exports appears to be small.*

A. Introduction

1. Since the onset of the Asian financial crisis in July 1997, the rupee has depreciated by about 19 percent against the dollar. By contrast, in real effective terms, the rupee has remained broadly unchanged since July 1997, and has appreciated by about 8 percent since the unification of the exchange rate and the shift to a managed float in March 1993. Currency realignments in the wake of the Asian crisis and the continued sluggish performance of exports in dollar terms have hence heightened concerns that the rupee has become overvalued.

2. This chapter focuses primarily on the following question: have currency realignments in Asia over the past year had an impact on India's competitiveness and on the outlook for exports? Recognizing that no single indicator offers a complete and satisfactory assessment of competitiveness, and that in examining export competitiveness, price–based competitiveness indicators should not be the only part of the analysis, this chapter reviews a broad range of methodologies from both a technical and econometric point of view. To put recent movements of the rupee in perspective, section B provides a historical overview of developments in selected external indicators as well as in India's trade and exchange regimes. Section C assesses alternative measures of competitiveness. Section D discusses various approaches to measuring exchange rate misalignment, and assesses recent levels of the rupee by estimating an equilibrium real effective exchange rate (REER). Section E examines the likely impact on India's exports of recent exchange rate developments. Finally, section F contains concluding remarks and discusses policy issues. The main conclusions are as follows:

- Most of the appreciation of the rupee in real terms in recent years appears to be an equilibrium phenomenon reflecting movements in economic fundamentals. There is also evidence of a Balassa–Samuelson effect.[2]

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[1]Prepared by Dimitri Tzanninis.

[2]The Balassa–Samuelson effect describes the process by which higher productivity growth in the tradable than in the nontradable goods sector (relative to partner countries) leads to wage and price increases in the nontradable goods sector, and to a real appreciation of the currency.

- A number of econometric techniques suggest that the rupee was not substantially overvalued in 1997/98.[3] However, the results should be interpreted with caution given the inherent impression of econometric estimates, and the fact that more recent events that could have affected competitiveness are not yet fully captured in the data.

- The recent sluggish performance of exports in dollar terms appears to have been related mainly to nonprice factors. Moreover, the likely impact on India's exports of currency realignments in the region appears to be small.

B. Historical Perspective

3. Until the 1980s, the rupee was significantly overvalued as external sector policies were used to promote the objective of industrialization through import substitution. With the resulting subsidization of imports, quantitative restrictions on imports and high import tariffs were maintained to prevent substantial balance of payments deficits. Import restrictions were accompanied by rationing of foreign exchange, price and capital account controls. The lack of a realistic alignment of the exchange rate led to major distortions in the relationship between domestic and foreign prices, that, coupled with export controls, penalized exports.

4. In the early 1980s, a progressive liberalization of the trade and exchange regimes began. Following an IMF–supported stabilization program in 1981, India gradually switched from import substitution to export promotion policies. By 1985, India had adopted a medium–term export and import policy intended to provide a strong base for improving the competitiveness of its exports, with an emphasis on the liberalization of essential imports of capital goods and intermediate inputs. To support this objective, the rupee was allowed to depreciate sharply (in nominal and real terms) beginning in 1985 (Chart III.1). With relatively conservative macroeconomic policies in place, movements in the REER reflected primarily policies to liberalize the exchange regime: comparison of the REER and the nominal effective exchange rate during the second half of the 1980s shows that the driving force behind movements in the REER was the nominal depreciation of the rupee. The policy of bringing the rupee to more realistic levels and the partial easing of the trade and exchange restrictions contributed to rapid export growth (see Chart III.1), which in turn helped expand the tradable goods sector.[4]

5. India's outward orientation increased during the 1990s. The stabilization and reform efforts initiated in 1991 in response to a severe balance of payments crisis were accompanied by a sizable depreciation of the rupee. The trade element of the reforms involved a further liberalization of the import regime by removing quantitative restrictions on imports, with the

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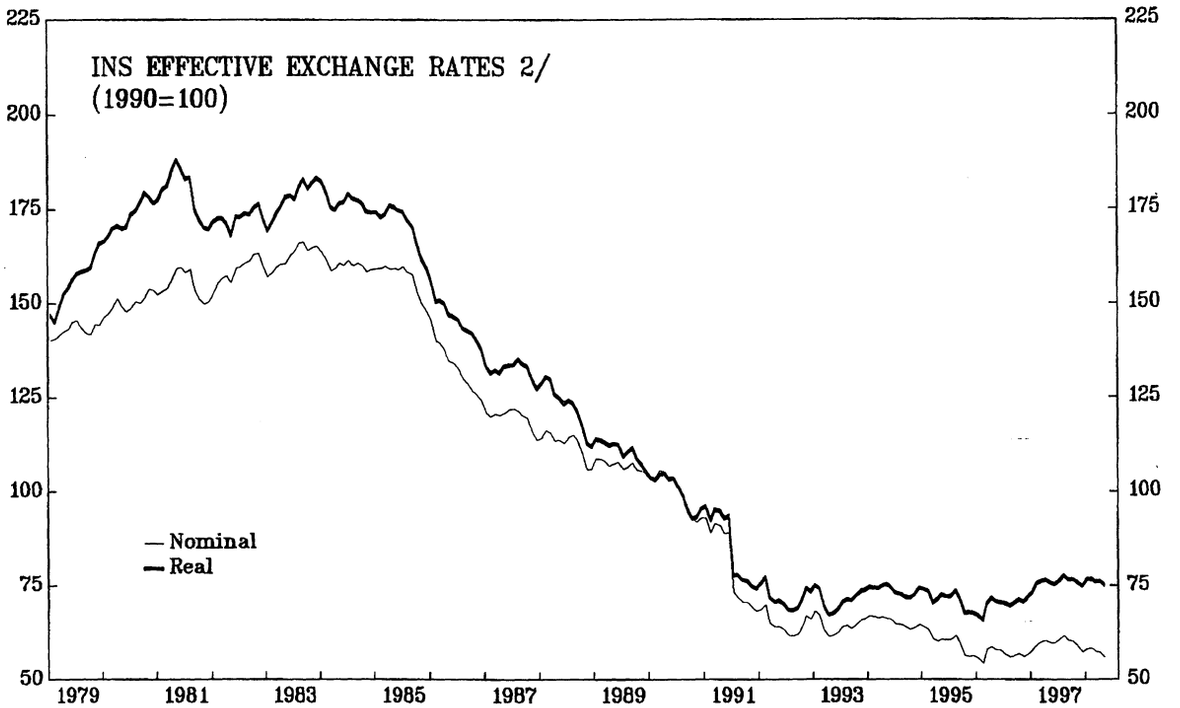
[3]India's fiscal year starts April 1.

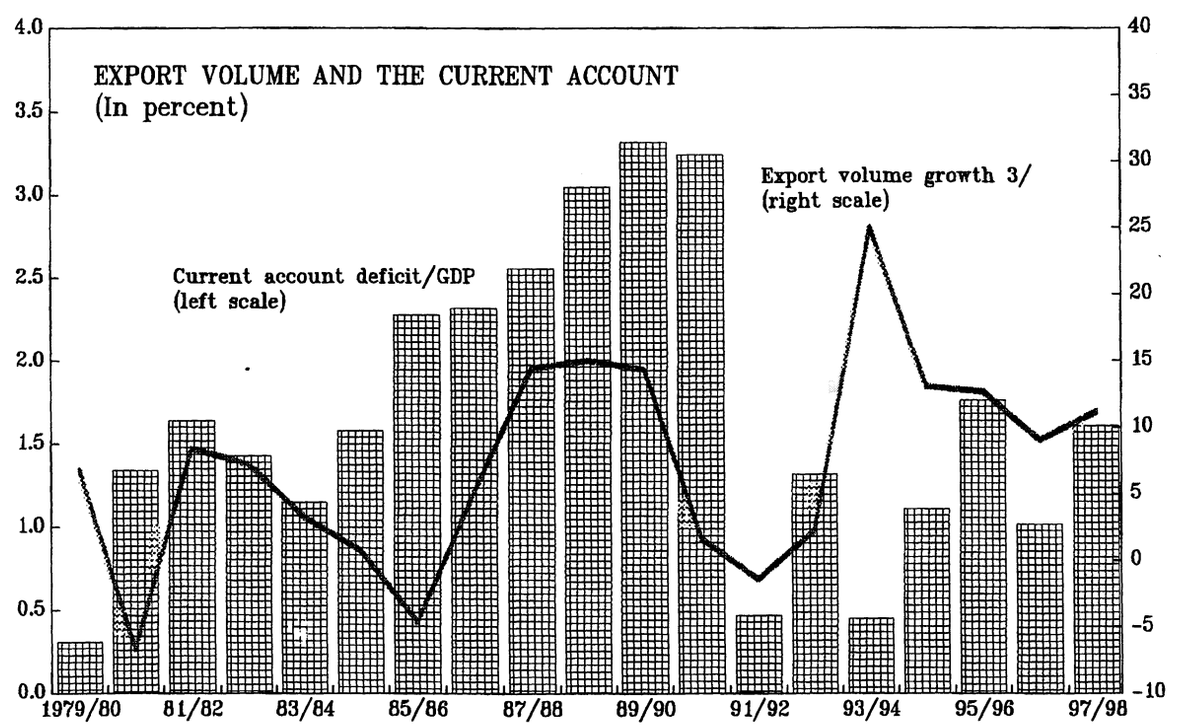
[4]However, it is difficult to detect any Balassa–Samuelson effects during the 1980s due to the overvaluation of the currency and the prevailing price and trade controls.

CHART III.1

INDIA

EFFECTIVE EXCHANGE RATES, EXPORTS, AND THE CURRENT ACCOUNT, 1979/80-1997/98 1/





Sources: Data provided by the Indian authorities; IMF, Information Notice System; and IMF, World Economic Outlook.

1/ April-March fiscal year.
2/ Effective exchange rates from the IMF's Information Notice System (INS).
3/ Merchandise exports only.

exception of consumer goods. Moreover, import tariffs were lowered across the board in a phased manner.[5] The unification of the exchange rate in March 1993 made the rupee convertible for current account transactions and brought the REER in line with fundamentals. This move was accompanied by a shift to a managed float of the exchange rate, and followed by steps toward full capital account convertibility. A surge in private capital inflows—particularly portfolio and foreign direct investment—that started in late 1993 led to pressure on the rupee to appreciate and to a substantial buildup in reserves. Reflecting the adjustment in the exchange rate and the more open trade and exchange regimes, India's share in world merchandise exports rose from 0.5 percent in 1991 to 0.65 percent in 1997.

6. Given the distortions in the exchange rate prior to 1993, **it is more meaningful to discuss developments in India's competitiveness from 1993 to date**, thus treating 1993 as a structural break. Indeed, the authorities have often used the level of the REER prevailing in March 1993—as computed by the Reserve Bank of India (RBI); see section C—as a benchmark equilibrium rate to gauge developments in competitiveness, with the recognition that the equilibrium rate may have gradually shifted.[6] However, this recognition is not widely shared by market participants (especially exporters and the corporate sector), and there are many who view the appreciation of the rupee in real effective terms since 1993 as an erosion of competitiveness that should be rectified by a weaker rupee. The following analysis shows that it is not appropriate to compare the current level of the REER against its level in March 1993 to assess developments in competitiveness: although the rupee appeared to be consistent with an equilibrium in the external position in 1993, the statistical evidence (see section D below) points to an equilibrium real appreciation since then.

C. Alternative Measures of Competitiveness

7. The IMF's Information Notice System (INS) calculations of India's REER do not suggest a loss of competitiveness since the onset of the currency crisis in Asia in July 1997. Despite the significant depreciation of currencies in Asia, the depreciation of the rupee vis–à–vis the dollar since then has maintained the REER of the rupee broadly at its level prior to the turmoil in Asia (Chart III.2).

8. However, the INS calculations of India's effective exchange rates are not without shortcomings. First, they rely on a weighting scheme that takes into account trade statistics

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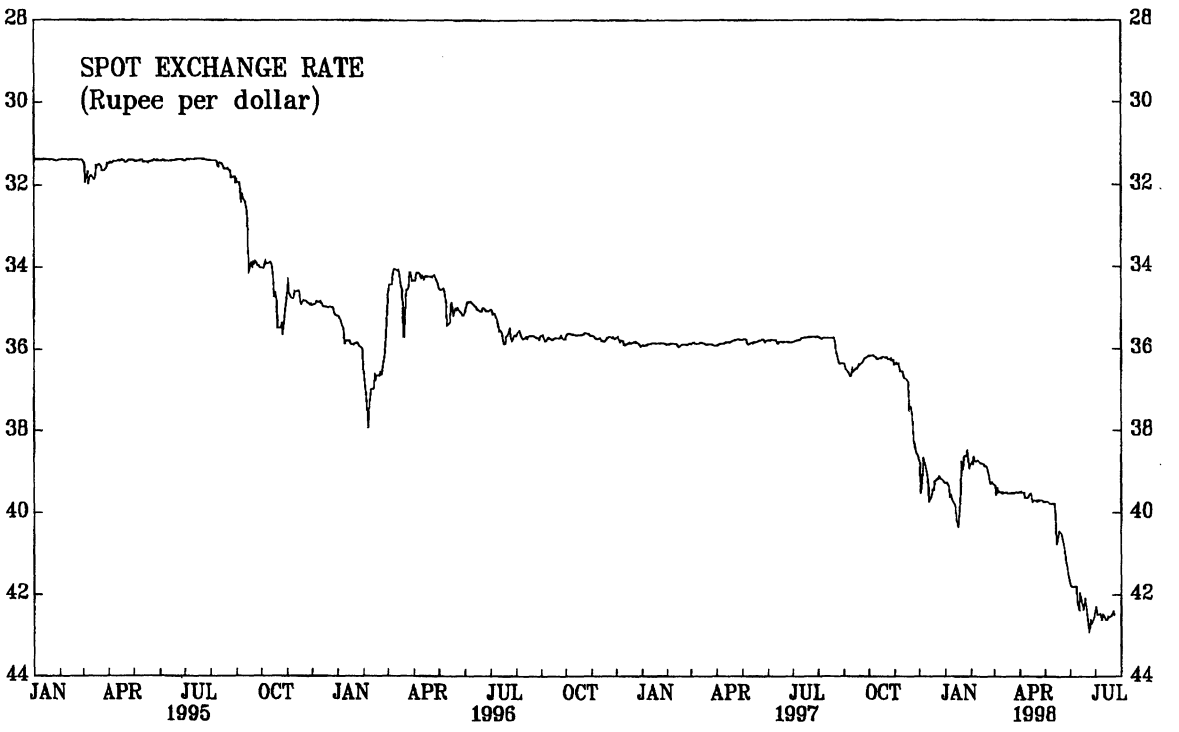
[5]The effective import–weighted tariff rate has been lowered from 87 percent in 1990/91 to about 30 percent in 1997/98.

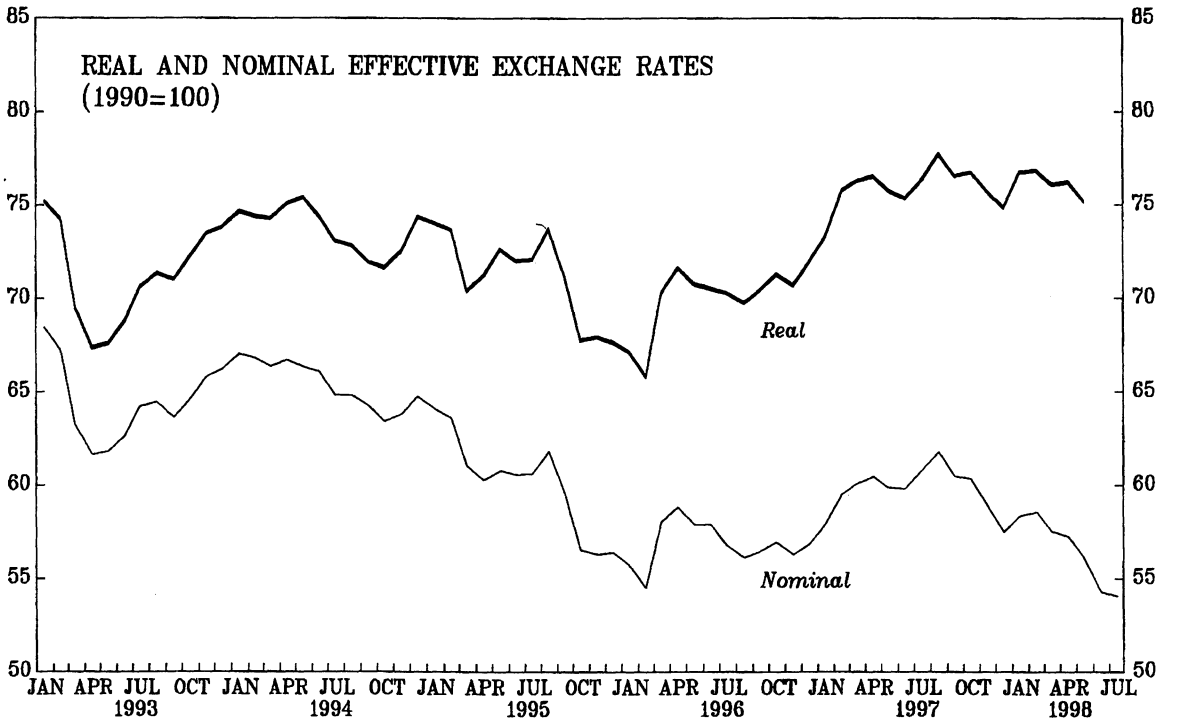
[6]It is reasonable to view the REER in March 1993 as consistent with a stable equilibrium in the external position. The unification of exchange rates set the rupee at a competitive and sustainable level from the point of view of movements in both domestic prices and the external current account; since then, the net flow of foreign assets and the external debt have followed sustainable paths.

CHART III.2

INDIA

EXCHANGE RATE DEVELOPMENTS, 1993-1998





Sources: Data provided by the Indian authorities; and IMF, Information Notice System.

over the period 1988–90, which may not accurately reflect India's current trade patterns. Second, they may not fully capture recent developments in competitiveness because they exclude the ASEAN–4 countries (Indonesia, Malaysia, the Philippines, and Thailand), as these countries have bilateral competitiveness weights of less than one percent.[7] These countries have played an increasingly import role in India's competitiveness in recent years that is not captured in the INS weights. Motivated by these shortcomings, this section addresses the following question: what do alternative measures of competitiveness indicate? This question is addressed by examining two alternative sets of real effective exchange rates.

CPI–based REER indices

9. To assess the discrepancy created by the omission of the ASEAN–4 countries from India's REER calculations, India's CPI–based REER (from the INS) is compared with the following CPI–based REER indices, which have bilateral competitiveness weights that include the ASEAN–4 countries:[8] (i) an REER index constructed using **the full set** of bilateral competitiveness weights (referred to as INS–FULL) from the latest revision to the INS carried out over 1994–96 that includes all countries with bilateral competitiveness weights below one percent (thus including the ASEAN–4 countries); (ii) an REER index based on the standard (truncated) INS weights, but selectively adding the ASEAN–4 countries in the calculations, with competitiveness weights calculated on the basis of Direction of Trade Statistics (DOTS) for 1994–96, which provide a reasonably accurate reflection of current trading patterns; and (iii) India's REER index as computed by the RBI, which covers a broader range of countries than the INS (36 in total, including the ASEAN–4 countries), with bilateral competitiveness weights based on trade statistics over the period 1975–91.[9]

10. The above indices have a number of advantages as well as shortcomings:

- **The methodology used by the INS to compute the REER is superior because it takes into account third–market competition**. However, as noted above, countries with bilateral competitiveness weights of less than one percent (such as the ASEAN–4

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[7]Countries with bilateral competitive weights below one percent are excluded from the calculations of effective exchange rates in the INS. For a description of the methodology and the data used to compute the effective exchange rate indices in the INS, see Desruelle and Zanello (1997).

[8]The term "CPI–based REER" is used to reflect the use of consumer prices for partner countries in the calculation of the REER. For India, however, rather than the CPI, the wholesale price index (WPI) is used in the INS calculations because it is the widest and most timely price indicator.

[9]The RBI also uses the WPI for India in its calculations of a CPI–based REER. See Reserve Bank of India (1993).

countries in the case of India's effective exchange rates) have been excluded from the calculations. Therefore, in periods of currency turmoil, the INS indices might not accurately track developments in competitiveness if they exclude the countries whose currencies undergo large fluctuations. Moreover, calculations of weights in the INS are based on trade statistics that do not capture the changes in India's trade patterns during the 1990s.[10]

- **The methodology for constructing the REER index based on DOTS trade shares for 1994–96 is *ad hoc***: due to computational constraints, the only weights adjusted using DOTS trade shares were the ones for the ASEAN–4 countries. As a result of the significant depreciations of the ASEAN–4 currencies over the past year, the REER derived this way would, by design, show a more pronounced appreciation (or a less pronounced depreciation) of the rupee since July 1997 than the INS index.

- **The RBI's REER does not capture any third–market competition**, a particularly relevant issue for Indian exports following the severe depreciation of some competitor currencies. Moreover, although the RBI's REER includes a broader range of countries (including the ASEAN–4 countries), its bilateral competitiveness weights are based on outdated trade statistics. These weights under represent the countries of the European Union, and overemphasize the importance of the U.S. in India's trade.[11]

11. Despite its shortcomings, **the INS index appears to capture reasonably well recent developments in competitiveness**: Table III.1 shows that the differences between the four CPI–based REER indices discussed above are small. By all four REER measures, the rupee has appreciated by 8–12 percent from March 1993 to date, and has remained broadly unchanged since July 1997 when the turmoil in Asia began (Chart III.3). As expected, the REER indices that include the ASEAN–4 countries (most notably INS–FULL and DOTS) show a slightly less pronounced depreciation in recent months.

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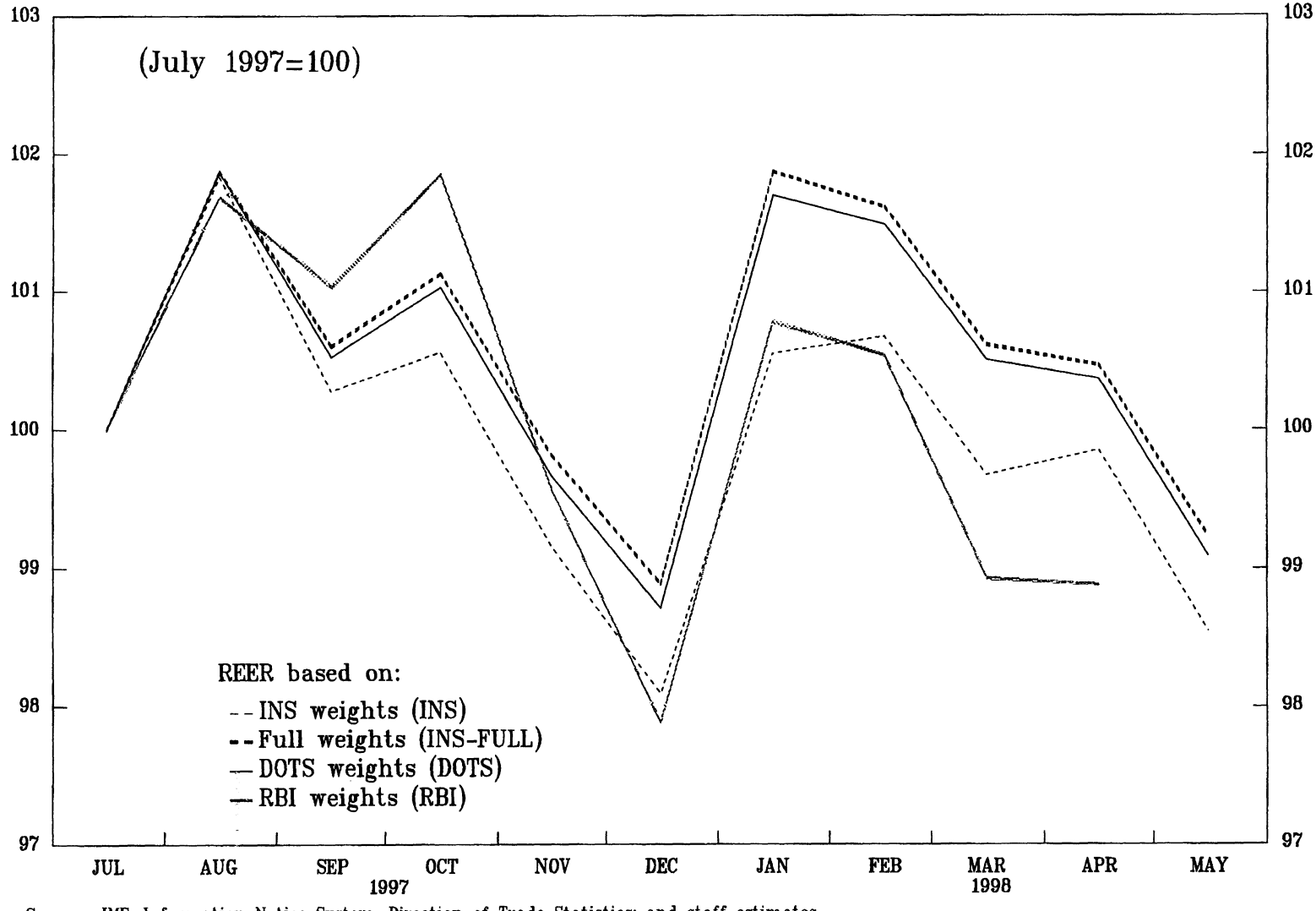
[10]There has been a gradual increase in the share of Asian countries in India's exports in recent years. The share of all Asian countries in India's exports increased from 24 percent in 1990/91 to 29 percent in 1996/97, with the trend broadly continuing in 1997/98 despite declining exports to the countries primarily affected by the financial crisis. In 1997/98, exports to the subset of Southeast and East Asian countries accounted for about 20 percent of India's exports, while imports from those countries accounted for about 15 percent of total imports.

[11]The cumulative weights of the countries of the European Union in the RBI's REER index are 13.9 percentage points lower than their cumulative weights in the INS. Moreover, the weight of the U.S. is 3 percentage points higher than its weight in the INS.

CHART III.3

INDIA

CPI-BASED REAL EFFECTIVE EXCHANGE RATES, 1997-1998 1/



Sources: IMF, Information Notice System, Direction of Trade Statistics; and staff estimates.

1/ For India, the WPI is used in all REER indices.

Table III.1 India: CPI–based Real Effective Exchange Rates, 1993–98

(In percent)

	Change from March 1993 to date 1/	Change from July 1997 to date 1/
INS	8.2	-1.5
INS–FULL	8.4	-0.8
DOTS	8.4	-0.9
RBI	12.1	-1.1

Sources: IMF, Information Notice System; IMF, Direction of Trade Statistics; RBI, Reserve Bank of India Bulletin; and staff estimates and calculations.

1/ Percent changes through May 1998 for INS, INS–FULL, and DOTS; through April 1998 for RBI.

REER indices based on CPI, WPI, and export unit values

12. In order to assess competitiveness based on a broader set of indicators and to detect any Balassa–Samuelson effects, the following REER measures (which are based on different price indices) are compared: the CPI–based REER computed by INS, a WPI–based REER, and an REER based on relative export unit values. The rationale for using wholesale prices in the computation of REERs is that they contain a larger traded goods component than consumer prices, and that they are not as much influenced by price controls and indirect taxes. Similarly, export unit values capture a large component of trade in goods.[12]

13. It appears that the real appreciation of the rupee since 1993 (based on INS calculations) may not have jeopardized export competitiveness in recent years. The divergent trends in the CPI–based and WPI–based REER, on the one hand, and the REER based on relative export unit values, on the other (Chart III.4), point to the direction of relatively faster productivity growth in India's tradable goods sector than in other countries (the Balassa–Samuelson effect).[13] In India, the gap in productivity growth between the tradable

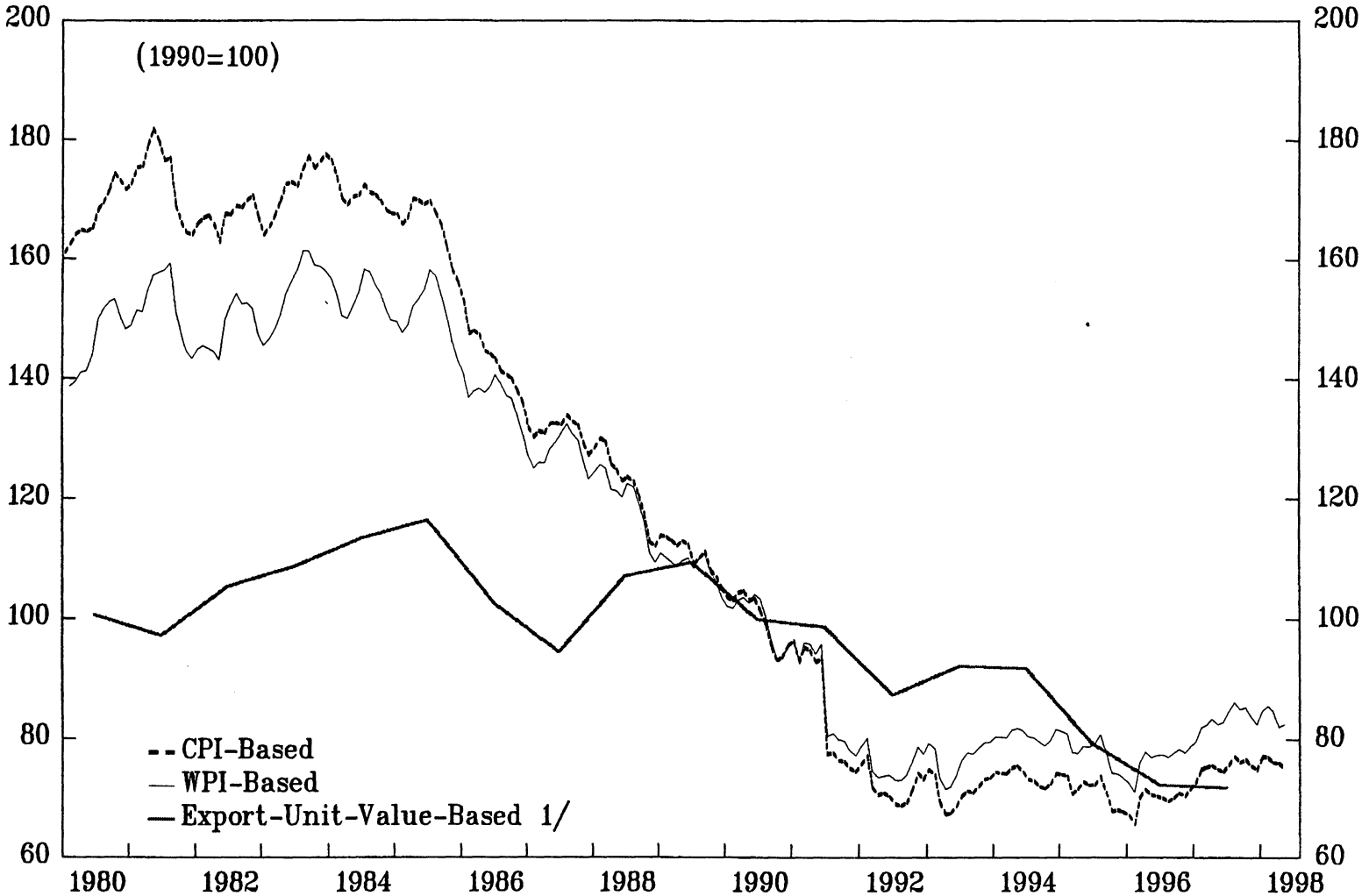
[12]For a discussion of the advantages and limitations of various price and cost indices in calculating REERs, see Halpern (1996), and Marsh and Tokarick (1994).

[13]The effect is more pronounced in the mid–1980s and early 1990s, when more drastic changes in India's trade and exchange regimes took place. Such an effect is more likely to be important when examining countries at different levels of development, such as India and its major trading partners (the G–7 countries). The existence of the Balassa–Samuelson effect is tested directly in section D.

CHART III.4

INDIA

REAL EFFECTIVE EXCHANGE RATE INDICES, 1980-1998



Sources: Data provided by the Indian authorities, IMF, Information Notice System; IMF, International Financial Statistics; and staff estimates.

1/ Annual data.

and nontradable goods sectors appears to have grown more than in partner countries, thus confining the price increases that led to the real appreciation of the rupee primarily to the nontradable goods sector. As a result, relative export prices have fallen more rapidly relative to broader price indices in India than elsewhere, following the accelerated liberalization of the trade and exchange regimes beginning in the early 1990s.

D. The Level of the Rupee

14. The appreciation of the rupee in real effective terms in recent years has been cited as one of the main factors behind the slowdown in India's exports in dollar terms. The task of isolating the effect of the REER on exports from all other influences becomes particularly difficult in an environment of gradual liberalization of the trade and exchange regimes. Nonetheless, it appears that the recent performance of exports has primarily reflected nonprice factors (Box III.1). Against this background, this section examines whether the rupee was overvalued in 1997/98 by measuring the extent of its misalignment in real effective terms in relation to an estimated equilibrium REER.[14] To increase confidence in the findings, the degree of misalignment was measured using three different methods:

- A **Hodrick–Prescott (HP) filter** was used based on the premise of relative purchasing power parity over the long run, and on the empirical evidence showing the REER exhibiting mean–reverting properties; that is, deviations of the REER from equilibrium are temporary, although sometimes relatively long lived.[15] According to this method, the rupee was slightly overvalued (1½ percent) at end–March 1998, and most of its misalignment at the onset of the Asian crisis has been subsequently corrected (Chart III.5).[16]

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[14]The measurement of the extent of misalignment is complicated by the fact that the "equilibrium" REER is an unobservable variable. In this chapter, misalignment is defined as the deviation (in percent) of the actual REER from its estimated equilibrium level. In interpreting the results, it is worthwhile noting that the notion of equilibrium used is a statistical one rather than one that would be consistent with macroeconomic balance as defined by economic theory.

[15]The HP filter is a generalization of the trend–stationary hypothesis used in the literature on real exchange rates. Although the HP filter is devoid of theoretical underpinnings and gives excessive weight to the most recent observations (the end–period problem), it is often used because of its computational simplicity. To avoid the end–period problem, actual data for the REER through June 1998 were used but the results were truncated at end–March 1998.

[16]See Agénor and Hoffmaister (1996), and Clark and MacDonald (1998) for the application of HP filters to estimate the extend of misalignment of REERs. Chinn (1998) used a simplified version of the trend–stationary hypothesis by employing a linear deterministic trend to calculate equilibrium REERs.

Box III.1. The Performance of India's Exports

India's exports remained weak in dollar terms in 1997/98. Exports grew by 2½ percent in dollar terms in 1997/98, compared with 4½ percent in the previous year, far below the growth rates recorded in recent years. However, the performance of exports has been robust in volume terms: partner country import deflators from WEO suggest that export volumes rose by 9 percent in 1996/97 and by about 11 percent in 1997/98 (see Chart III.1).

There have been marked differences in export performance across sectors. A number of export sectors—accounting for nearly half of total exports—have performed relatively well, most notably chemicals and related products, gems and jewelry, and engineering goods. However, traditional sectors, such as agricultural products, garments, and leather goods have performed poorly.

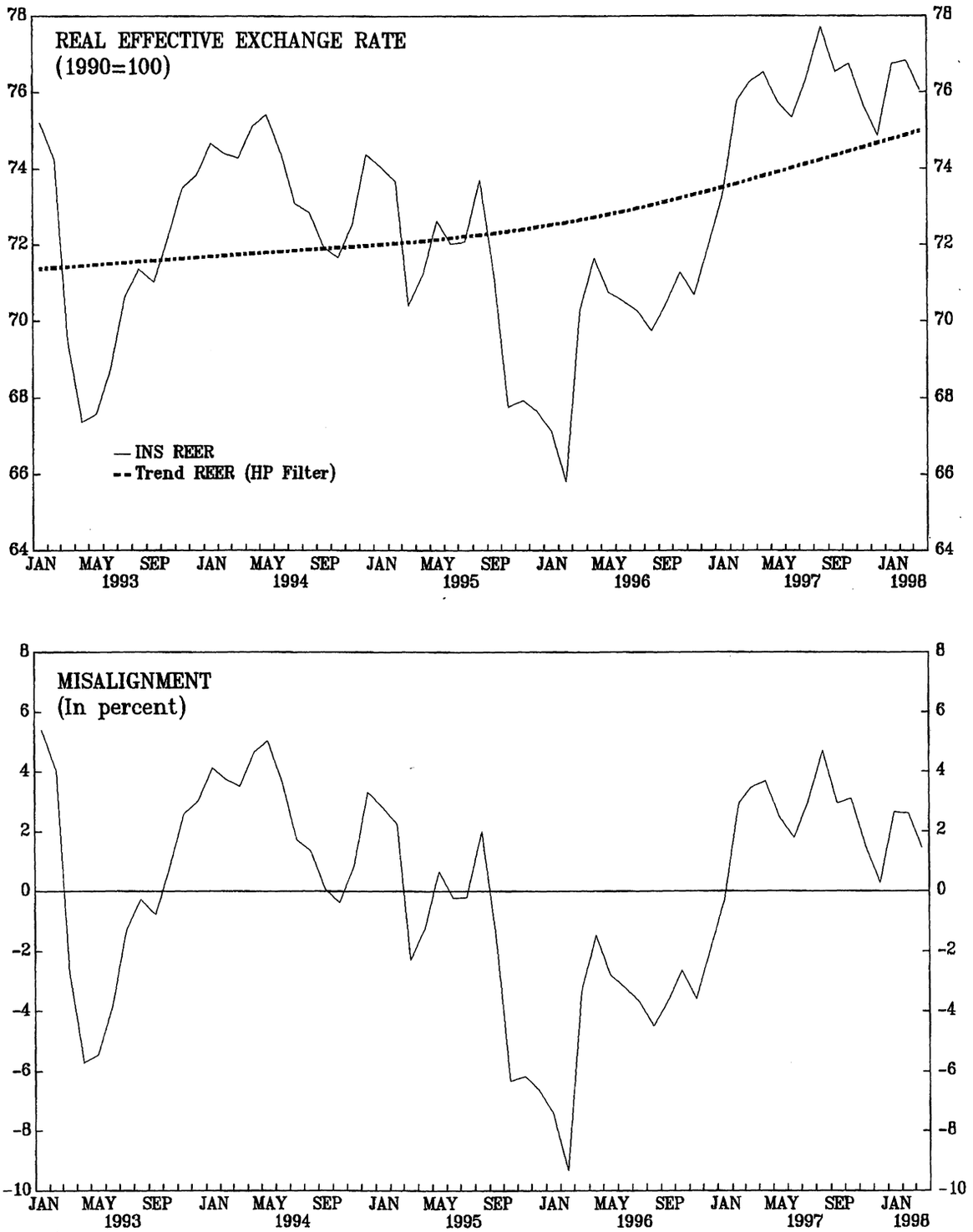
The performance of exports has primarily reflected nonprice factors. A number of export sectors have been affected by weaker world demand, as well as specific factors such as the virtual freeze on wheat exports to meet domestic demand, antidumping action by the European Union affecting garment exports, and stricter domestic environmental norms affecting leather exports. The performance of exports has also reflected structural factors such as infrastructure bottlenecks, most notably in electric power and port facilities.

The lack of reforms in the export–oriented small–scale sector has also constrained export growth. Small–scale units are defined as manufacturing units in which investment in plant and machinery is less than Rs 30 million (about $700,000). These units enjoy special protection from both domestic and international competition. About 800 products are reserved for production by small–scale units. The small–scale sector's products account for roughly half of all exports. These restrictions have made it difficult to take advantage of economies of scale, and have hence hindered the competitiveness of exports. A 1997 official report by the Hussain Committee assessed "...the case for reservations is fundamentally flawed...The policy for reservations has crippled the growth of several industrial sectors, restricted exports, and has done little for the promotion of small–scale industries."

CHART III.5

INDIA

LONG-RUN REAL EFFECTIVE EXCHANGE RATE AND DEGREE OF MISALIGNMENT, 1993-98



Sources: IMF, Information Notice System; and staff estimates.

- The **Beveridge–Nelson decomposition method** was used to separate permanent from temporary movements in the REER (the latter associated with misalignments). This method is not designed to estimate an "equilibrium" REER in an econometric sense, but rather to decompose movements in the REER into a permanent (stochastic trend) component and a temporary (cyclical) component.[17] According to this method, the rupee was about one percent above its stochastic trend at end–March 1998 (Chart III.6).

- The **long–run cointegrating relationship between the REER and its determinants** was estimated to assess whether the appreciation of the rupee since 1993 has been an equilibrium phenomenon, and to measure the extent of misalignment (if any) of the rupee in 1997/98. Regressions using annual data found an empirical long–run link between India's REER and the following fundamental variables: (i) trade policy (proxied by the sum of exports and imports over GDP), capturing the impact on India's REER of the shift in the trade regime; (ii) the external environment (proxied by India's terms of trade); and (iii) domestic supply factors (productivity differential between the tradable and nontradable goods sectors). **The statistical evidence suggests that: (i) most of the appreciation of the rupee since 1993 has been an equilibrium phenomenon reflecting movements in economic fundamentals; and (ii) the rupee was overvalued by 2–3 percent in 1997/98** (Chart III. 7).[18]

15. The patterns of misalignment estimated by the HP filter and the Beveridge–Nelson decomposition method broadly share their main features. In particular, both methods capture reasonably well the two episodes of turbulence in the foreign exchange market in recent years: the depreciation of the rupee vis–à–vis the dollar in late 1995 and early 1996, and again from August 1997 onward. Moreover, in most instances the misalignment of the rupee has been confined within 5 percentage points around its equilibrium value.[19]

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[17]See Beveridge and Nelson (1981). Several studies have used this method mainly to compute the extent of misalignment of REERs. See, for example, Agénor and Hoffmaister (1996), and Calvo *et al* (1995). Patel and Srivastava (1998) used this method to compute the correlation between the temporary component of India's REER and cyclical impulses such as inflation.

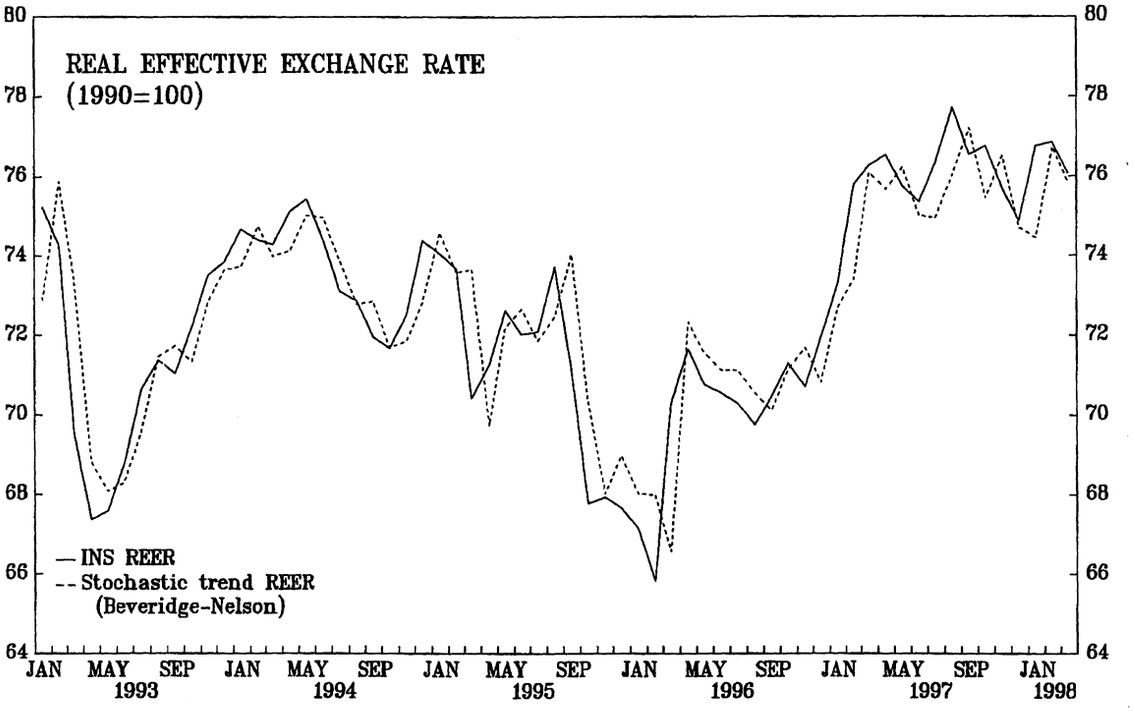
[18]While keeping in mind the inherent imprecision of econometric estimates, the somewhat higher degree of misalignment found with this method apparently captures the aggregation effect of annual data, which are unable to identify turning points within a year. By the other two methods employed to measure the degree of misalignment, the overvaluation of the rupee in the first half of 1997/98 had, to a significant extent, been corrected by end–March 1998.

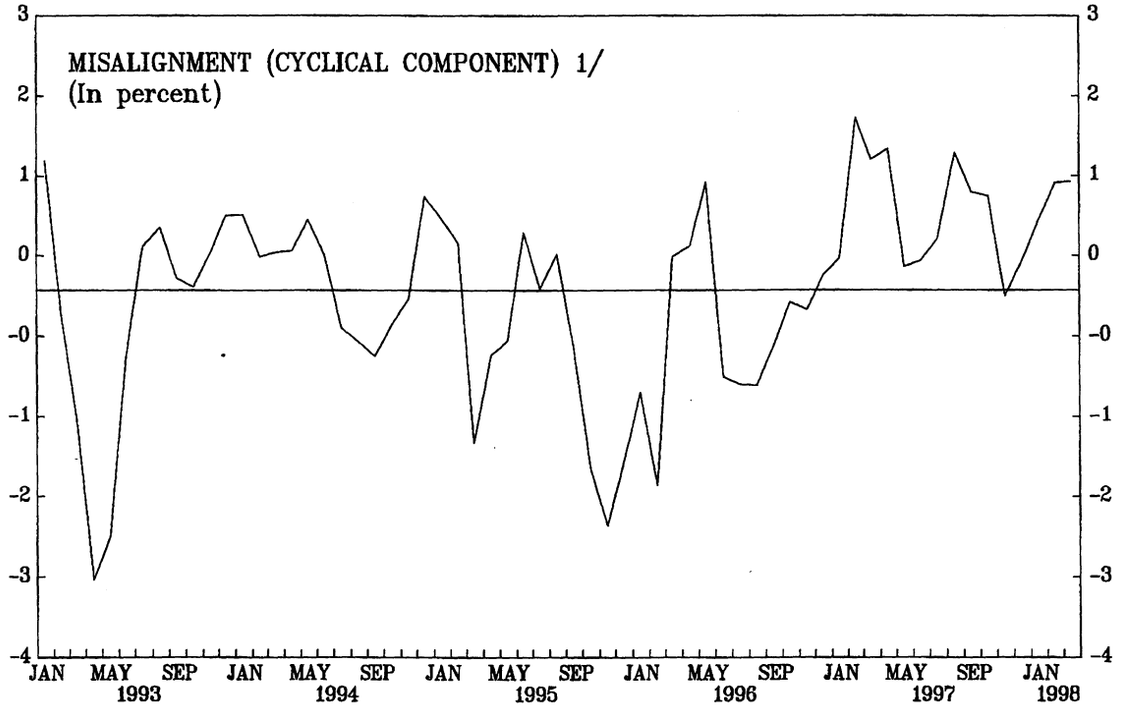
[19]The estimated overvaluation (1–3 percent by all three methods used) in 1997/98 is not large relative to past deviations of the REER from its equilibrium. Historically, misalignments of the rupee have tended to correct themselves within two years.

CHART III.6

INDIA

LONG-RUN REAL EFFECTIVE EXCHANGE RATE AND DEGREE OF MISALIGNMENT, 1993-98





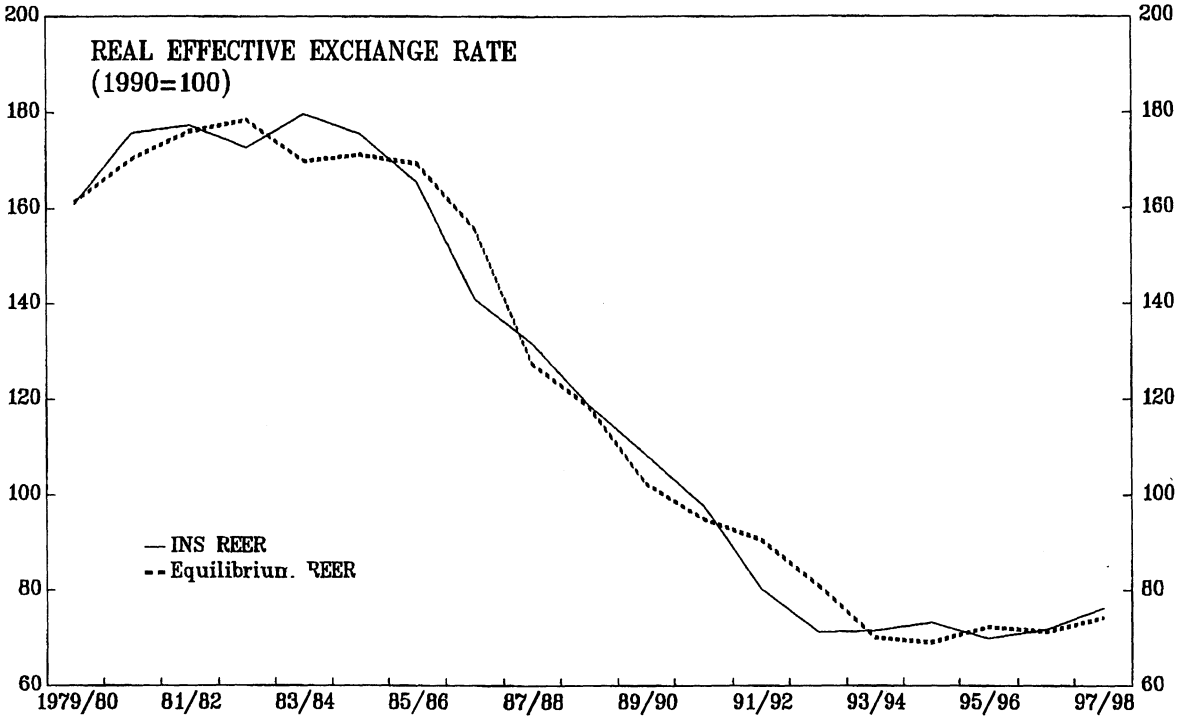
Sources: IMF, Information Notice System; and staff estimates.

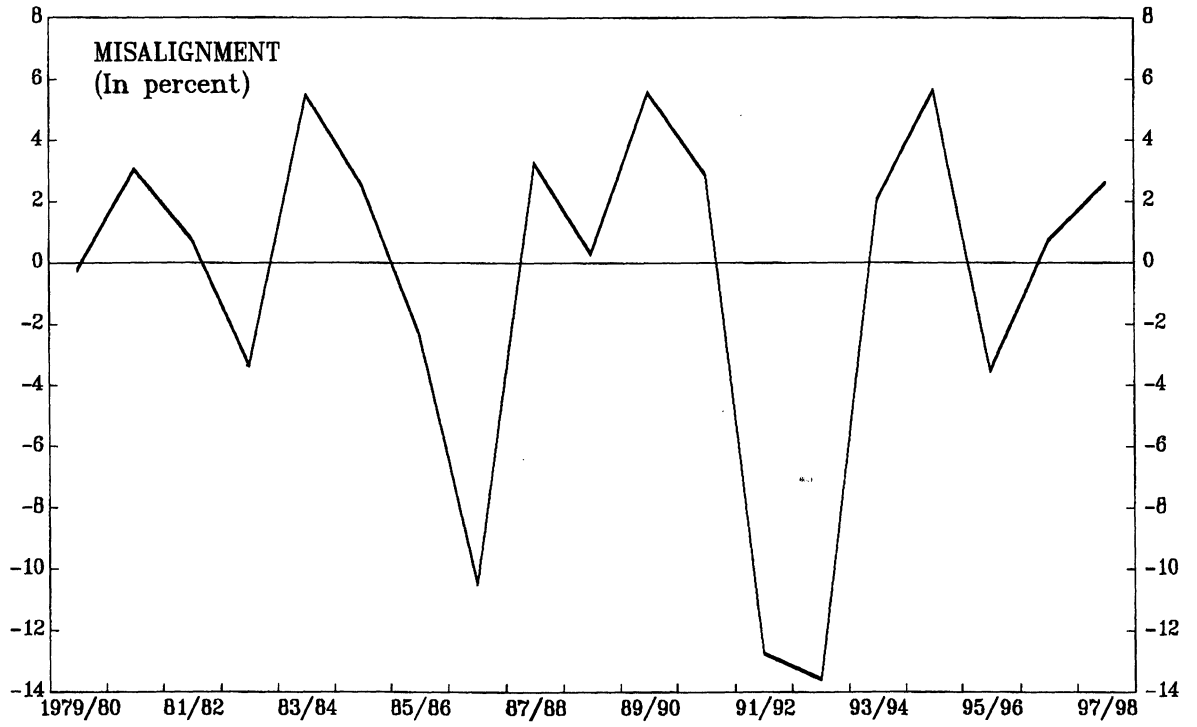
1/ 3-month moving average.

CHART III.7

INDIA

LONG-RUN REAL EFFECTIVE EXCHANGE RATE AND DEGREE OF MISALIGNMENT, 1979/80-1997/98 1/





Sources: IMF, Information Notice System; and staff estimates.

1/ April-March fiscal year.

16. The cointegration analysis is the most appealing of the three methods because it has a solid theoretical foundation. However, lack of higher frequency data for a number of explanatory variables for India's REER prevented the empirical analysis from assessing short–run movements of the REER. The empirical analysis was also unable to establish a long–run link between fiscal policy (namely government consumption or investment) and the REER.[20] This is not an unexpected result, given that fiscal policy is likely to only have a short–run effect on the REER that may not be captured by annual data. Moreover, the analysis failed to show a long–run link between capital inflows and the REER. Several factors may have accounted for this result. First, strong capital inflows are a relatively recent phenomenon in India, that may not have been sufficiently protracted for cointegration analysis to establish a long–run link between the inflows and the REER. Second, despite the surge since 1993, capital inflows remain relatively small compared to GDP.[21] Third, intervention by the RBI in response to capital inflows may have prevented cointegration analysis from detecting a statistically significant impact of capital inflows on the REER. See the annex to this chapter for a detailed discussion of the statistical tests and the estimation results.

E. Impact on Export Performance

17. **The likely impact on India's exports of currency realignments in the region appears to be small**. Using the export elasticities estimated in Srinivasan (1998),[22] if the estimated overvaluation of the rupee persists at about 2 percent, it would imply a decline in export volumes by 0.6 percent in 1998/99, and by one percent over the long run (relative to where the export volumes would otherwise have been). However, the depreciation of the rupee vis–à–vis the dollar since end–March 1998 (a period outside the empirical analysis) has resulted in a decline of the REER of about one percent over the same period, likely bringing the REER closer to its equilibrium value. Hence, the above estimates could be seen as the upper end of the range of the likely impact on export performance of recent currency movements.

18. It is worthwhile distinguishing between disequilibrium movements in export volumes, as estimated above, and equilibrium movements in export volumes in response to equilibrium shifts in fundamental determinants. Cointegration analysis estimated the equilibrium appreciation of India's REER since 1993/94 at around 6 percent (that is, an actual

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[20]Using annual data for India, Patel and Srivastava (1998) were also unable to establish a long–run link between fiscal policy (deficit–to–GDP ratio) and the REER.

[21]For example, net portfolio and foreign direct investment inflows—which have accounted for the bulk of capital inflows in recent years—amounted to 1.2 percent of GDP in 1997/98, substantially lower than most Asian economies.

[22]Srinivasan estimated the elasticity of India's exports with respect to the REER in the range of (-0.304, -0.278) in the short run and (-0.537, -0.493) in the long run.

appreciation of 8½ percent less an estimated overvaluation of around 2½ percent). In view of the long–run elasticities noted above, this equilibrium appreciation of the REER implies a decline in export volumes over the long run (other things constant) of around 3 percent (relative to where export volumes would otherwise have been). This equilibrium decline in export volumes accounts for a relatively small part of the actual decline since 1993/94, thus pointing to the importance of nonprice factors in explaining recent export performance.

19. Third–market effects of currency depreciations are notoriously difficult to quantify. An attempt was made to identify countries in the region that could challenge India with increased competition in third markets. To this end, the composition of India's exports was compared against the composition of exports of the ASEAN–4 countries, China, and Pakistan. In particular, detailed trade data (based on 2–digit Standard International Trade Classification data) were used to compute the correlation between the commodity shares of the total exports of India and those of each of these countries. The magnitude of the estimated correlation coefficient—which in effect measures similarities in the structure of exports—was then used as an indication of the degree of competition for exports between India and these countries. The analysis suggests that India competes in the same commodities primarily with Pakistan, China, and Thailand (Table III.2). In view of regional currency movements over the past year, and assuming no major regional currency realignments in the near term, **the main threat to India's exports appears to be from Thailand**, which has a similar basket of exports to common markets, mainly the U.S. and the European Union.

F. Concluding Remarks and Policy Implications

20. This chapter examined from several perspectives the impact of recent currency realignments in the region on India's competitiveness and on the outlook for exports. A number of alternative indicators of competitiveness as well as methodologies were used to gain a better understanding and to increase confidence in the findings. The results were consistent across different methodologies.

21. The results suggest that the rupee was not substantially overvalued in 1997/98. Based on available empirical estimates of export elasticities, the impact on export performance of the strength of the rupee in real effective terms in 1997/98 appears to be small. However, these results, based on backward–looking assessment, should be interpreted with caution given the inherent imprecision of econometric estimates, the reliance on a single indicator of competitiveness (namely a CPI–based REER), and the fact that more recent events that could have affected competitiveness are not yet fully captured in the data.

22. The empirical evidence confirms that the appreciation of the rupee in real effective terms since March 1993 is largely an equilibrium phenomenon reflecting movements in economic fundamentals, namely trade policy, the external environment, and domestic supply factors. Looking ahead, further progress in liberalizing the trade and exchange regimes would likely shift further the equilibrium REER.

Table III.2. Selected Asian Economies: Principal Exports, 1996

	India	Indonesia	Malaysia	Philippines	Thailand	Pakistan	China
				(In millions of U.S. dollars)			
Textiles and clothing 1/	7,408	6,329	2,767	2,328	4,066	3,021	37,150
Agricultural and fishery products	6,952	7,438	1,539	1,320	9,145	1,152	11,950
Of which: Rice	1,009	...	--	--	2,012	504	1
Gems and jewelry	4,707	423	610	62	2,042	...	1,444
Engineering goods 2/	4,471	4,222	10,008	9,292	9,379	...	22,147
Chemicals and chemical products	3,072	244	2,678	353	1,792	87	8,879
Leather and leather goods	1,441	87	41	121	400	259	921
Other	4,104	20,876	60,536	5,690	27,156	3,417	68,581
Total exports 3/	32,154	39,619	78,180	19,166	55,992	8,440	151,073
				(In percent of total exports)			
Textiles and clothing 1/	23.0	16.0	3.5	12.1	7.3	35.8	24.6
Agricultural and fishery products	21.6	18.8	2.0	6.9	16.3	13.6	7.9
Of which: Rice	3.1	...	--	--	3.6	6.0	--
Gems and jewelry	14.6	1.1	0.8	0.3	3.6	...	1.0
Engineering goods 2/	13.9	10.7	12.8	48.5	16.8	...	14.7
Chemicals and chemical products	9.6	0.6	3.4	1.8	3.2	1.0	5.9
Leather and leather goods	4.5	0.2	0.1	0.6	0.7	3.1	0.6
Total of principal exports	87.2	47.3	22.6	70.3	47.9	53.5	54.6
Memorandum items:							
Correlation coefficient 4/	1.00	0.32	0.08	0.36	0.68	0.80	0.72
Bilateral exchange rate (percent change) 5/	--	388.3	38.7	34.4	34.1	-4.0	-15.9

Sources: United Nations Statistical Office, Trade Analysis and Reporting System (TARS); IMF, Recent Economic Developments (various issues); and staff estimates.

1/ Includes footwear for Malaysia.

2/ Includes electronics and computer software for India; includes electronics and electronics components for all other countries.

3/ Non-oil/gas exports for Indonesia.

4/ Correlation between the commodity shares of total exports of India and the respective country, based on 2-digit Standard International Trade Classification (SITC) data for 1993-95 from the TARS database. Coefficients close to one suggest that the two countries compete in the same commodities.

5/ Percent change since June 30, 1997. Positive figures indicate appreciation of the rupee vis-à-vis the respective currency.

23. The econometric results provide sufficient support to the hypothesis of Balassa–Samuelson effects, despite the lack of data on productivity for recent years as well as the limited degrees of freedom in the estimated equation that did not allow direct testing of the 1990s in isolation (see the annex). The results suggest that productivity gains in the tradeable goods sector stemming from the structural reforms implemented during the 1990s played a role in the appreciation of the REER of the rupee during the same period. External factors (as proxied by the terms–of–trade variable) were also found to belong to the long–run cointegrating relationship between the REER and its fundamental determinants.

24. The analysis suggests that a deliberate policy of engineering a nominal depreciation of the rupee would have only limited effects on exports in the short run. Instead, such a policy could potentially trigger another bout of pressure on the rupee due to a loss of confidence, and could eventually lead to an erosion of competitiveness through adjustments in domestic prices. Hence, the RBI's policy of not resisting market–determined movements in the rupee, and of intervening only to prevent "disorderly" depreciation, seems appropriate in light of the empirical evidence. However, were significant and sustained downward pressure on the rupee to materialize, monetary policy should be the first line of defense to resist any overshooting of the exchange rate. Demands often expressed by market participants and exporters to target the level of the REER based on the REER in March 1993 or another "neutral" rate, if adopted, would risk loss of control over inflation.

25. Historically, large gains in export volume growth have been associated with rounds of structural reform and external liberalization such as in the mid–1980s and early 1990s. Given the evidence of a relatively small effect on export performance of movements in the rupee around its equilibrium level, improvements in competitiveness could be achieved through nonprice factors, including by addressing the structural factors affecting export performance, and by promoting a more quality–conscious export sector. In particular, bold reforms in the export–oriented small–scale sector would enhance competitive forces and efficiency in the economy, and would improve productivity by internalizing economies of scale. Moreover, the lifting of the existing ceiling on investment would allow innovation in product design and production methods that would help enhance competitiveness.

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Determinants of India's Long–Run Equilibrium Real Effective Exchange Rate

25. This annex describes a model of India's long–run equilibrium REER based on annual data for 1979/80–1997/98, and examines the issue of misalignment of the rupee from an econometric point of view.

Conceptual issues

26. A number of factors are expected to affect the REER in the long run. Taking into account data availability, the treatment of these factors in this chapter is discussed below:

- **Trade policy** is proxied by the sum of exports and imports over GDP.[23] Widespread import controls can support an overvalued exchange rate. Downward adjustments of the REER to more realistic levels have been accompanied by relaxation of imports controls (especially of imports of essential capital goods and intermediate inputs). The relaxation of controls promotes export competitiveness and leads to a rise in both imports and exports.

- **The external environment** is proxied by India's terms of trade (defined as the ratio of India's export unit values to import unit values). An improvement in the terms of trade (shown as a rise in the ratio) would have a positive impact on the current account and would lead to an appreciation of the REER.

- **Domestic supply factors** are defined as the productivity differential between the tradable and nontradable goods sectors for India and its major trading partners proxied by per capita real growth in manufacturing less per capita real growth in services. This term measures the Balassa–Samuelson effect: that is, higher productivity growth in the tradable than in the nontradable goods sector (relative to partner countries) leads to rises in wages and prices in the nontradable goods sector, and to a real appreciation of the REER.

- **Fiscal policy** is defined as the ratio of government consumption to GDP. Higher government consumption relative to GDP would put upward pressure on the price of nontraded goods, leading to an appreciation of the REER. Implicit in this argument is the assumption that government spending is concentrated on nontraded goods.

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[23]Reliable data on the extent of quantitative restrictions on imports as well as on other nontariff barriers are not available for the full sample period.

- **Capital inflows** are defined as the ratio to GDP of the sum of: net direct investment in India; net inflows of portfolio investment; net increase in other investment; and errors and omissions.[24] Higher capital inflows would exert an upward pressure on the REER.

Estimation issues

27. Estimation of the long–run cointegrating relationship between India's REER and its fundamental determinants is complicated by a number of factors: (i) the limited availability and frequency of data for most of the explanatory variables prescribed by theory complicates analysis of policy variables as well as short–term factors, and reduces the precision of econometric estimates due to the small number of degrees of freedom; (ii) the existence of widespread nonprice controls for most of the sample period lowers the information content of the data; (iii) there are no data on sectoral productivity covering the full sample period that could potentially help explain a significant part of the appreciation of the rupee in real terms in recent years;[25] and (iv) the gradual change in the exchange and trade regimes over the last two decades complicates the identification of structural breaks in the data and weakens the relation between policy variables and the exchange rate .

28. In an effort to better examine the role of policy variables and short–term factors, attempts were made to estimate the long–run cointegrating relationship based on quarterly data (some constructed from annual series). While the results (not reported here) broadly confirmed the findings described in this section, they nonetheless yielded perverse signs for some explanatory variables because of the artificial way some quarterly series had to be constructed. Specifically, the terms–of–trade series was derived from the annual data, with the quarterly pattern of the export price index for India replicating the quarterly pattern of India's WPI, and the quarterly pattern of the import price index replicating the quarterly pattern of the weighted export price index of India's major trading partners. Similarly, the industrial production index was used to construct quarterly series for productivity growth in the manufacturing sector, while productivity growth in the services sector was derived by splicing the annual series.

Model

29. The long–term determinants of India's REER were estimated using annual data over 1979/80–1997/98 for: trade policy (proxied by the sum of exports and imports over GDP); a proxy for the external environment (India's terms of trade); and domestic supply factors

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[24]Capital inflows rather than a real interest rate differential was chosen as a fundamental determinant of India's REER. This choice was dictated by the fact that India maintained a relatively closed capital account for most of the period under examination that did not allow the prevailing high interest rate differential to manifest itself in large–scale capital inflows.

[25]Available data on sectoral productivity do not extend beyond 1993/94.

(productivity differential between the tradable and nontradable goods sectors for India and its major trading partners proxied by per capita real growth in manufacturing less per capita real growth in services).[26] [27] All data were expressed in logarithms, except for the variable for the domestic supply factors, which included negative values.

Integration

30. To determine the appropriate estimation procedure, tests for nonstationarity of the above variables were carried out using the Augmented Dickey–Fuller (ADF) method, which looks for the presence of unit roots in the series. Table III.3 lists the fourth–order ADF statistics for the REER, trade policy (EXIM), terms of trade (TOT), and domestic supply factors (B–S). According to the tests, the null hypothesis of nonstationarity—that is, each variable has a unit root, or equivalently, is integrated of order one: I(1)—cannot be rejected for any of the variables. All variables are thus stationary in first differences, and cointegration analysis among the level variables is required.

Table III.3. ADF(4) Statistics Testing for a Unit Root

	Variable			
	REER	EXIM	TOT	B–S
Ho: I(1)	-2.85	-1.14	-0.85	-1.92

Note: Critical values are -3.1 (5 percent level), and -4.0 (1 percent level). Lag length was determined by the choice of the lag with the highest ADF statistic (in absolute values).

Cointegration

31. The Johansen procedure is used for the cointegration analysis.[28] The Johansen procedure is a full information maximum likelihood estimation for vector autoregressive systems, and, as such, it is not concerned about the endogeneity of the explanatory variables.

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[26]Preliminary regressions did not find evidence of fiscal variables (government consumption to GDP, and government investment to GDP) belonging to the long–run relationship. While this result may be consistent with fiscal policy having only a short–run effect on the REER, it may also indicate that the variables used were poor proxies for testing the hypothesis that government expenditure is relatively concentrated on nontraded goods.

[27]A common cointegrating relationship could not be obtained when the capital inflows variable was included. By contrast, Patel and Srivastava (1998) were able to obtain such a relationship for India, but they did not elaborate on how the capital inflows variable was defined.

[28]See Johansen (1988 and 1995).

Nonetheless, the procedure imparts a heavy toll on the degrees of freedom and on the precision of the econometric estimates in small samples because it uses a lag structure. The procedure searches for the existence of one or more long–run cointegrating relationships between the selected variables. Table III.4 reports the statistics from the Johansen procedure. Only the final specification is reported. The procedure found evidence of the following long–run relationship between the fundamental variables:[29]

$$REER = -1.3436(EXIM) + 0.3753(TOT) + 0.5784(B–S)$$

Table III.4. Johansen Tests of Existence of Long–Run Relationships

	λ–max 1/	Trace 1/
Ho: rank=0	29.77*	59.19**
<=1	16.00	29.41
<=2	10.32	13.42
<=3	3.09	3.09

	Variable			
	REER	EXIM	TOT	B–S
	Standardized feedback coefficients α			
0.0090	0.0766	0.3079		0.0063

1/ Single and double asterisks denote significant test statistics at the 5 percent and 1 percent level, respectively.

Note: The lag length in the vector autoregression was set to one year.

32. The estimation found evidence of a long–run cointegrating relationship between India's REER and its fundamental determinants. All estimated coefficients have the anticipated signs. The feedback coefficients suggest a relatively slow adjustment from disequilibrium. The estimated equation is used to derive the equilibrium REER. Misalignment is then defined as the difference between the actual REER and the antilogarithm of the

[29]Estimation and testing were carried out in PcFiml. The small sample size (19 annual observations) was sufficient for the Johansen procedure to be conclusive despite the loss of degrees of freedom due to the lag structure of the estimated system. Given that the fewer the degrees of freedom the harder it is to reject the null hypothesis of no cointegrating relationship, the reported results are thus relatively powerful.

predicted value of the REER derived from the equation above (that is, the equilibrium REER), expressed in percent of the equilibrium REER. Chart III.7 shows that most of the appreciation of the rupee in real terms since 1993 has been an equilibrium phenomenon. The estimated misalignment of the rupee in 1997/98 was 2–3 percent.[30]

[30]It is unclear to what extent the large misalignment of the rupee in 1991/92 and 1992/93 (around 13 percent) reflects actual misalignment or a statistical error in the standard econometric sense (that is, the combined effect of temporary and random factors). This period coincides with a sharp depreciation of the rupee in nominal terms that might have overshot the long–run equilibrium rate.

IV. The Financial Performance of Public Sector Commercial Banks in India[1]

Abstract: *This paper assesses the factors that have contributed to the weak financial performance of the public sector banks, and discusses the options for further reform. The introduction of new prudential norms in the early 1990s uncovered a large stock of nonperforming loans among the public sector commercial banks, and gave a clearer indication of their weak financial position. Since then, measures have been introduced to strengthen these institutions: capital ratios have been improved, nonperforming loans have declined, and profitability has risen. However, the financial performance of the public sector banks remains worse than that of the domestic private sector and foreign banks operating in India, suggesting the need for a second wave of reforms.*

A. Introduction and Overview

1. A program of far reaching financial sector reforms has been underway in India since the early 1990s. The reforms have been aimed at enhancing the productivity and efficiency of the banking and financial services sector, improving the transparency of operations, and ensuring that the sector is operating on a sound financial footing. To this end, the vast majority of controls on interest rates have been removed, pre–emptions on banks assets have been reduced, and more stringent regulatory and supervisory standards have been introduced.

2. As part of this process, the Reserve Bank of India (RBI) issued new guidelines in 1992/93 which tightened interest recognition, loan classification, and provisioning norms for commercial banks to bring them more into line with international standards. The minimum capital adequacy requirement for commercial banks was also raised to 8 percent of risk–weighted assets. The introduction of these new norms uncovered a large stock of nonperforming loans and gave a clearer indication of the weak financial position of the public sector commercial banks, which dominate the banking sector.

3. This paper argues that several factors have contributed to the poor financial performance of the public sector banks. First, government ownership and intervention in their operations has weakened their commercial orientation. Second, the regulatory, supervisory, and legal structure was inadequate until the recent improvements and failed to identify the financial problems in the banks. Third, the balance of payments crisis in the early 1990s resulted in a combination of macroeconomic developments that have been associated with banking problems in other countries and is likely to have resulted in an increase in loan defaults (disproportionately impacting the public banks because they accounted for an even larger proportion of the banking sector at that time than they do now). Fourth, structural reforms introduced since the crisis have affected the viability of companies in previously protected sectors of the economy, again leading to an increase in nonperforming loans.

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[1]Prepared by Tim Callen.

4. However, there has also been a considerable divergence of performance among the public banks, with a number being particularly weak performers, which suggests these factors alone do not provide the complete story. An analysis of the public sector banks based on published balance sheet data[2] suggests that: some of the weaker banks expanded their lending more rapidly during the second half of the 1980s than the stronger banks, and consequently were more exposed to subsequent developments in the real economy; that their operating costs are higher than for the stronger banks, possibly indicating poor management; but that differing exposure to priority or public sector borrowers does not appear to explain performance differences.

5. The government has injected substantial capital into the public banks to enable them to provision against their nonperforming loans and meet the capital adequacy requirements set by the RBI. Reforms have also been undertaken to improve their operational performance. Most of the banks now meet the minimum capital adequacy ratio, nonperforming loans have declined (as a percent of advances), although at some banks they remain at an uncomfortably high level, and there has been some improvement in profitability. However, this improvement has not been substantial, and the financial performance of the public sector banks remains worse than that of the domestic private sector and foreign banks.

6. While initial reforms have helped strengthen the sector, more needs to be done to enable the public sector banks to become viable institutions in the increasingly competitive banking market. The next stage of reforms will need to focus on giving more autonomy to the stronger public banks and introducing significant private capital into them, while effectively addressing the problems in the weak banks.

7. The remainder of the paper is organized as follows. A brief overview of the commercial banking sector in India is provided in Section B. The factors that are likely to affect the performance of commercial banks, and how these apply in the Indian context, are discussed in Sections C and D respectively. The performance of the public banks relative to the private sector and foreign banks operating in India, and the wide variation in performance among the public banks themselves, is assessed in Section E. Lastly, policy options for reforming the public sector banks, with a particular focus on the weakest performers, is contained in Section F. Annex I provides an overview of the structure of the financial system in India, and Annex II compares the loan classification and provisioning norms in India with those in a number of other countries.

B. An Overview of the Commercial Banking Sector in India

8. Commercial banks are the most important financial intermediaries in India. They primarily meet the short–term financing needs of corporations, and account for about

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[2]The sources used are: *Report on Trends and Progress of Banking in India, 1996/97*, Reserve Bank of India; *Bulletin*, Indian Bankers Association, March 1997; and the 1996/97 Annual Reports of the 27 public sector commercial banks.

60 percent of the assets of the banking and financial institutions sector. Prior to 1969, all banks, except the State Bank of India (SBI) and its seven associate banks, were privately owned. Under the Nationalization Act of 1969, the 14 largest private sector banks were nationalized, and a further 6 were nationalized in 1980. The commercial banking sector is dominated by the existing 27 public sector banks, who account for 84 percent of assets (the SBI and its associate banks alone account for 30 percent of assets).[3] Since 1969, commercial banks have grown strongly, with the number of bank branches increasing from around 8,000 to well over 60,000 today, of which nearly 60 percent are in rural areas. However, their operations have been strictly regulated, and although the financial reforms introduced since the early 1990s have eased some of these restrictions, a significant number remain (Box IV.1).

9. While private sector banks and foreign banks were allowed to continue operating alongside the public sector banks, their expansion was strictly regulated. However, in 1993, new private and foreign banks were allowed to enter the market. Currently, domestic private banks and foreign banks each account for 8 percent of assets. The banking sector is completed by regional rural banks and co–operative banks, which are mainly rural based.

10. While the commercial banks have been very successful in mobilizing deposits, their financial performance has been poor and their profitability low, averaging only 1½ percent of assets during 1992/93–1996/97 in gross terms, and, net of provisions, has been negative in two of these years (Table IV.1, top panel). While India has not experienced a full–blown banking crisis, severe weaknesses among the public sector banks became apparent in the early 1990s as the Reserve Bank of India (RBI) moved to introduce a more stringent prudential norms relating to capital adequacy, income recognition, and loan classification. All the 19 nationalized banks have received capital injections from the government (totaling nearly 2 percent of GDP) to enable them to provision for nonperforming loans (NPLs) and to raise their capital toward the minimum 8 percent capital adequacy ratio now stipulated by the RBI. NPLs of the public sector banks are high, and while some progress has been made in reducing them in recent years, they remained at 17¾ percent of advances in 1996/97 (down from 23½ percent in 1993/94). Net of provisioning, the figure for 1996/97 was 9¼ percent of advances.[4] However, the extent of NPLs is still understated by the system of loan classification and provisioning which falls short of international best practice (Annex II).

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[3]The New Bank of India was merged with the Punjab National Bank in 1993 so that there are now 19 "nationalized" banks, the SBI, and its seven associate banks.

[4]Because write-offs, even of fully provisioned loans, are difficult in the Indian legal and regulatory framework, provisions are a relatively large proportion of NPLs for a strong bank. The authorities, therefore, focus on NPLs net of provisions.

Box IV.1: Selected Financial Sector Reforms in India

Financial sector reforms have proceeded on a number of fronts during the past several years. In broad terms the strategy has consisted of: (i) gradually relaxing controls that have repressed the financial system; and (ii) developing the institutional infrastructure to manage a deregulated financial market. Some of the highlights of these reforms are outlined below.

Pre-emptions on commercial bank assets

- The **statutory liquidity ratio** (SLR), under which banks are required to hold government and other "approved" securities, has been reduced from 38½ percent of net demand and time liabilities in 1990/91 to 25 percent.

- The **cash reserve ratio** (CRR), which obliges a bank to hold a certain proportion of its net demand and time liabilities as reserves with the RBI, has been reduced from 25 percent in 1990/91 to 10 percent.

- Domestic banks are required to meet a **priority sector lending requirement** of 40 percent of advances. Priority sectors are agriculture, small scale industries, the export sector, and "weaker" sections of the community (lending to this segment is on account of government sponsored poverty alleviation and employment generation schemes). Prior to the reforms, most of these loans were at below market interest rates. Banks are also subject to behest lending in the forms of directives from the government or the courts, particularly with respect to rehabilitation finance for sick industrial units. Although the reforms have not changed the overall priority sector lending target, the interest subsidy element has been reduced, and greater flexibility has been given in meeting the eligibility criteria. Foreign banks have been advised to increase priority sector advances to 32 percent of credit.

Interest rates

- Prior to reforms, interest rates on deposits and lending were administered by the RBI. Most restrictions have now been removed. Interest rates on deposits of maturity greater than 30 days have been freed, while lending rates have been deregulated, although banks have been advised to announce the maximum spread over the prime lending rate (PLR) for all advances other than consumer credit. Further, interest rates on loans below Rs 200,000 must not exceed the PLR available to the best borrowers.

Bank regulation and supervision

- In April 1992, the RBI prescribed new **capital adequacy norms** in line with the Basle Committee standards. By March 1996, all commercial banks were to meet a minimum 8 percent capital adequacy ratio.

- The RBI issued new guidelines covering **income recognition, asset classification, and provisioning requirements**, to address the shortcomings in the regulatory framework and bring it more into line with international standards. These were phased in over a three year period starting in 1992/93.

- A Board of Financial Supervision was established in 1994/95 within the RBI to oversee **regulatory and supervisory policies**.

Competition in the financial sector

- The RBI announced guidelines in 1993 for the **entry of new private commercial banks**—both domestic and foreign. So far, 9 new domestic private banks and 10 foreign banks have commenced operations.

- The **branch licensing** policy for domestic banks has been liberalized, although not abolished.

Table IV.1: Financial Performance of Indian Commercial Banks, 1992/93-1996/97

(As a percent of total assets)

	Net Interest Income	Interest Income	Interest Expense	Non-interest Income	Total Income	Operating Expenses	Gross Profits	Provisions	Net profits
				All commercial banks					
1992/93	2.51	9.71	7.20	1.16	3.67	2.64	1.03	2.11	-1.08
1993/94	2.54	8.70	6.16	1.35	3.89	2.64	1.25	2.10	-0.85
1994/95	3.00	8.63	5.63	1.40	4.40	2.76	1.64	1.22	0.42
1995/96	3.13	9.36	6.23	1.50	4.63	2.94	1.69	1.54	0.15
1996/97	3.21	9.88	6.67	1.46	4.67	2.85	1.82	1.14	0.68
Average 92/93-96/97	2.88	9.26	6.38	1.37	4.25	2.77	1.49	1.62	-0.14
				Public sector banks					
1992/93	2.39	9.55	7.16	1.18	3.57	2.63	0.94	1.92	-0.98
1993/94	2.36	8.56	6.20	1.28	3.64	2.65	0.99	2.14	-1.15
1994/95	2.92	8.61	5.69	1.32	4.24	2.83	1.41	1.16	0.25
1995/96	3.08	9.20	6.12	1.40	4.48	2.99	1.49	1.56	-0.07
1996/97	3.16	9.69	6.53	1.32	4.48	2.88	1.60	1.04	0.56
Average 92/93-96/97	2.78	9.12	6.34	1.30	4.08	2.80	1.29	1.56	-0.28
				Old private sector banks					
1992/93	2.91	9.39	6.48	1.17	4.08	2.72	1.36	1.00	0.36
1993/94	2.97	8.91	5.94	1.30	4.27	2.45	1.82	1.26	0.56
1994/95	3.03	8.89	5.86	1.46	4.49	2.33	2.16	1.00	1.16
1995/96	3.14	10.15	7.01	1.56	4.70	2.60	2.10	1.04	1.06
1996/97	2.95	10.67	7.72	1.48	4.43	2.50	1.93	1.01	0.92
Average 92/93-96/97	3.00	9.60	6.60	1.39	4.39	2.52	1.87	1.06	0.81
				New private sector banks					
1992/93	...	...	...	...	...	...	...	...	...
1993/94	...	...	...	...	...	...	...	...	...
1994/95	...	...	...	...	...	...	...	...	...
1995/96	2.84	9.25	6.41	1.82	4.66	1.89	2.77	0.92	1.85
1996/97	2.91	10.26	7.35	2.02	4.93	1.92	3.01	1.23	1.78
Average 95/96-96/97	2.88	9.76	6.88	1.92	4.80	1.91	2.89	1.08	1.82
				Foreign banks					
1992/93	3.56	11.62	8.06	1.00	4.56	2.70	1.86	4.74	-2.88
1993/94	4.22	10.04	5.82	2.23	6.45	2.66	3.79	2.28	1.51
1994/95	4.25	9.88	5.63	2.41	6.66	2.73	3.93	2.27	1.66
1995/96	3.74	10.46	6.72	2.38	6.12	2.77	3.35	1.77	1.58
1996/97	4.08	11.07	6.99	2.51	6.59	3.01	3.58	2.17	1.41
Average 92/93-96/97	3.97	10.61	6.64	2.11	6.08	2.77	3.30	2.65	0.66

Source: Report on Trends and Progress of Banking in India, 1996/97.

C. What Influences the Financial Performance of Commercial Banks?

11. In theory, a large number of factors affect the financial performance and viability of commercial banks. These can be broadly grouped into three categories.

12. **Macroeconomic factors**. These include, interest rates, growth, inflation, the exchange rate, and the terms of trade which affect bank performance either through the impact on the repayment ability of borrowers or directly through funding costs (or both). Swings in asset prices can also be important. Regional economic developments are another factor when banks have large regional concentrations (in the U.S., the sharp economic downturns in California and New England were important determinants of the banking crises in these states in the early 1990s). Structural shifts in the economy are also likely to be important. For example, a reduction in trade protection will open up unviable protected industries to international competition, resulting in financial difficulties in companies that fail to adjust to the heightened competitive pressures, and an increase in nonperforming loans.

13. **Banking sector factors**. Rapid growth in bank credit, often in response to financial liberalization and in the absence of effective supervision, is often a signal of increased risk taking by banks as they lower their credit standards and seek to raise market share in the more competitive market. While this may increase profitability in the short–term, it makes them more vulnerable to adverse shocks and can threaten viability in the longer–term. Government involvement in the banking sector through directed credit, controls on interest rates, and other stipulations on behavior generally have a negative effect on profitability. In these cases, banks are often simply an extension of public policy, with the government using them to pursue its development objectives, rather than independent profit oriented institutions.

14. **Bank specific factors**. These include: the level of NPLs; the capital–asset ratio; the concentration of the loan portfolio; liquidity, particularly the relative maturity structures of its assets and liabilities; the quality of management; and the cost structure. NPLs adversely affect bank profitability by reducing income earned on the asset portfolio. A relatively low capital base means a bank is less able to absorb negative shocks, and may induce an increase in the riskiness of a bank's loan portfolio.[5] A highly concentrated loan portfolio increases the risks of an adverse shock significantly affecting a bank's financial position, while its liquidity position determines how it can respond to a shock. The quality of management, which is very difficult to measure, will be a key factor in the success of the bank, while a high cost

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[5]Although critical as a quantitative supervisory tool and as a buffer to absorb losses without using depositors' funds, the role of capital in the case of a public sector bank is less well defined than for a private sector bank. In particular, the capital investment in a private sector bank gives owners and managers a powerful incentive to run the bank safely and soundly. Nevertheless, as argued by Rangarajan (1997), regardless of whether a bank is public or private, capital adequacy is an important indicator of financial strength, and is used by bank counter parties to assess the risk of transacting with the institution.

structure will make attaining profitability more difficult (management quality and cost structure are likely to be related, see below).

15. There has been considerable recent research on the causes of bank failures. Using a sample of developed and developing countries, Demirguc–Kunt and Detragiache (1998) find that low GDP growth, excessively high real interest rates, high inflation, and adverse terms of trade shocks increase the likelihood of systemic problems in the banking system. Gonzalez–Hermosillo, Pazarbasioglu, and Billings (1997), in an analysis of the Mexican banking system, suggest that while bank specific factors (profitability, the level of NPLs, and exposure to real estate) are key in determining the probability of bank failure, macroeconomic factors play a pivotal role in influencing the time to failure. Thus, while a financially weak bank may be able to continue operations in a stable macroeconomic environment, its weakness will be exposed by an adverse shock which will push it toward bankruptcy. They find that high real interest rates, as well as a depreciation of the exchange rate, imply a decrease in the survival time of a bank. Honohan (1997), however, argues that macroeconomic fluctuations are not always simply a trigger that reveal underlying weaknesses in the banking system, but rather that weaknesses in the banking system result in over–optimistic lending decisions, which are not addressed at an early enough stage by the monetary and supervisory authorities, and which contribute to cycles in the economy and sow the seeds of banking sector problems when the resultant asset bubble bursts (for example, in the Nordic countries and Japan). He characterizes this as a hybrid of macro and micro causes of bank failure.

16. There may be a link between the cost efficiency of banks and problem loans (and bank failure). Using U.S. data, Berger and DeYoung (1997) find that failing banks tend to be located far from the "efficient" frontier, incurring higher costs and lower profits relative to institutions on the "efficient" frontier. There are several possible reasons for the relationship between cost–inefficiency and nonperforming loans. Low cost efficiency may be a signal of poor management practices in a bank, which apply both to the operations of the bank and to the managing of the loan portfolio. Therefore, banks with poor management may have problems both monitoring their costs and their loans. DeYoung (1997) found that cost efficiency was positively related to examiners' ratings of bank management quality. Alternatively, the observed relationship may be explained by the fact that loan quality problems lead to extra costs in terms of the recovery and the workout of the loans, thus creating the appearance of low cost efficiency.

D. The Macroeconomic and Banking Environment in India

17. In practice, a number of the factors discussed in the previous section have importantly influenced the operations and financial performance of the public commercial banks in India. In particular:

- **Government ownership and intervention in the sector**. For many years, bank managers and the regulatory authorities focused excessively on quantitative indicators, such as growth in deposits and lending, including to favored sectors, and

branch expansion, rather than on costs, credit quality, and the capacity of borrowers to service loans.

- Through its ownership, the government has actively used the public sector banks to promote its social and developmental objectives. Commercial objectives have not been of paramount importance for the public sector banks. The incentives for appropriate loan assessment and ex ante monitoring of performance have been much diminished as managers are unlikely to suffer the consequences of bad loan decisions. Further, while the desire for deposit mobilization has resulted in an extensive branch network, a large number of these branches are loss making (Narasimham, 1998).

- Government intervention in the banking sector has occurred through a number of avenues, including directed lending and regulated interest rates. This has forced banks into lending into unviable areas, at interest rates that do not reflect the risks involved. Nonperforming assets in priority sector lending have been somewhat higher than in other areas.[6] Further, the high CRR and SLR requirements have reduced returns on bank asset portfolios.[7]

- The public sector's role in the financial sector also has important implications for corporate governance (see Box IV.2).

The financial reforms implemented since the early 1990s have addressed some of these factors, although others remain a significant influence on the operations of the public banks.

- **Weak regulatory and supervisory structure and inadequate legal framework for debt recovery.** Until the reforms in 1992/93, income recognition norms allowed banks to book as income interest due but not paid, while the lack of explicit provisioning norms allowed banks to make insufficient provisions for NPLs. These practices permitted banks to defer corrective action on problem accounts. The culture of repayment also suffered because of periodic loan waiver schemes. Debt recovery procedures remain grossly inadequate as bank claims are extremely difficult to enforce through the legal system.

- **Economic conditions.** The balance of payments crisis in early 1991 resulted in a sharp slowing in growth (from an average of 6 percent during 1980–90, and a peak of

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[6]Priority sector advances accounted for 47 percent of total NPLs in 1996/97 (*Report on Trends and Progress in Banking, 1996/97*).

[7]This, however, is no longer true in terms of the SLR requirement as commercial banks are holding securities in excess of the minimum requirement and these securities now pay market interest rates.

Box IV.2: Corporate Governance in India

Numerous policies and institutional structures have stymied the usual monitoring and discipline imposed on management by creditors/investors. Recent reforms and developments have started to improve the corporate governance environment, but it is difficult to judge at this stage how significant the impact has been. Some of the relevant issues are discussed below.

- **Domination of the public sector in the provision of debt financing.** The incentives for appropriate loan assessment and ex ante monitoring of performance is much diminished in public sector financial institutions given that they are unlikely to suffer the consequences of bad loan decisions. Firms know the incentives faced by the managers of the banks. Together with the small amount of equity capital in many firms, the lack of an effective debt recovery process, and the virtual impossibility of bankruptcy, the incentive for the owner of a firm is to engage in either risky projects that may have a possible high payoff (but low probability of success), or in projects that have a high payoff in non–financial terms (such as the prestige of being involved in a large project). Two further aspects of government interference have also affected financial institution monitoring of the corporate sector: (i) directed lending takes away much of the role of a banker in appraising the quality of a borrower; and (ii) the system of Maximum Permissible Bank Finance (MPBF) used a mechanical system to determine a company's access to working capital, rather than letting the lending institution make the decision. Recent reforms have tightened income recognition and loan classification standards and have increased the incentives for bank management to improve methods of credit appraisal now that non–performing assets have to be reflected in a bank's financial accounts. Memorandums of Understanding have been agreed between the RBI and those public sector commercial banks who have received capital injections from the government. These agreements require the banks concerned to restructure their operations and include bank–by–bank performance targets. The MPBF system is also now virtually defunct.

- **The public sector dominates the investment sector.** The three largest institutional investors are publicly owned. While these institutions do have representation on company boards depending on their stake, they have tended to be passive investors. This is in contrast to other countries, particularly the United States, where large institutional shareholders with a substantial ownership stake more actively influence corporate policies. However, Government–owned financial institutions are starting to exert themselves more as large shareholders, and some have drawn up lists of poorly performing companies and are considering creating funds to finance takeovers (see "Takeovers in India", *The Economist*, April 4, 1998).

- **The market for corporate control.** Only a small proportion of the equity in many companies is traded on the stock market, and management has often remained largely immune to the pressures of the market. There have also been legal barriers to the credible use of threat of take–overs to monitor management. However, things appear to be changing. For example, at ICICI, one of India's largest development banks, large domestic and foreign shareholders were critical of the company's activities, including its lack of focus on shareholder value. These concerns were voiced at Board meetings and were instrumental in having management accept sea changes in corporate governance (World Bank, 1997). Further, takeovers and corporate restructuring are becoming more commonplace, with hostile bids now possible under regulations passed last year. However, it is still a difficult process, particularly for a foreign investor.

- **Accounting standards.** Corporate accounts do not have to be presented on a consolidated basis (although the accounts of subsidiaries have to be appended to the parent company's annual report). But, the growing role of foreign investors in Indian financial markets, and the access of domestic companies to overseas markets, has required greater information provision and focus on corporate performance.

- **Bankruptcy laws and the debt recovery process.** The virtual impossibility of liquidating an insolvent company has eroded the threat of bankruptcy as an ex ante performance and monitoring instrument. The difficulty for creditors to recover a loan is another significant problem for effective corporate discipline. Debt tribunals have been established to try and expedite the recovery process, although results have been mixed.

8¾ percent in 1988, to only 1¾ percent in 1991) (Chart IV.1). This slowdown followed quite rapid growth in lending to the private sector during the 1980s (averaging 17 percent per annum).[8] Inflation also picked up sharply, peaking at 13½ percent in 1991, while the terms of trade fell sharply. The depreciation of the real exchange rate experienced since the mid–1980s accelerated during 1990–92 with the rupee being devalued by 19 percent. Real short–term interest rates rose from around 1 percent in 1988 to 6 percent in 1990–91 as monetary policy was tightened to restore confidence and reverse short–term capital outflows. This increase was not, however, reflected in lending rates, which in real terms fell during this period (although they remained high). These developments are broadly consistent with the factors found by Demirguc–Kunt and Detragiache (1998) and Gonzalez–Hermosillo, Pazarbasioglu, and Billings (1997) to precede banking sector crises.

- **Structural change in the economy**. The economy has undergone significant structural change following the reforms introduced after the 1990/91 crisis. Pursuit of an import substitution policy since independence (based on the notion of self–reliance) had sought to protect agriculture and foster the build–up of domestic industry. Some progress was made in liberalizing trade during the 1980s, but it was not until the early 1990s that decisive steps were taken.[9] These reforms have significantly reduced tariff and non–tariff protection, particularly in the manufacturing sector where 51 percent of commercial bank credit is directed. While the reforms have yielded substantial economic benefits, they have also undermined the competitive position of many companies who have been slow to restructure, in part because of labor laws that impede adjustment. The profitability and debt–servicing ability of these companies is likely to have been severely affected.

18. The absence of reliable data prior to 1992/93 makes it impossible to assess the relative importance of these factors. Consequently, it is not clear whether the large stock of NPLs revealed by the tightening in loan classification norms had built up slowly over a period of time as the lack of commercial focus of the banks undermined the quality of their assets and the regulatory and supervisory framework failed to reveal the problems, or was the more immediate result of economic developments in the early 1990s. It is likely that the problems were there prior to 1991, but subsequent developments magnified their extent.

19. However, excessive risk taking by commercial banks in the form of speculative lending for real estate or stock purchase or large unhedged foreign currency transactions does not appear to be a factor behind their high NPLs. The restrictions placed on their operations

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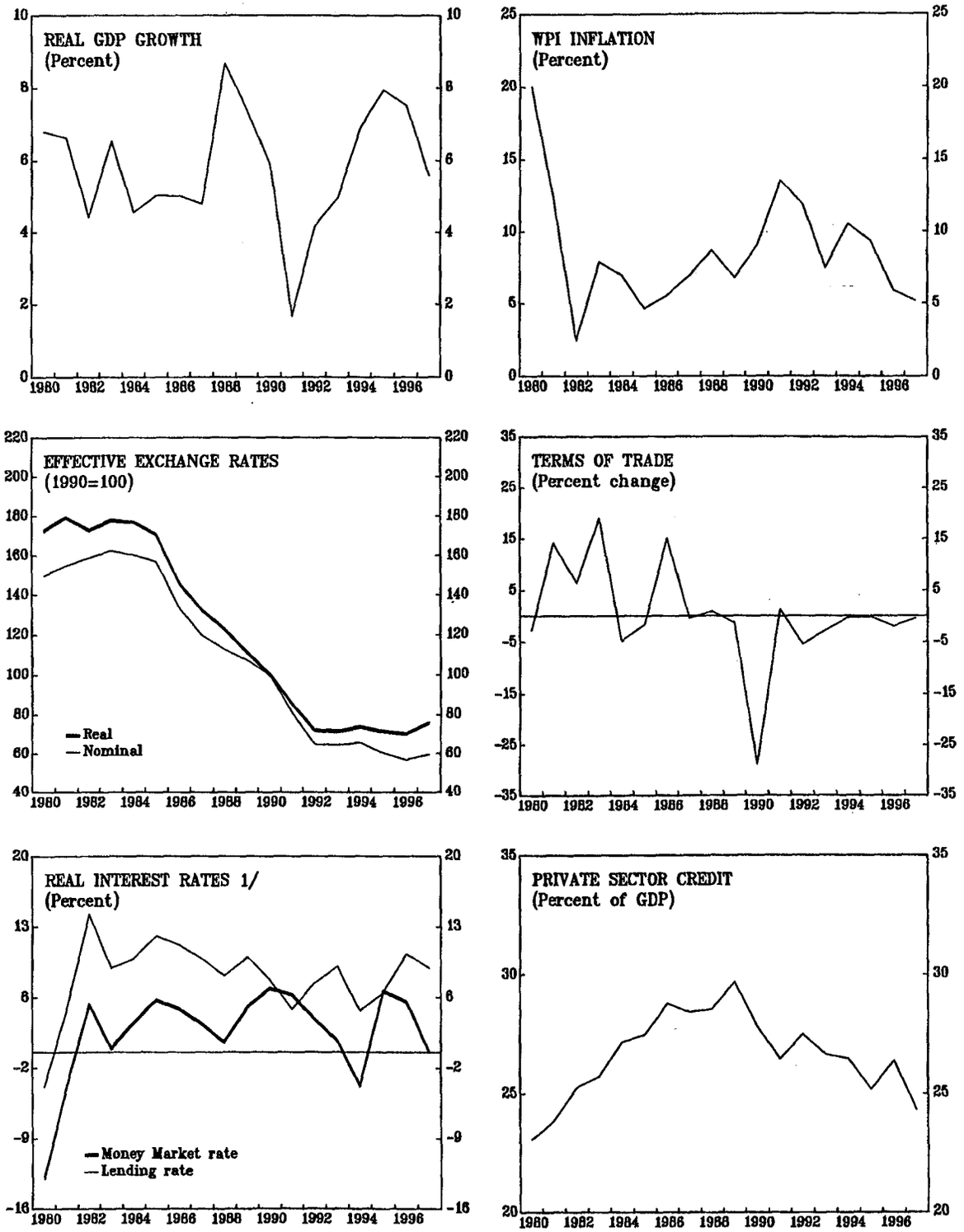
[8]However, the ratio of private sector bank credit-to-GDP only rose from 23 percent to 30 percent over this period.

[9]See "Trade Reforms and Economic Response," in *India—Selected Issues*, September 1997. In the manufacturing sector, the average tariff has declined substantially, while import licensing, industrial licensing, and foreign investment policies have also been liberalized.

CHART IV.1

INDIA

SELECTED ECONOMIC INDICATORS, 1980-1997



Sources: World Economic Outlook; International Financial Statistics; WEFA (Intline); and Indian authorities.

by the RBI have ensured that their direct exposures in these areas are small. Further, loan–to–deposit ratios are low, at around 55 percent, partly because of the CRR and SLR stipulations.

E. Performance Differences Among the Commercial Banks

20. Financial performance has varied greatly among the commercial banks during recent years, with the performance of the domestic private and foreign banks having been stronger than that of the public banks. Of course, these banks have had a number of advantages over the public sector banks: some have only recently entered the market, and during this period economic conditions have been favorable; they have been more able to choose their areas of business and introduce technology into their operations; they are not burdened with an over–extensive branch network; and, in the case of the foreign banks, they have been less subject to government stipulations. However, despite these differences, the financial performance of the new domestic private and the foreign banks provides a benchmark to which the public sector banks need to move towards if they are to become viable institutions in the increasingly competitive banking market. This section uses balance sheet data from the published annual reports of the banks to highlight some of the main performance differences between the banking groups since 1992/93.

Public, private, and foreign banks

21. The NPLs of the public sector banks are considerably higher than those of the domestic and foreign private banks. At end–1996/97, net NPLs stood at 6 percent of advances for the old private sector banks, 2 percent for the new private sector banks, and 2½ percent for the foreign banks, compared to 9¼ percent for the public sector banks. Further, while 10 public banks had net NPLs in excess of 10 percent of advances, only two old private sector and three foreign banks did. In terms of capital adequacy, the public banks position is not dissimilar to the old private banks, but remains weaker than that of the new private banks and the foreign banks. At end–1996/97, 2 public sector and 4 domestic private sector banks did not meet the 8 percent ratio, although 16 of the 27 public sector banks had a capital ratio in excess of 10 percent.

22. To assess the recent profit performance of the banks, profits can be broken down into their main components as follows:

gross profit = net interest income + net non–interest income – operating expenses

net profit = gross profit – provisions.

A comparison among the different bank groups shows that (Table IV.1):

- **The profitability of the public sector banks has been much lower than that of the private and foreign banks.** Although profitability of the public sector banks has improved in recent years, their gross profits have been less than one–half of those of

the foreign banks since 1992/93, while net profits have been negative in three of the five years. The higher profitability of the foreign banks in India is consistent with evidence from other developing countries (Demirguc–Kunt and Huizinga, 1998). In India, this likely reflects the fact that foreign banks (together with the new private sector banks): have followed a different business strategy, concentrating on specialized and high yielding fee based activities and advisory services in strategically located metropolitan areas; have a sufficiently strong technological edge over the public sector banks; have been better capitalized; and are subject to less government interference in their operations.

- **Net interest income of foreign banks has been higher than for the domestic banks**. While net interest income of the public sector banks has been broadly similar to those of the private banks at 3 percent in recent years, it has been well below the 4 percent earned by the foreign banks.[10] Foreign banks may have been able to set their interest spreads higher on the strength of their better customer service (Reserve Bank of India, *Annual Report 1996/97*, page 56). The composition of net interest income has varied between the different banks.

  - **For the public sector banks, both interest expenses and interest income have been lower than for the private and foreign banks**. On the cost side, this has reflected their ability to raise lower cost retail deposits through their extensive branch networks. Low interest income has reflected a loan portfolio with a large proportion of nonperforming assets, which has also been more skewed toward lower interest earning assets, and an extensive investment portfolio in government securities.

  - **For the private and foreign banks, their higher interest expenses reflect a reliance on more costly retail and wholesale funding respectively**. This is due to their smaller branch networks, which have been limited by government restrictions. Within their assets, foreign banks earned a substantially higher return on their lending, partly reflecting lower NPLs, and a somewhat higher return on their investment portfolio.

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[10]Net interest income derived from the balance sheets of the banks is not a good indication of the spread on loan business to the corporate sector in India. Firstly, given the substantial proportion of nonperforming assets, interest income from the balance sheet will not be representative of the interest rate charged on new lending. Second, net interest income on the balance sheet comprises three components; advances, investments, and deposits with the RBI and in the inter–bank market. With the high CRR (effective October 1997, the interest paid on cash balances maintained under the CRR was raised to 4 percent from 3½ percent) and lending to the priority sector representing a large burden on profitability, a wide margin is needed on standard loan business to compensate for the low returns elsewhere in the portfolio. In 1995/96, interest earned by the public sector banks on advances was 12 percent, on investments 11 percent, and on cash 3½ percent.

- **Foreign banks also generated higher non–interest income than the domestic banks.** Non–interest income of the public sector banks has been similar to that of the old private sector banks, but well below that of the new private sector and foreign banks. This reflects the greater role of foreign banks in fee generating activities, such as guarantees on trade finance.

- **The operating costs of the public sector banks are higher than those of the private banks, but broadly similar to those of the foreign banks.** The high costs of the public sector banks reflect their extensive branch network and substantial over manning. In the new private sector and the foreign banks, the ratio of deposits–to–employees is seven and five times greater than that in the public sector banks respectively, while the ratio of wages and salaries to total operating costs of public sector banks is almost double that of foreign banks. The high operating costs of the foreign banks appear to be attributable to their greater expenditure on technology. In both the public sector banks and the foreign banks, operating costs have increased during the 1990s, while they have been reduced in the old private sector banks.

- **The provisions made by the foreign banks have been much higher than those of the public and domestic private sector banks.** This likely reflects more stringent provisioning standards followed by these institutions.

Among public sector banks

23. There have been significant differences in performance among the public sector banks. Although the financial performance of the public sector banks as a whole has not been very impressive, the aggregate ratios conceal significant divergences in performance between the banks (Table IV.2). For example, while the SBI, Oriental Bank of Commerce, and Corporation Bank achieved positive and increasing profits between 1992/93–1996/97, Indian Bank, UCO Bank, and United Bank of India made substantial losses, which continued into 1996/97. The proportion of gross NPLs (to total advances) in 1996/97 ranged from 39 percent for Indian Bank to 7½ percent for Oriental Bank of Commerce, and net NPLs from over 25 percent for Indian Bank to 3½ percent for Corporation Bank. Further, the capital adequacy ratio ranged from negative for Indian Bank to 17½ percent for Oriental Bank of Commerce.[11] Hence, although all the public banks have been subject to government intervention and adverse economic developments, these do not appear to provide a complete explanation of bank performance. Bank specific factors also appear to have been important.

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[11]In this comparison it should be kept in mind that overdue loans with a government guarantee, and hence overdue loans to the public sector, are not counted as NPLs. Given the much higher proportion of lending by the SBI to the public sector than for the nationalized banks (see below), this may bias downward the NPLs of the SBI.

Table IV.2. Selected Financial Indicators of Public Sector Banks, 1995/96-1996/97

Name of Bank	Net Nonperforming Loans (Percent of Net Advances)		Capital Adequacy Ratio (Percent)		Gross Profit/Loss (Percent of total assets)		Net Profit/Loss (Percent of total assets)	
	1995/96	1996/97	1995/96	1996/97	1995/96	1996/97	1995/96	1996/97
State Bank of India	6.61	7.30	11.60	12.17	2.10	2.17	0.58	0.85
State Bank of Bikaner & Jaipur	6.11	7.96	9.33	8.82	1.71	1.93	0.39	0.50
State Bank of Hyderabad	9.94	11.42	9.90	10.84	2.46	2.43	0.61	0.56
State Bank of Indore	9.62	11.29	8.80	9.31	2.01	2.23	0.39	0.49
State Bank of Mysore	8.59	10.96	8.81	10.80	1.91	2.39	0.54	0.74
State Bank of Patiala	6.60	5.88	9.51	11.25	2.23	2.26	0.63	0.68
State Bank of Saurashtra	5.70	6.47	12.38	12.14	2.00	2.43	-4.94	1.45
State Bank of Travancore	7.38	8.82	9.40	8.17	2.07	1.93	0.39	0.52
Allahabad Bank	16.00	14.84	9.68	10.57	0.83	1.40	0.05	0.49
Andhra Bank	3.29	4.10	5.07	12.05	0.89	1.06	0.16	0.43
Bank of Baroda	8.15	8.94	11.19	11.80	2.55	2.06	0.61	0.73
Bank of India	7.00	6.52	8.44	10.25	1.43	1.53	0.84	0.95
Bank of Maharashtra	9.39	9.66	8.49	9.07	0.85	1.18	0.16	0.54
Canara Bank	7.45	9.32	10.38	10.17	2.09	1.83	0.81	0.41
Central Bank of India	13.49	14.40	2.63	9.41	0.91	1.14	-0.32	0.57
Corporation Bank	2.26	3.63	11.30	11.27	3.13	3.02	1.52	1.53
Dena Bank	7.30	9.40	8.27	10.81	1.76	2.00	0.63	0.75
Indian Bank	23.87	25.24	Negative	-18.81	-1.26	-0.81	-7.52	-2.28
Indian Overseas Bank	8.57	7.64	5.95	10.07	0.12	0.72	0.02	0.58
Oriental Bank of Commerce	3.60	5.64	16.99	17.50	2.62	2.60	1.64	1.56
Punjab & Sind Bank	10.34	12.04	3.31	9.22	0.12	0.75	-1.83	0.26
Punjab National Bank	12.70	10.38	8.23	9.15	1.22	1.77	-0.30	0.68
Syndicate Bank	8.39	7.53	8.42	8.80	0.64	0.56	0.13	0.38
UCO Bank	11.43	13.73	7.83	3.16	-0.17	-0.45	-1.53	-1.08
Union Bank of India	5.94	6.98	9.50	10.53	1.52	1.52	0.39	0.96
United Bank of India	23.28	18.70	3.50	8.20	-0.37	-0.43	-2.16	-0.89
Vijaya Bank	11.90	9.56	Negative	11.50	0.07	0.43	-3.47	0.24

Source: Report on Trends and Progress of Banking in India, 1996/97.

24. What are the characteristics of the poorly performing public sector banks? To shed some light on this, three sub–groups were constructed: the SBI and its seven associates (referred to as the SBI in the remainder of the paper); five "weak" nationalized banks; and five "stronger" nationalized banks.[12] Several points can be made from comparing the performance of these groups (Table IV.3):

- **The performance of the weak commercial banks has significantly affected the results of the public sector banks as a whole.** Losses have been recorded by these banks as a group for five successive years, and averaged 2¼ percent of assets over this period. The performance of the stronger public sector banks has not been significantly different from that of the old private sector banks, but has still been well below that of the new private sector banks and the foreign banks.

- **Net interest income of the weak banks has been considerably lower than for the SBI and the stronger banks.** Interest income is much lower, reflecting the larger proportion of NPLs in the loan portfolio. However, the prime lending rates of the weak banks have been above those of the SBI and stronger banks during the past couple of years suggesting that new borrowing rates for these banks are somewhat higher. Interest expenses of the weak banks have been higher than both the stronger banks and the SBI, possibly reflecting a higher risk premium in the funding costs of these banks.

- **Operating expenses of the weak banks have been somewhat higher than the stronger banks, but about the same as those of the SBI.** However, while the operating expenses of the stronger banks and the SBI have remained broadly unchanged during the 1990s, those of the weak banks have risen.

25. What explains the different financial performances among the public banks during this period? Not all the information required to make such an assessment is available. For example, the sectoral exposure of individual banks or detailed information on the composition of their NPLs is not disclosed in the balance sheets. However, several points can be made:

- **Rapid expansion appears to be part of the explanation.** Two of the weak banks, Indian Bank and UCO Bank, expanded rapidly in the late 1980s with lending growth averaging 20 percent per annum between 1985/86 and 1990/91 (a growth rate exceeded by only one other bank). The incremental loan/deposit ratio of these two

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[12]The criteria for selecting the weak banks were those that had incurred net losses in three of the past four years. The five weak banks are Central Bank of India, Indian Bank, UCO Bank, United Bank of India, and Punjab and Sind Bank. Each of these had gross NPLs of 25 percent or more in 1996/97. The criteria for selecting the strong banks was that no losses were incurred in any of the past five years. The five strong banks are: Bank of Baroda, Canara Bank, Union Bank of India, Oriental Bank of Commerce, and Corporation Bank.

Table IV.3: Financial Performance of Indian Public Sector Commercial Banks, 1992/93-1996/97 1/

(As a percent of total assets)

	Net Interest Income	Interest Income	Interest Expense	Non-interest Income	Total Income	Operating Expenses	Gross Profits	Provisions	Net profits
				SBI and Associates					
1992/93	3.17	10.26	7.09	1.46	4.63	2.99	1.63	1.38	0.25
1993/94	2.96	9.29	6.34	1.53	4.49	2.85	1.63	1.40	0.24
1994/95	3.38	9.29	5.91	1.61	4.99	3.00	1.99	1.61	0.38
1995/96	3.58	9.74	6.17	1.69	5.27	3.21	2.06	2.24	-0.18
1996/97	3.68	10.33	6.65	1.53	5.21	2.99	2.22	1.50	0.72
Average 92/93-96/97	3.35	9.78	6.43	1.56	4.92	3.01	1.91	1.62	0.28
				Weak banks					
1992/93	1.06	8.84	7.78	0.89	1.95	2.73	-0.78	2.16	-2.95
1993/94	1.30	8.23	6.93	0.86	2.16	2.82	-0.66	3.86	-4.52
1994/95	1.97	8.00	6.03	1.04	3.01	2.76	0.25	0.87	-0.62
1995/96	1.94	8.45	6.51	1.02	2.96	3.12	-0.15	2.52	-2.67
1996/97	2.01	8.86	6.85	1.04	3.04	3.00	0.04	0.72	-0.68
Average 92/93-96/97	1.66	8.47	6.82	0.97	2.63	2.89	-0.26	2.03	-2.29
				Stronger banks					
1992/93	2.88	10.01	7.12	0.82	3.70	2.58	1.12	1.25	-0.13
1993/94	2.91	9.19	6.28	1.05	3.97	2.39	1.57	1.44	0.14
1994/95	3.45	8.90	5.45	1.01	4.46	2.46	2.00	1.36	0.64
1995/96	3.59	9.73	6.14	1.00	4.59	2.48	2.11	1.39	0.72
1996/97	3.52	10.16	6.65	0.93	4.44	2.44	2.00	1.17	0.84
Average 92/93-96/97	3.27	9.60	6.33	0.96	4.23	2.47	1.76	1.32	0.44

Source: Report on Trends and Progress of Banking in India, 1996/97.

1/ See text for the criteria for selecting "weak" and "stronger" banks and for the individual banks that fall into each category.

banks was around 80 percent, exceeded only by the SBI. Given the SLR requirement on deposits, this growth was financed by a rapid expansion of wholesale borrowing. However, for the weak banks as a whole, deposit growth was only slightly above the average for the public banks, while lending growth was below the average (Table IV.4). Lending by the SBI also grew rapidly during the late 1980s (averaging nearly 18 percent), and with deposit growth of only 12½ percent per annum, this was also funded by a rapid increase in borrowing.

- **The higher operating costs of the weak banks may be a sign of poor management**. Indeed, it has been suggested that organizational culture and quality of management have played a crucial role in determining individual bank performance in India (see Government of India, 1993). Banks with a tradition of promotion from within have typically been better managed and more resistant to external pressure in their lending and staffing decisions and, in turn, this has been reflected in the quality of their loan portfolio.

- **Different concentrations of lending to the priority sector and the public sector do not appear to help explain differences in performance and NPLs**. Indeed, the weak banks have a slightly lower percentage of advances to the priority sector than the strong banks, although considerably higher than the SBI. They have lower advances to the public sector than the strong banks, although much less than the SBI. While this may appear surprising, it does not mean that directed lending can not help explain the high level of NPLs in the system, rather that it can not explain differences across institutions.

F. Policy Issues

26. The public sector commercial banks need further reform. The previous section has highlighted that the financial performance of the public sector banks has been weak, and has fallen well short of that of other commercial banks operating in India. Addressing these weaknesses will be important in helping to improve the operations of the financial sector, and in achieving a more efficient allocation of resources.

27. Efforts have already been made to begin to address the problems. Annual memorandums of understanding (MOUs) between the RBI and seventeen of the nationalized banks were introduced in 1993 which set out certain performance criteria to be met during the coming year. These cover profitability, internal controls, modernization, capital adequacy, NPLs, and business growth. Those banks regarded as particularly weak have been placed under close surveillance by the RBI. Banks that meet minimum standards (net profits for each of the past three years, capital adequacy ratio above 8 percent, net NPLs below 9 percent, and minimum owned funds of Rs 1 billion) have recently been given more autonomy in their administration and recruitment. The World Bank has also been involved in a loan which is directed at improving the performance at six of the public banks. Further, banks have been given scope to close down loss–making branches, except in rural areas,

Table IV.4: Aspects of Public Sector Commercial Bank Performance, 1985/86-1996/97

	1985/86-1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
				Priority sector lending/total lending			
All public sector banks	...	29.6	28.6	30.9	29.3	29.6	31.1
SBI and associates	...	26.6	25.3	28.9	27.3	27.4	29.2
Weak banks	...	31.9	30.4	32.8	31.0	31.3	34.7
Stronger banks	...	32.2	32.0	32.4	32.0	33.6	34.0
				Lending to public sector/total lending			
All public sector banks	...	9.9	13.1	13.2	11.7	11.3	11.5
SBI and associates	...	13.7	20.2	18.9	12.9	16.3	15.2
Weak banks	...	7.8	7.9	10.0	11.6	8.0	9.6
Stronger banks	...	9.5	10.4	10.4	9.5	7.1	9.2
				Growth in lending			
All public sector banks	15.4	10.3	7.6	-4.9	20.9	16.7	5.9
SBI and associates	17.8	10.0	9.8	-9.4	20.3	21.1	6.1
Weak banks	14.8	12.0	3.8	-13.0	19.6	6.1	-3.8
Stronger banks	14.1	13.6	11.4	8.4	27.9	16.7	6.9
				Growth in deposits			
All public sector banks	12.1	18.1	4.0	15.1	13.9	12.9	14.8
SBI and associates	12.5	22.7	12.3	17.0	12.5	14.3	15.4
Weak banks	12.4	11.4	12.6	7.5	11.5	10.1	12.7
Stronger banks	13.7	23.0	14.3	19.0	17.7	15.2	15.4

Source: Indian Banker's Association, *Bulletin*, March 1997; and the 1996/97 Annual Reports of the commercial banks.

while special tribunals have also been set up in a number of states to try and speed the process of debt recovery.

28. However, these reforms have so far had mixed success. While the capital adequacy of the public banks has been improved substantially and nonperforming loans have been reduced, this has been largely achieved through capital injections from the government. Continued capital injections without fundamental reform will not provide a solution to the problem. While profitability has shown some improvement, it remains well below that of other banks in the market, and it is a sustained improvement in profitability that is crucial to the future viability of the public sector banks.

29. The government is placing a high priority on strengthening the financial sector, and has stressed that "although the Indian banking system has registered commendable progress in terms of geographic and functional coverage, its performance in terms of operating efficiency and viability still leaves considerable room for improvement." (Government of India, Economic Survey, 1997/98, page 38). To this end, the recent Narasimham Committee on Banking Sector Reform has made a number of important recommendations in the areas of prudential regulation and supervision, disclosure, and the recapitalization and structural transformation of the financial system which the government is currently studying. If implemented, these proposals would go a long way to addressing the remaining weaknesses in the system.

30. A number of steps could be taken to improve the operational flexibility of the banks which would help improve their profitability. Important restrictions continue to be imposed on the operations of banks, particularly through the high CRR requirement and directed lending. Reductions in the CRR would release more funds to the banks and enable them to increase their profitability (if used wisely).[13] A reduction in priority sector lending would give banks increasing scope to lend on purely business grounds, with benefits for overall financial performance. If this is not feasible in the near term, modifications to the existing scheme could be made by further broadening the definition of priority sector, letting interest rates on the lending be fully market determined, and making branch managers fully responsible for the identification of beneficiaries under these schemes. The SLR requirement also remains high, but given that the banks are holding securities well in excess of the minimum requirement this is not currently a constraint on their behavior.

31. Improving the quality of the asset portfolio will also depend on effectively addressing the NPL problem. To aid the loan recovery process, reform of the current legal system is critical to more clearly define the rights and liabilities of parties to contracts, and to provide for the rapid resolution of disputes. On the cost side, while greater flexibility in terms of branching has been given, strong unions continue to impede staff rationalization.

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[13]The RBI has announced its intention to reduce the CRR over time to 3 percent. This obviously has to be done in a manner consistent with the overall objectives of monetary policy.

32. The welcome initiatives to give the stronger public banks greater autonomy should be pursued further in a wide range of areas, including asset management, the ability to hire and fire staff, and branch numbers. The stronger banks should also be encouraged to raise private capital. Several banks have already accessed the capital markets, and the government's equity holdings in these banks have been reduced to the 60–75 percent range, while a number of others have made private placements of subordinated debt.[14] However, with minimum government ownership limits of 51 percent for the nationalized banks and 55 percent for the SBI in place, there is currently a limit to how much private capital can be raised. The recent Narasimham Committee Report recommended that minimum public ownership levels should be reduced to 33 percent. If further divestment is undertaken it is likely to be more successful if strategic partners are found for the banks, as the sale of equity to a large number of small investors is unlikely to have the desired impact on management performance. These strategic partners—whether domestic or foreign—will need to have sufficient banking experience and ensure that the banks are adequately capitalized. Reliance on private capital for recapitalization will also prevent the burden falling on the government budget at a time when the outstanding stock of public debt is at an uncomfortably high level.

33. Perhaps most pressing is the need to deal effectively with the weak banks. It is apparent that significant performance differences exist among the public sector banks, and that the performance of a relatively small number of banks has dragged down the performance of the sector as a whole. As stressed by Tarapore (1997), the presence of a number of financially weak banks may be detrimental to the functioning of the financial sector as a whole. Banks that have lost most or all of their capital face a different incentive structure from sound banks, and competition from insolvent banks can pose threats to the financial soundness of their competitors. An unsound bank may offer higher interest rates than its competitors to attract deposits, which it then uses to finance higher risk lending. In less competitive markets, weak banks may widen their spreads to cover the cost of nonperforming loans and operational inefficiencies, penalizing depositors and/or discouraging investment (see Lindgren, Garcia, and Saal, 1996). While the available data makes it difficult to reach firm conclusions, the prime lending rates and the cost of funds of the poorer performing banks have been somewhat higher than for the other banks, suggesting that these institutions may be contributing to upward pressure on interest rates in India.

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[14]The SBI floated a GDR in October 1996, raising $370 million. Dena Bank, Bank of Baroda, Oriental Bank of Commerce, and Bank of India raised capital through the domestic market. Punjab National Bank and three of the state banks have raised subordinated debt. In all cases new capital has been raised, and there have been no sales of the existing government share in these banks.

34. With regard to the weak banks, a number of policy options have been suggested:

- **Merge the weak banks with other institutions**. If this strategy were to be followed, measures would need to be taken to ensure that the stronger institution in the merger was not dragged down by the weaker, and that such mergers were made purely on business grounds. In particular, the balance sheet of the weak bank would need to be cleaned up, staff layoffs and branch closures would need to be permitted, and the management of the weak bank dismissed.

- **Establishing an Asset Reconstruction Company (ARC)**. The government has recently announced that bank specific ARCs will be introduced on a trial basis for a number of weak banks. The government will guarantee the bonds floated by the ARCs to securitize the NPLs. The ARC will then concentrate on recovering the maximum value from the transferred NPLs. The effectiveness of the proposed ARCs will be dependent on a number of factors including: the market pricing of the problem loans; the existence of clear and transparent rules for managing and disposing of assets; and the efficient functioning of the legal system. Further, unless fundamental reform of the bank is undertaken, transferring the NPLs off its books is only a cosmetic solution to the underlying problem. Indeed, it may create adverse incentive problems for bank management.

- **Narrow banks**. The Tarapore Committee on Capital Account Convertibility recommended that the operations of the weak banks be limited by imposing an incremental credit–deposit ratio on them, with the ratio lower the weaker the bank. However, even if a bank is invested mainly in government securities it still faces interest rate risks, and the Treasury operations of the weak banks do not appear to be any better than the lending operations. The government securities market in India is also fairly illiquid, due to the large mandatory holdings of banks and investment institutions. The growth of deposits of the weak banks has generally been slower than the other public sector banks in recent years. However, again there are exceptions with several having deposit growth in 1996/97 in excess of 17 percent (compared to an average for the public sector banks as a whole of 13 percent).

- **Aggressively seek blue–chip business**. The quality of the weak banks' loan portfolio could be improved by the acquisition of high quality borrowers. However, competition is growing for this business, not only among the banks, but also from other financial institutions and the capital markets. The blue–chip companies, if they want bank finance, are likely to prefer dealing with the stronger banks who may offer better terms (and be more efficient).

- **Bring in experienced senior management or advisors**. They should be given greater autonomy in running the bank, and placed on performance based contracts with effective and ambitious performance goals agreed on a regular basis with the government. Within a set period, the objective should be to ready the bank for public offering.

35. The effective resolution of the problem of the weak banks will require fundamental reform of their operations. The analysis in the previous section suggests that to return the weak banks to sustained profitability will require: (i) boosting interest income by dealing with the NPLs on the balance sheet; (ii) ensuring that credit evaluation and monitoring systems are in place to ensure that NPLs on new loan business are minimized; (iii) ensuring they are not allowed to try and grow themselves out of the current problems until the requirements under (ii) are in place; (iv) a significant reduction in operating costs through branch closures and layoffs.

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Structure of the Financial Sector in India

36. The Indian financial system is dominated by the public sector. It consists of commercial banks, co–operative banks, regional rural banks, development finance institutions, nonbank finance companies, insurance companies, provident funds, and mutual funds, as well as the Reserve Bank of India (RBI), the country's central bank (Table IV.5).

37. Commercial banks are the most important financial intermediaries. They account for about 60 percent of the financial assets of the banking and other financial institutions sector. There are currently 27 public sector banks which dominate the commercial banking sector, accounting for 84 percent of its assets. The State Bank of India is by far the largest bank, accounting for 21 percent of assets (30 percent if its seven associate banks are included).Currently, there are 25 "old" private sector banks (accounting for 6½ percent of assets); 9 new private sector banks (accounting for 1 1/2 percent of assets), and 39 foreign banks (accounting for 8 percent of assets), of which 10 have entered since 1993. The banking sector is completed by regional rural banks and co–operative banks.

38. Development finance institutions (DFIs) have traditionally been the main providers of long–term funds for industrial development. DFIs are also allowed to own and operate subsidiaries, including commercial banks, finance companies, and mutual funds. Non–bank finance companies (NBFCs) provide a variety of services including lease and hire–purchase financing, housing finance, and investment banking. These institutions are largely privately owned. Excessive regulation of the commercial banks and the light regulation and supervision of NBFCs has resulted in the rapid growth of the latter over the past decade. However, financial problems have surfaced in some of these institutions, delinquencies have risen, and a number have been prohibited from accepting public deposits.

39. The other financial institutions are predominantly public sector owned.[15] There are two public insurance companies (the Government Insurance Corporation of India (GIC) and the Life Insurance Corporation of India (LIC)). By far the largest mutual fund is the publicly owned Unit Trust of India (UTI) which accounts for about 80 percent of mutual fund business. A number of smaller funds also now operate following the liberalization of the industry in 1992, including some that are subsidiaries of public sector banks. There are also a number of provident funds, the largest of which is the Employees' Provident Fund.

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[15]For more details on the operations of these investment institutions see *India–Selected Issues*, December 1996.

Table IV. 5. Structure of the Indian Financial System

Institution	Number and Ownership	Financial Assets (In billions of rupees, as of March 1997)	Supervisor
Reserve Bank of India	Central bank	2,410.9 1/	
Banking system			
Commercial banks	100 scheduled commercial banks comprising 27 public, 34 domestic private, and 39 foreign.	5,420.0	RBI
Cooperative banks 2/	95,644	657.5	RBI (and NABARD) and state governments
Regional rural banks	196	188.5	RBI (and NABARD)
Other financial institutions			
Development finance institutions 3/	13 (publicly owned, although some now have private shareholders)	1311.5	RBI
State level financial institutions 4/	18 SFCs and 28 SIDCs	192.0	State governments have responsibility
Nonbank finance companies	Approximately 37,500, of which only 700 are registered with the RBI. Mainly privately owned.	1243.7 5/	RBI and Securities Exchange Board of India (SEBI)
Provident, investment, and insurance funds			
Insurance companies	2 (publicly owned)	1052.7	Insurance Regulatory Authority
Provident funds	Consists of the Employees Provident Fund and a number of smaller funds. Publicly owned	1283.3 6/	Government of India
Mutual funds	35 (public and private ownership). The publicly owned Unit Trust of India is by far the largest.	858.2	RBI and SEBI

Sources: *Report on Trends and Progress of Banking in India, 1996/97*, Reserve Bank of India; Securities and Exchange Board of India, *Annual Report, 1997/98*; Patel, U., 1997, "Aspects of Pension Fund Reform: Lessons for India," *Economic and Political Weekly*, September 20; and Mohanty, N., 1998, "Nonbank Finance Companies: Developments and Issues," in this volume.

1/ As of end–June 1997.
2/ Data are for 1995/96. Includes: primary (urban) co–operative banks; state co–operative banks; central co–operative banks; state/central land development banks; primary agricultural credit societies; and primary land development banks. Financial assets are approximated by loans outstanding.
3/ The thirteen development finance institutions are: Industrial Development Bank of India (IDBI); Industrial Credit and Investment Corporation of India (ICICI); Industrial Finance Corporation of India (IFCI); Industrial Investment Bank of India (IIBI); Small Industries Development Bank of India (SIDBI); National Bank for Agriculture and Rural Development (NABARD); National Housing Bank (NHB); the Tourism Finance Corporation of India (TFCI); EXIM bank; Risk Capital and Technology Finance Corporation (RCTC); Technology Development and Information Company of India (TDICI); Shipping Credit and Investment Company of India (SCICI); and the Export Credit and Guarantee Corporation (ECGC).
4/ Comprises State Finance Corporations (SFCs) and State Industrial Development Corporations (SIDCs).
5/ Financial assets are approximated by deposits.
6/ Estimate is for 1995/96 and may not be comprehensive. Taken from Patel, 1997.

An International Comparison of Indian Standards of Income Recognition, Loan Classification and Provisioning Norms

40. The Basle Core Principles for Effective Banking Supervision do not include quantitative minimum criteria regarding income recognition, loan classification, and provisioning requirements. However, there are some basic standards that a number of countries around the world have adopted, or are in the process of adopting, that are increasingly being considered as "international best practice". Table IV.6 sets out income recognition, loan classification, and provisioning norms in a number of developing countries (either currently used or in the process of being adopted).

41. Current loan classification and provisioning standards in India fall well short of evolving best practice standards in a number of important areas (Table IV.7).

- A nonperforming loan is defined as a credit facility where interest has remained unpaid for a period of 180 days past the due date.
- No provisioning is made for standard loans, and no "special mention" category is identified.
- A loan is classified as substandard if it has been nonperforming for a period up to 2 years (ie., past due for 30 months), doubtful if it has been nonperforming for between 2 and 5 years, and lost if identified as such by external auditors or the RBI.
- Loans to the agricultural sector are treated more liberally, being classified as nonperforming if past due for two harvest seasons.
- Loans which carry a government guarantee, but are past due, are not counted as nonperforming.

42. The Narasimham Committee recommended some tightening of current standards. Specifically: the criterion for doubtful assets should be reduced from 30 to 18 months past due (the criterion for substandard assets to remain unchanged at 6 months past due); loans to the agricultural sector and with a government guarantee should be classified on the same basis as other loans; the period for stopping income recognition when interest or principal is not paid should be reduced from 180 to 90 days; and a general provision of one percent of standard assets should be introduced. However, even if these recommendations were fully implemented, the system would still fall short of best practice. No estimates are currently available regarding the impact that the adoption of best practice standards would have on the level of NPLs.

Table IV.6a. Loan Classification: Comparative Country Information

Country	Period Overdue Interest	Period Overdue for Loan Classification as: Substandard	Doubtful	Loss
Korea				
Existing	When past due	Normally not classified until 6 months past due unless declared bankrupt.		
Proposed*	No changes	3 months	6 months	6 months
*Classification will be reviewed based on findings of diagnostic reviews to ensure a forward-looking approach.				
Indonesia				
Existing*	1–12 months	1–12 months	18 months	21 months**
Under implementation	3 months	3 months	6 months	9 months
*Varies by type of credit and installment period. **Refers to 21 months **after** a credit has been classified as doubtful and there is no repayment.				
Malaysia				
Existing*	90 days	90 days	6 months	12 months
*Effective January 1998.				
Philippines				
Existing:* unsecured	3 months	3 months	**	6 months
secured	3 months	6 months		
*Since October 1997. **If classified as substandard in last examination but principal has not been reduced by at least 20 percent during the succeeding 12 months.				
Thailand				
Existing: unsecured	6 months*	6 months	Over 6 months	Over 6 months
secured	6 months*	12 months	Over 12 months	Over 12 months
Proposed	3 months	3–6 months	6–12 months	Over 12 months
*Effective January 1998 irrespective of collaterals; previous limit (since July 1995) was 12 months for secured loan.				
Argentina - Existing	90 days	90–179 days	180–365 days	Over 365 days
Brazil - Existing				
Consumer/Commercial	60 days	60–180 days	181–360 days	Over 360 days
Res. mortgage	360 days	60–180 days	181–360 days	Over 360 days
Chile - Existing				
Consumer	90 days	30–59 days	60–119 days	120 days & over
Res. mortgage	90 days	Over 179 days	n.a.	n.a.
Commercial	90 days	Varies in accordance with % of default		
Colombia - Existing				
Consumer	90 days	60–89 days	90–179 days	180–360 days
Mortgage/Commercial	120 days	60–119 days	120–359 days	360 days & over
Peru - Existing				
Consumer	90 days	30–59 days	60–120 days	Over 120 days
Res. mortgage	90 days	30–119 days	120–365 days	Over 365 days
Commercial	15 days	Not indicated		

Table IV.6b. Loan Provisioning Rules: Comparative Country Information (In percent)

Country	Unclassified Standard	Special Mentioned	Substandard	Doubtful	Loss
Korea					
Existing	0.5	1*	20	75**	100**
Proposed	1	2*	25	75**	100**
*Classified as precautionary loans.					
**That portion of a loan classified doubtful or loss that is fully secured will normally be classified Substandard to the extent of the market value of the collateral.					
Indonesia					
Existing*	0.5	n.a.	10**	50**	100**
Proposed	1	5	15	50	100
*Based on uncollateralized portion.					
**Effective end-1996 for Substandard and 1993 for Doubtful and Loss.					
Malaysia					
Existing*	1.5	1.5	20**,***	50***	100***
*Effective 1998 general provision increased from 1 percent to 1.5 percent of total outstanding loans.					
**Effective March 1998.					
***Provision computed against uncollateralized portion.					
Philippines					
Existing*	2	2	25**	50**	100**
*Effective October 1997 a general provision of 2 percent on gross loan portfolio less loans which are considered nonrisk (interbank loans or loans collateralized by government securities or guarantees) has been adopted.					
**Collateral values deducted in computing required provisions; in effect since 1990. For substandard loans, provisioning for collateralized loans will be 12.5 percent by December 31, 1998 and 25 percent by April 15, 1999.					
Thailand					
Existing*	0	0	15**	100	100
Proposed***	1	2	20	50	100
*Based on unsecured portion.	0	0	15–20	100	100
**Since June 1997.					
***Stricter criteria for secured loans.					
Argentina					
Existing					
With liquid guarantees	1	1	1	1	1/100
With preferred guarantees	1	3	12	25	50/100*
Without guarantees	1	5	25	50	100
*Irrevocable (loss) accounts provisioning becomes 100 percent in case of bankruptcy/insolvency.					
Brazil - Existing					
Unsecured	0	0	100	1/100	100
Partially secured/Secured	0	0	50/20	100/20	100
Export/Import	0–100	100	100	100	100
Chile - Existing	0	1	20	60	90
Colombia - Existing					
Unsecured - Principal	0	1	20	50	100
Secured - Principal	0	0	0	0	50–100
Interest	0	1	100	100	100
Peru - Existing*					
Unsecured consumer	0	3	30	60	100
Unsecured res. Mortgage/Commercial	0	1	25	50	100
*Provisioning applied on total balance.					

Table IV.7: India. Loan Classification and Provisioning Requirements for Commercial Banks

	Current System		Proposed System 1/	
	Classified when overdue	Provision required	Classified when overdue	Provision required
General provision				
All loans		—		1 percent
Specific provisions				
Substandard	6 months	10 percent	6 months 2/	unchanged
Doubtful	30 months	**For secured loans:** If doubtful for less than:	18 months	unchanged
		1 year: 20 percent		
		1–3 years: 30 percent		
		Otherwise: 50 percent		
		Unsecured loans:		
		100 percent		
Loss	Identified as lost by auditors or RBI	100 percent	Identified as lost by auditors or RBI	unchanged

Source: Report of the Committee on Banking Sector Reforms; and Standard and Poor's.

1/ System as proposed by the Narasimham Committee. To be phased in over a 3–year period.

2/ With regard to income recognition, income should stop accruing when interest or installment of principal is not paid within 90 days (currently 180 days).

V. Nonbank Finance Companies in India: Developments and Issues[1]

A. Introduction

Abstract: *This paper reviews the rapid spread of nonbank finance companies (NBFCs) over the last two decades and recent policy initiatives to strengthen this sector. Operating under minimal regulation with lax supervision, NBFCs' asset quality gradually deteriorated as the higher cost of mobilizing funds compelled them to seek higher returns by making risky investments. The general downturn of the economy over the past couple of years exposed the fragility of the sector. A new regulatory and supervisory framework was introduced in early 1998 to restore market confidence and promote orderly growth of the industry. Once fully implemented, the measures are expected to increase competition between banks and nonbank finance companies and, over time, contribute to the consolidation of the nonbank sector.*

1. Nonbank finance companies (NBFCs) have grown rapidly since the 1980s and have increasingly become an integral part of the financial system in India. The number of NBFCs increased more than five fold between 1981 and 1997, and their aggregate deposits grew at an average annual rate of 36 percent in the decade ended March 1997. The development of nonbank financial institutions was spurred initially by nationalization of the banking sector in 1969 and 1980, which left nonbank finance companies as the only avenue for private initiative in the financial sector. Moreover, nationalized banks began to accord higher priority to government development and investment objectives, and certain retail financial activities fell outside their new mandates. As a result, some financial and investment activities that had been carried out by banks before nationalization gravitated toward NBFCs which remained largely in private hands. The growth of the NBFC sector was subsequently supported by the diversification of the Indian economy and the rise in middle class consumerism following economic liberalization. Over the years, NBFCs have demonstrated considerable flexibility in meeting the diverse and increasingly complex financial needs of India's growing economy.

2. Until recently, NBFCs operated under minimal supervision and with virtually no entry hurdles. Consequently, their rapid growth was also accompanied by an increasingly risky asset portfolio. The vulnerability of NBFCs became more apparent as the economy began to slow down in 1996, and delinquencies began to rise. Since 1997, liquidation proceedings have been filed against five large finance companies; 35 companies, including some large ones, have been prohibited from accepting public deposits; and several large and medium–sized companies have been downgraded by credit rating agencies. The recent developments have brought to the surface the fragility of many NBFCs in India and have prompted the Reserve Bank of India (RBI) to introduce a new set of regulations in order to restore market confidence and promote orderly growth of the industry.

3. This paper discusses the key factors that contributed to the rapid growth of NBFCs and their subsequent difficulties, and assesses the ongoing reforms in addressing the

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[1]Prepared by Nirmal Mohanty, Economist, New Delhi Office.

fundamental weaknesses of the nonbank financial sector. Section B outlines the characteristics and the role of NBFCs in a financial sector still dominated by banks, and discusses their past performance and present difficulties. Section C reviews the recent reform efforts. Some of the key challenges and issues lying ahead in reforming the NBFC sector are discussed in Section D. And, finally, Section E draws conclusions and outlines areas for future reforms.

B. NBFCs in India: Characteristics and Past Performance

Characteristics of NBFCs

4. NBFCs in India represent a rather diverse group of companies.[2] Predominately privately–owned, NBFCs have traditionally acted as niche players in India's increasingly sophisticated financial system. Mainly providing financing to small and medium–sized companies and to the household sector, NBFCs can be classified into three broad categories in terms of their activities and primary functions:

- First, companies involved in leasing, hire purchase and other forms of asset financing. Traditionally, banks have financed the working capital requirements of industry, and large government–owned financial institutions (such as the Industrial Development Bank of India and the Industrial Finance Corporation of India) have provided investment financing to large companies. The NBFCs have filled the gap by financing the fixed capital needs of small and medium–sized companies—many of them in the informal sector—as well as financing consumer durables for the household sector.[3] In the process, NBFCs have helped some segments of financial markets (especially leasing and hire purchasing) to develop in size, maturity, and sophistication.

- Second, companies providing basic retail banking services and financial intermediation to small depositors and borrowers in widely–dispersed locations not adequately covered by banks. These finance companies with their informal system and a commissioned agent network have an advantage over banks in terms of consumer orientation and access, particularly in rural areas.

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[2]In India, an NBFC is legally defined, from a regulatory viewpoint, as "a non–banking institution which is a loan company or an investment company or a hire purchase finance company or an equipment leasing company or a mutual benefit financial company." Insurance companies and stock exchanges are excluded. For the purpose of this paper, housing finance companies are treated as NBFCs, since they are governed by a similar regulatory framework.

[3]Often for tax reasons, these businesses are carried out by separate companies owned by manufacturers and distributors.

- Third, companies involved in the capital market. Linked to the securities industry, these companies normally carry out businesses such as distribution of primary issues, stock brokering, fund management and underwriting.

5. The first two groups of companies are regulated and supervised by the RBI, while the Securities Exchange Board of India (SEBI) regulates the third group. Until recently, the first two groups of companies could undertake capital market activities in addition to their regular business activities. Under directions from the SEBI, NBFCs were required to segregate activities related to the capital market and conduct them under separate entities with effect from June 1998. The focus of this paper is on the first two groups of companies, since companies in the third group have not developed in the same manner, are not facing the same difficulties and issues, and are subject to a different set of regulations than those in the first two categories.

Growth in size and market share of NBFCs

6. The NBFC sector has grown rapidly since the early 1980s. The number of nonbank financial institutions increased from about 7,000 in 1981 to 38,000 in 1997, compared to about 100 banks currently operating in India.[4] NBFCs have also grown significantly in volume terms as well as in relation to banks. Based on available data, the following stand out:[5]

- NBFCs' aggregate deposits (which in India includes borrowing) rose at an average annual rate of 36 percent between 1986/87 and 1996/97 (Table V.1).[6] Within this aggregate, regulated deposits (which includes public deposits) grew at an average rate of 52 percent per annum, and their share in total deposits increased from 14 percent to 43 percent during this period.

- Among NBFCs, leasing companies recorded the highest rates of growth of deposits (73 percent annually), followed by housing finance companies (Table V.2).[7] Despite a decline in their relative share over the years, loan companies still dominate the NBFC sector and account for over 50 percent of total deposits.

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[4]About 4,700 NBFCs are deposit–taking intermediaries and about 100 have assets of Rs 1 billion (about US$25 million) or more.

[5]Historical data on NBFCs are fragmentary and inconsistent. Also, available data tend to underestimate the size of the NBFC sector as many companies failed to submit returns to the RBI.

[6]Fiscal year April 1– March 31.

[7]Consolidated historical data are only available on NBFC deposits.

Table V.1. India: Deposits and Borrowings of NBFCs, 1983/84-1996/97 1/

(In billions of Indian Rupees; end of period)

Fiscal Year	Regulated deposits 2/			Exempted deposits/ borrowings 4/	Aggregate deposits	Ratio of (3) to (5) (in percent)
	Public deposits 3/	Other deposits	Total			
	1	2	3	4	5 (=3+4)	6
1983/84	2.2	0.6	2.8	28.9	31.6	8.9
1984/85	3.6	0.5	4.1	39.5	43.6	9.4
1985/86	4.2	0.6	4.9	44.7	49.6	9.8
1986/87	7.1	1.2	8.3	51.1	59.4	14.0
1987/88	10.2	1.1	11.4	63.6	75.0	15.2
1988/89	13.1	1.8	15.0	89.1	104.1	14.4
1989/90	16.1	1.6	17.7	128.7	146.4	12.1
1990/91	18.9	1.5	20.4	152.0	172.4	11.8
1991/92	26.5	1.8	28.2	176.1	204.4	13.8
1992/93	33.9	9.0	42.9	406.7	449.6	9.5
1993/94 5/	59.4	115.0	174.4	390.0	564.4	30.9
1994/95	86.3	168.1	254.4	600.5	855.0	29.8
1995/96	140.6	246.5	387.1	629.6	1016.7	38.1
1996/97 (Prov.)	198.4	332.7	531.2	712.5	1243.7	42.7

Source: Reserve Bank of India.

1/ Including housing finance companies.

2/ Regulated deposits are subject to certain restrictions imposed by way of regulatory measures. These deposits include: (i) fixed deposits received from public; (ii) non convertible debentures; (iii) deposits received from shareholders and directors; (iv) inter-corporate deposits; and (v) deposit guaranteed by directors.

3/ Public deposits include fixed deposits, recurring deposits, and daily deposits received from the members of the public including relatives and friends of directors, funds received from shareholders by a public limited company, and money raised through issuance of of unsecured debentures and bonds.

4/ Borrowing and deposits that are outside the scope of regulatory measures. These include: (i) funds received from central, state and foreign government; (ii) borrowing from banks and financial institutions; (iii) issues of convertible debentures and 'bonds; and (iv) funds received in trust.

5/ Some deposits such as inter-corporate deposits which had been classified as exempted deposits were reclassified as regulated deposits in 1993/94.

Table V.2. India: Aggregate Deposits of NBFCs by Type of Company, 1983/84-1995/96 1/

(In billions of Indian rupees; end of period)

Fiscal Year	LCs	ICs	HPFCs	ELCs	MBFCs	MNBCs	HFCs	Total
1983/84	21.5	2.6	1.7	0.2	0.4	3.8	1.3	31.6
	(68)	(8)	(5)	(1)	(1)	(12)	(4)	
1984/85	30.4	3.8	3.2	0.1	0.6	4.4	1.0	43.6
	(70)	(9)	(7)	(0)	(1)	(10)	(2)	
1985/86	32.0	4.2	3.3	0.6	0.7	6.9	1.8	49.6
	(65)	(9)	(7)	(1)	(1)	(14)	(4)	
1986/87	36.0	5.8	6.0	0.6	0.9	7.4	2.6	59.4
	(61)	(10)	(10)	(1)	(2)	(12)	(4)	
1987/88	42.2	7.3	7.9	4.9	0.9	7.7	4.0	75.0
	(56)	(10)	(10)	(7)	(1)	(10)	(5)	
1988/89	55.6	11.4	9.7	12.6	1.5	8.6	4.7	104.1
	(53)	(11)	(9)	(12)	(1)	(8)	(4)	
1989/90	68.1	18.6	12.2	24.2	1.9	9.6	11.8	146.4
	(46)	(13)	(8)	(17)	(1)	(7)	(8)	
1990/91	73.1	21.6	16.0	37.2	2.4	9.1	13.0	172.4
	(42)	(13)	(9)	(22)	(1)	(5)	(8)	
1991/92	90.4	23.1	19.7	37.7	3.6	11.3	18.5	204.4
	(44)	(11)	(10)	(18)	(2)	(6)	(9)	
1992/93	225.7	31.9	40.7	69.6	5.8	15.1	60.7	449.6
	(50)	(7)	(9)	(15)	(1)	(3)	(14)	
1993/94	267.5	40.3	58.5	87.0	10.9	9.9	90.4	564.4
	(47)	(7)	(10)	(15)	(2)	(2)	(16)	
1994/95	440.4	57.3	85.5	133.2	15.8	15.4	107.5	855.0
	(52)	(7)	(10)	(16)	(2)	(2)	(13)	
1995/96	526.3	68.7	110.8	139.4	12.2	19.5	139.9	1,016.7
	(52)	(7)	(11)	(14)	(1)	(2)	(14)	

Source: Reserve Bank of India.

1/ Figures in brackets represent share in total.

Definitions: LC - Loan Company
IC - Investment Company
HPFC - Hire Purchase Finance Company
ELC - Equipment Leasing Company
MBFC - Mutual Benefit Finance Company
MNBC - Miscellaneous Non-Banking Company
HFC - Housing Finance Company

- NBFCs grew far more rapidly than banks (Table V.3). Aggregate deposits with NBFCs were equivalent of 24 percent of bank deposits in 1995/96, compared to only 5 percent in 1983/84. In March 1996, the total assets of NBFCs were Rs 1,198 billion, equivalent to more than one–fifth of banking sector's assets. The share of NBFC deposits in gross financial assets of the household sector has risen from 4 percent in 1989/90 to 14 percent in 1995/96.

- Loans and advances, investments, hire purchases and equipment leasing comprise the bulk of the assets of NBFCs. In March 1996, loans alone accounted for about 45 percent of total assets of NBFCs (excluding housing finance companies), while investment in shares, bonds and debentures accounted for 24 percent. NBFCs dominate banks in areas of leasing, hire–purchase financing, housing and investment in private securities. Their average loan size, however, is very small compared to bank loans.

Factors contributing to the rapid growth of NBFCs

7. The development of the NBFC sector was facilitated by the segmentation of the financial sector, as the narrow scope for competition and the limited overlap in activities between banks and nonbank financial institutions created a vacuum that was filled by NBFCs. By early 1990s, NBFCs were well positioned to meet the growing, and increasingly more sophisticated, financing needs ushered by the advent of middle class consumerism, automobile boom, and proliferation of small and medium–sized companies that accompanied a rapidly expanding and a more liberal capital market. Market segmentation had a number of features, including:

- Differences in objectives and priorities. Banks, particularly after nationalization, followed the development objectives of the government mainly through the system of directed credit. Banks were also required to maintain a large part of their assets in government securities. In contrast, NBFCs, not constrained by government mandate, met the new demand for financial intermediation created by the liberalization of the economy and the diversification of the manufacturing and services sector.

- Institutional factors. Until the mid–1990s, there was a clear delineation of certain financial activities between banks and NBFCs. Banks were not permitted to engage directly in leasing and hire–purchase financing until 1994, although they had been allowed to undertake such activities through their subsidiaries (which were treated as NBFCs) a decade earlier. Since the deregulation of the industry, only foreign banks and domestic private banks have been making inroads in such areas as consumer loans, leasing and hire–purchasing. Public sector banks which dominate the financial sector have been slow in diversifying in these areas which have remained solidly in NBFCs' domain.

- Differences in the regulatory framework between banks and nonbanks. In contrast to a heavily regulated banking sector, NBFCs operated with minimum regulation in a

Table V.3. India: Deposits of NBFCs and Scheduled Commercial Banks, 1983/84-1995/96 1/

(In billions of Indian rupees; end of period)

Fiscal Year	Regulated deposits of NBFCs	Aggregate deposits of NBFCs	Deposits with banks	Ratio of (2) to (3) (in percent)	Ratio of (1) to (3) (in percent)
	1	2	3	4	5
1983/84	2.8	31.6	607.3	5.2	0.5
1984/85	4.1	43.6	725.7	6.0	0.6
1985/86	4.9	49.6	857.0	5.8	0.6
1986/87	8.3	59.4	1,029.4	5.8	0.8
1987/88	11.4	75.0	1,186.8	6.3	1.0
1988/89	15.0	104.1	1,401.5	7.4	1.1
1989/90	17.7	146.4	1,754.4	8.3	1.0
1990/91	20.4	172.4	2,047.7	8.4	1.0
1991/92	28.2	204.4	2,307.6	8.9	1.2
1992/93	42.9	449.6	2,745.6	16.4	1.6
1993/94	174.4	564.4	3,247.2	17.4	5.4
1994/95	254.4	855.0	3,760.1	22.7	6.8
1995/96	387.1	1,016.7	4,204.5	24.2	9.2

Source : Reserve Bank of India.

1/ NBFCs include housing finance companies.

weak supervisory environment. There were initially no licensing requirements for NBFCs and no minimum equity was required. The only requirement to operate a nonbank financial institution was a certificate of incorporation from the Registrar of Companies which was often issued without any scrutiny of the prospective promoter's background and financial status. Moreover, NBFCs are not subject to reserve requirements and their liquidity requirements are lower than those for banks. The low entry barrier coupled with high profit potentials in a growing market led to a proliferation of finance companies offering a variety of innovative services.

- Differences in operating procedures. Banks have a clear edge at the wholesale level, while NBFCs' strength lies at the retail level. On the lending side, the demand for large loans—especially from high quality borrowers—is particularly sensitive to interest rates and banks have had an advantage in meeting this demand by offering more competitive rates than NBFCs (discussed further below). Moreover, only a few NBFCs were large enough to meet the demand of large borrowers. On the other hand, NBFCs dominate the retail market because of their flexibility and the speed and mode of delivery, compared to banks' often lengthy and bureaucratic procedures. On the deposit side, NBFCs grew by offering more attractive rates than banks, and by mobilizing funds through a pro–active and incentive–driven commissioned agents system.

The emergence of problems

8. The inherent instability of a rapidly growing, and yet unregulated and unsupervised industry, became increasingly apparent. Beginning with a weak capital base, the NBFC's asset portfolio began to deteriorate as the higher cost of funds led them to take on higher risks. Banks in general had access to low–cost current and savings deposits, but NBFCs were not permitted to accept such deposits, and typically raised about one–third of their resources through bank loans and convertible debentures at a high cost. Moreover, banks benefitted from regulations that kept deposit rates low. But, because of lax supervision, NBFCs often offered rates of returns substantially in excess of the statutory ceiling in order to aggressively increase their deposit base.[8] Mobilizing funds through commissioned agents also added to the cost. Additionally, financing of smaller companies and durable goods was inherently more risky. Nevertheless, there were only some isolated cases of defaults (mostly among smaller companies) during the sectors' period of rapid growth.

9. Problems intensified in the mid–1990s as NBFCs' risky asset portfolio made it difficult for them to adjust to pressures associated with the general downturn of the economy. It has become more difficult for NBFCs to mobilize resources and their problems have been compounded as banks have scaled back their exposure. Borrowing from banks and other financial institutions fell from 31 percent of NBFCs' aggregate deposits in 1995 to 25 percent

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[8]The statutory ceilings on deposit rates for NBFCs were also typically 2–3 percentage points higher than those for banks.

in 1996, prompting the nonbank financial institutions to seek public deposits even more aggressively and at higher cost. Moreover, there are indications of a flight of deposits to larger, stronger NBFCs, and a general slowdown of deposit growth in the more recent periods. In addition, with the capital market continuing to remain sluggish, NBFCs have been finding it difficult to augment their capital base. Indeed, NBFCs have consistently under performed the general market since 1996 (Chart V.1). The combination of these factors has accentuated the difficulties faced by the sector in the aftermath of economic slowdown, and, in some cases, might have even led some NBFCs toward riskier investments. The recent failure of a major NBFC (Box V.1), and frequent defaults in several areas including automobile financing and equipment leasing since then, have exposed the fragility of the nonbank financial sector, and has highlighted the need for better regulation and supervision.

C. Reform of the NBFC Sector

10. A legal framework for regulating NBFCs was established in 1963 by adding a new chapter in the RBI Act. These provisions granted statutory powers to the Reserve Bank to effectively supervise, control and regulate the deposit acceptance activities of NBFCs, but no powers to regulate or supervise NBFC assets. With its expanded mandate, the RBI began issuing directives to NBFCs from time to time on maturity period, quantum and interest rates on deposits, and encouraged a public debate on policy matters relating to the sector.

11. Since 1971, no less than seven expert committees have reviewed and made recommendations to reform the NBFC sector (Box V.2). Despite earlier attempts, the reform effort began in earnest only in 1993, and an integrated supervisory system became operational in January 1998. A number of factors may have contributed to the slow start in reforms. In the period of economic and financial liberalization, the RBI's more immediate priority was to reform the banking system. Moreover, NBFCs became important players in India's financial system only in early 1990s, although their growth spurt had begun much earlier. Also, as indicated earlier, there were relatively few incidents of failure during the period of their rapid growth, and it was only when the fragility of the sector came to light that the need for regulation and better supervision was more strongly felt.

12. Beginning in 1993, the reform strategy for NBFCs had three major components. First, guidelines were issued requesting NBFCs with "net owned fund (NOF)" of more than Rs 5 million to register with the RBI.[9] Registration was, however, voluntary. Second, in line with banking sector reform, there was a progressive introduction of prudential guidelines, although the RBI did not have powers to enforce compliance. Third, the RBI made increasing use of its power to regulate NBFCs' deposit taking activities to create incentives—including, lowering liquid asset requirement, deregulating interest rates, raising ceiling on permissible deposits—for prudent asset management.

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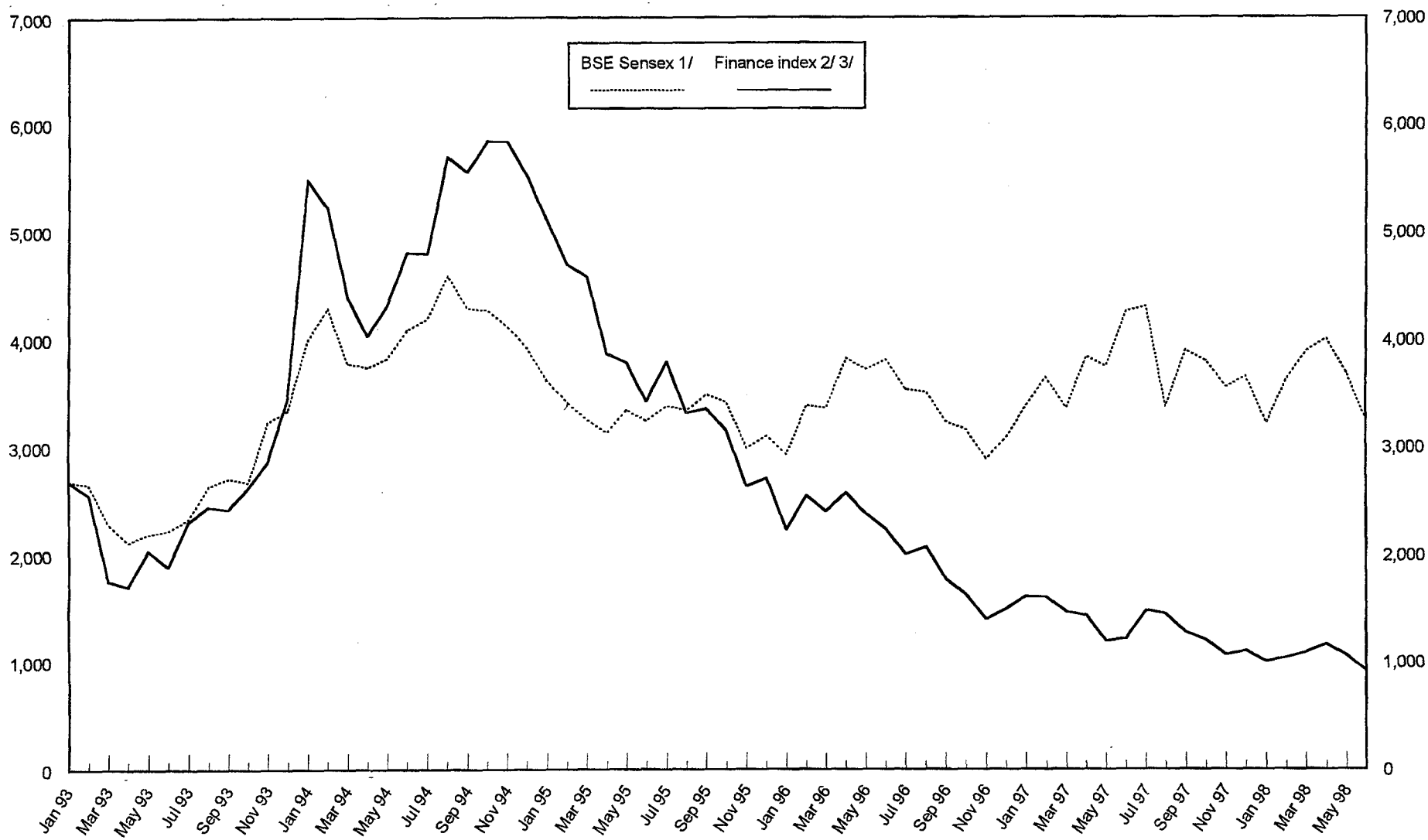
[9]NOF is defined as the sum of paid–up capital and free reserves, adjusted for accumulated losses, deferred revenue expenditure and other intangible assets appearing in the balance sheet. NOF and equity are used interchangeably in this paper.

CHART V.1

INDIA

MARKET PERFORMANCE BY NBFCs



Sources: Data provided by the Indian authorities; and CRISIL.

1/ Based on equity prices of 30 large companies; broadly represents the market.
2/ Based on equity prices of 18 NBFCs; compiled by CRISIL, a rating agency.
3/ For easier viewing, finance index has been scaled up.

Box V.1. An NBFC Failure: The Case of Chain Roop Bhansali (CRB)

The CRB group was engaged in several financial activities, including investment banking, running a mutual fund and making loans. It grew in size and complexity during 1990s to become one of the largest nonbank financial companies in India—the company reported total assets of Rs 6.4 billion (about US$150 million) in March 1996.

In October 1996, the RBI began an enquiry into CRB's financial affairs following the company's application for registration, which coincided with a complaint of default filed against the company. Based on media reports, investigation revealed poor loan and investment portfolio management. CRB had invested in several shadow companies and small companies whose issues were managed by a CRB subsidiary. Despite an asset structure that was apparently low in quality and liquidity, the group had been able to meet its obligations by raising money from the market from time to time. The RBI's enquiry into CRB's financial affairs culminated in the appointment of a provisional liquidator in May 1997.

The question puzzling the investigators was how a company with such a weak capital base could raise funds from the market with such ease and for so long. Again, according to media reports, CRB resorted to manipulation of financial statements to inflate its profits with the help of unscrupulous auditors. Also, a credit rating agency had given the company an 'A plus' rating which obviously sent wrong signals to investors. Misleading balance sheets and a high credit rating helped CRB raise funds in the capital market. As for public deposits, CRB offered high, up-front incentives to circumvent the ceiling on deposit rates, often paying investors as high as 30–35 percent a year on one–year deposits, compared to 10–12 percent offered by banks.

A large number of investors were affected by the CRB failure. Subsequent delinquencies in some other large and medium size companies have reinforced the public perception that the sector is in trouble. These difficulties, however, have not resulted in a run on NBFCs, although it is widely reported that fixed deposits are not being renewed, and funds are being moved to stronger NBFCs.

Box V.2. Summary of Recommendations on NBFC Reform

Bhabtosh Datta Group Report, 1971

- Reduce the number of entities to be regulated through incorporation.
- Inspect NBFCs at least on a sample basis.

James Raj Study Group, 1973

- Ensure that NBFCs act in line with the objectives of monetary policy.
- Safeguard the interests of depositors.

Chakravarty Committee, 1987

- Curb activities not in conformity with credit policy.
- Mandatory licensing for companies with business volume exceeding a pre–specified level.

Narasimham Committee, 1991

- Establish minimum capital requirement and prudential norms.
- Introduce a system of supervision based on periodic returns.

Shah Committee, 1992

- Design an integrated regulatory framework, focusing on larger registered companies.
- Apply uniform regulations to all financial companies.
- Register all companies with "net owned funds" of more than Rs 5 million, and enforce this entry norm for new companies.
- Introduce capital adequacy standards and limits on credit concentration.
- Subject NBFCs to annual credit rating.

Khanna Committee, 1995

- Equip the Reserve Bank with statutory powers to enforce, inter alia, entry–point conditionalities, compulsory registration, investment in approved securities and creation of a reserve fund.
- Establish a comprehensive supervisory framework, focusing on NBFCs with "net owned funds" above Rs 10 million.
- Off–site surveillance for all NBFCs.
- Require supervisory rating for registered NBFCs, and use ratings for triggering on–site inspection.

Narasimham Committee Report, 1998

- Introduce an integrated system to regulate and supervise the activities of banks, financial institutions and NBFCs.
- Phased increases in minimum capital requirement to Rs 20 million.
- No deposit insurance scheme for NBFCs.

13. The capital adequacy norms introduced by the RBI in June 1994 were based on risk weights of different asset types and off–balance sheet items.[10] Prudential guidelines for income recognition, transparency of accounts and provisioning of bad and doubtful debts were also introduced, and norms for credit concentration were established. These guidelines were, however, applicable only to registered companies. NBFCs not in compliance with prudential norms were penalized while those in compliance benefitted only from some minor relaxation in their deposit acceptance limits. As such, there was little incentive for the NBFCs to register with the RBI.[11]

14. In July 1996, the RBI offered significant incentives for registration. A certificate of registration with the RBI was required in order for finance companies to benefit from deregulation of interest rates on deposits, removal or relaxation of ceiling on deposit size, and reduced liquid asset requirement. The RBI issued such certificates once it was satisfied that the company was complying with the prescribed credit rating requirement and specified prudential norms.[12]

15. The Government promulgated the RBI (Amendment) Ordinance in January 1997, which was replaced by an Act in March 1997. This Act empowered the RBI to: (i) make registration for NBFCs mandatory; (ii) establish entry norms; and (iii) penalize NBFCs not in compliance with prudential guidelines (including powers to cancel registration). Following the amendment, all NBFCs were required to apply for registration by July 1997.

16. The earlier partial attempts to reform the NBFC sector culminated in the introduction of a new, comprehensive regulatory framework in January 1998. Recognizing the systemic risks inherent in an unregulated, under supervised, largely informal and yet expanding financial sector, the latest round of reforms aimed to inspire public confidence in the financial system. The latest initiative included a number of measures to tighten the regulatory environment, with the focus on NBFCs accepting public deposits.[13] More specifically:

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[10] Registered NBFCs were required to achieve a minimum capital adequacy norm of 6 percent by March 31, 1995 and 8 percent by March 31, 1996.

[11] On March 31, 1994, there were 37,880 NBFCs on the RBI record. Of these, 10,845 companies were submitting annual statutory returns and were required to comply with regulations pertaining to their liabilities, but only 700 were registered.

[12] Liquid asset requirement of these companies was reduced from 15 percent to 12.5 percent of their deposits, of which at least 10 percent was required to be invested in government securities and government–guaranteed bonds.

[13] NBFCs not accepting public deposits are exempted from regulations relating to interest rates, size and maturity of deposits, as well as the capital adequacy requirement, credit and investment concentration norms, and statutory requirements. They are also not required to

(continued...)

- Entry barriers were fixed, and a credit rating has been made mandatory for NBFCs accepting public deposits. NBFCs with equity of less than Rs 2.5 million (about US$60,000) and rated below investment grade would not be permitted to accept public deposits.

- Limits have been placed on NBFCs' public deposits—varying between one–half to four times their equity—linked to their lines of business and credit rating.

- NBFCs are subject to an interest rate ceiling of 16 percent on their public deposits.

- NBFCs accepting public deposits are required to comply with all the prudential norms encompassing income recognition, accounting standards, asset classification, provisioning of bad and doubtful debts, and credit and investment concentration.

- For NBFCs accepting public deposits, the capital adequacy requirement was increased from 8 percent to 10 percent in March 1998, to be raised further to 12 percent by March 1999.

- NBFCs' investment in a single company or a single group of companies would be limited to 15 and 25 percent of their equity, respectively. Similar norms were established for credit concentration.

- All NBFCs accepting public deposits were required to meet a uniform statutory liquidity ratio requirement of 12.5 percent of public deposits with effect from April 1, 1998, to be raised to 15 percent on April 1, 1999.

17. In the area of supervision, the new regulations emphasized routine off–site examinations. On–site inspection (mainly covering companies with large public deposits) would be carried out on a random basis, considering, inter alia, the company's past compliance with prudential norms, and incidence of complaints. Broadly, the new framework—once fully implemented—would close the gap in the regulatory environment between banks and nonbank finance companies (Box V.3) and create a more level playing field for competition between NBFCs and banks. Tighter prudential regulations and closer

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[13](...continued)
obtain a credit rating.

Box V.3. Comparison of Current Regulatory Norms Between Banks and NBFCs

	Banks	NBFCs
Minimum capital requirement	Rs 1 billion	Rs 2.5 million
Credit rating	Not mandatory	Mandatory for companies that accept public deposits
Demand deposits	Can accept	Cannot accept
Maturity of term deposits	Not less than 15 days	Between 1- 5 years
Interest rates		
Deposits	Fixed at 4.5 percent for savings accounts. Rest are deregulated.	16 percent ceiling on public deposits
Loans	Banks' Prime lending rate serves as the ceiling for loans up to Rs 200, 000.	No restriction
Cash reserve requirement	10 percent of net demand and time liabilities	Not required
Statutory liquidity requirement	25 percent of net demand and time liabilities	12.5 percent of public deposits; to be raised to 15 percent from April 1, 1999
Directed lending	40 percent of net bank credit	Not required
Exposure norm on investment and credit	Exposure to a company not to exceed 25 percent, and to a group of companies 50 percent, of capital and free reserves.	Exposure to companies in the same group not to exceed 40 percent of "net owned funds"
Minimum capital adequacy requirement	8 percent	10 percent; to be raised to 12 percent by March 31, 1999

supervision would also be expected to contribute, over time, to the consolidation of the nonbank financial sector.[14]

D. Key Challenges and Issues in Regulating and Supervising the NBFC Sector

18. The effectiveness of the new regulatory and supervisory framework to address the underlying problems in India's nonbank financial sector would need to consider the RBI's limited supervisory infrastructure in relation to the size of the NBFC market, and the difficult business environment that is currently facing the sector. The first would have implications for licensing, monitoring and supervising nonbank financial institutions, and the second would affect the ability of NBFCs to adjust to the new requirements. Among many challenges in reforming the NBFC sector, four stand out:

Prioritization of RBI supervisory resources

19. Clearly, given that the strain on the RBI's capacity would remain substantial, certain prioritization is necessary, and indeed unavoidable.[15] According to the new system, the nature and extent of supervision would primarily depend on whether or not a company has access to public deposits. Rigorous regulation and supervision for companies that accept public deposits (relatively few in number) and minimal supervision for those that do not, appears to be an appropriate strategy. Within the group of companies that accept public deposits, priority is currently given to a few large companies accounting for a significant part of the sector. Accordingly, prudential supervision for large companies (with asset size of Rs 1 billion or more) is to be intensified through more frequent reporting requirements.

20. Some of the recent company failures have exposed weaknesses in auditing. In view of its limited supervisory capacity, the RBI relies heavily on external auditors to review the companies' prudential reports. Without significant deterrence against poor auditing, the quality and accuracy of reported information have at times been questioned. As such, the trade–off between excessive burden on the RBI and benefits of thorough on–site supervision would need to be appropriately balanced.

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[14]Mergers between NBFCs have not been widely practiced so far. Instead, the NBFCs have largely preferred to acquire selected assets of other companies for the fear of undisclosed liabilities. Moreover, unlike in the case of banks, the RBI lacks formal powers to force mergers.

[15] The burden of supervision is enormous. Following the RBI's directives, about 37,500 NBFCs applied for registration. Out of these, about 9,100 satisfied the minimum capital requirement, and some 2,400 companies were accepting public deposits and hence would be subject to all the prescribed regulations.

Are the minimum capital requirement and licensing procedures effective screening mechanisms?

21. The RBI has prohibited unauthorized entities from conducting business, requiring new companies as well as the existing companies to register and obtain a license. In view of its limited resources, the RBI has delegated the task of inspecting and auditing the license applications to chartered accountants. Before granting registration, the RBI would have to be satisfied that the companies are in a position to meet their present and future liabilities, are not operating in a manner detrimental to the interests of depositors, and have adequate capital structure and earning prospects. As a part of the licensing requirement, the RBI has established a minimum capital requirement of Rs 2.5 million, compared to Rs 1 billion for banks.

22. The entry barrier may be too low to serve as an effective first–point screening device. In addition, a thorough scrutiny of companies would be cumbersome and might raise the risk of dilution of registration process.[16] Raising the minimum capital requirement would not only reduce the number of companies to be supervised, but also make company management more sensitive to stakeholders' interest and more cautious in its credit decisions.[17]

Limits on size of deposits might create operational problems for some NBFCs

23. Under the new system, a nonbank finance company's overall borrowing is constrained by capital adequacy requirement. Public deposits—which are considered critical from a systemic risk viewpoint—are subject to a ceiling determined by the company's credit rating and the size of its NOF. A higher credit rating and a larger NOF would allow a higher access to public deposits. The strategy is aimed at creating incentives for companies to raise their capital base and reduce their dependence on public deposits.

24. Compliance with the ceiling on total deposits would entail a deposit contraction for some companies. Also, credit ratings of a number of companies have recently been down–graded, further restricting their capacity to mobilize deposits.[18] Recognizing that many companies may face severe liquidity constraints in the short–run, the RBI has allowed a liberal time–frame to adjust to the new requirement. Even so, many companies would likely be affected.

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[16] By June 1998, about 5,900 companies were issued certificates of registration and only 50 were rejected.

[17] The 1998 Narasimham Committee Report (Box V.2) recommended a phased increase in minimum capital requirements to Rs 20 million (about US$470,000).

[18] A downward revision by one notch from AAA, for example, would imply a 40 percent reduction in limit on total public deposits.

Is deposit insurance a solution?

25. The growing stress in the NBFC sector has initiated a debate on the desirability of extending deposit insurance to nonbank finance companies in order to bring some confidence to depositors.[19] Two broad views on optimal timing have been expressed by those supporting the introduction of a deposit insurance scheme. One view is that an insurance scheme should only be considered once the consolidation phase of the industry is over and there is effective supervision in place. Alternatively, it is argued that a deposit insurance scheme could be extended to those NBFCs that meet certain criteria related to size or credit rating. Nevertheless, both views maintain that deposit insurance should cover only small depositors; that there should be some elements of coinsurance; and that the scheme be self–financing.

26. A full–fledged insurance scheme for NBFCs during the period of transition and consolidation might lead to moral hazard problems and would be very expensive. Given the large number of NBFCs, the RBI's limited supervisory infrastructure, and a new, untested set of regulations, it is particularly important not to weaken market discipline, which often complements supervision. The authorities' refusal to bail out failing NBFCs and not covering their deposits—as in a recent case of major NBFC failure—has prompted depositors to question other NBFCs. Moreover, NBFCs in India are complex hybrids and services offered by them are far from standardized. As such, measurement of risk in each case and its corresponding premium would be difficult.

E. Summary and Recommendations

27. NBFCs have traditionally catered to the financing needs of small and medium companies and the household sector—segments not adequately served by traditional banks. Indeed, regulatory and institutional factors segmented the financial market and limited competition and overlap in activity between banks and nonbank financial institutions. In the 1980s and early 1990s, NBFCs expanded rapidly in response to the growing need for flexible and prompt financing at the retail level which the banks—constrained by regulation, state ownership and tradition—could not meet. NBFCs increased their deposit base aggressively by offering attractive rates and reaching remote areas. At the same time, however, the higher cost of funds compelled NBFCs to seek higher returns on assets by lending to low quality borrowers and making risky investments. As the sector was subject to little regulation and lax supervision, risks increased and the sector's weak asset structure became apparent as the economic growth moderated in the mid–1990s.

28. The authorities' response to the sector's growing difficulties has been in the right direction, and the new regulatory framework introduced in early 1998 has been appropriately

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[19]Deposit insurance is currently available for bank deposits of up to Rs 100, 000. Moreover, deposits in public sector banks are generally considered to be secure given the strong financial backing by the government. The 1998 Narasimham Committee Report did not support the extension of the deposit insurance scheme to NBFCs (Box V.2).

geared toward containing systemic risks and instilling confidence in the sector. As tighter regulations and closer supervision take hold, the NBFC sector would be expected to consolidate which would provide a foundation for sustainable growth in the future. Also, as the playing field between banks and NBFCs becomes more level with the reform of the banking system and the tightening of NBFC regulations, the competition in the financial sector would be expected to increase.

29. Within this broad framework, there are some key policy issues to consider. In the short and medium term, there is scope to make NBFC regulations more simple, direct and transparent. Moreover, a higher minimum capital requirement would act as a more effective entry barrier in the spirit of the high standards set by the new regulations; information generated through registration could suggest a more appropriate entry norm, also considering RBI's own supervisory capacity. Pressure for government takeover of failing NBFCs should be resisted. Also, the introduction of a deposit insurance scheme at this stage would be costly and would likely create moral hazard problems, without addressing the fundamental difficulties facing the sector. While credit rating could continue to be mandatory, the rating level should be delinked from the limits on the size of public deposits.

30. In the long run, a move towards universal banking and emergence of financial conglomerates are expected; indeed, boundaries between various sets of financial institutions have already begun to become blurred. Under the circumstances, it would be important for the regulatory authorities to preserve the identity of NBFCs as separate institutions, and to balance the regulations and supervision of banks and NBFCs in a manner that no particular group is at a permanent disadvantage. The aim should be to create conditions where NBFCs could provide greater competition in the financial sector, and continue meeting the financing needs created by a growing and diversifying economy.