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India: Recent Economic Developments and Selected Issues

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INDIA

Recent Economic Developments and Selected Issues

Prepared by a staff team from the Asia and Pacific Department,
Fiscal Affairs Department, and Monetary and Exchange Affairs Department

Approved by the Asia and Pacific Department

June 5, 2001

Contents Page

I. Introduction and Summary 6

II. Economic Activity and Prices 8
A. Overall Developments 8
B. Sectoral Developments 9
C. Saving and Investment 12
D. Inflation 12
E. Macroeconomic Dynamics in India 13

III. External Sector Developments and Trade Policies 26
A. Overall Balance of Payments 26
B. Current Account 27
C. Capital Account 30
D. Trade Policy 32

IV. Monetary Policy and Financial Market Developments 46
A. Monetary Policy and Interest Rate Developments 46
B. Monetary Aggregates 49
C. Stock Market Developments 50
D. Banking Sector Developments 51

V. Fiscal Developments 62
A. Background 62
B. Central Government Fiscal Performance in 2000/01 63
C. Central Government Budget for 2001/02 66
D. State Government Finances 69
E. Performance of Public Sector Undertakings (PSUs) 73
F. Oil Coordination Committee (OCC) Accounts 73

VI. Structural Policies and the Report of the Prime Minister's Economic Advisory Council 83
A. Introduction 83
B. The EAC Report 83
C. Recent Structural Measures 88
D. Concluding Remarks 90

VII. Interstate Differences in Rural Poverty in India 91
A. Introduction 91
B. Trends in Rural Poverty 92
C. Has Growth Been Pro Poor? 101
D. Poverty Dynamics During the Reform Period 107
E. Conclusions 109

VIII. Postal Savings in India 112
A. Introduction 112
B. Financial Products 115
C. Government Policy and Costs of the System 117
D. Reform Considerations 121
E. Conclusion 124

IX. Pension Reform in India 126
A. The Current System of Pensions and Provident Funds 126
B. Problems with the Current System 133
C. Ongoing Reform Efforts 136
D. Concluding Remarks 142

X. Foreign Exchange Market Developments and Policies 147
A. Overview of the Indian Foreign Exchange Market 147
B. The Structure of the Indian Foreign Exchange Market 150
C. Gauging the Flexibility of the Rupee 151
D. Offshore Markets 154
E. Foreign Exchange Market Intervention 155
F. Concluding Observations 157

Text Boxes

II.1. The Information Technology Sector 11

III.1. The India Millennium Deposit Scheme 27
III.2. 2001/02 EXIM Policy Statement 33

IV.1. April 2001 Monetary and Credit Policy Statement 48
IV.2. Financial Sector Reform Measures 52

V.1. The Fiscal Responsibility and Budget Management Bill 64
V.2. FY 2001/02 Revenue Measures 67
V.3. Recommendations of the Expenditure Reforms Commission 68
V.4. Recommendations of the Eleventh Finance Commission and the Fiscal Reform Facility 71
V.5. Power Sector Issues 72

VI.1. Major Reform Initiatives in 2000/01 84

VII.1. Agricultural Wages: Some Unpleasant Arithmetic 103

VIII.1. Interest Rates on Postal Savings Schemes 113
VIII.2. National Savings Organization (NSO) 114
VIII.3. The Taxation of Income from Postal Savings 116
VIII.4. Loans Against Small Savings Collections 118
VIII.5. The Postal Savings System in Japan 119

Tables

II.1. GDP at Factor Cost by Sector of Origin, 1994/95–2000/01 15
II.2. GDP at Market Prices by Expenditure Components, 1994/95–1999/2000 16
II.3. Employment and Labor Statistics, 1993/94–1998/99 17
II.4. Agricultural Production and Yields, 1994/95–2000/01 18
II.5. Index of Industrial Production, 1995/96–2000/01 19
II.6. Saving and Investment, 1994/95–1999/2000 20
II.7. Price Developments, 1995/96–2000/01 21

III.1. Balance of Payments, 1995/96–2000/01 36
III.2. Official Reserves, 1995/96–2000/01 37
III.3. Selected Countries: Inward Foreign Direct Investment, 1995–1999 38
III.4. External Commercial Borrowing, 1993/94–2000/01 39
III.5. External Debt, 1994/95–2000/01 40

IV.1. Selected Monetary Indicators, 1995/96–2001/02 46
IV.2. Real Interest Rates 49
IV.3. Reserve Money, 1997/98–2000/01 55
IV.4. Monetary Survey, 1997/98–2000/01 56
IV.5. Financial Performance of Commercial Banks, 1993/94–1999/2000 57
IV.6. Indicators of Financial System Soundness, 1995/96–1999/2000 58

V.1. Consolidated Public Sector Operations, 1995/96–2001/02 74
V.2. Fiscal Targets 63
V.3. Central Government Operations, 1995/96–2001/02 75
V.4. State Government Operations, 1995/96–2001/02 76

VII.1. Panel Regressions, 1978–97 101

VIII.1. Amount Outstanding under Postal Savings Schemes 115
VIII.2. Effective Cost of Postal Savings Schemes, 2000/01 115

IX.1. Employee Provident Fund and Employee Pension Scheme, 1996/97–1998/99 128
IX.2. Civil Service Pension System, 1998 132
IX.3. Parameters of the Civil Service Pension System 134

X.1. Exchange Rate Volatility, 1996–2000 160
X.2. Interest Rate Volatility, 1996–2000 161
X.3. Reserves Volatility, 1996–2000 161
X.4. Exchange Rate Flexibility, 1996–2000 162
X.5. Exchange Rate Regressions: Co-Movement with the U.S. Dollar 163

Charts

II.1. Industrial Production and Business Confidence, 1995–2001 22
II.2. Components of Industrial Production, 1995–2001 23
II.3. Inflation Indicators, 1995–2001 24
II.4. Dynamic Responses to Shocks 25

III.1. Quarterly External Sector Developments, 1997–2000 41
III.2. Exchange Rate Developments, 1996–2001 42
III.3. Current Account Developments, 1992/93–1999/2000 43
III.4. Merchandise Exports and Imports, 1996–2000 44
III.5. Selected External Indicators, 1992/93–1999/2000 45

IV.1. Monetary Indicators, 1996–2001 59
IV.2. Financial Market Developments, 1996–2001 60
IV.3. Selected Monetary Indicators, 1996–2001 61

V.1. Government Deficits and Debt, 1990/91–2001/02 77
V.2. Fiscal Trends—Central and State Governments, 1990/91–2001/02 78
V.3. Central Government Budget Targets vs. Outturns, 1991/92–2001/02 79
V.4. State Government Budget Targets vs. Outturns, 1991/92–2000/01 80
V.5. Fiscal Indicators—PSUs, 1990/91–2001/02 81
V.6. OCC Accounts, 1990/91–2000/01 82

VII.1. Incidence of Rural Poverty in India's States 94
VII.2. Estimated Interstate Distribution of Poverty, 1978–97 96
VII.3. Intradistribution Dynamics, 1978–97 97
VII.4. Poverty Dynamics Between 1988–97 98
VII.5. Poverty Convergence Across India's States, 1978–97 100
VII.6. Interstate Distribution of Conditioned Poverty, 1978–97 105

VII.7. Intradistribution Dynamics of Residual Poverty, 1978–97 106
VII.8. Poverty Dynamics in the Early and Late Reform Years 107
VII.9. Poverty Convergence During the 1990s 108
VII.10. Conditioned Poverty Dynamics in the Early and Late Reform Years 109

VIII.1. Postal Savings Deposits vs. Bank Deposits 125
VIII.2. Postal Savings Deposits as Percent of Bank Deposits 125

X.1. Exchange Rates and Reserves, 1990–2001 148
X.2. Daily Exchange Rate Movements (log difference) 152

Appendix

IX.1. Small Saving Schemes 143

I. Introduction and Summary[1]

1. **India rebounded strongly from its 1991 balance-of-payments crisis, aided by structural reforms and other policy adjustments.** By the middle of the 1990s, growth had accelerated to an average of 7½ percent, and substantial improvements had been achieved in a number of social indicators, including of health, education, and poverty. Through the end of the decade, inflation generally remained on a downward trend—reflecting careful monetary policy management—trade and financial sector reforms were sustained, and external developments were broadly favorable despite a number of external and domestic shocks. The current account deficit generally remained under 1½ percent of GDP, and foreign reserves increased to around six months of imports.

2. **Economic activity, nonetheless, slowed in the latter part of the decade, and since 1997/98, growth has averaged just under 6 percent.** This reflected the effects of various shocks—including the Asian financial crisis, volatile world oil prices, patchy monsoons that led to weak agricultural output, and natural calamities, including the devastating earthquake that struck the state of Gujarat in January 2001. However, deeper structural factors appear to have played a role, including infrastructure constraints, uncertainty about the impact of the removal of quantitative import restrictions, excessive regulatory constraints in the industrial and agricultural sectors, and high real interest rates.

3. **The fiscal situation also deteriorated markedly during the second half of the 1990s.** The consolidated public sector deficit reached a peak of 11¼ percent of GDP in 1999/2000, and while the deficit may have narrowed somewhat in 2000/01, public sector debt rose further to over 83 percent of GDP. This reflected difficulties at both the central and state government levels with central excise and customs collections, pressures to hike civil service salaries and pensions, and rising interest burdens.

4. **In order to address these issues, the government has sought to reinvigorate the process of structural and fiscal reform.** Fiscal responsibility legislation has been tabled in Parliament and the recent report of the Eleventh Finance Commission has established modalities for encouraging fiscal consolidation at the state level. A long-delayed comprehensive program of "second-generation" reforms was released in January 2001, and many of the measures were endorsed in the context of the government's 2001/02 budget.

5. **These broader macroeconomic developments are discussed more fully in Chapters II-VI, while Chapters VII-X consider additional selected issues.**

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[1] The analysis and data contained in this report were based on information available at mid-May 2001, when the report was drafted.

- **Chapter VII examines trends in interstate differences in rural poverty.** It finds that growth has been pro poor in India, and the incidence of poverty has declined in all states during the last two decades, although poverty initially increased in the post-1991 reform period, before declining in the latter part of the decade. Moreover, while differences between states' poverty levels had been narrowing during the 1980s, this convergence has weakened in the 1990s—although this is likely the result of interstate differences in structural factors, rather than differences in growth.

- **Chapter VIII reviews India's postal saving system and possible reform issues.** This system provides important savings vehicles for the rural population with limited access to the banking system. However, high and inflexible interest rates on these schemes, combined with substantial tax advantages, have led to discrimination against other savings instruments—particularly bank deposits—and the system also suffers from a significant asset-liability maturity mismatch and a cumbersome administration. Moreover, state governments have automatic access to a large share of the funds deposited, which has undermined fiscal discipline at the state level.

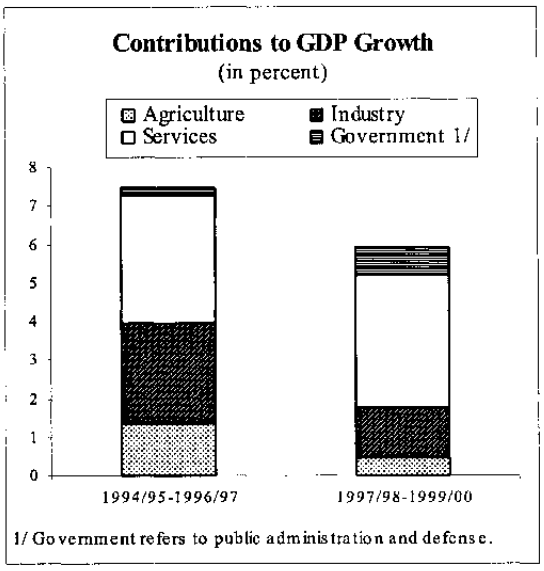
- **Chapter IX describes and evaluates the current system of pensions and provident funds, and discusses reform options.** These issues are a subject of active debate in India today, owing to the complexity and narrow coverage of currently available pension programs. Moreover, while rapid aging of the population is a less pressing concern in India than in other countries in the region, low returns on invested funds imply potentially large liabilities on the government budget.

- **Chapter X briefly reviews the structure of and recent developments in the Indian foreign exchange market.** The currency's flexibility, offshore market dynamics, and responsiveness to intervention are analyzed, and tests suggest that rupee/dollar rate has been remarkably stable, especially compared to other floating rate currencies. In addition, movements in the offshore nondeliverable forward premia tend to provide significant leading information regarding movements in the spot rate. Finally, intervention in the foreign exchange market appears to have had a small and negative impact on the rupee.

II. Economic Activity and Prices[1]

A. Overall Developments

1. **The Indian economy slowed in the latter part of the 1990s**, with real GDP growth (at factor cost) averaging just under 6 percent between 1997/98 and 1999/00 compared to 7½ percent during the previous three years.[2] The slowdown reflected a sharp deceleration in both agricultural and industrial production (Table II.1). Growth in the agricultural sector, which was adversely affected by poor weather conditions (except during 1998/99), slowed to 1¾ percent on average during the last three years. Industrial sector growth decelerated to 4¾ percent per year—less than half the rate of the previous three years—reflecting weaker growth in agricultural incomes, the effects of the Asian crisis, volatile oil prices, and high real interest rates, as well as increasing infrastructure constraints and uncertainty about the impact of the removal of quantitative import restrictions. While measured service sector growth rose, this largely reflected civil service wage hikes associated with the Fifth Pay Commission awards.[3]



2. **On the expenditure side, the slowdown in the late 1990s reflected both lower consumption and investment growth** (Table II.2). Public sector and household capital accumulation accelerated, but this was more than offset by weak private corporate investment, which declined by 2 percent per annum during this period.

3. **Official advance estimates indicated that GDP growth remained at 6 percent during 2000/01**. The industrial sector was estimated to have rebounded modestly, owing to stronger export growth (see Chapter III). This was offset by weaker service sector growth,

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[1] Prepared by Ranil Salgado.

[2] Data that are presented in this chapter reflect official data releases (some provisional) through mid-May 2001. In a few instances, official estimates may differ from IMF staff estimates.

[3] Government services (or public administration and defense) are estimated by the Central Statistical Organization (CSO) using the government's wage bill (with arrears counted in the year that they are paid) deflated by the wholesale price index.

reflecting the waning effects of the civil service wage hikes, and the impact of persistent drought conditions in a number of states on agricultural production, which was exacerbated by low water tables in some areas.

4. **The advance estimates for 2000/01 may be subject to downside revision.** Growth slowed to 5¾ percent (on a four-quarter basis) in the third quarter of the fiscal year and indicators of import growth and industrial production weakened further in the fourth quarter (Charts II.1 and II.2). This slowdown may partly reflect the impact of the devastating earthquake that struck the state of Gujarat in January 2001.

5. **The Gujarat earthquake caused a massive loss of life and damage to physical assets as well as a widespread disruption of economic activities.** Some estimates put the loss of life at over 20,000, with 165,000 injured, and asset losses and reconstruction costs around $4.4 billion (about 1 percent of India's GDP). Output losses were estimated to be $650 million over three years, with most of the loss concentrated in 2000/01, related to the absence of workers, power and telecommunications shortages, transportation problems, and the suspension of regular operations at Kandla—India's busiest port. Nonetheless, the impact on production was expected to be moderated by the fact that the areas most affected by the earthquake were not major contributors to state GDP. Large-scale industrial plants mostly survived owing to quakeproof construction, and damage was concentrated on medium- and small-scale industries, especially in areas of textiles and jewelry.

6. **Employment in the organized sector, which accounts for only 28 million of the working-age population of almost 600 million, fell by ½ percent in the two years to 1998/99**, the last year for which data are available (Table II.3). The decrease was largely explained by a 2¼ percent decline in employment in public sector enterprises. Employment remained largely unchanged elsewhere in the public sector and in the private sector. However, the composition of employment in the private sector shifted as service sector jobs (particularly in financing, insurance, and real estate) increased, while agricultural and industrial sector jobs decreased modestly.

B. Sectoral Developments

Agriculture

7. **Agricultural sector growth weakened in 1999/00 to ¾ percent, following a jump to 7 percent the previous year.** Output of groundnuts declined sharply, particularly in Gujarat because of adverse weather conditions, while production of other oilseeds, cotton, and tea also decreased (Table II.4). Growth in foodgrain production decelerated to 2¾ percent and, despite inadequate rainfall in a number of districts, still reached a record high of 209 million tons, reflecting gains in rice and wheat production. Growth of coffee and natural rubber output slowed, partly in response to weak domestic and international prices.

8. **The advance estimates indicated that agricultural sector growth remained under 1 percent in 2000/01.** Foodgrain production was estimated to have declined by almost

5 percent. Although the monsoon was considered to be normal (within 10 percent of the long-term average), a large number of districts received deficient rainfall for the second year in succession, contributing to low water reservoir levels—through March 2001, water levels in the 70 major reservoirs had fallen to 63 percent of the average over the last decade. Critically-affected states included Gujarat, Madhya Pradesh, Orissa, Himachal Pradesh, and Rajasthan—which together usually account for over 20 percent of foodgrain production. In addition, production of oilseeds and tea was also estimated to have decreased, while fishing and production of other commercial crops and coffee increased, but at a slower pace.

Industry

9. **Industrial sector growth recovered in 1999/00 to 6½ percent, but remained below the 9½ percent growth rates achieved in the mid-1990s.** The pickup reflected strength in public sector construction, in response to fiscal stimulus, and manufacturing, which was boosted by stronger external demand as partner countries recovered from the Asian crisis and increased domestic demand for intermediate goods and consumer durables (Table II.5). Nonetheless, growth in industrial activity remained substantially below average growth rates achieved in the mid-1990s, owing to weaker private consumption and corporate investment—the latter reflecting the effects of a buildup of excess capacity in the mid-1990s and poor infrastructure, particularly in the transportation and power sectors.

10. **The advance estimates for 2000/01 suggested that industrial sector growth remained about 6½ percent, but more recent indicators point to slower growth.** In the advance estimates, growth in industry excluding construction was estimated to have remained at 6 percent. More recent data from the Index of Industrial Production (IIP)—which covers industry excluding construction—indicated a sharp slowdown in these sectors towards the end of the fiscal year with growth slowing from 6 percent in the fiscal year to November 2000 to 5 percent in the fiscal year to March 2001.[4] Other indicators also point to weakness, including the sluggishness of capital goods imports and production of vehicles, textiles, and cement.

Services

11. **Services sector growth accelerated further in 1999/00 from 8¼ percent to over 9½ percent, near its historical peak reached in 1995/96.** As in recent years, growth was led by the communications sector—including telecommunications—and the financing, insurance, and real estate sector, aided by government reforms that deregulated these segments of the economy. In addition, information technology services continued to grow rapidly with software services increasing by over 40 percent in U.S. dollar terms (Box II.1).

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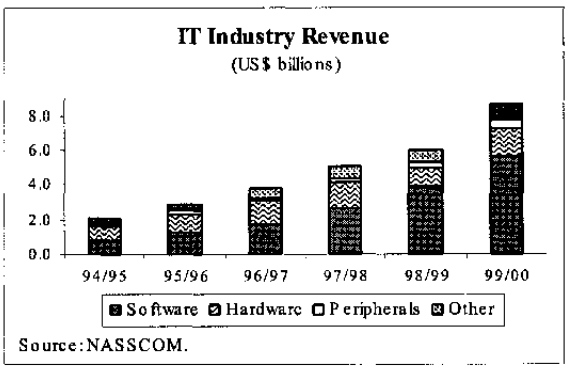
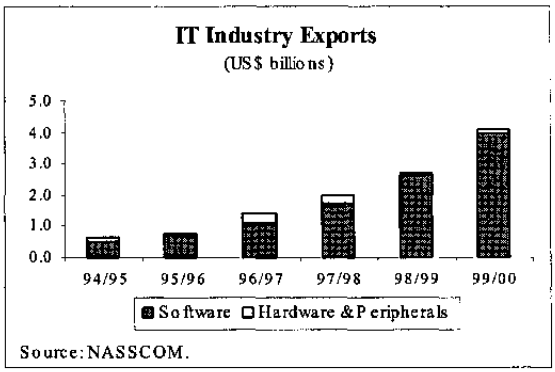
[4] The CSO uses data from the IIP to prepare estimates of growth in the registered industrial sector.

Box II.1. India: The Information Technology Sector

India's information technology (IT) sector has grown rapidly in recent years. According to the National Association of Software and Services Companies (NASSCOM), IT industry revenue reached $8.7 billion (2 percent of GDP) in 1999/00, after growing almost 34 percent annually (in dollar terms) in the previous five years. The main contributor to growth in the IT sector was software services exports which grew 52½ percent annually during the period and accounted for 46 percent of IT industry revenues by 1999/00. Other areas of strength included software services for the domestic market and networking, which grew at annual rates of 37 percent and 54 percent, respectively. Employment in the sector also grew rapidly (over 20 percent per year) and was estimated to be over 400,000 (about 1½ percent of employment in organized sectors) by end-2000. By contrast, hardware exports contracted in the late 1990s in both rupee and dollar terms.



Source: NASSCOM.



Source: NASSCOM.

Booming IT exports have helped sustain India's external current account in the late 1990s, moderating the effects of several external shocks—including the Asian crisis and a surge in oil prices. Growth in IT exports during the late 1990s accounted for about one-sixth of the overall growth in goods and services exports, and during 1999/00, IT exports were roughly equal to the increase in the oil import bill. Moreover, the surge in inward remittances from Indian workers abroad (a component of private transfers) and the shift in the source of these remittances from the Middle East to the United States may reflect the repatriation of savings by overseas Indian IT professionals.

India's success in the IT services field is attributable to a combination of factors, including its large pool of English-speaking university graduates in sciences, relatively low wages, a well-placed international diaspora, favorable government policies, and low start up costs for software firms. India graduates over 60,000 engineers a year, and salaries are about one-tenth to one-half of those found in the United States.[1] It is estimated that there are over 250,000 Indian IT professionals in the United States alone, including many in management positions, some of whom play important roles in outsourcing work to India. Government policies have benefited the IT industry by minimizing interference in the sector (particularly, compared to other industrial and services sectors), providing favorable tax treatment, and emphasizing investments in higher education. Indian IT firms have also benefited from the establishment of a number of software technology parks that provide infrastructure—particularly, reliable communication and power—that are not readily available elsewhere.

The structure of India's IT sector appears to make it less vulnerable to the global cyclical downturn. Unlike other Asian economies, hardware (including peripherals) accounts for a negligible share (less than 3 percent in 1999/00) of IT exports. Moreover, a large share of India's software services exports are back-office and data services or customization of non-mission critical software—areas where low wages bring significant competitive advantages. Indeed, analysts have argued that as global firms cut costs during an economic slowdown, more work could be outsourced to Indian companies.

Over the medium term, India's IT sector is expected to remain vibrant, although benefits to the rest of the Indian economy may be limited. The IT sector employs a small share of the Indian population and is largely confined to the southern states of Andhra Pradesh, Karnataka, and Tamil Nadu, the western state of Maharashtra, and a few enclaves around Delhi. Even under the most optimistic scenarios that assume that India will be able to shift to higher value-added exports as IT sector wages and competition from other developing countries increase, the sector will employ only just over 2 million people by 2008 (out of a current working population of 600 million). Moreover, some analysts suggest that if productivity does not improve in other sectors of the economy, these may be adversely affected if the real exchange rate appreciates because of strong IT export earnings.

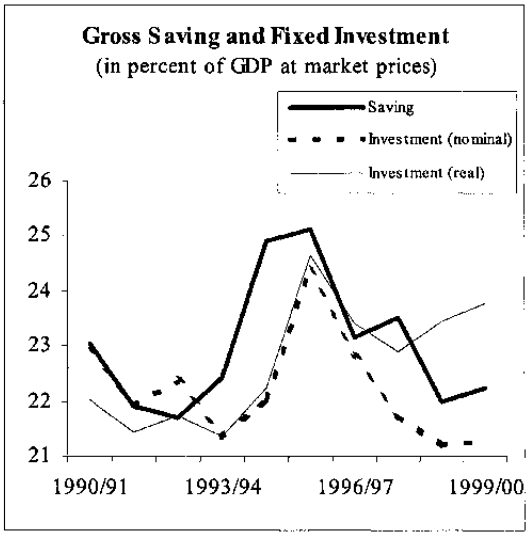
[1] Ashish Arora, "Software Development in Non-Member Economies: The Indian Case," *OECD Information Outlook 2000.*

Transportation sector growth also accelerated to 7½ percent after two relatively weak years, as port and freight traffics and railway passenger growth rebounded.

12. **The advance estimates indicated that service sector growth remained robust, but decreased to 8¼ percent in 2000/01.** However, this decline may be exaggerated as measured government services growth was adversely affected by the completion of arrears payments and wage hikes associated with the Fifth Pay Commission awards. Communications sector output surged almost 25 percent, while other services sectors remained buoyant.

C. Saving and Investment

13. **The gross domestic saving rate, which reached its historical peak of over 25 percent of GDP in 1995/96, has shown a declining trend in recent years**, falling to 22¼ percent of GDP in 1999/00 (Table II.6). The decline is attributable to a drop in public sector saving, which fell from 2 percent of GDP to -1¼ percent of GDP, reflecting the widening deficit of the central and state governments. The private sector saving rate increased modestly, as the household saving rate, continuing its long-run secular trend, increased to a historical peak of 19¾ percent of GDP in 1999/00. This more than offset a 1¼ percentage point decline in private corporate saving rate, attributable to the effects of the industrial slowdown and increased energy prices on profits.



14. **Gross fixed capital formation, in nominal terms, also declined from its historical peak of 24½ percent of GDP to 21¼ percent of GDP during 1995/96 to 1999/00.** This reflected a drop in the public sector investment rate of 1¼ percentage points, as capital expenditures were constrained by the widening public sector deficit, and a fall in the private corporate investment rate of 2¼ percentage points—largely in machinery and equipment—in response to the excess capacity built up in the mid-1990s. The household sector investment rate increased by ½ percentage point as higher investment in construction more than offset lower investment in machinery and equipment. In real terms, the decrease in the rate of gross fixed capital formation was more moderate—declining by only 1 percentage point—as the investment deflator, particularly of private sector machinery and equipment, grew at a much slower rate (4 percent per year) than the overall GDP deflator (6¾ percent).

D. Inflation

15. **Inflation measured using the wholesale price index (WPI) fell to under 3 percent (on a 12-month basis) in late 1999, but rebounded to 8½ percent in early 2001** (Chart II.3

and Table II.7). The higher inflation rate largely reflected fuel and energy prices that increased by almost 40 percent between September 1999 and October 2000 as administered fuel prices were raised in three steps (October 1999, and March and September 2000). The pass-through to other domestic prices was generally contained, helped by weak prices of primary and manufactured food products, in part reflecting abundant food stocks. Nonfood manufacturing inflation, nonetheless, increased to 6¾ percent in early 2001 from 2¼ percent in January 2000.

16. **However, WPI inflation declined to 5½ percent in March 2001**, reflecting the waning base effect of hikes in administered fuel prices along with still quiescent food prices and weakening domestic demand. Indicative of falling inflation pressures, nonfood manufacturing inflation also decreased to 5½ percent.

17. **In contrast to historical trends, inflation measured using the consumer price index (CPI) has remained below WPI inflation since September 1999.** CPI inflation decreased to 3½ percent in 1999/00 (period-average basis), reflecting weak food prices. After increasing modestly during most of 2000/01, CPI inflation declined to 3 percent in February 2001 (on a 12-month basis), as the impact of higher energy prices on consumer prices has been more muted than on wholesale prices because of the relatively higher weight of food in the CPI (nearly 60 percent of the total index).[5]

E. Macroeconomic Dynamics in India

18. **The Indian economy has been subject to a number of external and domestic shocks in recent years.** On the external side, global oil prices fell to under $12 per barrel in early 1999 and then increased by over 150 percent in the next 18 months, while global GDP growth also fluctuated, declining to 2¾ percent in the aftermath of the Asian crisis before rising to almost 5 percent in 2000. During the last few years, the Indian rupee also faced intermittent bouts of downward pressure. On the domestic side, agricultural production suffered from patchy monsoons in the late 1990s, contributing to weak growth in rural incomes and private consumption. Monetary policy was also adjusted on several occasions, even though the bank rate generally declined from 12 percent in early 1997 to 7 percent in early 2001.

19. **To quantify the impact on the Indian economy of these and similar shocks over time, vector autoregressions (VARs) were estimated.** The VARs were based on annual

---

[5] The WPI is heavily weighted towards manufactured items, which comprise almost 64 percent of the index, with primary articles accounting for 22 percent of the index and fuel and energy for the remaining 14 percent. Food products in the WPI are components of both primary articles and manufactured items and sum to 27 percent of the index.

data between 1969/70 and 1999/00.[6] The VARs generally included the log of real GDP, the log of the wholesale price index (WPI), and the current account balance-to-GDP ratio, in that order.[7] The log of world real GDP, the log of world oil prices, and the log of the U.S. dollar/rupee exchange rate (on a period-average basis) were included individually and jointly in the VARs to obtain the impact of external shocks.[8] The effect of domestic shocks was assessed by adding the short-term interest rate and/or the log of agricultural sector GDP.[9]

20. **The main findings were:**

- Real output was most responsive to (one standard error positive) shocks to either world oil prices or short-term interest rates, followed to a lesser extent by (negative) shocks to world real GDP (Chart II.4). The impact of each of these shocks reached a peak between one to three years and was permanent. The effect on output of exchange rate shocks was smaller.[10] Shocks to agricultural production had an insignificant impact, which were also of the wrong sign, on aggregate activity.

- Shocks to short-term interest rates had a negative and relatively large impact on the price level, which began to reverse within 2 years. Higher oil prices tended to increase the price level—but only temporarily—while lower world GDP and exchange rate appreciation led to lower price levels.

- The impact on the current account balance of any of the shocks was relatively small, generally less than ¼ percent of GDP. Higher interest rates had the largest effect, leading to an increase in the current account balance, in turn reflecting the slowdown in real activity. Counterintuitively, higher world oil prices also led to a small improvement in the current account balance, likely owing to the slowdown in real GDP or demand.

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[6] Annual data was used reflecting the limited availability of some time series at a higher frequency. For example, quarterly GDP data in India is available only since 1996/97.

[7] Two lags of each variable and a constant term were included in each equation of the VAR. Although GDP and prices are nonstationary, the VARs were estimated in levels, instead of first differences, so as not to impose the restriction that the shocks have permanent effects.

[8] World real GDP and world oil prices are from the *World Economic Outlook* database.

[9] The call money market rate was used for the short-term interest rate. In the VARs with the log of agricultural sector GDP, the log of industrial sector GDP and the log of services sector GDP replaced the log of real GDP.

[10] The VARs were also estimated with the real interest rate and the real effective exchange rate with similar albeit generally weaker effects.

Table II.1. India: GDP at Factor Cost by Sector of Origin, 1994/95-2000/01 1/

	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	Est. 2000/01
			(In billions of rupees, at current prices)				
GDP at factor cost	9,170.6	10,732.7	12,435.5	13,900.4	16,160.3	17,864.6	19,894.8
Agriculture and allied activities	2,787.7	3,031.0	3,626.1	3,870.1	4,599.0	4,842.2	5,072.6
Mining and quarrying	226.6	252.6	277.0	334.3	351.1	381.6	392.1
Manufacturing	1,554.3	1,938.0	2,206.8	2,319.8	2,517.9	2,746.0	2,999.4
Electricity, gas, and water supply	238.0	277.0	299.6	352.9	424.8	475.3	590.5
Construction	466.5	550.1	628.1	778.0	919.2	1,054.2	1,222.3
Trade, hotels, and restaurants	1,192.4	1,462.6	1,716.5	1,945.3	2,247.3	2,469.7	2,810.0
Transport, storage, and communications	611.2	707.3	836.3	974.4	1,113.1	1,225.9	1,429.4
Financing, insurance, real estate, and business services	1,030.2	1,250.9	1,375.8	1,568.0	1,815.8	2,150.8	2,513.0
Community, social, and personal services	1,063.7	1,263.2	1,469.3	1,757.7	2,172.2	2,518.9	2,865.5
Of which : public adminstration and defense	486.5	573.2	652.4	799.8	992.9	1,163.4	1,288.8
			(In billions of rupees, at constant 1993/94 prices)				
GDP at factor cost	8,380.3	8,995.6	9,700.8	10,162.7	10,830.5	11,519.9	12,211.7
Agriculture and allied activities	2,540.9	2,518.9	2,760.9	2,693.8	2,884.0	2,903.3	2,930.5
Mining and quarrying	219.6	232.6	233.7	256.7	260.0	264.5	276.4
Manufacturing	1,404.9	1,614.2	1,770.1	1,796.9	1,842.6	1,967.6	2,093.9
Electricity, gas, and water supply	207.7	221.8	233.8	252.2	268.3	282.3	298.0
Construction	428.3	455.0	464.5	512.0	543.4	587.3	638.5
Trade, hotels, and restaurants	1,099.8	1,258.5	1,355.0	1,458.4	1,560.3	1,683.6	1,796.1
Transport, storage, and communications	561.5	623.2	674.4	726.7	779.9	844.8	935.6
Financing, insurance, real estate, and business services	950.9	1,028.5	1,100.0	1,227.8	1,331.3	1,465.5	1,606.7
Community, social, and personal services	966.7	1,043.0	1,108.4	1,238.2	1,360.7	1,521.2	1,636.1
Of which : public adminstration and defense	441.9	471.8	491.1	562.4	620.4	702.3	743.0
			(Percent change at constant prices)				
GDP at factor cost	7.3	7.3	7.8	4.8	6.6	6.4	6.0
Agriculture	5.0	-0.9	9.6	-2.4	7.1	0.7	0.9
Industry 2/	10.2	11.6	7.1	4.3	3.4	6.4	6.6
Services 3/	7.1	10.5	7.2	9.8	8.2	9.6	8.3
Of which : public adminstration and defense	1.3	6.8	4.1	14.5	10.3	13.2	5.8

Source: Data provided by the Indian authorities.

1/ 2000/01 data are official advance estimates, which may differ from IMF staff estimates.
2/ Includes mining and quarrying; manufacturing; electricity, gas and water supply; and construction.
3/ Includes trade, hotels, and restaurants; transport, storage, and communication; financing, insurance, real estate, and business services; and community, social, and personal services.

Table II.2. India: GDP at Market Prices by Expenditure Components, 1994/95-1999/2000 1/

	1994/95	1995/96	1996/97	1997/98	1998/99	Est. 1999/00
	(In billions of rupees, at current prices)					
GDP at market prices 2/	10,097	11,872	13,679	15,223	17,583	19,570
Private consumption	6,607	7,562	8,967	9,746	11,412	12,654
Government consumption	1,158	1,287	1,456	1,722	2,118	2,515
Gross fixed capital formation	2,221	2,910	3,139	3,439	3,732	4,161
Construction	1,001	1,225	1,345	1,587	1,801	2,034
Machinery and equipment	1,219	1,685	1,794	1,852	1,931	2,127
Change in stocks	157	222	-158	101	-12	283
Exports of goods and services	1,016	1,307	1,453	1,608	1,971	2,309
Imports of goods and services	1,047	1,450	1,610	1,815	2,225	2,631
	(In billions of rupees, at constant 1993/94 prices)					
GDP at market prices 2/	9,261	9,970	10,663	11,150	11,819	12,667
Private consumption	5,881	6,265	6,831	7,010	7,514	7,821
Government consumption	990	1,070	1,118	1,240	1,385	1,592
Gross fixed capital formation	2,036	2,433	2,469	2,586	2,772	3,010
Construction	917	994	1,009	1,122	1,212	1,310
Machinery and equipment	1,120	1,439	1,460	1,463	1,559	1,700
Change in stocks	145	188	-123	79	-8	203
GDP deflator 3/	109.0	119.1	128.3	136.5	148.8	154.5
	(Percent change at constant prices)					
GDP at market prices 2/	7.3	7.7	7.0	4.6	6.0	7.2
Consumption	4.5	6.8	8.4	3.8	7.9	5.8
Private	5.1	6.5	9.0	2.6	7.2	4.1
Government	1.3	8.0	4.5	11.0	11.7	15.0
Gross fixed capital formation	10.5	19.5	1.5	4.7	7.2	8.6
Construction	4.6	8.5	1.5	11.3	8.0	8.1
Machinery and equipment	15.8	28.5	1.5	0.2	6.6	9.0
GDP deflator at market prices	9.0	9.2	7.7	6.4	9.0	3.8
GDP at factor cost	7.3	7.3	7.8	4.8	6.6	6.4

Source: Staff estimates based on data provided by the Indian authorities.

1/ Data are provisional.
2/ Excludes statistical discrepancy. Data on exports and imports of goods and services at constant prices are not available.
3/ Indexed to 100 in 1993/94.

Table II.3. India: Employment and Labor Statistics, 1993/94-1998/99

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
	(In millions of persons, end-of-period)					
Employment in the organized sector 1/	27.4	27.5	27.9	28.2	28.2	28.1
Public sector	19.4	19.5	19.4	19.6	19.4	19.4
Central government	3.4	3.4	3.4	3.3	3.3	3.3
State government	7.3	7.4	7.4	7.5	7.5	7.5
Public enterprises	6.5	6.5	6.5	6.5	6.5	6.4
Local authoritics	2.2	2.2	2.2	2.2	2.2	2.3
Private sector	7.9	8.1	8.5	8.7	8.7	8.7
Agriculture and allied activities	0.9	0.9	0.9	0.9	0.9	0.9
Industry	4.8	4.9	5.3	5.4	5.4	5.4
Mining and quarrying	0.1	0.1	0.1	0.1	0.1	0.1
Manufacturing	4.6	4.7	5.0	5.2	5.2	5.2
Electricity, gas, and water	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.1	0.1	0.1	0.1	0.1	0.1
Services	2.2	2.3	2.3	2.3	2.4	2.5
Trade, hotels, and restaurants	0.3	0.3	0.3	0.3	0.3	0.3
Transport, storage, and communication	0.1	0.1	0.1	0.1	0.1	0.1
Financing, insurance, real estate, and business services	0.3	0.3	0.3	0.3	0.3	0.4
Community, social, and personal services	1.6	1.6	1.7	1.6	1.7	1.7

Source: CEIC.

1/ All establishments in the public sector and nonagricultural private establishments with ten or more employees.

Table II.4. India: Agricultural Production and Yields, 1994/95-2000/01

	1994/95	1995/96	1996/97	1997/98	1998/99	Est. 1999/00	Est. 2000/01
	(In millions of tons, unless noted otherwise)						
Production							
Foodgrains	191.5	180.4	199.4	192.3	203.5	208.9	199.0
Rice	81.8	77.0	81.7	82.5	86.0	89.5	86.8
Wheat	65.8	62.1	69.4	66.3	71.3	75.6	70.0
Coarse cereals	29.9	29.0	34.1	30.4	31.2	30.5	29.9
Pulses	14.1	12.3	14.2	13.0	14.9	13.4	12.3
Oilseeds 1/	21.3	22.1	24.4	21.3	24.7	20.9	18.6
Cotton 2/	11.9	12.9	14.2	10.9	12.3	11.6	13.2
Jute 3/	8.0	7.7	10.0	10.0	8.8	9.4	8.9
Sugarcane	275.5	281.1	277.6	279.5	288.7	299.2	300.6
Tea 4/	0.8	0.8	0.8	0.8	0.9	0.8	0.8
Kharif foodgrains	101.1	95.1	103.9	101.6	102.8	104.9	102.7
Rabi foodgrains	90.4	85.3	95.5	90.7	100.7	104.0	96.3
	(In kg. per hectare, unless noted otherwise)						
Yields							
Foodgrains	1,548	1,491	1,614	1,552	1,571	1,697	...
Rice	1,911	1,797	1,882	1,900	1,747	1,990	...
Wheat	2,559	2,483	2,679	2,485	2,590	2,755	...
Maize	1,448	1,595	1,720	1,711	1,797	1,785	...
Pulses	610	552	635	567	634	630	...
Oilseeds 1/	843	851	926	816	944	856	...
Cotton	257	242	265	208	224	226	...
Jute	1,949	1,875	1,998	1,978	1,875	1,995	...
Sugarcane 5/	71	68	66	71	71	71	...
Tea 4/	1,767	1,755	1,810	1,868	1,996	...	...

Sources: Government of India, Economic Survey; and data provided by the Indian authorities.

1/ Nine major oilseeds.
2/ In million bales of 170 kg. each.
3/ In million bales of 180 kg. each.
4/ Data are for calendar years. For example, data under the heading 1993/94 are for 1993.
5/ In metric tons per hectare.

Table II.5. India: Index of Industrial Production, 1995/96-2000/01

	Weight 1/	1995/96	1996/97	1997/98	1998/99	1999/00	Prelim. 2000/01
				(Annual percent change)			
All industries	100.0	13.0	6.1	6.7	4.1	6.7	4.9
Manufacturing	79.4	13.0	6.1	6.7	4.1	6.7	4.9
Food products	9.1	6.7	3.5	-0.4	0.7	4.2	10.0
Beverages, tobacco, and related products	2.4	13.3	13.5	19.4	12.9	7.6	4.7
Cotton textiles	5.5	10.5	12.1	2.4	-7.7	6.7	3.0
Wool, silk and man-made fibre textiles	2.3	14.7	10.5	18.5	2.8	11.9	5.4
Jute and other vegetable fibre textiles	0.6	7.7	-4.5	16.9	-7.3	-0.9	0.8
Textile products (including wearing apparel)	2.5	35.7	9.4	8.5	-3.5	2.0	3.6
Wood and wood products	2.7	24.1	7.1	-2.6	-5.8	-16.2	3.6
Paper and paper products	2.7	15.6	9.1	6.9	16.0	6.3	-9.3
Leather and leather and fur products	1.1	13.7	9.4	2.2	8.1	13.8	10.6
Basic chemicals and chemical products	14.0	11.2	4.8	14.4	6.6	10.0	7.5
Rubber, plastic, petroleum, and coal products	5.7	7.8	2.0	5.2	11.3	-1.1	10.9
Nonmetallic mineral products	4.4	23.6	7.9	13.4	8.3	24.4	-2.0
Basic metals and alloy industries	7.5	15.8	6.7	2.6	-2.5	5.0	1.6
Metal products and parts (except machinery and equipment)	2.8	-4.6	9.7	7.9	17.0	-1.2	15.4
Machinery and equipment (except transport equipment)	9.6	18.7	5.0	5.8	1.5	17.7	7.9
Transport equipment and parts	4.0	17.4	12.5	2.5	20.1	5.7	-2.1
Other manufacturing industries	2.6	25.8	24.7	-1.3	1.0	-16.0	7.5
Mining and quarrying	10.5	9.7	-1.9	6.9	-0.8	1.0	3.4
Electricity generation	10.2	8.1	4.0	6.6	6.5	7.3	4.0
Index of industrial production classified by use:							
Basic goods	35.6	10.8	3.0	6.9	1.6	5.5	3.8
Capital goods	9.3	5.3	11.5	5.8	12.6	6.9	1.4
Intermediate goods	26.5	19.4	8.1	8.0	6.1	8.8	4.5
Consumer goods	28.7	12.8	6.2	5.5	2.2	5.7	7.9
Durables	5.4	25.8	4.6	7.8	5.6	14.1	14.0
Nondurables	23.3	9.8	6.6	4.8	1.2	3.2	6.0

Source: CEIC.

1/ Weights for 1993/94 base-year data. Weights for index classified by use were revised slightly for data from 1998/99 onwards.

Table II.6. India: Saving and Investment, 1994/95-1999/2000 1/

	1994/95	1995/96	1996/97	1997/98	1998/99	Est. 1999/00
	(In percent of GDP at market prices, unless noted otherwise)					
Gross domestic saving	24.9	25.1	23.2	23.5	22.0	22.3
Private sector	23.2	23.1	21.5	22.0	22.8	23.4
Household saving	19.7	18.2	17.0	17.8	19.1	19.8
Physical saving	7.8	9.3	6.7	8.0	8.2	9.2
Financial saving	12.0	8.9	10.3	9.9	10.9	10.5
Corporate saving	3.5	4.9	4.5	4.2	3.7	3.7
Public sector	1.7	2.0	1.7	1.5	-0.8	-1.2
Gross capital formation 2/	23.5	26.5	22.1	22.9	21.2	22.7
Gross fixed capital formation	22.0	24.4	22.8	21.7	21.2	21.3
Private sector	13.2	16.7	15.9	15.4	15.0	14.9
Household	7.3	8.5	7.3	7.3	8.3	9.0
Corporate sector	5.9	8.2	8.6	8.1	6.6	5.9
Public sector	8.8	7.7	6.9	6.4	6.3	6.4
Changes in stocks	1.4	2.2	-0.7	1.2	-0.1	1.4
Private sector	1.5	2.2	-0.8	1.0	-0.2	0.8
Public sector	-0.1	-0.1	0.1	0.2	0.1	0.7
Memorandum item:						
Fixed investment deflator 3/	7.9	9.2	6.1	3.8	3.9	2.7

Sources: Staff estimates based on data provided by the Indian authorities.

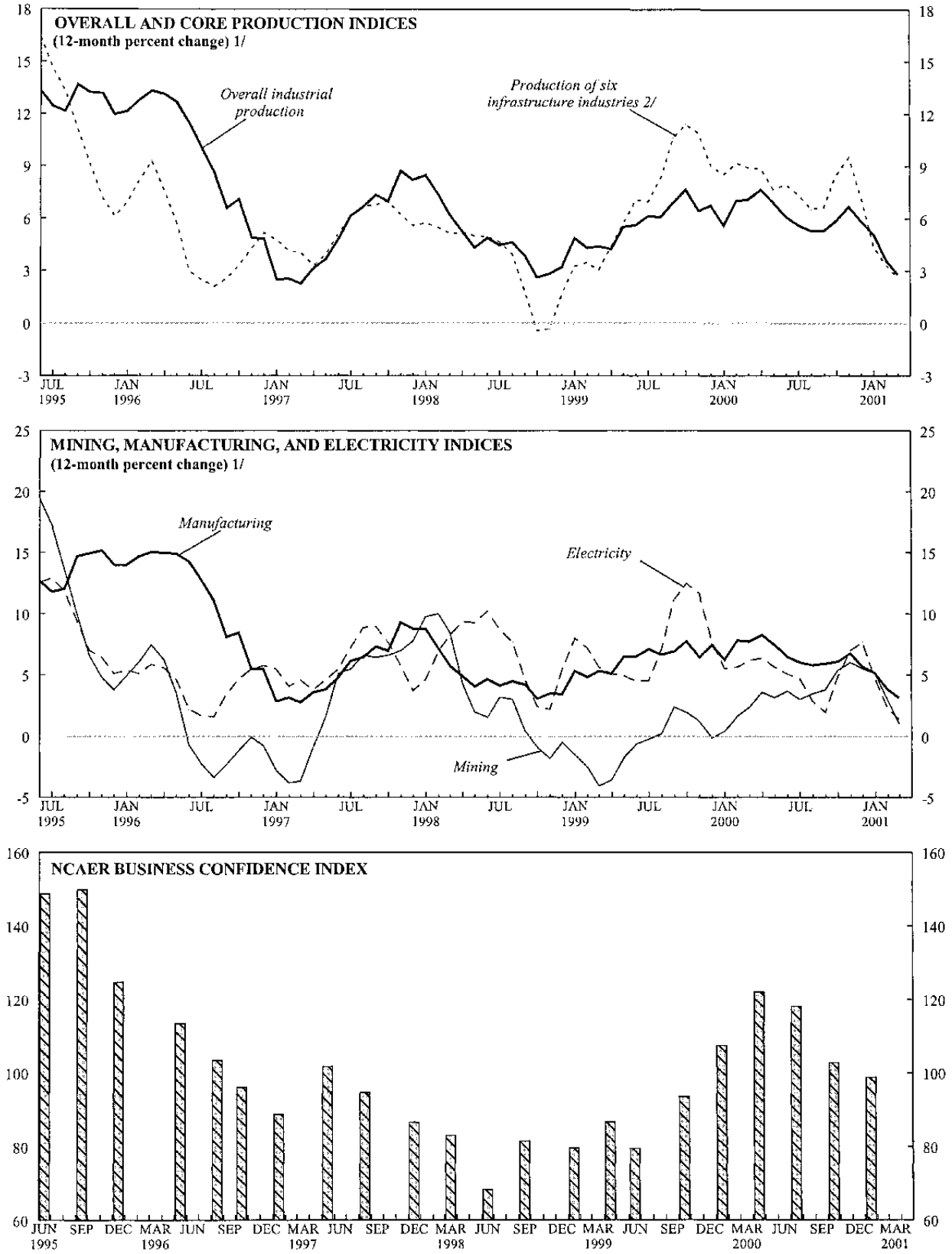
1/ Data are provisional.
2/ Not adjusted for statistical discrepancy.
3/ Percent change.

Table II.7. India: Price Developments, 1995/96-2000/01

	Weight	1995/96	1996/97	1997/98	1998/99	1999/00	Prelim. 2000/01
		(Annual percent change, end of period)					
Wholesale Price Index (WPI), 1993/94 weights	100.0	4.4	5.4	4.5	5.3	6.5	5.5
Primary commodities	22.0	3.1	9.2	4.6	7.6	4.0	1.7
Food	15.4	7.7	11.6	4.0	9.3	7.1	0.1
Nonfood	6.1	-6.1	3.3	7.2	2.7	-3.5	6.0
Minerals	0.5	-10.7	17.0	-8.3	17.8	-11.6	12.0
Fuel, power, light, and lubricants	14.2	5.1	13.3	13.7	3.2	26.7	15.4
Manufactured products	63.7	4.7	2.4	2.3	4.9	2.4	3.9
Food products	11.5	3.8	10.6	5.8	9.2	-0.3	-3.2
Beverages, tobacco, and tobacco products	1.3	4.0	10.4	8.3	9.4	3.3	10.0
Textiles	9.8	-1.3	-9.0	1.5	-2.1	1.8	3.8
Wood and wood products	0.2	7.8	0.0	64.6	-0.1	-4.9	-10.8
Paper and paper products	2.0	15.3	-7.1	1.8	14.5	5.0	14.2
Leather and leather products	1.0	2.0	4.4	6.2	0.1	14.6	-2.2
Rubber and plastic products	2.2	7.2	-1.6	-0.2	0.1	0.1	-1.5
Chemicals and chemical products	1.4	6.6	4.9	0.7	11.0	5.5	4.7
Nonmetallic mineral products	2.5	7.8	-3.6	-2.4	2.9	-0.9	15.5
Basic metals, alloys and metal products	8.3	6.3	3.7	3.3	1.0	3.2	3.1
Machinery and machine tools	8.4	3.9	3.0	-1.5	1.1	-0.5	9.3
Transport equipment and parts	4.3	8.0	5.0	3.1	2.3	4.7	6.1
Other	10.7	6.3	5.2	0.7	10.8	5.4	4.6
Consumer Price Index (CPI)	100.0	8.9	10.0	8.3	8.9	4.8	2.5

Source: CEIC.

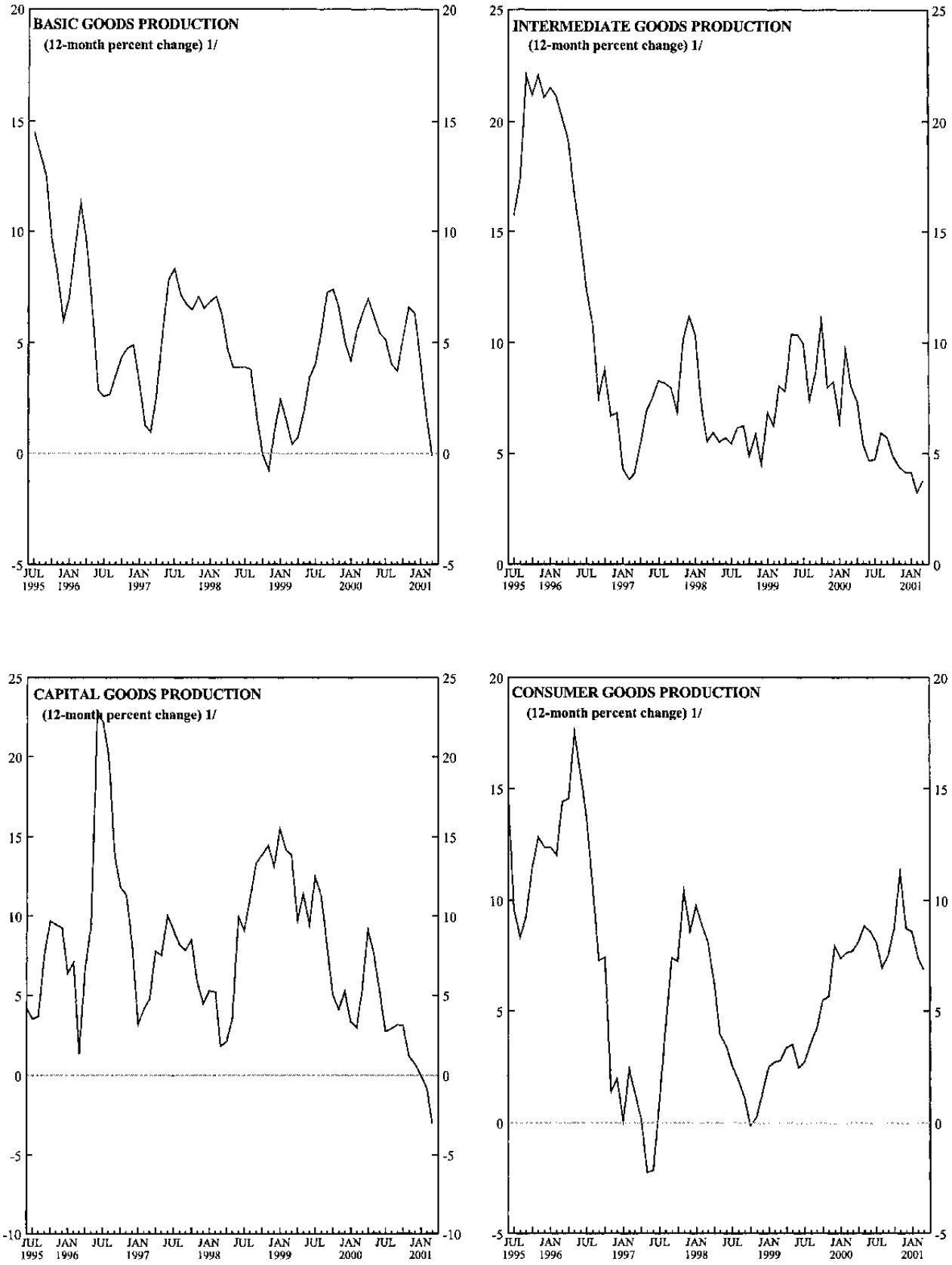
Chart II.1. India: Industrial Production and Business Confidence, 1995-2001



Sources: Data provided by the Indian authorities, CEIC, and NCAER.

1/ Three-month moving average.
2/ Based on weighted average of the electricity, coal, steel, crude petroleum, petroleum products, and cement indices.

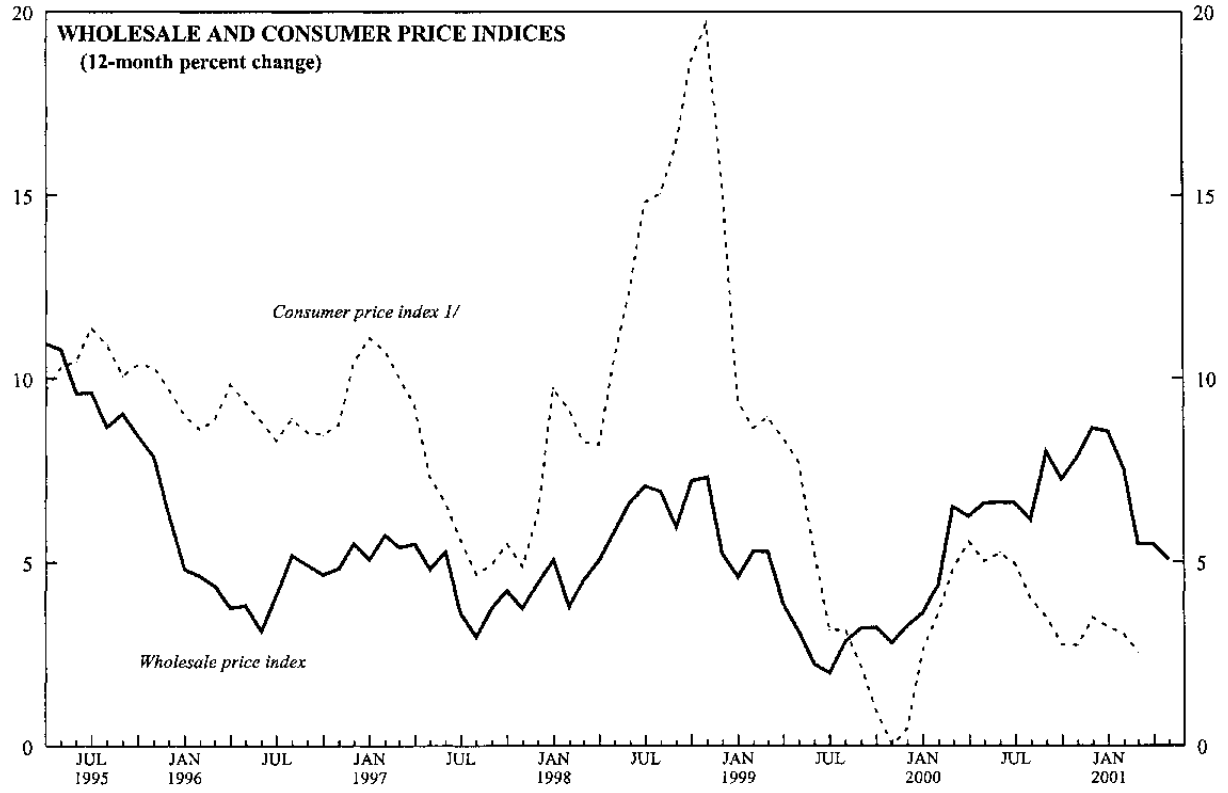
Chart II.2. India: Components of Industrial Production, 1995-2001

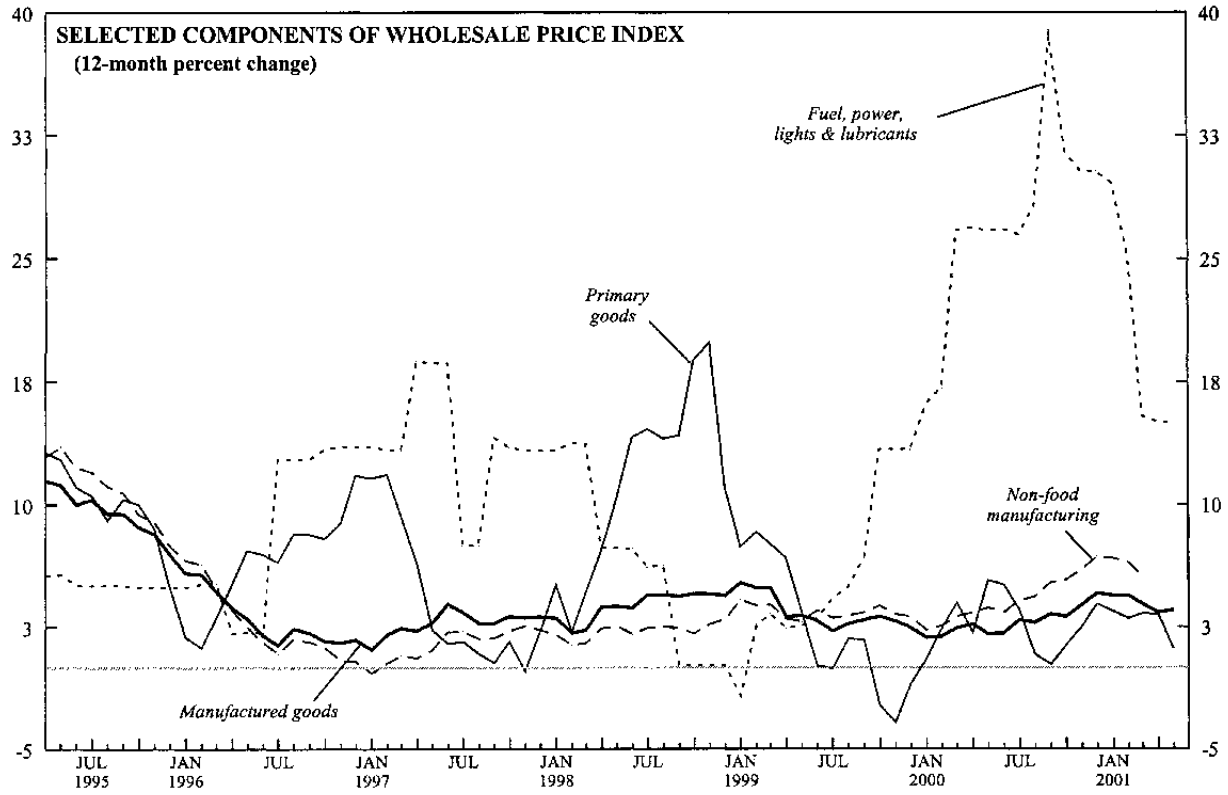


Source: Data provided by the Indian authorities; and CEIC.

1/ Three-month moving average.

Chart II.3. India:Inflation Indicators, 1995-2001

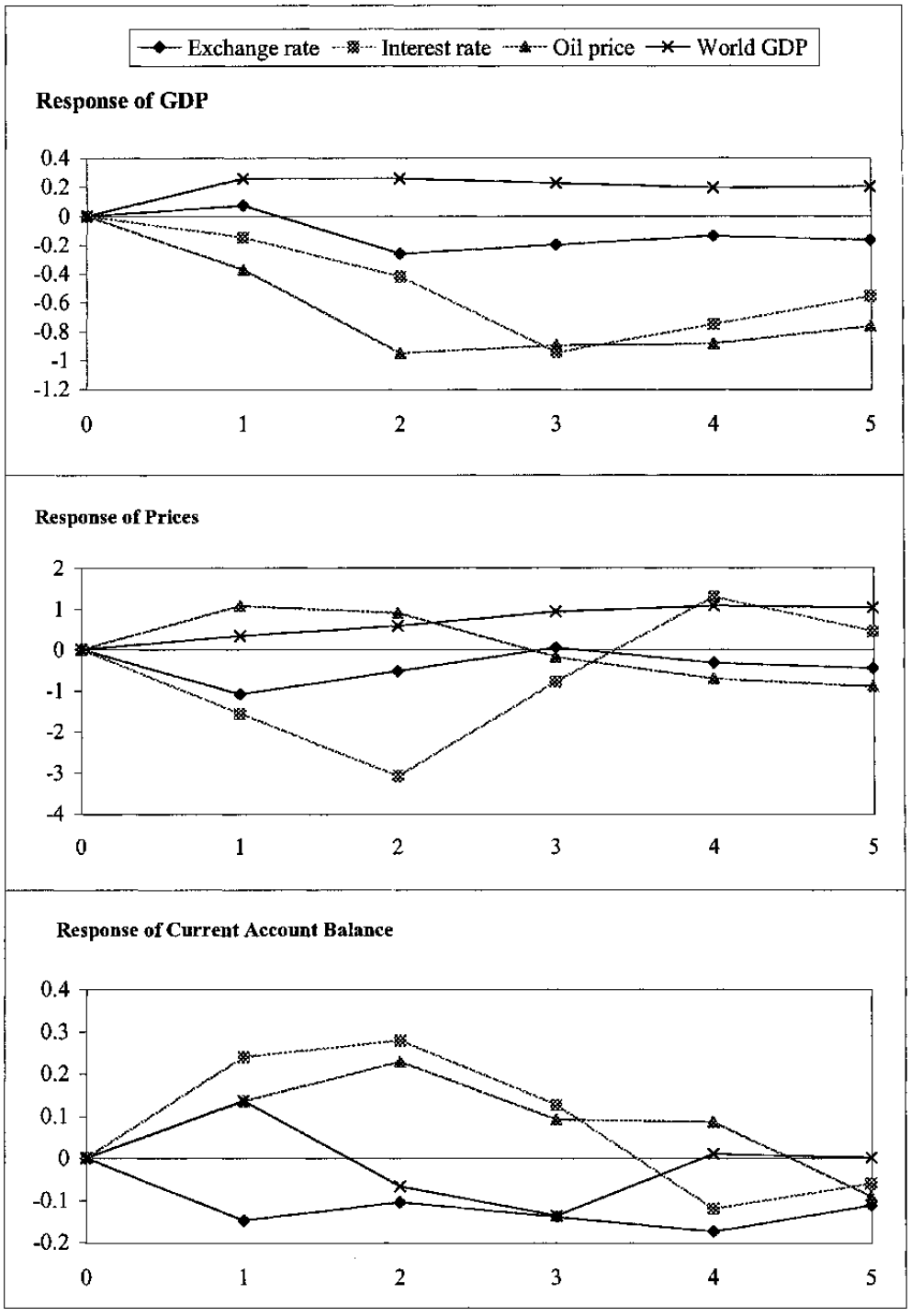




Source: Data provided by the Indian authorities.

1/ For industrial workers.

Chart II.4. India: Dynamic Responses to Shocks 1/
(Percent change)

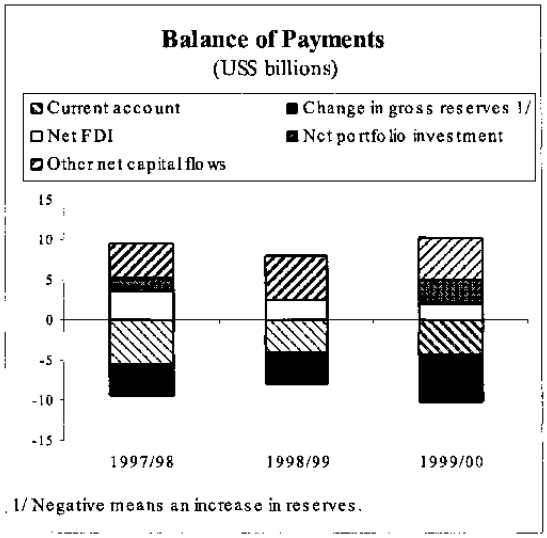


1/ Impulse-response functions for VAR with ordering log(GDP at factor cost), log(WPI), current account balance-to-GDP ratio, log(dollar-rupee exchange rate), call money interest rate, log(world oil price), and log(world GDP). One standard deviation positive innovations are 2.6 percent for exchange rate, 2.8 percentage points for interest rate, 27.5 percent for oil prices, and 0.5 percent for world GDP.

III. External Sector Developments and Trade Policies[1]

A. Overall Balance of Payments

1. **Despite a sharp rise in oil prices, the overall balance of payments in India strengthened during 1999/2000** (Table III.1). The current account deficit remained largely unchanged at $4¼ billion (just under 1 percent of GDP) as exports of goods and services accelerated and private transfers surged, mostly offsetting the increase in oil and other imports. Net capital inflows increased to $10¼ billion, largely reflecting a rebound in net portfolio investment. Consequently, gross international reserves increased from $32½ billion at end-March 1999 to $38 billion (about six months of goods and services imports) at end-March 2000, and net outstanding forward liabilities, which peaked at $3¼ billion at end-January 1998, declined to $675 million at end-March 2000 (Table III.2 and Chart III.1).



2. **The overall external position deteriorated in the middle of 2000**. Although the current account deficit weakened only modestly due to higher oil imports, pressures on the capital account mounted. These reflected portfolio and other private capital outflows, including those from foreign institutional investors (FIIs), as market confidence was undermined by the global turnaround in sentiment toward information technology (IT) stocks (which represented over a quarter of India's market capitalization), concerns about the impact of higher oil prices, and fears that the rupee had lost competitiveness because of the appreciation of the dollar against other currencies (Chart III.2). The Reserve Bank of India (RBI) responded vigorously to shore up the exchange rate by intervening heavily in both the spot and forward markets, raising the Bank rate in July, and introducing several administrative measures to limit access to foreign exchange, including a surcharge on import financing that was in contravention of Article VIII.[2] By end-October, gross reserves fell below $35 billion (4¾ months of imports), and net outstanding forward liabilities rose to $2¼ billion.

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[1] Prepared by Ranil Salgado and Alexander Hammer. Data presented in this chapter reflect official data releases through mid-May 2001.

[2] The surcharge was removed in January 2001.

3. **In late 2000 and early 2001, the balance-of-payments position improved considerably**. The government's India Millennium Deposit (IMD) scheme—a five-year instrument marketed to nonresident Indians beginning in October—was highly successful, yielding inflows of $5.5 billion (Box III.1). The boost to reserves, the easing of world oil prices, and several cuts in the U.S. federal funds rate in early 2001 helped restore market confidence. By end-March, the rupee/dollar rate recovered some of its earlier losses, portfolio inflows rebounded, and gross reserves rose to over $42 billion (about six months of imports and four times short-term external debt), while the RBI's net outstanding forward liabilities fell to $1¼ billion.

Box III.1. India: The India Millennium Deposit Scheme

Patterned after the Resurgent India Bond (RIB) issue of August 1998, the India Millennium Deposit (IMD) scheme was launched by the State Bank of India (SBI) on October 21, 2000 to raise funding from nonresident Indians and overseas corporate bodies. IMD deposits have a maturity period of five years and offered interest rates of 8.5 percent on dollar deposits, 7.85 percent on pound-sterling deposits, and 6.85 percent on euro deposits. Interest will be paid on a semi-annual basis. The main features of the scheme included full repatriability of interest and principal; exemptions from income, gift, and wealth taxes in India; and the scope for joint holding with Indian residents. Although IMD deposits (unlike bonds) are not tradable in the secondary market, authorized dealers are permitted to grant loans to holders of IMDs and premature encashment, without penalty, is possible after six months—but both only in rupees. The IMD was closed on November 6, 2000 after raising $5.5 billion, substantially more than the $4.2 billion raised by the RIB.

IMD funds were to be largely invested in government securities or on lent to infrastructure projects. Deposits were collected both by the SBI and other banks on behalf of the SBI. These other banks were provided a collection fee of 0.25 percent and a commission of 1.5 percent. Moreover, the banks could borrow up to 50 percent of the funds that they mobilized for the scheme at a 10 percent interest rate from the SBI for on lending to infrastructure projects. Most of the remaining funds were invested by the SBI in government securities of five years or longer, while smaller amounts were invested in short-term treasury bills.

Exchange rate risks are shared by the SBI and the government. As with the Resurgent India Bond, the RBI will maintain a "maintenance of value" account to cover any exchange rate losses that might be incurred by the SBI. The account will be funded by contributions from the government and the SBI. The SBI's contribution will be limited to 1 percent per year, with the government shouldering the balance.

As a result of the IMD, gross reserves, which dipped below $35 billion at end-October 2000, rose to over $42 billion by end-March 2001. A large part of the increase in reserves can be attributed to increased gross commercial borrowing (inflows from the IMD scheme are classified in this category in the balance-of-payments statistics), which surged from $1.1 billion in the first two quarters of 2000/01 to $6.3 billion in the third quarter.

B. Current Account

4. **The current account deficit deteriorated only modestly in dollar terms**, rising marginally to $4¼ billion in 1999/2000 and $5 billion in the four quarters to December 2000, notwithstanding the sharp increase in oil imports (Charts III.3). With higher world oil prices, the oil import bill rose sharply from $6½ billion in 1998/99 to reach almost $15 billion in the

first eleven months of 2000/01. However, the impact on the current account was mostly offset by robust growth in goods and IT-related services exports and a surge in net private transfers, attributable to increased redemption of nonresident Indian (NRI) deposits into rupees. In addition, non-oil import growth weakened sharply in 2000/01, falling on a customs basis in both rupee and dollar terms.[3]

5. **Merchandise exports increased by 11½ percent in dollar terms in 1999/2000, after declining by 4 percent in 1998/99, and in 2000/01, growth accelerated to 20 percent**. The rebound reflected buoyant global demand and the revival of trade following the Asian crisis, but also significant share gains by Indian firms in export markets, perhaps reflecting the benefits of earlier structural and trade reforms.[4] In 1999/00, exports to Asia and the United States were particularly robust, as were export sales of gems and jewelry and ready-made garments (Chart III.4). Exports to Asia remained strong in 2000/01, growing by over 20 percent through December (the latest available data), while exports to a number of oil-producing countries in the Middle East also picked up. Sales in 2000/01 were led by exports of petroleum products, ready-made garments, and engineering goods.

6. **After falling by 7 percent in 1998/99, merchandise imports grew at an annual rate of over 16 percent in dollar terms in 1999/2000 and the first three quarters of 2000/01**. The surge mainly reflected the effect of the sharp increase in world oil prices on the value of oil imports, which represented roughly one fifth of India's merchandise imports in 1999/00. Non-oil imports were relatively subdued, growing by 4 percent in 1999/00 and by 5½ percent in the first three quarters of 2000/01.[5] This reflected declines in gold imports in response to a hike in import duties and the introduction of the Gold Deposit Scheme, which was designed to mobilize domestic holdings of gold; in capital goods imports, reflecting weak business investment; and in foodgrain imports in 2000/01 owing to the buildup of large domestic grain stocks. The weakness in non-oil imports occurred despite steady growth of imports from Asia (which represented over a quarter of total imports), particularly from China.

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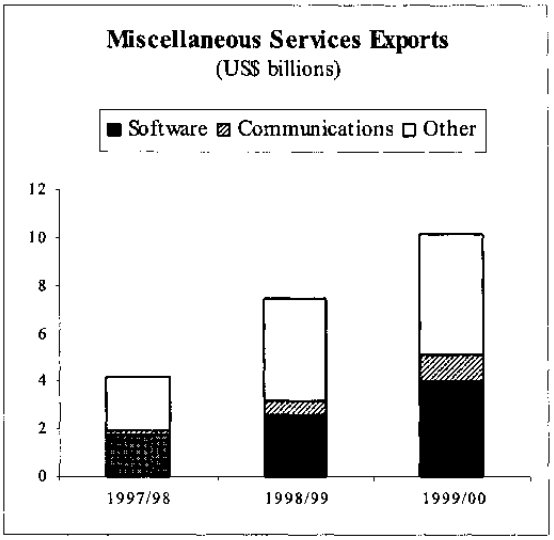
[3] Aggregate quarterly trade data on a balance-of-payments basis are available from the RBI with a lag of one quarter. Aggregate monthly trade data on a customs basis, which excludes military and other noncustoms imports, are available from the Directorate General of Commercial Intelligence and Statistics with about a lag of one month. Composition of trade and the direction of trade are available with longer lags.

[4] Staff estimates, calculated based on the import growth of partner countries weighted by India's exports to those countries, indicate that partner country nominal imports grew 6½ percent and 13 percent, respectively, in 1999/00 and 2000/01.

[5] On a customs basis, non-oil imports fell in 2000/01.

7. **The surplus in traded services increased by $1¾ billion in 1999/2000, mostly due to rapidly growing exports of software services.** These exports, which appear in the "miscellaneous" services category in the balance-of-payments accounts, surged from $2½ billion to $4 billion. Exports of other miscellaneous services—including communication services—increased by $1¼ billion, while other services exports declined. Services imports increased by $1 billion, attributable to imports of financial services and increased business and tourist travel abroad, while imports of transportation services declined.



8. **The services balance improved further in 2000/01.** Travel payments and miscellaneous services exports and imports again increased, while other categories of services exports and imports were largely unchanged. Although the composition of miscellaneous services has not yet been released, NASSCOM, the primary source for IT-related export data, estimated that software services grew to $6¼ billion during 2000/01.

9. **Net private transfers rebounded to $12½ billion in 1999/2000, and rose further to $13½ billion in the four quarters to December 2000.** The increase reflected inward remittances from Indians working abroad, with a shift in the source of these funds from the Middle East to North America, in turn related to increased employment of Indian IT professionals overseas. Remittances were also boosted by the redemption of foreign currency accounts held by nonresident Indians into rupees, which more than offset the decline in transfers in the form of gold and silver.[6] These latter transfers fell as imports of bullion, which are recorded as merchandise imports, were liberalized.[7]

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[6] The local currency redemption of NRI accounts was included as private transfer receipts in the balance-of-payments statistics for data starting in 1996/97.

[7] Prior to October 1997, gold and silver were imported into India through the "baggage route" (where nonresident or returning Indians were allowed to bring up to 10 kilograms into the country) or through special import licenses. Imports through the baggage route were recorded in the balance-of-payments statistics both as a noncustoms import and as a private transfer—so they had no overall impact on the balance of payments since the foreign exchange used to purchase the gold was earned outside India. Since their liberalization, these imports have increasingly taken place through the normal customs route, resulting in an increase in customs imports, and because of the accounting methodology, a decrease in both noncustoms imports and private transfers.

C. Capital Account

10. **Improved investor confidence contributed to a strengthening of the overall capital account surplus in 1999/2000.** The surplus had fallen in the previous two years, partly owing to the effects on sentiment of the Asian financial crisis, the imposition of sanctions following the India's testing of nuclear devices in May 1998, and the Russian default in August 1998. However, portfolio inflows strengthened considerably in 1999/00, helping to boost the capital account surplus to $10¼ billion.

11. **Despite a weakening of international investor confidence, the capital account surplus remained comfortable during the first three quarters of 2000/01.** Portfolio and other capital flows turned negative in the middle of the fiscal year, but the IMD scheme led to a sharp increase in commercial borrowing in the third quarter. Although balance-of-payments data are not yet available, monthly data also suggest that portfolio inflows rebounded strongly in the fourth quarter.[8]

12. **Net foreign direct investment (FDI) weakened further in 1999/2000, and remained weak in the first three quarters of 2000/01.** FDI inflows to India, which have averaged about $2½ billion, or less than ¾ of a percent of GDP, over the past five years, are low by the standards of many other countries in Asia. Relative to total FDI flows to developing countries, moreover, India's share declined by ¾ percentage point between 1997 and 1999 (Table III.3). Encouragingly, A.T. Kearney's February 2001 FDI Confidence Index and FDI Confidence Audit of India indicated that India's absolute and relative attractiveness as a destination for FDI increased from its January 2000 survey, with India's rank improving from eleventh to seventh.[9] However, while market size and potential, labor force skills, and competitive wages were seen as positives for investment in India, excessive bureaucracy, a slowdown in reforms, and poor infrastructure were viewed as significant deterrents.

13. **Net portfolio investment has been volatile in recent years, responding to broader international developments, as well as domestic factors.** With the onset of the Asian crisis, FIIs withdrew funds from Indian markets between August 1997 and August 1998, while Indian companies lost access to overseas equity and debt markets. As sentiment toward emerging markets improved during the course of 1999 and the outlook for the domestic economy strengthened, FII inflows resumed, averaging almost $180 million a month during 1999/00. During the first half of 2000/01, FII inflows slumped compared to the first half of

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[8] Data on FII inflows are available from the RBI on a monthly basis with a lag of about three months and from the SEBI on a daily basis.

[9] See A.T. Kearney, *FDI Confidence Index*, February 2001, Vol.4 and A.T. Kearney, *FDI Confidence Audit: India*. The index was based on a survey of the world's 1,000 largest companies, while the audit was based on private interviews with senior executives in these companies.

1999/00. Then, in late 2000, deteriorating market confidence led to FII outflows. As sentiment stabilized in early 2001, FII inflows resumed reaching over $2 billion through end-April, despite the slowdown in industrial production and a downturn in Indian equity markets related to the stock market scandal that broke during March 2001.

14. **Net external borrowing dropped to $1½ billion 1999/2000 from $4¾ billion in the previous two years, and remained weak in the first half of 2000/01.**[10] The decline, which was masked in 1998/99 by $4¼ billion in proceeds from the Resurgent India Bond (RIB), reflected lower commercial borrowing with disbursements falling from $7½ billion in 1996/97 to $3¼ billion in 1999/00 (Table III.4). In turn, this reflected a number of factors, including a fall off in borrowing for power sector projects and the slowdowns in industrial sector growth and private corporate sector investment (see Chapter II). After remaining weak in the first half of 2000/01, external borrowing surged in the third quarter because of the IMD scheme.[11]

15. **Indicators of India's external debt continued to improve during 1999/00 and into 2000/01** (Table III.5 and Chart III.5). Total external debt stood at $98½ billion (22 percent of GDP) in March 2000, of which 38½ percent was on concessional terms. Short-term debt was only $4 billion (1 percent of GDP or 10½ percent of gross reserves) on a contracted-maturity basis and only $10 billion (2¼ percent of GDP or 26½ percent of gross reserves) on a residual-maturity basis.[12] Total debt fell further during the first half of 2000/01 to $98 billion, although short-term debt on a contracted-maturity basis rose to $4½ billion.[13]

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[10] Net external borrowing includes external assistance, commercial borrowing, and short-term credits.

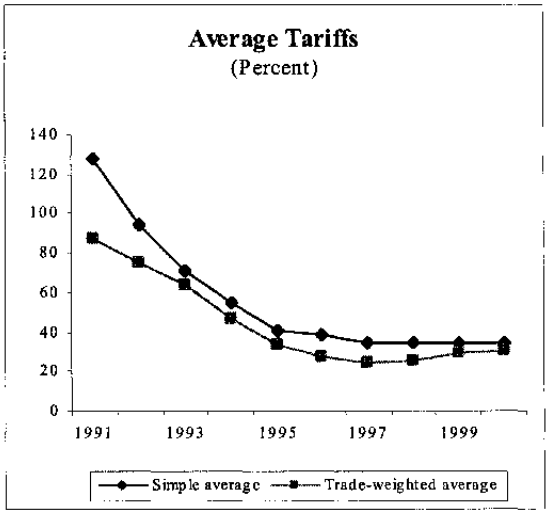
[11] Increased external borrowing was partly offset in the capital account by outflows of NRI deposits in the third quarter, possibly reflecting shifts in these deposits to the IMD scheme.

[12] Short-term debt on a residual-maturity basis in India may be underestimated as NRI deposits are calculated on a contracted-maturity basis.

[13] While external debt statistics are now generally available on a quarterly basis, short-term external debt on a residual-maturity basis is estimated only on an annual basis.

D. Trade Policy[14]

16. **By most measures, India has substantially liberalized trade during the past decade**. At the beginning of the 1990s, India's trade policies exhibited high tariff rates, complicated licensing requirements, and other nontariff barriers (NTBs). Following the 1991 balance-of-payments crisis, significant trade liberalization occurred. Tariff rates, which averaged 87 percent (on a trade-weighted basis) in 1991, fell to 25 percent by 1997, and NTBs—such as licensing requirements on imports of industrial inputs and capital goods—were reduced. Export incentives and concessions remained significant, however, and included tax exemptions for export earnings, preferential access to bank credit, and duty-free access to imported industrial inputs and capital goods, including through duty-free areas such as Special Economic Zones.



17. **A key element of trade reform in recent years has been the gradual elimination of quantitative import restrictions (QRs)**. Although India had already begun to dismantle its system of QRs in the mid-1990s, the process was accelerated after the Dispute Settlement Body of the World Trade Organization (WTO) ruled in favor of a 1997 complaint by the United States that India's QRs were not justified on balance-of-payments grounds. After, the Appellate Body of the WTO subsequently upheld the ruling, an agreement was reached with the United States in December 1999 that India would remove half of the remaining QRs by April 1, 2000 and subsequently all QRs by April 1, 2001.

18. **Even though all remaining QRs were removed in April 2001, a number of NTBs have been retained and in some cases enhanced**. The 2001/02 Export-Import (EXIM) policy statement, released in March 2001, imposed a number of new NTBs on imports, including some agricultural products, petroleum products, urea, and new and second-hand vehicles (Box III.2). In addition, the policy established an "early warning system" for monitoring imports, particularly of 300 sensitive items, on a monthly basis.[15] Consistent with

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[14] For a more detailed description of trade policy reforms through 2000, see *India—Recent Economic Developments*, (IMF Staff Country Report No. 00/155, November 2000).

[15] In early May 2001, the Indian government announced that the import of 300 consumer goods—including edible oils, toys, and liquor—would be restricted to only 11 entry points from over 200 previously. This restriction, however, was removed by the end of May.

Box III.2. India: 2001/02 EXIM Policy Statement

The key measures in the 2001/02 EXIM Policy Statement included:

- **Removal of remaining QRs** on 715 items.

- **Imposition of other nontariff barriers on imports**, including of agricultural products, petroleum products, urea, and new and secondhand vehicles:
  - Imports of some sensitive commodities—including wheat, rice, maize, petrol, diesel, ATF, and urea—were permitted only through designated State Trading Enterprises;
  - All primary product imports of plant and animal origin were subject to import permits based on sanitary and phytosanitary measures and provisions; and imports of liquor, processed food, and tea waste were subject to existing regulations on health and hygiene;
  - Imports of left-hand drive vehicles and of automobiles older than three years were banned; imports of secondhand automobiles were allowed only through the port of Mumbai; and additional certification requirements were mandated for secondhand automobiles.

- **Establishment of an "early warning system" for monitoring imports:**
  - A watch list of 300 sensitive items would be tracked on a monthly basis (with one month lag by later in 2001/02) by a special group that would also analyze the import data and publish a monthly statement in the media;
  - Proposed safeguards included imposition of safeguard duties (already imposed in seven cases), of temporary QRs, and of anti-dumping duties.

- **Increased tariffs** (announced in the 2001/02 Budget), including on:
  - Duty on secondhand automobiles raised to 180 percent (including excise duties);
  - Customs duties on tea, coffee, copra, coconut, and desiccated coconut raised from 35 percent to 70 percent;
  - Increased duties on crude and refined edible oils.

- **An annual export growth target of 18 percent**, with the aim of increasing India's share of global exports to 1 percent by 2004. Key proposals included:
  - EXIM Policy schemes (such as the Duty Exemption Scheme and the Export Promotion of Capital Goods Scheme) made applicable to additional sectors, including agriculture in particular;
  - Simplification of procedures for establishing Special Economic Zones;
  - A "Market Access Initiative" in which the government would assist industry in research and development, market research, specific market and product studies, warehousing and retail market infrastructure in selected countries, and direct market promotion through media advertising and buyer-seller meets.

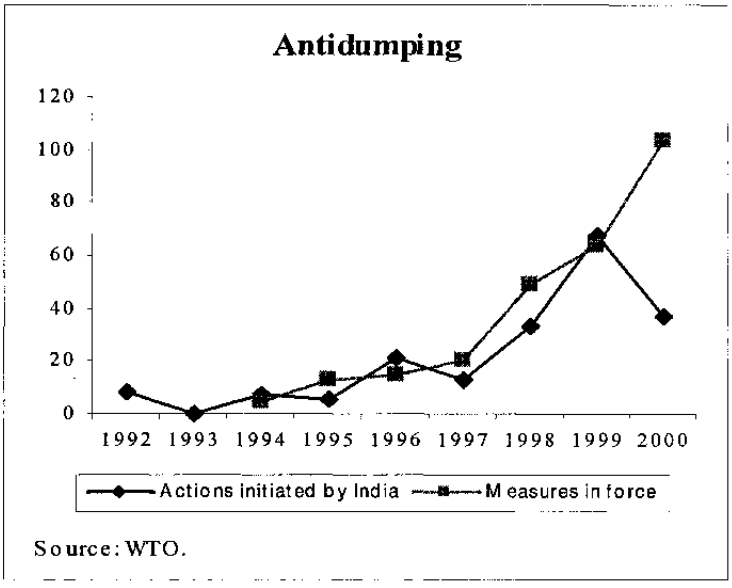
WTO rules, the EXIM policy proposed safeguards to prevent import surges that seriously threaten domestic industry included the imposition of safeguard duties (already imposed in seven cases), of temporary QRs, and of antidumping and countervailing duties. India also retained the option to increase applied tariff rates at any time provided that these rates do not exceed WTO bound rates and to restrict or prohibit imports for the protection of public morals, for the conservation of exhaustible natural resources, or based on health, sanitary, phytosanitary, or national security reasons.

19. **Despite concerns that the removal of QRs could lead to a dumping and surge of imports into India, only a small number of industries have been adversely affected.** These include dry-cell batteries, sport shoes, and some industries that in the past have been reserved for small-scale industries. In a number of instances where complaints about import surges have arisen—such as for import of apples, dust tea, and skimmed milk—total imports represented just a fraction of domestic production. Imports from some countries—China, for example—have increased rapidly in recent years, possibly related to the removal of QRs. However, Indian exports to these same countries have increased at even a faster rate, limiting the overall impact on the domestic economy.

20. **Average tariff rates remained high and broadly unchanged during 1997-2000.** Nonetheless, significant progress was made toward rationalizing the tariff structure, with the number of bands reduced from seven in 1998/99 to four in 2000/01. The statutory maximum tariff rate was also reduced from 45 percent to 35 percent—although higher duties applied to a number of items.[16] At the same time, a special import surcharge of 2 percent was introduced in the 1996/97 budget and subsequently increased to 5 percent in September 1997, and then to 10 percent in the 1999/00 budget.

21. **The 2001/02 budget took further steps toward tariff reduction.** The 10 percent customs duty surcharge was abolished from March 1, 2001, and the government also committed itself to lowering the statutory maximum tariff rate from 35 percent to 20 percent by 2004/05. However, in response to the withdrawal of QRs, customs duties were increased for a number of products—including tea, coffee, copra, coconut, and various edible oils and second-hand vehicles—to rates well above the statutory maximum tariff rate.

22. **Although tariff exemptions were reduced during the 1990s, their scope remains significant.** Exemptions apply to imports for export processing, certain megapower projects, and specific end uses such as fertilizer, leather, foodgrain, precious stones, and sports goods industries. In addition, preferential rates also apply to imports from selected countries.



Source: WTO.

[16] These items accounted for less than 1 percent of tariff lines, but included goods such as sugar, edible oils, rice, and wheat.

23. **As tariff and nontariff barriers have been reduced during the 1990s, India has generally increased the use of antidumping measures and is considered to be one of the most active users of these measures.** India had 103 antidumping measures in force as of end-2000 up from 49 at end-1998 and 64 at end-1999, and initiated 37 new actions in 2000. During 2000, imports from China were most frequently targeted with 10 initiations, followed by the European Union (6 initiations) and Taiwan POC (4 initiations)

Table III.1. India: Balance of Payments 1995/96-2000/01 1/

(In billions of U.S. dollars)

	1995/96	1996/97	1997/98	1998/99	1999/00	1999/00		2000/01		
						Q3	Q4	Q1	Q2	Q3
Current account balance	-5.9	-4.6	-5.5	-4.0	-4.2	-0.2	-1.1	-2.1	-1.4	-0.5
Trade balance	-11.4	-14.8	-15.5	-13.2	-17.1	-3.8	-5.7	-4.7	-4.5	-4.0
Merchandise exports	32.3	34.1	35.7	34.3	38.3	10.2	10.3	10.4	11.3	11.2
Merchandise imports	43.7	48.9	51.2	47.5	55.4	14.0	16.0	15.1	15.8	15.1
Oil	7.5	10.0	8.2	6.4	12.6	2.7	3.0	4.0	4.4	4.1
Non-oil	36.2	38.9	43.0	41.2	42.8	11.2	13.1	11.2	11.5	11.0
Customs	29.1	29.1	33.2	36.0	36.5	9.3	9.0	8.7	8.5	8.4
Noncustoms	7.1	9.8	9.8	5.1	6.3	2.0	4.0	2.4	2.9	2.6
Nonfactor services balance	-0.2	0.7	1.3	2.2	3.9	1.1	2.2	0.4	0.6	1.0
Receipts	7.3	7.5	9.4	13.2	15.7	4.0	5.2	3.3	4.4	5.6
Travel	2.7	2.9	2.9	3.0	3.0	0.8	0.9	0.7	0.7	0.9
Transportation	2.0	2.0	1.8	1.9	1.7	0.4	0.5	0.4	0.5	0.5
Insurance	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Government nie	0.0	0.1	0.3	0.6	0.6	0.2	0.2	0.1	0.2	0.2
Miscellaneous	2.4	2.4	4.2	7.4	10.1	2.5	3.6	2.0	2.9	3.9
Payments	7.5	6.7	8.1	11.0	11.9	2.9	3.0	2.9	3.8	4.6
Travel	1.2	0.9	1.4	1.7	2.1	0.5	0.5	0.7	0.6	0.7
Transportation	2.2	2.4	2.5	2.7	2.4	0.6	0.5	0.9	0.8	0.8
Insurance	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Government nie	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1
Miscellaneous	3.8	3.2	3.8	6.2	6.9	1.6	1.8	1.2	2.3	3.0
Net investment income	-3.2	-3.3	-3.5	-3.5	-3.6	-0.8	-0.9	-1.2	-0.9	-0.7
Credits	1.4	1.1	1.6	1.9	1.9	0.5	0.5	0.5	0.6	0.6
Debits	4.6	4.4	5.1	5.5	5.5	1.3	1.5	1.7	1.5	1.3
Transfers, net	8.9	12.8	12.2	10.6	12.6	3.3	3.4	3.4	3.4	3.2
Capital account balance	4.1	12.0	9.8	8.6	10.2	1.9	4.0	1.3	1.2	4.1
Direct investment, net 2/	2.0	2.7	3.5	2.4	2.1	0.4	0.8	0.6	0.5	0.5
Portfolio investment, net	2.7	3.3	1.8	-0.1	3.0	0.3	1.3	0.6	0.1	-0.4
Of which: FIIs and others	2.0	1.9	1.0	-0.4	2.2	0.2	0.9	0.2	-0.2	-0.4
External assistance, net	0.9	1.1	0.9	0.8	0.9	0.4	0.4	-0.4	0.0	0.3
Commercial borrowing, net	1.3	2.9	4.0	4.4	0.3	-0.1	0.4	-0.4	-0.2	5.1
Short-term credit, net	0.0	0.8	-0.1	-0.7	0.4	0.0	0.1	0.4	0.6	-0.5
NRI deposits, net	1.1	3.4	1.1	1.7	2.1	0.6	0.7	0.8	0.6	-0.4
Rupee debt	-1.0	-0.7	-0.8	-0.8	-0.7	0.0	-0.1	-0.5	0.0	0.0
Other capital	-3.1	-1.4	-0.7	0.9	2.1	0.4	0.6	0.1	-0.3	-0.6
Errors and omissions	0.6	-0.6	0.2	-0.3	0.3	0.4	0.3	-0.2	-0.2	0.6
Overall balance	-1.2	6.8	4.5	4.2	6.4	2.1	3.3	-1.0	-0.4	4.2
IMF, net	-1.7	-1.0	-0.6	-0.4	-0.3	-0.1	0.0	0.0	...	...
Increase in gross reserves (-)	2.9	-5.8	-3.9	-3.8	-6.1	-2.0	-3.3	1.0	0.4	-4.2
Memorandum items:										
Foreign exchange reserves	21.7	26.4	29.4	32.5	38.0	34.9	38.0	36.7	35.4	40.0
In months of imports of goods and services	4.7	5.3	6.0	5.8	5.9	5.6	5.9	5.5	5.2	5.8
Export value (in US$ terms; percent change)	20.3	5.6	4.5	-3.9	11.6	23.5	7.9	27.6	17.4	9.9
Import value (in US$ terms; percent change)	21.6	12.1	4.6	-7.1	16.5	19.8	43.1	23.0	21.3	8.3
Exports (in volume terms; percent change)	12.8	9.2	11.2	-0.3	12.8	...	...	...	...	...
Imports (in volume terms; percent change)	13.4	13.4	12.6	-2.4	10.8	...	...	...	...	...
Current account (percent of GDP) 3/	-1.7	-1.2	-1.3	-1.0	-0.9	-0.6	-0.9	-1.0	-1.0	-1.1
External debt (percent of GDP)	26.4	24.3	22.8	23.4	21.8	...	...	...	...	...
Short-term external debt (percent of GDP) 4/	3.4	3.5	2.9	2.7	2.2	...	...	...	...	...
Debt service in percent of exports (g & s)	25.5	22.2	19.3	19.3	17.8	...	...	...	...	...

Sources: CEIC and staff estimates.

1/ Indian authorities' presentation. Fiscal year runs from April 1-March 31.

2/ Equal to net foreign direct investment in India less net foreign investment abroad.

3/ For quarterly data, figures shown are the cumulative sum of the last four quarters.

4/ Residual-maturity basis, except for medium and long-term NRI deposits where contracted-maturity basis.

Table III.2. India: Official Reserves, 1995/96-2000/01

(In millions of U.S. dollars; end-of-period)

	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
Gold 1/	654	620	596	546	542	508
SDR holdings	82	2	1	8	4	2
Reserve position in IMF	311	295	284	663	658	616
Foreign exchange	17,044	22,367	25,975	29,522	35,058	39,554
Gross reserves	18,090	23,284	26,856	30,739	36,262	40,680
Use of Fund credit	2,374	1,313	664	288	26	0
Memorandum items:						
Gross reserves (gold valued at market prices) 2/	21,687	26,423	29,367	32,490	38,036	42,281
Outstanding net forward sales (-) / purchases (+)	-2,216	-345	-1,792	-802	-675	-1,259
Net reserves 3/	17,097	24,765	26,911	31,401	37,335	41,022

Sources: IMF, International Financial Statistics; except for memorandum items, where the data are provided by the Indian authorities.

1/ Gold valued at SDR 35 per troy ounce.
2/ Excluding Reserve position in the Fund.
3/ Defined as gross reserves (with gold valued at market prices) minus use of Fund credit and outstanding forward

Table III.3. Selected Countries: Inward Foreign Direct Investment, 1995-1999
(US$ billions)

	1995	1996	1997	1998	1999
China	37.7	42.4	45.4	45.6	41.0
Brazil	5.5	10.0	15.5	22.5	28.7
Mexico	9.5	9.2	12.8	11.3	11.9
Argentina	5.3	6.5	8.1	6.2	9.1
Chile	1.9	4.1	4.4	4.5	8.9
Singapore	7.2	10.5	12.5	4.2	7.1
Thailand	2.1	2.6	3.7	7.2	6.2
Korea	1.8	2.3	2.8	5.2	4.3
Malaysia	5.8	7.3	6.5	2.7	3.5
India	2.1	2.5	3.6	2.6	2.2
All Developing and Emerging Market Countries	124.2	153.2	181.5	171.3	185.7
Of which: India's share (in percent)	1.7	1.6	2.0	1.5	1.2

Source: *World Economic Outlook*.

Table III.4. India: External Commercial Borrowing, 1993/94-2000/01 1/

(In millions of U.S. dollars)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01 2/
Total sanctions	2,858	4,367	6,286	8,581	8,712	5,200	3,398	1,719
Financial institutions	294	476	1,849	1,502	795	150	125	70
Power	208	1,884	616	1,875	3,014	3,998	2,267	375
Railways	...	...	45	144	179	15	...	...
Shipping	460	117	105	146	210	37	27	144
Telecom	460	117	105	289	1,492	75	...	...
Petroleum	970	129	160	783	230	40	218	150
Civil aviation	91	18	390	46	373	...	...	...
Export-oriented units	156	48	191	...	...	...	...	...
Others	406	1,695	2,897	3,797	2,419	885	761	980
Gross disbursement 3/	2,913	4,152	4,252	7,571	7,371	7,231	3,187	2,360
Outstanding debt 4/	12,363	12,991	13,873	14,335	16,986	21,041	19,373	19,683
(In percent of total external debt)	13.3	13.1	14.8	15.3	18.2	21.5	19.7	20.1

Sources: Data provided by the Indian authorities.

1/ Borrowing controlled by "ECB guidelines", including loans from banks abroad, bonds (except foreign currency convertible bonds), and credit from official export credit agencies.
2/ Through end-December 2000, except for gross disbursement and outstanding debt, where through end-September 2000.
3/ On a balance-of-payments basis.
4/ Includes Resurgent India Bonds, but not the India Millennium Deposit Scheme as data are only through end-September 2000.

Table III.5. India: External Debt, 1994/95-2000/01 1/

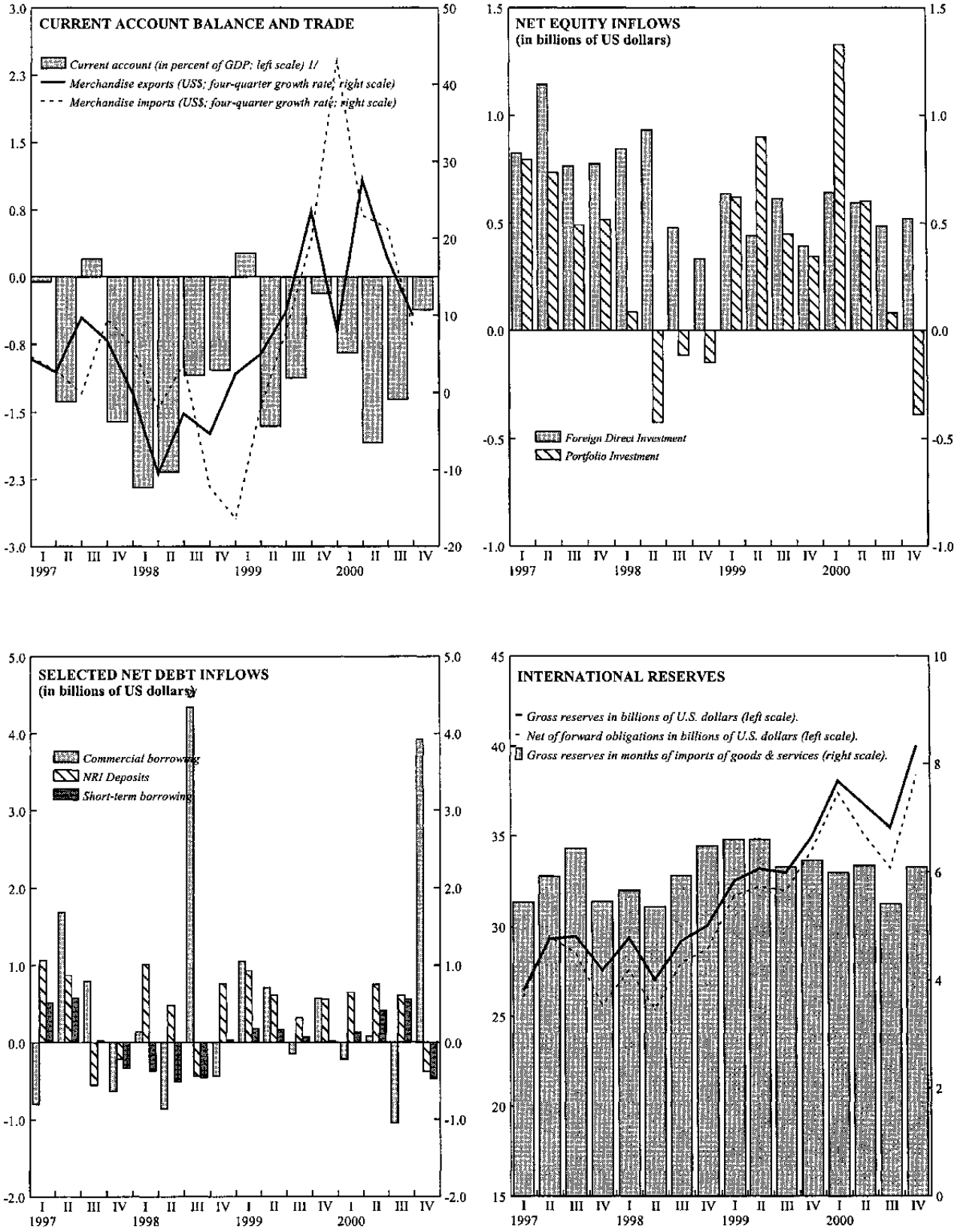
(In billions of U.S. dollars; end-of-period)

	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
Foreign currency-denominated debt 2/	89.4	85.5	86.0	87.7	92.9	94.0	94.1
Medium and long term	85.1	80.5	79.2	82.6	88.6	90.0	89.6
Multilateral	28.5	28.6	29.2	29.6	30.5	31.3	30.7
Government borrowing	26.1	26.1	26.4	26.3	27.0	27.4	...
Concessional	17.8	17.6	17.6	17.8	18.6	19.0	...
Of which : IDA	17.4	17.3	17.3	17.5	18.3	18.7	...
Nonconcessional	8.4	8.5	8.7	8.5	8.4	8.5	...
Of which : IBRD	7.1	6.9	6.8	6.4	6.1	5.9	...
Nongovernment borrowing	2.4	2.6	2.8	3.2	3.6	3.9	...
Public sector	1.0	1.4	1.3	2.2	2.5	2.8	...
Financial institutions	0.8	0.7	0.7	0.6	0.6	0.8	...
Private sector	0.6	0.5	0.9	0.4	0.4	0.4	...
Bilateral	20.3	19.2	17.5	17.0	17.5	18.1	17.2
Government borrowing	16.8	15.5	13.7	13.0	13.4	13.9	...
Of which : Concessional	16.8	15.2	13.4	12.8	13.3	13.6	...
Nongovernment borrowing	3.4	3.7	3.8	4.0	4.0	4.1	...
Public sector	2.2	1.7	1.7	1.4	1.3	1.4	...
Financial institutions	1.0	1.4	1.3	1.5	1.5	1.5	...
Private sector	0.3	0.5	0.8	1.1	1.2	1.2	...
Export credit	6.6	5.4	5.9	6.5	6.9	6.7	6.3
Commercial borrowing	13.0	13.9	14.3	17.0	21.0	19.4	19.7
Of which : Commercial bank loans	5.8	6.7	8.3	10.0	10.4	10.0	...
Nonresident Indian (NRI) deposits 3/	12.4	11.0	11.0	11.9	12.3	14.6	15.8
IMF	4.3	2.4	1.3	0.7	0.3	0.0	0.0
Short term (contracted-maturity basis)	4.3	5.0	6.7	5.0	4.4	4.0	4.5
Of which : NRI deposits 4/	2.3	2.9	3.8	2.2	2.2	1.5	...
Rupee-denominated debt 5/	9.6	8.2	7.5	5.9	4.7	4.4	3.8
Total external debt	99.0	93.7	93.5	93.5	97.7	98.4	97.9
(In percent of GDP)	(30.8)	(26.4)	(24.3)	(22.8)	(23.4)	(21.8)	...
Memorandum items:							
Concessional debt 6/	44.8	41.9	39.5	36.9	37.3	37.9	36.7
(In percent of total external debt)	(45.3)	(44.7)	(42.2)	(39.5)	(38.1)	(38.5)	(37.5)
Short term (contracted-maturity basis)	4.3	5.0	6.7	5.0	4.4	4.0	4.5
(In percent of GDP)	(1.3)	(1.4)	(1.7)	(1.2)	(1.0)	(0.9)	...
Short term (residual-maturity basis) 7/	...	...	13.6	11.9	11.2	10.1	...
(In percent of GDP)	...	...	(3.5)	(2.9)	(2.7)	(2.2)	...

Source: Government of India.

1/ Data at end-March, except for 2000/01 where at end-September 2000. Most components at end-September 2000 are not yet available.
2/ Excludes rupee-denominated debt owed to Russia.
3/ Deposits above one year's maturity. Excludes nonrepatriable, nonresident rupee deposits.
4/ Deposits of up to one year's maturity.
5/ Rupee-denominated debt owed to Russia, converted at current exchange rate, and payable through exports.
6/ Includes mutilateral and bilateral government and nongovernment borrowing.
7/ Except contracted-maturity for NRI deposits.

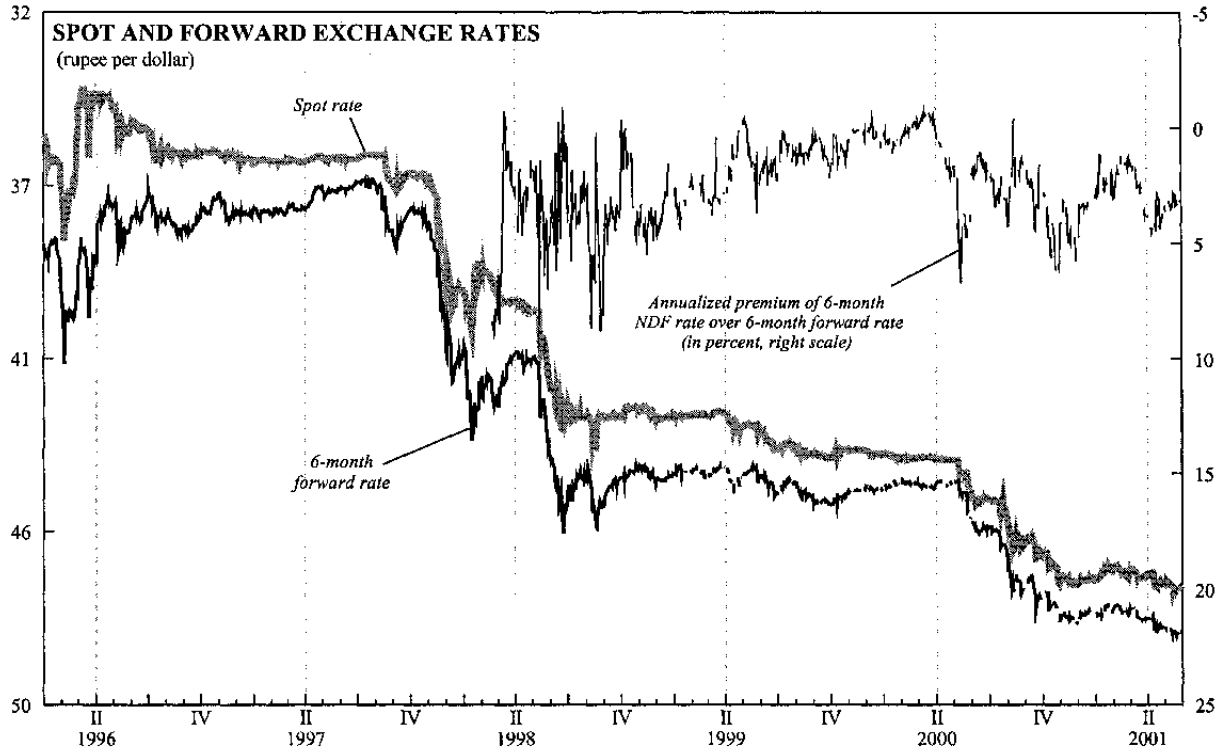
Chart III.1. India: Quarterly External Sector Developments, 1997-2000

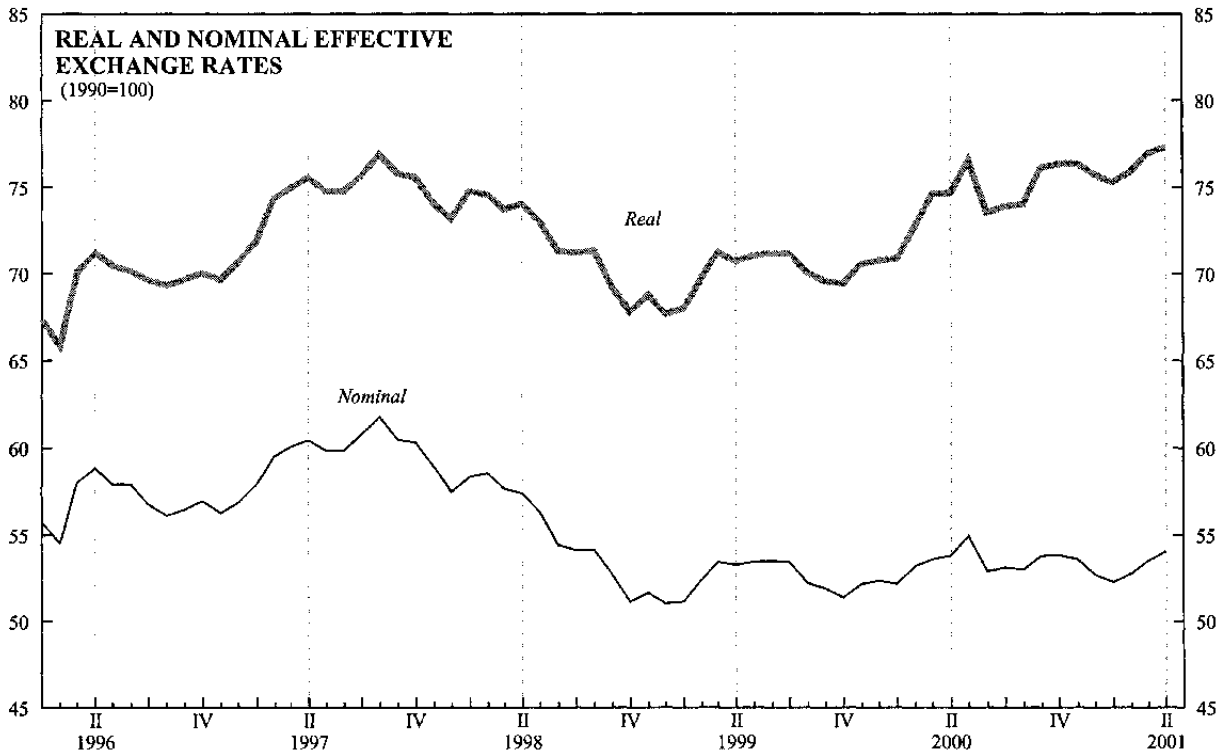


Source: Reserve Bank of India

1/ Shown as the sum of the preceding four quarters.
2/ Reflects proceeds from the Resurgent India Bond issue.

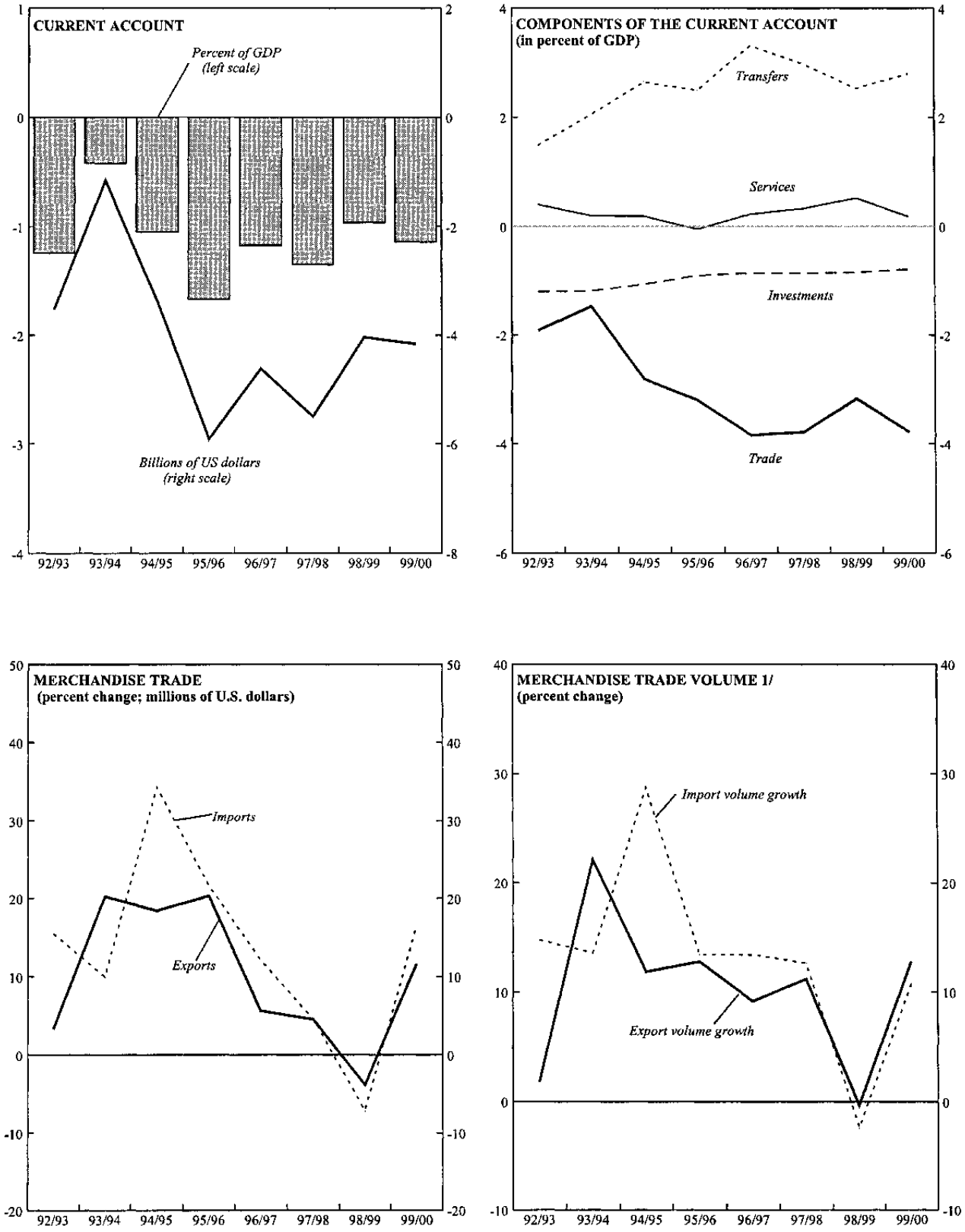
Chart III.2. India: Exchange Rate Developments, 1996-2001





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

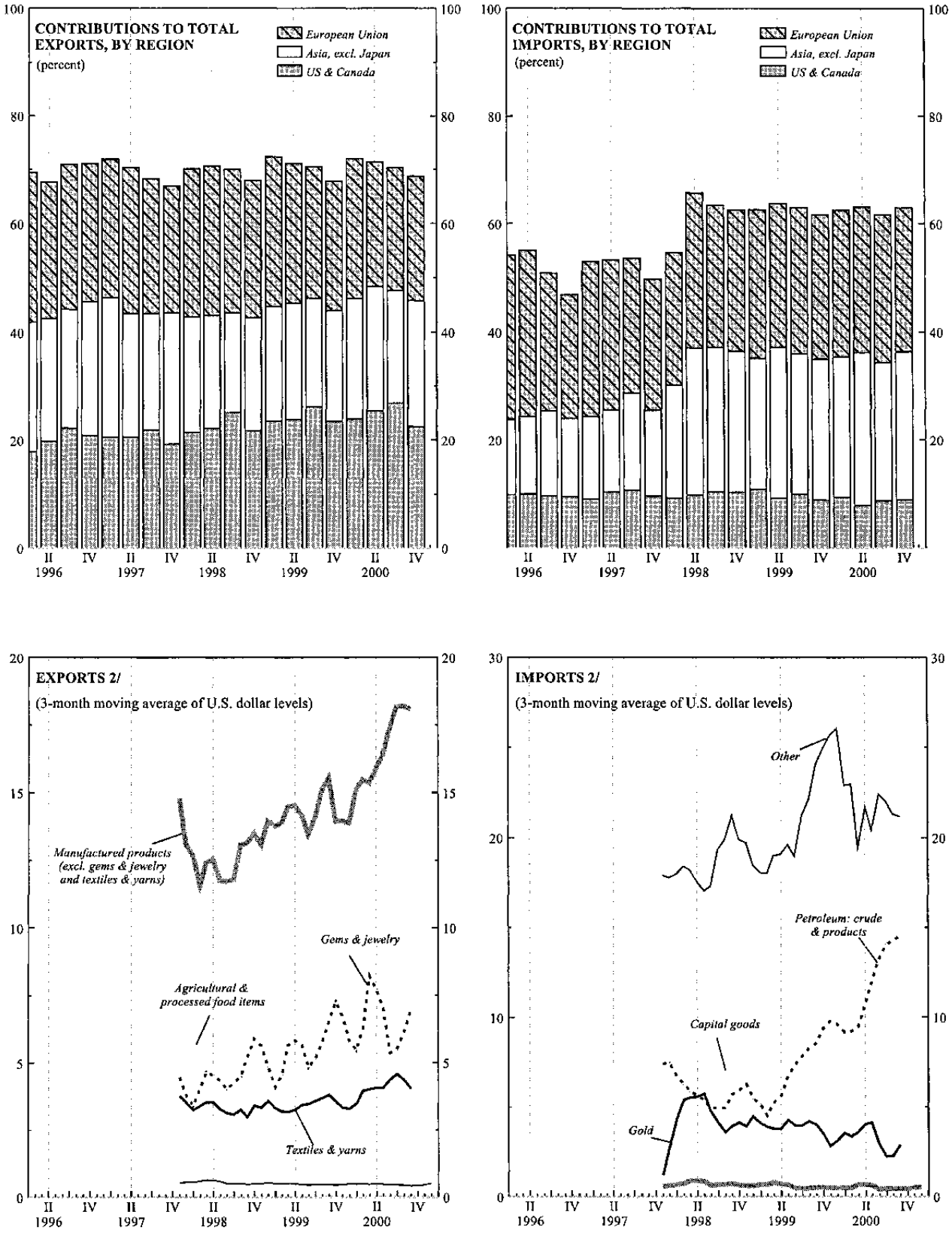
Chart III.3. India: Current Account Developments, 1992/93-1999/2000



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

1/ Volume estimates are derived from partner country trade price deflators from the WEO database.

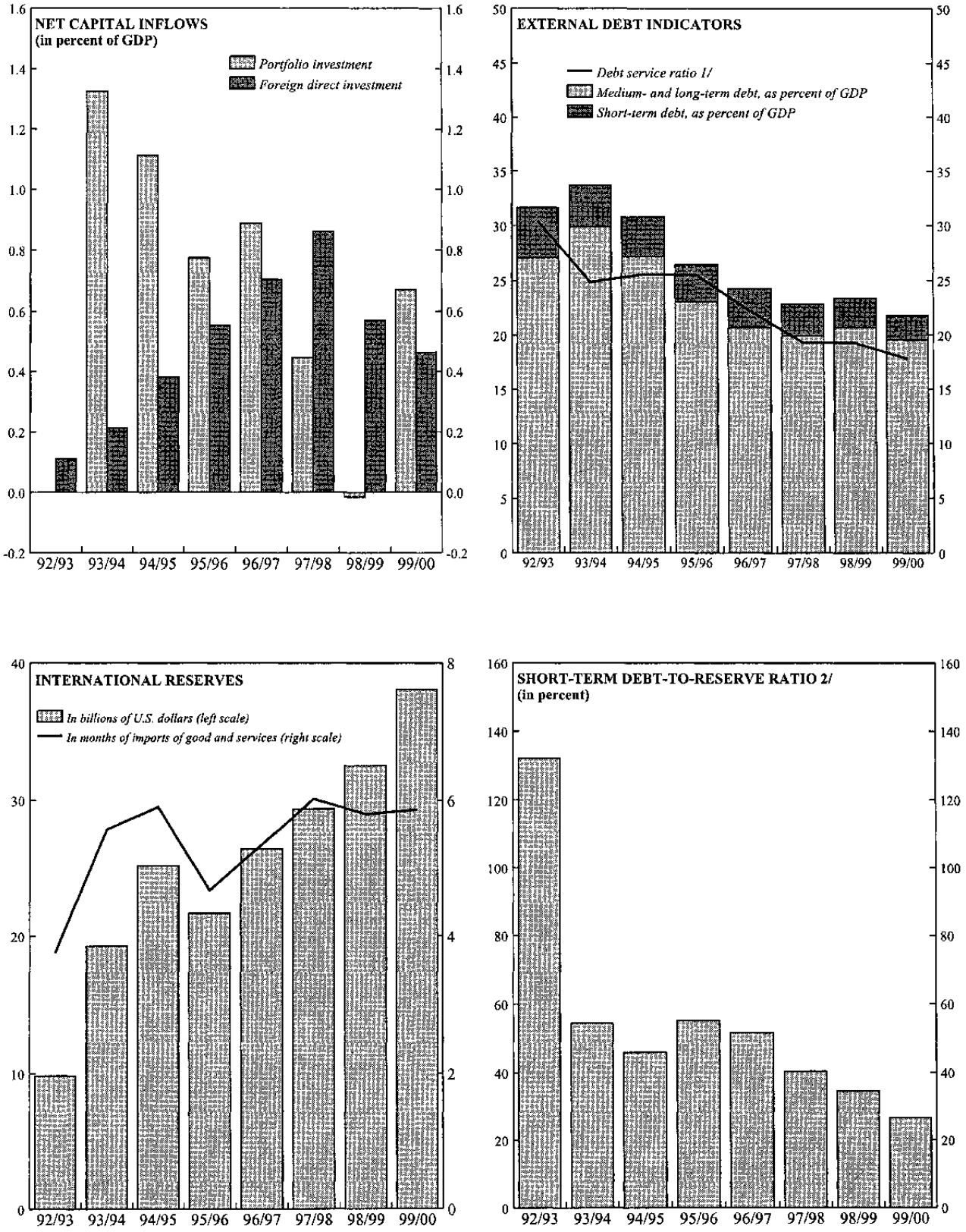
Chart III.4. India: Merchandise Exports and Imports, 1996-2000



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

1/ Customs data; based on U.S. dollar values.
2/ In billions of U.S. dollars.

Chart III.5. India: Selected External Indicators, 1992/93-1999/00



Source: Reserve Bank of India.

1/ In percent of current receipts.
2/ On a residual-maturity basis except for NRI deposits which are on a contractual-maturity basis.

IV. Monetary Policy and Financial Market Developments[1]

A. Monetary Policy and Interest Rate Developments

1. **Monetary policy developments during 2000/01 occurred in roughly three phases.** The year began with the Reserve Bank of India (RBI) cutting interest rates and the commercial banks' cash reserve ratio (CRR), reflecting a continuation of the previous year's bias toward ease. However, policy began to tighten shortly thereafter, and official interest rates were hiked in August, largely in response to pressure on the exchange rate, in turn related to increases in international interest rates and pressure on the current account due to higher world oil prices. Exchange rate pressures dissipated from November, as world oil prices moderated, foreign reserves were rebuilt with the success of the India Millennium Deposit (IMD) scheme, and global interest rates fell. Against this background, and in response to signs that domestic demand was weakening and inflation risks were contained, money market conditions were progressively eased, and the RBI cut official interest rates by the end of 2000/01.

2. **In April 2000, the RBI cut its Bank rate by 100 basis points to 7 percent and reduced the repo rate by the same amount to 5 percent** (Chart IV.1 and Table IV.1). The rate on saving deposits with banks was reduced from 4½ percent to 4 percent, and the CRR was cut from 9 percent to 8 percent. These measures were reinforced by the April 2000 *Monetary and Credit Policy Statement,* in which the RBI signaled its intention to continue its easing bias. Banks followed through almost immediately by lowering their average prime lending rates (PLR) by 100 basis points to 11½ percent.

Table IV.1. India: Selected Monetary Indicators, 1995/96-2001/02
(End-of-period)

	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	May 2001/02
				(Percent change)			
Reserve money	14.9	2.8	13.2	14.6	8.1	8.3	...
M3	13.6	16.2	18.0	19.4	14.6	16.2	...
NM3 1/	12.0	15.5	17.8	18.0	15.3	13.9	...
Credit to commercial sector	17.7	9.2	15.1	14.5	18.3	14.3	...
				(Percent)			
Cash Reserve Ratio (CRR)	14.0	10.0	10.3	10.5	9.0	8.0	7.5
Bank rate	12.0	12.0	10.5	8.0	8.0	7.0	7.0
91-day Treasury bill yield	13.0	8.0	7.3	8.8	9.2	8.8	7.4
Commercial bank PLR 2/	16.5	14.5-15.0	14.0	12.0-13.0	12.0-12.5	11.0-12.0	11.0-12.0

Source: Reserve Bank of India.

1/ New broad money series.
2/ Relates to five major banks

[1] Prepared by Taimur Baig and Dong He.

3. **While yields on short-term government securities fell sharply in response to the policy moves, longer-term yields did not respond as significantly**. The government's issuance of large quantities of longer-dated securities contributed to a marked steepening of the yield curve, and the difference between the 10-year and 3-month yields jumped to 240 basis points by end-April (Chart IV.2). Easy liquidity conditions during this period kept call money rates between the fixed repo rate (5 percent) and slightly above the Bank rate (7 percent).

4. **Market sentiment weakened and pressure on the exchange rate emerged through the summer of 2000**. This shift in sentiment was prompted by sharply rising oil prices, the drop in the U.S. Nasdaq, and interest rate hikes by the U.S. Federal Reserve and the European Central Bank. Through May and June, portfolio flows dried up, stock market volatility increased, balance of payments pressures resulted from oil imports, and headline inflation jumped to over 6½ percent. In response, the yield curve shifted up noticeably, with a firming of both short- and longer-term yields.

5. **Against this backdrop, in July, the RBI announced an increase in the Bank Rate and CRR of 100 and 50 basis points, respectively**. The RBI also raised short-term repo rates in several stages using its newly introduced Liquidity Adjustment Facility (LAF), in effect reversing its April policy move. Following the announcement, short-term rates rose to their highest levels in two years, commercial banks raised the PLR back to its pre-April level, and the yield curve continued to shift up through August (Chart IV.2).

6. **Pressure on the rupee began to ease by November**. This reflected declining oil prices, expectations of global interest rate cuts, and a rebuilding of foreign reserves, aided by inflows from the IMD. The rupee stabilized, and money market and securities market conditions became more favorable. An easing of repo and call rates by the RBI was paralleled by a gradual decline in yields on treasury bills and government securities. The yield curve began to flatten and shift down with falling short-term rates. Through December and January, securities markets rallied as monetary policy easing in the United States raised expectations for a rate cut in India.

7. **The authorities responded to the reduction in external pressures and signs of economic weakness by announcing a series of easing steps in February and March 2001**. Around the time of the 2001/02 budget, the RBI cut the Bank rate by 100 basis points in two stages and CRR by 50 basis points. In response, commercial banks lowered their PLR to 11½ percent, facilitated by the government's announcement that the administered rates on small savings would be reduced by 100-150 basis points. At this point, the RBI expressed the view that the downside risks to growth were manageable, and the uncertainties on the inflation front combined with the need to maintain confidence in the face of the stock market turbulence argued for putting further cuts on hold in the near term.

8. **However, in its April 2001 *Monetary and Credit Policy Statement*, the RBI suggested a bias toward further ease** (Box IV.1). Subsequently, the RBI lowered its repo rate by 25 basis points each on April 26 and May 28, bringing it to 6½ percent, and lowered

Box IV.1. India: April 2001 Monetary and Credit Policy Statement

With rate cuts preceding the release of the statement, the RBI left the Bank rate and CRR unchanged. However, there were references to the possibility of some future softening of rates. For 2001/02, the RBI projected GDP growth of 6-6½ percent; inflation within 5 percent; broad money growth of about 14½ percent; and the external current account deficit well below 2 percent of GDP.

CRR balances: Effective April 21, the interest rate paid on eligible CRR balances was increased from 4 to 6 percent. The RBI indicated that at some point in the future interest paid on CRR balances would be adjusted to the Bank Rate.

Liquidity Adjustment Facility: The RBI announced that the standing liquidity facilities available from the RBI (collateralized lending and export refinance) were to be split into two parts: (i) a normal facility and (ii) a back-stop facility. The normal facility initially constituted two-thirds, and the back-stop facility one-third, of the total credit limits. The normal facility would be provided at the Bank rate, whereas the back-stop facility will be provided at a variable daily rate (initially, at one percentage point above the reverse repo rate). With effect from the fortnight beginning May 5, 2001, the magnitude of the export refinance credit facility was increased to 15 percent of the outstanding export credit eligible for refinance.

Interest rate regulation: The ceiling rate with respect to pre-shipment credit up to 180 days was set at 1½ percentage points below the PLR; banks were also free to charge interest rates below the ceiling rate. In addition, the ceiling rate on foreign currency loans for exports by banks was revised to LIBOR plus 1 percentage point. The requirement that the PLR act as the floor rate for loans above Rs 200,000 was relaxed, and banks were allowed to offer loans at below-PLR rates to exporters or other creditworthy borrowers including public enterprises.

Inter-bank call money market: The statement announced that corporates would be cut out from the market by end-June 2001, and access to other non-bank institutions (including financial institutions, mutual funds and insurance companies) would be gradually reduced in four stages. The minimum maturity period for term deposits was reduced to 7 days (from 15).

Prudential regulations: The RBI announced that loans would be classified as non-performing if the interest and/or installment of principal remained overdue for a period of more than 90 days, beginning from 2003/04 (from the prevailing practice of 180 days). To facilitate the transition, the RBI called on banks to begin making additional provisions for such loans. In addition, assets of financial institutions would be treated as non-performing if interest and/or amortization of principal remained overdue for 180 days (previously 365 days).

Stock Market: The RBI's statement proposed to revise guidelines issued in November 2000 on banks' investments in shares, advances against shares, and other exposures. It discouraged Urban Cooperative Banks (UCBs) from lending directly or indirectly against security of shares, and urged them to unwind existing lending to stock-brokers or direct investment in shares. The statement limited the amount of funding available to institutions such as UCBs from the call-market, and imposed limits on cross exposures within the UCB sector (i.e., UCBs were advised not to increase term deposits with other UCBs and to unwind existing deposits). The proportion of the Statutory Liquidity Requirement that UCBs have to hold in the form of government and other approved securities was increased, and the statement raised the possibility of setting up a new supervisory body for UCBs.

the CRR to 7½ percent from 8 percent on May 19. Interest rates in the Treasury Bill and securities market, after jumping temporarily in March in response to stock market and political scandals, resumed their downward path in April.

9. **Owing to increases in inflation and a general decline in benchmark nominal rates, real interest rates declined in 2000/01** (Table IV.2). Despite within-year volatility, nominal rates fell on average during 2000/01, and in real terms, the decline was magnified by rising inflation. The decrease was most striking when the WPI or its nonfood manufactured component was used to calculate real rates, as inflation figures derived from these indexes were substantially higher than the previous year.

Table IV.2. India: Real Interest Rates
(In Percent)

	Real Money Market Rate				Real Lending Rate			
Calculated Using:	WPI	WPIM	WPIMNF	CPI	WPI	WPIM	WPIMNF	CPI
1983/84-1999/00 (Average)	3.3	3.6		1.7	8.4	8.7		6.8
1983/84-1990/91 (Average)	3.6	3.4		2.1	9.3	9.1		7.8
1991/92-1999/00 (Average)	3.0	3.8		1.4	7.5	8.4		5.9
1998/99	1.0	2.6	4.2	-6.1	6.7	8.3	9.9	-0.4
1999/00	5.2	6.0	5.5	5.2	8.8	9.6	9.1	8.8
2000/01	1.4	5.2	3.5	4.7	4.9	8.7	6.9	8.2

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

Key: WPI: Wholesale Price Index
WPIM: Manufactured subcomponent of the WPI
WPIMNF: Non-food Manufactured subcomponent of WPI
CPI: Consumer Price Index

B. Monetary Aggregates

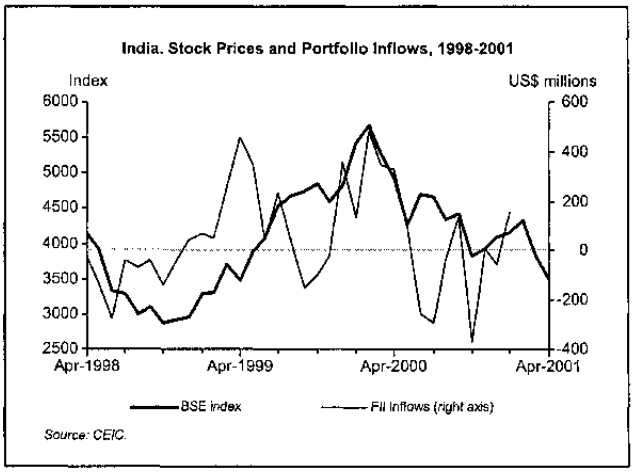
10. **Reserve money continued to grow at a moderate rate in 2000/01, increasing by 8¼ percent (y/y)** (Chart IV.3 and Table IV.3). The relatively slow rate of reserve money expansion reflected the effects of the economic weakness and the cut in the CRR. In particular, RBI credit to banks and commercial sector fell by 18 percent. Despite continued fiscal weakness, net RBI credit to government increased by 6 percent, as the RBI's large net subscription to the government's fresh dated securities was offset by net open market sales. Aided by IMD inflows, the RBI's net foreign assets grew 19 percent during the year.

11. **Broad money (M3) growth accelerated to 18 percent (y/y) in 2000/01 from the 14½ percent in the previous year, exceeding the RBI's projection of 15 percent** (Chart V.3 and Table IV.4). However, M3 growth was boosted by the effects of the IMD and other nonresident foreign currency deposits, and the RBI's new monetary aggregate (NM3), which excludes these flows, slowed to a growth of 14 percent, compared to 15¼ percent in the previous year.[2]

12. **Despite lower agricultural activity, and the larger base in 1999/2000 on account of Y2K uncertainties, growth in currency held by the public, at 10¾ percent, was the same as the previous year's growth rate.** However, the slowing of the economy was reflected in the growth of domestic credit, which eased to 15 percent during the year, compared to 6¼ percent the year before. Both net credit to government and credit to commercial sector grew slower than in 1999/2000. Net foreign assets of the banking sector, however, were bolstered by IMD flows, and grew by 18¾ percent, 3 percentage points higher than the previous year. Although bank credit to commercial sector rose rapidly in the first part of the year, it slowed significantly by year-end, and grew by 14¾ percent in 2000/01 on average, compared to 18¼ percent in the previous year.

C. Stock Market Developments

13. **In the wake of the Asia crisis and the imposition of sanctions, Indian stock prices rebounded strongly during October 1998-February 2000.** The Bombay Stock Exchange index rose by over 100 percent over this period to reach an historical high, and other indices performed similarly. Contributing to the surge were the announcement in February 1999 of favorable tax treatment of dividend distributions as well as international developments, including the improved sentiment toward emerging markets and the global investor enthusiasm for information technology (IT) stocks—IT stocks represent roughly one quarter of the Indian market's capitalization.



14. **However, stock prices fell sharply during February 2000-April 2001, with the BSE index dropping by nearly 40 percent on a monthly average basis.** In large part the decline reflected the global turnaround in sentiment toward the IT sector, but domestic factors were also significant. Notably, investor sentiment was adversely affected by concern regarding the effect of high oil prices

[2] The new broad money (NM3) series excludes nonresident repatriable foreign currency fixed liabilities, as well as pension and provident fund assets.

on growth, as well as uncertainty regarding the effect of trade liberalization on competitiveness. The effects of weak investor sentiment were also felt in the secondary market—resource mobilization through Initial Public Offerings declined significantly and funds raised through public and rights issues were 26 percent lower during April-December 2000 compared to the corresponding period of 1999.

15. **In March and April 2001, excessive leveraging and scandals compounded stock market volatility**. In March, share prices fell sharply, reportedly owing to insider trading, which contributed to several brokerage firms being unable to settle trades. As the large exposures to brokers of some Urban Cooperative Banks (UCB) came to light, episodes of depositor runs also took place. The RBI was required to intervene in one of the UCBs, and several large commercial banks also suffered losses on their interbank lending. Charges of insider trading and lax supervision led to the resignation of the chairman and the suspension of the broker-directors of the BSE.

16. **The episode revealed a number of supervisory and structural deficiencies**. Risks related to leveraging and price volatility were compounded by a weekly settlement cycle for stock transactions—all transactions within a week were settled only at the end of the cycle—and the so-called "Badla" market allowed clients to carry forward positions into future cycles and defer settlement. While the overall exposure of the banking system to the stock market appears to have been limited, some UCBs appeared to have carried large indirect exposures, reflecting lax supervision.

17. **The authorities acted swiftly to adopt measures to restore market confidence and address the underlying structural weaknesses.** As a first step to stabilize markets, the RBI announced that liquidity support to banks would be available if necessary funding from the market could not be secured. The Securities and Exchange Board of India (SEBI) tightened margin requirements and disclosure rules, and proposed to introduce a code of conduct for market participants. The government announced plans to de-mutualize the stock exchanges and adopt rolling settlements for the 200 scrips that represented the bulk of the trading volume. The RBI also issued revised guidelines on bank exposure to the stock market, and introduced limits on borrowing by urban cooperative banks in the interbank market (Box IV.2).

D. Banking Sector Developments

18. **The financial position of the commercial banking sector generally improved during 1999/2000**. Operating (pre-provision) profits increased by 33½ percent and net profits increased by 62¾ percent in the fiscal year, as fee and commission revenues and profit from securities trading witnessed a large year-on-year increase. However, net interest margins continued to decline for the third consecutive year, mainly among the public sector banks. This appears to reflect the fact that these banks tend to re-price their assets more frequently than their liabilities and the decreasing interest rate environment.

Box: IV.2. Financial Sector Reform Measures

Recently, the RBI has taken a number of measures to further develop financial markets and strengthen the regulatory and supervisory framework:

- In addition to lowering the PLR (see Box IV.1), the *Monetary and Credit Policy Statement* gave banks the discretion to disallow premature withdrawal of large time deposits.
- An announcement was made with regard to setting up a clearing corporation for debt securities and foreign exchange transactions, as well as an electronic Negotiated Dealing System to facilitate transparent electronic bidding in auctions and dealing in government securities on a real time basis.
- A new valuation norm was introduced for the investment portfolio of banks. Effective September 30, 2000, the investment portfolio of banks would be classified under three categories, viz., "held to maturity", "available for sale" and "held for trading." No more than 25 percent of the total investments could be classified as "held to maturity". Those classified as "held for trading" had to be revalued at monthly or at more frequent intervals.
- Effective March 31, 2002, revised rules on large exposure required, off-balance sheet exposures to be included in the measurement of large exposures, the limit of which was reduced from 20 percent of "capital funds" to 15 percent of the sum of Tier I and Tier II capital for single borrowers, and from 50 to 40 percent for a group of related borrowers.
- Revised guidelines on bank exposure to the stock market kept the exposure limit at 5 percent of total advances, but the definition of "exposure" was broadened to include direct investment in shares and convertible debentures, advances against shares, and guarantees issued on behalf of brokers. To avoid the concentration of such exposures to a few stock-broking entities, a sub-ceiling of 10 percent of total exposures to a single entity, including its associates and inter-connected companies, was also imposed.
- UCBs were prohibited from lending against security of shares and their call money market borrowing was capped. The placement of term deposits within the sector would be phased out. The proportion of Statutory Liquidity Requirement (SLR) that UCBs have to hold in the form of government and other approved securities was also increased.

19. **Asset quality in the banking sector remained a concern** (Table IV.5). Gross nonperforming assets (NPA) fell to 12.8 percent of gross loans in March 2000, compared to 14¾ percent in March 1999, and the ratio of net NPAs (i.e., after provisions) to net loans also declined from 7½ percent to 6¾ percent. However, this mainly resulted from loan growth rather than a drop in NPAs—indeed, gross NPAs within the public sector banks increased by 3 percent.

20. **Efforts to improve loan recovery in the banking sector continued.** In July 2000, the RBI issued guidelines for a one-time compromise settlement scheme that allowed banks to provide concessions in accrued interest in order to facilitate repayment of NPAs by delinquent borrowers. The 2001/02 budget announced plans to set up seven more Debt

Recovery Tribunals (DRTs), and proposed legislation to repeal the Sick Industrial Companies Act, to replace the Board for Industrial and Financial Restructuring (BIFR) by Company Law Tribunals, and to ensure foreclosure and enforcement of securities in cases of default.

21. **Restructuring among the public sector banks was encouraged with the adoption in 2000/01 of a uniform voluntary retirement scheme (VRS).** Of the 27 public sector banks, 26 opted to participate in the scheme, which provided for early retirement for employees aged 45 years and older. Two months salary was allowed for the lesser of each year of completed service or for the number of years remaining before retirement. Reports suggest that by end April 2001, 126,280 bank employees had applied for the scheme, equivalent to roughly 15 percent of the workforce.

22. **Capital adequacy remained relatively stable.** The average capital adequacy ratio (CAR) of the public sector banks declined marginally, whereas the CARs of most commercial banks remained well above the minimum stipulated requirement. The three weak public sector banks that had been identified by the earlier Verma Committee report as requiring restructuring submitted requests for recapitalization to the government, but approval of these plans is pending. Separately, in order to mitigate the adverse effect on capital adequacy ratios of voluntary retirement schemes, public sector banks were permitted to treat such costs as deferred expenditures to be charged against income over a period of five years.

23. **Consolidation continued among the private sector banks.** Following the merger between HDFC Bank with Times Bank in February 2000, ICICI Bank completed its merger with Bank of Madura in March 2001. The proposed merger between UTI Bank and Global Trust Bank, however, was called off amid charges of share price rigging prior to the merger announcement.

24. **Reform among the nonbank financial sector also continues.** In an effort to harmonize the roles and operations of development finance institutions (DFIs) and banks, a high-level Standing Coordination Committee was set up to coordinate the activities of DFIs and banks, including the adoption of common approaches to the operational issues in jointly-financed projects. The registration process for the Non-Bank Finance Companies (NBFCs) also was completed in 2000/01. Of the total applicants, 6 percent were permitted to accept public deposits by February 2001, and only 25 of these had deposits exceeding Rs 500 million, and the aggregate deposits of NBFCs totaled only about 2½ percent of total commercial bank deposits. The RBI has also issued guidelines that would allow NBFCs to be transformed into banks.

25. **Legislation was passed to allow private sector participants to write life insurance policies, with a cap of 26 percent on foreign ownership**. Twelve licenses to new entrants were issued and additional requests were in the pipeline. The Insurance Regulatory and Development Authority (IRDA), set up in April 2000, made it obligatory on new insurers to conduct certain business in rural/social sectors. For example, by their fifth year of operation, new entrants must write 15 percent of their life policies in priority sectors.

Table IV.3. India: Reserve Money, 1997/98-2000/01 1/

	1997/98	1998/99	1999/00	2000/01			
				June	Sept.	Dec.	Mar.
	(In billions of rupees, end of period)						
Reserve Money	2,260	2,593	2,804	2,843	2,720	2,856	3,036
Currency in circulation	1,506	1,758	1,968	2,062	2,023	2,128	2,178
Currency with public	1,456	1,689	1,888	1,976	1,947	2,045	2,091
Cash with banks	51	69	80	87	76	83	86
Bankers deposits	718	797	805	640	661	703	815
Other deposits	35	38	31	140	36	26	43
Net domestic assets of RBI	1,101	1,214	1,145	1,205	1,092	986	1,064
Claims on government	1,352	1,525	1,505	1,566	1,521	1,477	1,538
Center	1,336	1,454	1,421	1,543	1,481	1,430	1,465
States	15	71	84	23	40	47	73
Claims on banks	71	133	168	153	123	141	130
Claims on commercial sector	82	122	153	121	114	135	133
Other items (net)	-404	-566	-680	-637	-664	-765	-738
Net foreign assets	1,159	1,380	1,659	1,641	1,628	1,870	1,972
	(Annual growth rates)						
Reserve Money	13.0	14.8	8.1	5.2	6.7	7.8	8.3
Currency in circulation	9.8	16.7	11.9	9.3	10.6	6.2	10.7
Bankers deposits	20.5	11.0	0.9	-5.0	-2.0	14.7	1.3
Net domestic assets of RBI	4.7	10.3	-5.7	1.8	-2.1	-12.8	-7.0
Claims on government	8.8	12.9	-2.8	-0.8	0.6	-6.2	3.8
Net foreign assets	22.2	19.0	20.2	14.6	13.5	23.1	18.9
Memorandum item:							
Contribution of RBI credit to government to annual growth of Reserve Money (percentage points)	5.8	7.8	-1.9	0.2	0.4	-3.7	2.2

Source: Data provided by the Indian authorities

1/ Except for March 31, all other quarters are on a last reporting Friday basis.

Table IV.4. India: Monetary Survey, 1997/98-2000/01 1/

	1997/98	1998/99	1999/00	2000/01			
				June	Sept.	Dec.	Mar.
Broad money (M3)	8,213	9,810	11,239	11,865	11,944	12,612	13,056
Currency with public	1,456	1,689	1,888	1,976	1,947	2,045	2,091
Deposits	6,722	8,083	9,321	9,749	9,961	10,542	10,921
Nonbank deposits at RBI	35	38	31	140	36	26	43
Net domestic assets	6,832	8,032	9,183	9,799	9,844	10,270	10,612
Domestic credit	7,639	8,827	10,279	10,787	10,885	11,364	11,817
Net credit to Government	3,306	3,867	4,414	4,706	4,734	4,916	5,113
RBI	1,352	1,525	1,483	1,566	1,520	1,475	1,539
Other banks	1,954	2,341	2,931	3,139	3,214	3,441	3,575
Credit to commercial sector	4,333	4,960	5,866	6,082	6,151	6,448	6,704
Commercial bank lending	3,241	3,688	4,360	4,599	4,675	4,952	5,091
Nonfood	3,116	3,492	4,103	4,314	4,360	4,561	4,852
Food	125	197	257	285	315	391	239
Other 2/	1,092	1,272	1,506	1,483	1,476	1,495	1,613
Other items (net)	-807	-795	-1,097	-988	-1,041	-1,093	-1,205
Net foreign assets	1,381	1,779	2,056	2,066	2,100	2,342	2,443
			(Annual growth rates)				
Broad money (M3)	18.0	19.4	14.6	16.9	13.9	15.5	16.2
Currency with public	10.2	16.1	11.7	8.3	10.3	6.2	10.8
Deposits	19.9	20.2	15.3	17.9	14.9	17.6	17.2
Net domestic assets	15.7	17.6	14.3	18.0	13.2	13.7	15.6
Domestic credit	14.9	15.5	16.5	18.1	16.8	14.9	15.0
Net credit to government	14.5	17.0	14.1	13.4	11.7	11.3	15.9
Credit to commercial sector	15.1	14.5	18.3	22.0	21.0	17.9	14.3
o/w: Commercial bank lending	16.4	13.8	18.2	24.1	22.8	19.3	16.8
Commercial bank nonfood credit	15.1	12.1	17.5	25.0	20.9	17.5	18.3
Net foreign assets	30.9	28.8	15.6	12.3	17.7	24.3	18.8
			(Contribution to M3 growth)				
Net domestic assets	13.3	14.6	11.7	15.2	10.9	11.3	12.7
o/w: Net credit to government	5.7	6.8	5.6	5.9	4.7	4.6	6.2
Net foreign assets	4.7	4.8	2.8	2.2	3.0	4.2	3.4

Source: Data provided by the Indian authorities.

1/ End-year data are a consolidation of March 31 data for the RBI and the last reporting Friday data for commercial banks.

2/ Includes RBI commercial credit, bank holdings of securities, and credit to cooperatives.

Table IV.5. India: Financial Performance of Commercial Banks, 1993/94–1999/00
(As a percent of total assets)

	Net Interest Income	Non-Interest Income	Operating Expenses	Pre-Provision Gross Profits	Provisions & Contingencies	Net profits	Cost/Income Ratio
			All commercial banks				
1993/94	2.54	1.35	2.64	1.25	2.10	-0.85	0.68
1994/95	3.00	1.44	2.76	1.64	1.22	0.42	0.63
1995/96	3.13	1.49	2.94	1.69	1.54	0.16	0.63
1996/97	3.22	1.45	2.85	1.82	1.15	0.67	0.61
1997/98	2.95	1.52	2.63	1.84	1.02	0.82	0.59
1998/99	2.78	1.34	2.62	1.65	0.98	0.47	0.64
1999/00	2.72	1.43	2.49	1.66	1.00	0.66	0.60
Average	2.96	1.45	2.72	1.69	1.14	0.56	0.62
			Public sector banks				
1993/94	2.36	1.28	2.65	0.99	2.14	1.15	0.73
1994/95	2.92	1.16	2.83	1.41	1.16	0.25	0.67
1995/96	3.08	1.39	2.99	1.49	1.56	-0.07	0.67
1996/97	3.16	1.32	2.88	1.60	1.03	0.57	0.64
1997/98	2.91	1.33	2.66	1.58	0.81	0.77	0.63
1998/99	2.80	1.22	2.66	1.37	0.95	0.42	0.66
1999/00	2.70	1.28	2.52	1.47	0.89	0.57	0.63
Average	2.93	1.31	2.74	1.50	1.05	0.48	0.65
			Old private sector banks				
1993/94	2.97	1.31	2.45	1.82	1.26	0.56	0.57
1994/95	3.04	1.35	2.33	2.16	1.00	1.16	0.52
1995/96	3.14	1.56	2.60	2.10	1.04	1.06	0.55
1996/97	2.93	1.48	2.52	1.89	0.98	0.91	0.57
1997/98	2.57	1.71	2.31	1.96	1.16	0.81	0.54
1998/99	2.15	1.33	2.26	1.21	0.73	0.48	0.65
1999/00	2.33	1.68	2.18	1.84	1.00	0.84	0.54
Average	2.62	1.55	2.37	1.80	0.98	0.82	0.57
			New private sector banks				
1993/94	...	...	...	...	...	...	...
1994/95	1.17	...	0.65	1.07	0.43	0.64	...
1995/96	2.84	1.82	1.89	2.77	0.92	1.85	0.41
1996/97	2.88	2.03	1.94	2.98	1.24	1.74	0.39
1997/98	2.23	2.42	1.76	2.86	1.32	1.55	0.38
1998/99	1.98	1.53	1.74	1.78	0.75	1.03	0.50
1999/00	1.87	1.66	1.42	2.11	1.15	0.97	0.40
Average	2.36	1.89	1.75	2.50	1.08	1.42	0.42
			Foreign banks				
1993/94	4.21	2.22	2.66	3.79	2.28	1.51	0.41
1994/95	4.24	2.42	2.73	3.93	2.27	1.66	0.41
1995/96	3.74	2.34	2.77	3.35	1.77	1.58	0.45
1996/97	4.13	2.49	3.00	3.62	2.44	1.19	0.45
1997/98	3.93	2.93	2.97	3.91	2.94	0.97	0.43
1998/99	3.47	2.43	3.59	2.32	1.63	0.69	0.57
1999/00	3.85	2.60	3.21	3.24	2.07	1.17	0.50
Average	3.82	2.56	3.11	3.29	2.17	1.12	0.48

Source: Report on Trends and Progress of Banking in India, 1999/00, and staff estimates.
Note: Average is the five-year simple average over the period 1995/96 to 1999/00.

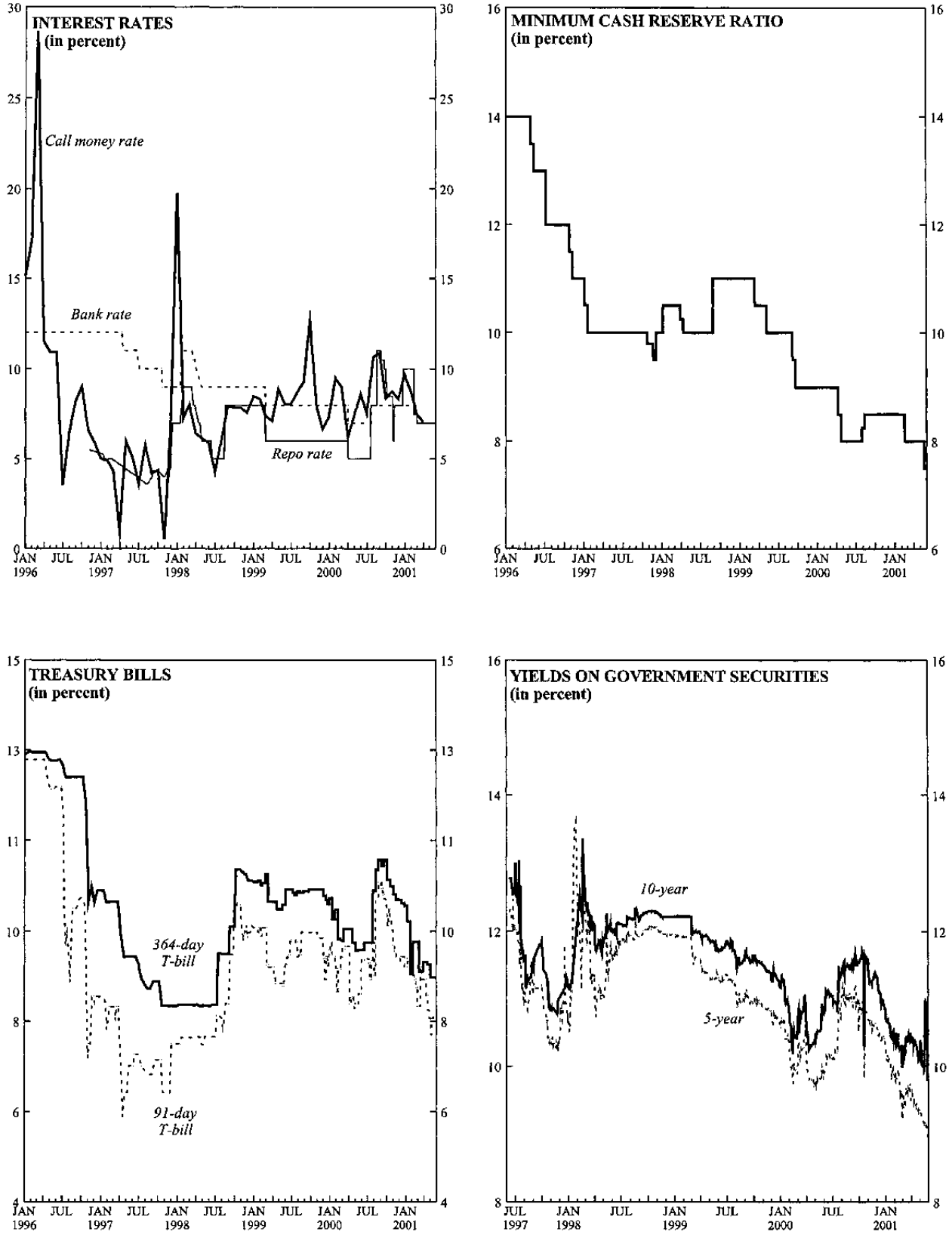
Table IV.6. India: Indicators of Financial System Soundness, 1995/96-1999/2000

	1995/96	1996/97	1997/98	1998/99	1999/2000
Measures of financial strength and performance 1/					
Risk-weighted capital ratio	...	10.4	11.6	11.2	11.1
Public sector banks	8.7	10.0	11.5	11.2	10.7
Old private sector banks	...	11.7	12.5	12.0	12.4
New private sector banks	...	15.3	13.2	11.8	13.4
Foreign banks	...	10.4	10.4	10.8	11.9
Number of institutions not meeting 9 percent CAR					
Public sector banks	15	6	3	1	1
Old private sector banks	10	4	4	4	3
New private sector banks	0	0	0	1	0
Foreign banks	12	8	6	3	0
Net nonperforming loans (percent of outstanding loans) 2/					
Public sector banks	8.9	9.2	8.2	8.1	7.4
Old private sector banks	...	6.7	6.7	8.9	6.8
New private sector banks	...	2.0	2.0	4.4	2.0
Foreign banks	1.3	1.9	2.2	2.9	2.1
Number of institutions with net NPLs above 10 percent of advances					
Public sector banks	8	10	10	9	5
Old private sector banks	3	3	5	8	6
New private sector banks	0	0	0	0	0
Foreign banks	1	3	9	13	10
Net profit (+) /loss (-) of commercial banks (percent of total assets)	0.2	0.7	0.8	0.5	0.7
Public sector banks	-0.1	0.6	0.8	0.4	0.6
Old private sector banks	1.1	0.9	1.0	0.5	0.8
New private sector banks	1.9	1.7	1.6	1.0	1.0
Foreign banks	1.6	1.2	1.0	0.7	1.2
Balance Sheet Structure of commercial banks					
Loan/deposit ratio	59.1	54.6	50.3	47.9	49.3
External deposits (percent of total deposits) 3/	5.6	4.1	11.5	13.1	12.8
Of which : foreign currency deposits (percent of total deposits) 4/	...	...	5.0	6.5	6.2
Foreign currency loans (percent of total) 5/	6.2	5.0	4.6	4.3	4.0
Real estate loans (percent of private credit)	0.5	0.6	0.6	0.5	0.4

Source: Data provided by the Indian authorities.

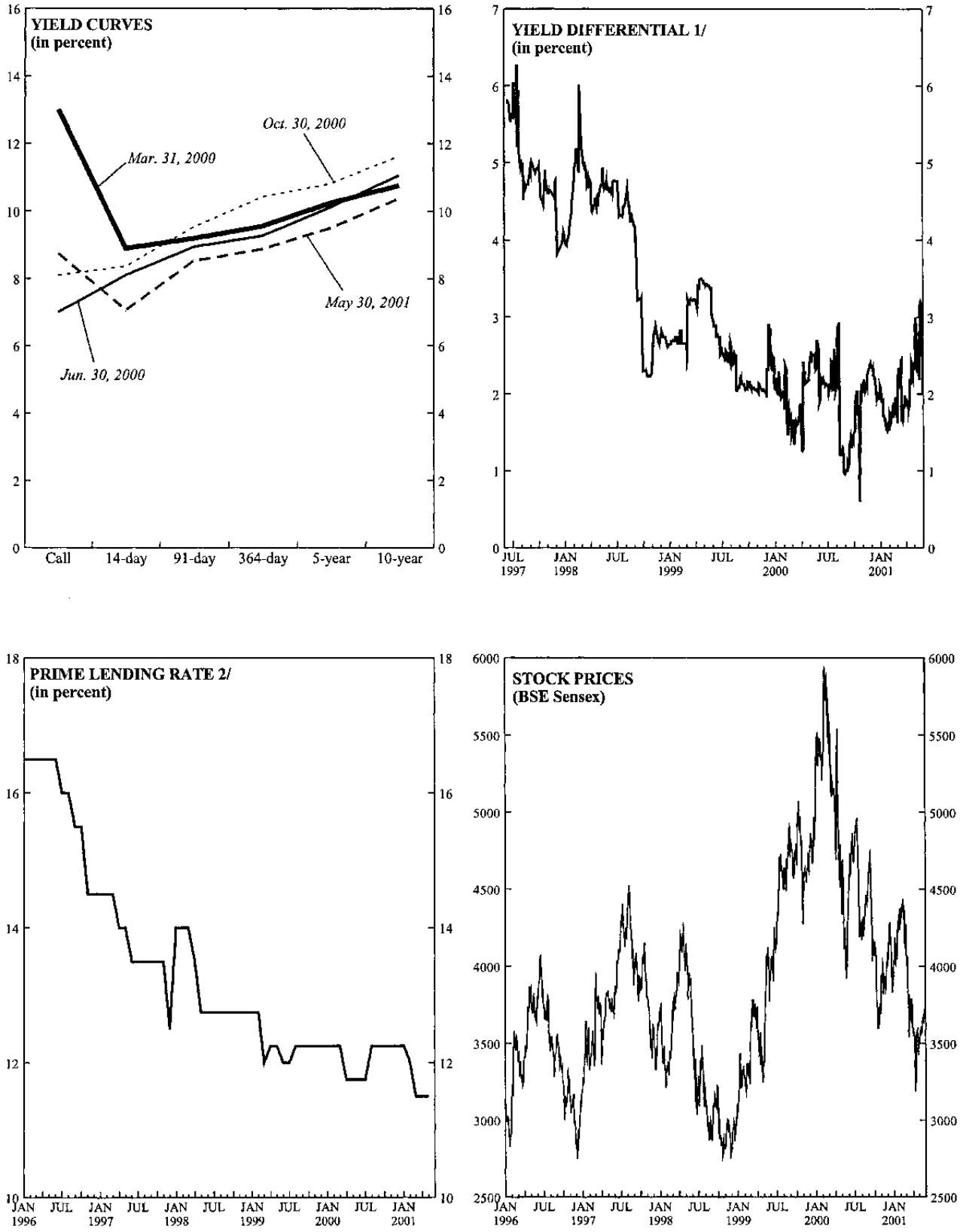
1/ Loan classification and provisioning standards do not meet international standards.
2/ Gross nonperformaing loans less provisions.
3/ External deposits comprise foreign currency deposits and nonresident (external) rupee accounts (NRE accounts) which can be freely repatriated abroad. Several classes of deposits were reclassified as external in June 1997.
4/ As of August 1999.
5/ Refers only to commercial bank purchase or discount of foreign bills. No other information is available.

Chart IV.1. India: Monetary Indicators, 1996-2001



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

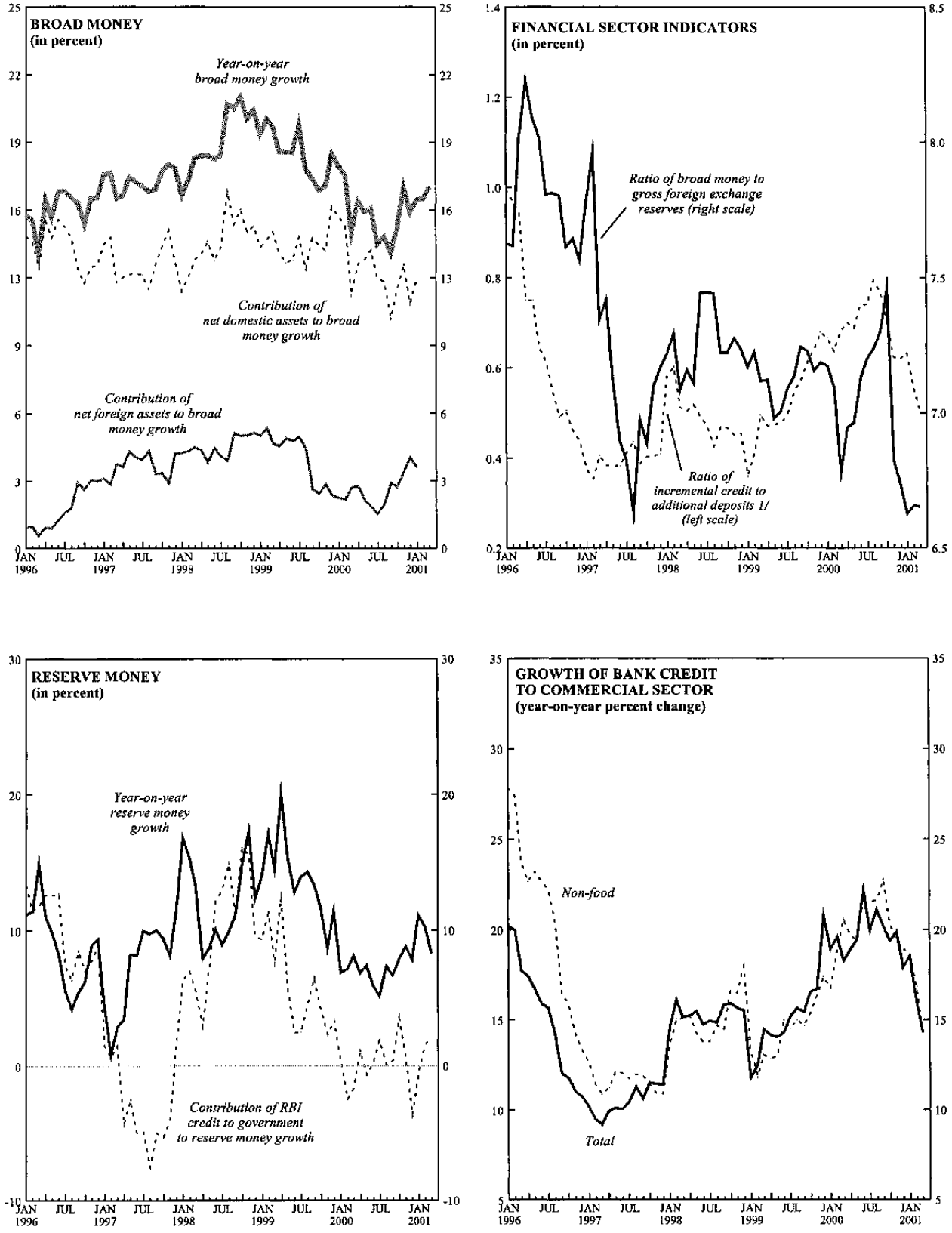
Chart IV.2. India: Financial Market Developments, 1996-2001



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

1/ Difference between 10-year secondary market yield of central government securities and 91-day Treasury bill yield. Increases indicate a steeper yield curve.
2/ Prime lending rate of the State Bank of India.

Chart IV.3. India: Selected Monetary Indicators, 1996-2001



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

1/ Twelve-month increase in credit to the private sector as a ratio of the twelve-month increase in commercial bank deposits.

V. Fiscal Developments[1]

A. Background

1. **The deficit of the consolidated public sector deteriorated steadily during the second half of the 1990s, leading to increasing concerns regarding fiscal sustainability.**[2] The deficit reached a peak of 11.2 percent of GDP in 1999/2000, but appears to have narrowed in 2000/01 to 10.6 percent of GDP (Table V.1 and Chart V.1a). Notwithstanding this improvement, however, public sector debt is estimated to have continued to increase, to over 83 percent of GDP by end-March 2001 (Chart V.1b).

2. **Several factors underly the deterioration in fiscal indicators since the mid-1990s.** The central government tax ratio declined, led by deterioration in excise and customs collections, and owing primarily to rate cuts that were not accompanied by sufficient base-broadening measures (Chart V.2a). On the expenditure side, civil service salaries and pensions rose sharply beginning in 1997/98, following wage increases granted in line with recommendations of the Fifth Pay Commission.[3] In addition, the interest burden increased at both the central and state government levels as the debt stock rose, the share of concessional external financing declined, and financial sector liberalization and the high debt stock put upward pressure on domestic interest rates (Chart V.2b).

3. **The government has sought to address the fiscal situation by tabling draft fiscal responsibility legislation in Parliament**. The legislation would eliminate the center's

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[1] Prepared by Patricia Reynolds and Poonam Gupta.

[2] The consolidated public sector comprises the central government, state governments and union territories, central public enterprises (also known as public sector undertakings or PSUs), and the accounts of the Oil Coordination Committee (OCC). Fiscal sustainability risks are discussed in greater detail in Chapter 5 of *India at the Crossroads*, T. Callen, P. Reynolds, and C. Towe eds., (Washington DC: IMF), 2001; and also in the *Annual Report 1997/98* of the Reserve Bank of India.

[3] Pay scales for central government civil servants are determined on the basis of recommendations of the Pay Commission, a constitutionally-mandated body that is established about every ten years. Recommendations of the Fifth Pay Commission, which submitted its report in January 1997, included a three-fold increase in basic pay scales, downsizing of 30 percent in each government department and agency over a 10-year period, and an overhaul of the organizational structure of the central government. Although the wage awards were incorporated beginning with the 1997/98 budget—resulting in a permanent increase in central government wages and salaries of roughly 0.5 percent of GDP—the recommended reorganization and staffing cuts were not implemented. While state governments are not obligated to adopt the Pay Commission recommendations, in practice they have tended to follow central government pay revisions with a lag of about a year.

revenue deficit—current expenditures less current revenues—and reduce its overall deficit to 2 percent of GDP by 2006 (Box V.1). The Eleventh Finance Commission (EFC), which submitted its final report in August 2000, also set the target of eliminating the revenue deficits of state governments by 2005 (Table V.2).

Table V.2. India: Fiscal Targets
(percent of GDP)

		Revised Estimates 1999/00	FRBM Targets 2005/06	EFC Targets 2004/05
Fiscal deficit 1/	General government 2/	10.0	...	6.5
	Central government	5.5	< 2.0	4.5
	State governments	4.9	...	2.5
Revenue deficit	General government 2/	6.5	...	1.0
	Central government	3.6	0.0	1.0
	State governments	2.9	...	0.0
Total liabilities 3/	General government 2/	66	...	55
	Central government	59	< 50	48
	State governments	25	...	...

Sources: Report of the Eleventh Finance Commission, July 2000; The Fiscal Responsibility and Budget Management Bill, 2000; Union Budget documents.

1/ Authorities' definition—divestment receipts are included above the line.
2/ Authorities' definition—consolidated central and state governments (OCC excluded).
3/ External debt valued at current exchange rates.

B. Central Government Fiscal Performance in 2000/01

4. The **2000/01 budget** targeted a 5.6 percent of GDP deficit (using the staff's definition), which was 0.2 percentage points higher than the outturn for 1999/2000.[4] New tax measures were expected to yield 0.2 percent of GDP, while improved buoyancy, especially in the area of excise and customs collections, was expected to increase tax collections by a further 0.3 percent of GDP. However, roughly half the increase was budgeted as transfers to the states and union territories (UTs) under the interim recommendations of the Eleventh Finance Commission (EFC). Key tax measures included: the replacement of the MODVAT with the CENVAT at a single rate of 16 percent; the phasing out of the income tax exemption on export earnings; and the reduction in the peak tariff rate from 40 percent to 35 percent.

[4] The staff's definition of the deficit treats divestment proceeds as below-the-line financing, while the authorities' definition includes divestment proceeds in revenues. Under the authorities' definition of the deficit, the overall deficit was targeted at 5.1 percent of GDP, compared with 5.4 percent of GDP in 1999/2000.

Box V.1. India: The Fiscal Responsibility and Budget Management Bill

The **Fiscal Responsibility and Budget Management (FRBM) bill** was tabled in Parliament in December 2000, and is expected to be brought to a vote by the Fall of 2001. It establishes targets for central government deficit and debt reduction over the medium term, as well as requirements for improved transparency. Its key features include:

- The revenue deficit is to be reduced by at least ½ percent of GDP per year, and eliminated by 2006; thereafter, a surplus is to be built up and used to repay debt.
- The overall deficit is to be reduced by at least ½ percent of GDP per year, and brought to 2 percent of GDP by 2006.
- The deficit reduction targets may be relaxed in case of unforeseen demands owing to national security or natural calamities.
- New central government guarantees are capped at ½ percent of GDP each year.
- The central government is prohibited from borrowing directly from the RBI (except for ways and means advances) after 2004.
- Total liabilities are to be reduced to 50 percent of GDP or lower by 2011.
- Improvements are to be made to transparency and reporting, including submission to Parliament of annual statements on the fiscal strategy, specification of three-year rolling targets for prescribed fiscal indicators and underlying assumptions, and assessments of fiscal sustainability.
- The Finance Minister will be required to report to Parliament quarterly on revenue and expenditure trends, to explain any deviation in fiscal performance from FRBM obligations, and to propose remedial measures. Expenditures are to be "proportionately curtailed" in the event of revenue shortfalls or expenditure overruns.

5. The budget also implied an increase in expenditures of about 0.3 percent of GDP. The increase largely reflected increased allocations for defense, which were to rise by 0.5 percent of GDP in response to the military action in the Kargill area. Food subsidies were targeted to fall by 0.1 percent of GDP, as a result of reforms that adjusted the price of food grains to above-poverty-line consumers to match economic costs, and prices to below-poverty-line consumers to 50 percent of economic costs. Similarly, outlays on fertilizer subsidies were lowered by 0.1 percent of GDP owing to a hike in fertilizer prices. Grants to states and UTs were increased by 0.3 percent of GDP in line with the EFC recommendations.

6. **Revised estimates** put the 2000/01 deficit at 5.3 percent of GDP—somewhat lower than the budget target of 5.6 percent of GDP—reflecting higher-than-budgeted nontax revenue collections, and shortfalls on capital expenditures (Table V.3 and Chart V.3a).[5] Unaudited actual figures released at end-May indicate the deficit was slightly higher—5.4 percent of GDP—with tax revenues falling about 0.7 percent of GDP short of the revised

[5] Ratios for 2000/01 employ the staff's estimate of nominal GDP. Under the authorities' definition of the deficit (see footnote 4, above), and using the official nominal GDP estimate for 2000/01, the overall deficit is estimated to have exactly met the 5.1 percent of GDP budget target.

estimates, and only partially offset by additional year-end expenditure cuts. The discussion that follows nonetheless focuses on the revised estimates, which remain the only comprehensive official data on the 2000/01 outturn.[6]

7. **On the revenue side**, shortfalls in gross tax revenue were estimated at 0.1 percent of GDP (Chart V.3b). While the success of new measures to widen the tax base led to higher-than-budgeted noncorporate income tax collections, all other collections fell short of target. Corporate tax revenues were adversely impacted by the economic slowdown and accelerated write-off of VRS expenditures by public sector banks. Excise and customs revenues were reduced by post-budget cuts in rates applying to petroleum products, and customs collections were also depressed by sluggish non-oil imports. The Gujarat earthquake was expected to have reduced tax collections in all categories. However, the tax shortfalls projected by the revised estimates were more than offset by strong nontax collections—in particular, large interest and dividend receipts from PSUs, and higher-than-budgeted remittance of profits from the RBI owing to interest earnings from the increase in foreign exchange reserves during the latter part of the fiscal year (see Chapter III).

8. **Expenditures** on current account items were estimated to exceed budget targets by 0.3 percent of GDP, led by overruns on food subsidies owing to post-budget hikes in support prices and the cost of maintaining large buffer stocks of foodgrain (Chart V.3c).[7] Fertilizer subsidies were also expected to exceed the budget target, owing to higher world prices of naphtha. Higher-than-budgeted grants reflected central assistance to financially-troubled public sector undertakings (PSUs) for payment of salaries and voluntary separation schemes. These overruns were estimated to be more than offset by compression of capital expenditures, including on the central plan and for military capital expenditures—the latter due to procurement delays (Chart V.3d).[8]

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[6] Revised estimates for 2000/01 were released at the time of the 2001/02 budget, at end-February 2001. Unaudited actuals for 2000/01 were released by the Controller General of Accounts on May 31, 2001, although these figures contain insufficient detail to permit reconciliation with either the budget or revised estimate figures (e.g., breakdowns of tax revenues by type of tax or of expenditures beyond categorization into current and capital items are not provided). Actual and comprehensive figures for 2000/01 will be released at the time of the 2002/03 budget.

[7] As part of its strategy to ensure food security, the government targets a foodgrain buffer stock of 15 million tons. By the end of 2000/01, the actual stock had reached about 42 million tons, owing to the high procurement prices offered to farmers.

[8] Plan expenditures are jointly determined by the Planning Commission, Ministry of Finance, central government spending ministries, and—where relevant—state governments. These consist mainly of outlays for development projects, and have both capital and current expenditure components.

9. The bulk of **financing** needs in 2000/01 were met through market borrowing. Net issuance of government bonds was estimated at Rs 779.5 billion (3.6 percent of GDP), of which about Rs 119 billion was accounted for by the RBI (Chart V.3e). Divestment receipts were estimated to fall Rs 75 billion (0.4 percent of GDP) short of target (Chart V.3f). Other important sources of financing included borrowing against deposits to the National Small Savings Fund, provident fund collections, and special deposit schemes (0.4 percent of GDP each).[9]

10. **Total liabilities** of the central government were estimated to have reached Rs 11.6 trillion (53.9 percent of GDP) by March 31, 2001, of which only Rs 584.3 billion (2.7 percent of GDP) was external debt—although the latter is reported at historical exchange rates. Almost three-quarters of domestic debt was in the form of government securities. While estimates of central government guarantees are not yet available for 2001, the amount outstanding at end-March 2000 was Rs 839.5 billion (4.3 percent of GDP).

C. Central Government Budget for 2001/02

11. Under the staff's definition of the deficit (see footnote 4), the 2001/02 budget targeted little consolidation relative to the revised estimates for 2000/01, with cuts in current expenditures (relative to GDP) offset by higher capital spending, lower nontax revenue, and higher tax transfers to state governments (Table V.3 and Chart V.3a). However, on the authorities' definition, the deficit target of 4.7 percent of GDP would imply 0.4 percent of GDP in consolidation, owing to an equivalent increase in divestment proceeds.

12. **Gross tax revenues** were expected to hold steady relative to GDP, notwithstanding the introduction of significant new measures (Chart V.3b and Box V.2). Although the budget removed special surcharges on both corporate and higher-income noncorporate taxpayers, direct tax revenues were budgeted to remain constant relative to GDP owing to tax buoyancy and increased voluntary compliance. Excise revenues were budgeted to increase slightly relative to GDP, owing to rate rationalization, hikes in duties on diesel and gasoline, and a new special surcharge on selected tobacco products. Customs revenues were budgeted to decline by 0.1 percent of GDP, with revenue losses resulting from tariff rate cuts partially offset by faster import growth and increased buoyancy. Service tax revenues were budgeted to rise by Rs 36 billion—a 64 percent increase over revenues anticipated in 2000/01—owing to the addition of new services under the tax net. However, revenues from the service tax would still be quite small, at just less than 0.2 percent of GDP. **Nontax revenues** were budgeted to decline slightly relative to GDP, with lower profits from the RBI expected to be partially compensated by increased license fee collections, especially from the newly corporatized telecommunications company BSNL.

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[9] Special deposit schemes include special deposits with the government by nongovernment provident funds, superannuation and gratuity funds, and surplus funds of the Life Insurance Corporation and the Employees' State Insurance Corporation.

Box V.2. India: FY 2001/02 Revenue Measures

The **key revenue measures announced in the 2001/02 budget** included:

- Further rationalization of the excise duty structure toward a manufacturing-level VAT (CENVAT) with a 16 percent central rate and a 16 percent special excise duty on selected items. A modest start was made toward a longer-term commitment to gradually eliminate individual excise exemptions, although a new exemption was also introduced.
- Increased excise duties on diesel and gasoline.
- Special surcharge on cigarettes and tobacco products for funding the National Calamity Contingency Fund.
- Inclusion of additional service sectors under the service tax net.
- Elimination of the 10 percent customs surcharge, which would lower the peak tariff rate to 35 percent.
- Commitment to reduce the peak tariff rate further to 20 percent within three years.
- Sharp hikes in customs duties on many items subject to removal of quantitative import restrictions in April 2001, including second-hand cars, tea, coffee, and edible oils.
- Reduced customs duties applicable to gold and favored industries, such as IT, film, and jewelry.
- Elimination of the 10 percent surcharge on corporate and high-income noncorporate incomes; however, the new 2 percent surcharge for financing the National Calamity Contingency Fund is retained.
- Measures to widen the income tax net and improve tax administration.
- Withdrawal of some income tax exemptions; however, new tax holidays were also introduced, including for investments in infrastructure and telecommunications.

When the budget was presented to Parliament for debate on April 25, the Finance Minister introduced **several additional measures**:

- Increases in standard deductions for income tax.
- A more liberal amortization schedule for expenditures by public sector banks on voluntary retirement schemes.
- An increase in the tax deduction limit on interest earned from government securities.
- Extension of small-scale excise exemptions to the garment sector.
- Sharp hikes in the basic customs duty on new imported cars and two-wheelers, and cuts in customs duties on some telecom and IT-related items, ships, clothing accessories, raincoats, and plastic footwear.
- A slowing of the planned phase-out of the tax exemption on export earnings—while 100 percent of profits will still be subject to taxation by 2004/05, in 2001/02 only 30 percent of profits will be taxable, compared with the 40 percent specified in the last budget speech.

The Finance Minister indicated that, although the increase in standard income tax deductions would reduce budgeted revenues by Rs 10 billion (0.04 percent of GDP), the changes in excise and customs taxes would be revenue neutral.

13. **Total expenditures** were budgeted to decline by 0.3 percent of GDP relative to the 2000/01 revised estimates, with a 0.3 percent of GDP increase in plan and nonplan capital expenditures more than offset by a 0.6 percent of GDP decrease in current expenditures (Charts V.3c and V.3d). Savings on current expenditures were expected from fertilizer subsidies and wages and salaries, owing to implementation of reform measures recommended by the Expenditure Reforms Commission (Box V.3). Interest payments were also budgeted to decline relative to GDP, given cuts in provident fund rates announced in the budget and expectations of a broader softening of interest rates during the year. The increase in capital expenditures was projected to be led by higher military and plan spending,

although the budget indicated that 0.2 percent of GDP in plan capital allocations would not actually be spent unless a corresponding amount of privatization receipts (in excess of Rs 70 billion) were achieved.[10] Earthquake relief for Gujarat was expected to be financed by the tax surcharge for the National Calamity Contingency Fund (targeted to yield Rs 10 billion), and would also take the form of accelerated allocation of central resources for plan spending.[11]

Box V.3. India: Recommendations of the Expenditure Reforms Commission

The **Expenditure Reforms Commission** (ERC) was constituted following the Budget Speech in February, 2000, to make recommendations on central government expenditure reforms—in particular with regard to streamlining and downsizing the structure of government, and improving the targeting and cost of subsidies. The ERC has so far submitted five reports, which included recommendations to:

- ban the creation of new civil service posts for two years;
- cut 10 percent of staff by 2004/05, facilitated by a new voluntary retirement scheme and restructuring of eight departments and ministries;
- implement a ration card system for food subsidies at the state government level;
- allow greater autonomy of state governments in providing food subsidies, including through more market-oriented procurement procedures;
- take steps to reduce foodgrain buffer stocks in excess of 10 million tons, including by moderating increases in support prices; and
- decontrol the fertilizer sector and increase prices toward import parity, gradually over a period of 10 years.

14. The 2001/02 budget was again expected to be **financed** primarily by market borrowing, although this was budgeted to decline by 0.5 percent of GDP relative to the 2000/01 revised estimates (Chart V.3e). Divestment proceeds were budgeted to increase by 0.4 percent of GDP (Chart V.3f), and other sources of finance were expected to be relatively stable relative to GDP. **Total liabilities** were budgeted to rise by Rs 1.5 trillion, to Rs 13.2 trillion (53.2 percent of GDP), by March 31, 2002. External liabilities (measured at historical exchange rates) were projected to remain relatively low, at Rs 595.9 billion (2.5 percent of GDP).

15. The 2001/02 budget also introduced a number of **structural measures**, including with regard to reforming food and fertilizer subsidies, labor markets, small-scale industries,

[10] Specifically, Rs 120 billion in divestment receipts were targeted for 2001/02. The first Rs 70 billion earned was earmarked for restructuring assistance to PSUs, worker safety nets, and debt reduction. The next Rs 50 billion—if realized—would be used for additional budgetary support for plan expenditures. If all or part of this Rs 50 billion is not earned, the associated sending would not go forward.

[11] External assistance was also anticipated, in particular from the World Bank and Asian Development Bank, although this was not incorporated into the center's budget figures.

the power sector, social security, financial sectors, and capital account transactions. These measures are discussed in greater detail in Chapter VI of this volume.

D. State Government Finances

16. **During 1999/2000, state government finances continued to deteriorate**, with the combined deficit of the states and union territories rising to 4.8 percent of GDP, compared to 4.3 percent of GDP in 1998/99 and 2.9 percent of GDP in 1997/98 (Table V.4).[12] This outturn was also significantly higher than the budget estimate of 3.9 percent of GDP (Chart V.4). The slippage reflected 0.7 percent of GDP in expenditure overruns, primarily on teachers' salaries, pensions, interest payments on market loans, additional expenditures on natural calamities, and transfers to local governments. In addition, states' tax collections fell short of target by 0.2 percent of GDP, due in part to the harmonization and rationalization of sales tax rates undertaken in preparation for a nationwide VAT in 2002. Grants from the central government for nonplan spending and to support states' expenditures on the central plan were also marginally lower-than-budget targets.

17. The higher-than-budgeted deficit in 1999/2000 was **financed** by additional loans from the central government, higher market borrowing, and increased borrowing against small savings schemes and provident funds. Increases in the first two of these sources reflected funding under the memoranda of understanding (**MOUs**) signed by thirteen states with the central government during the year, whereby short-term loans and relaxation of market borrowing constraints were granted in exchange for commitments to reform.[13] Although the overall reform parameters were agreed jointly, policy design was left primarily to individual states, and included commitments to enhanced user charges and fees, improved targeting of subsidies, divestment, and reforms to tax systems, civil services, and power sectors. While details of these MOUs and the states' subsequent performance were not made public, the fact that the state deficit target was missed by such a wide mark reflected difficulties in implementing these reforms.

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[12] Includes 25 states and the National Capital Territory of Delhi that existed until October 2000; in November 2000, three new states—Chattisgarh, Jharkhand, and Uttaranchal—were created by bifurcating the states of Madhya Pradesh, Bihar, and Uttar Pradesh, respectively.

[13] During the early months of 1999/2000, the central government accelerated transfer of budgeted central tax and plan grants. Then, in December 1999, Rs 25.7 billion in transfers to thirteen states were converted to three-year loans under a newly-created Extended Ways and Means Advances Facility. In addition, seven of these states were allowed to borrow Rs 19.2 billion in excess of borrowing limits set by the central government at the beginning of 1999/2000. The thirteen states were Andhra Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Manipur, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, and Uttar Pradesh.

18. **2000/01 budgets** targeted a 4.3 percent of GDP consolidated deficit for the states, with the implied fiscal consolidation driven by improvements in state tax collections, and increased tax and grant transfers from the central government, as recommended by the Eleventh Finance Commission (Box V.4). Expenditures were budgeted to increase by 0.5 percent of GDP, with a shift in composition toward nondevelopmental components reflecting strong growth in interest payments and expenditures on administrative services. These two components combined were budgeted to account for 24 percent of total state expenditures in 2000/01, compared to only 17 percent a decade earlier.

19. Although consolidated data on the **2000/01 outturn** and **2001/02 budgets** will not be released until the Fall of 2001, information on central transfers published in the central government's 2001/02 budget indicates that the states' share of central tax revenues may be at least 0.1 percent of GDP lower than targeted, owing to shortfalls in central collections. Another risk to the 2001/02 targets is developments in state power sectors (Box V.5).

20. The total **state government liabilities** outstanding was estimated to have reached Rs 41.9 billion (21.4 percent of GDP) at the end of March 2000, and was projected to rise to Rs 49.9 billion (22.9 percent of GDP) by end-March 2001. Almost 60 percent of these liabilities represent loans and advances from the central government. Although market borrowing has increased in recent years, it remains low at about 17 percent of total liabilities.

21. Outstanding **guarantees** extended by 17 major states were estimated at Rs 993.1 billion (5.1 percent of GDP) at end-March 2000—a sharp increase from Rs 830.1 billion (4.7 percent of GDP) at end-March 1999. In addition to these explicit guarantees—mostly related to public investments—states have acquired other contingent liabilities, including payment assurances and letters of comfort to banks and financial institutions. Contingent liabilities may also arise from pay-as-you-go or inadequately funded state government pension schemes, various state insurance and social security schemes, and recapitalization requirements of state financial institutions and public enterprises—including guarantees extended by state enterprises and arrears built up by state public utilities. A recent RBI report has recommended enhanced disclosure norms covering many of these potential liabilities, and efforts are underway in several states to establish sinking funds and ceilings on guarantees.[14]

[14] Reserve Bank of India, Department of Economic Analysis and Policy, "Report of the Core Group on Voluntary Disclosure Norms for State Governments," January 12, 2001.

Box V.4. India: Recommendations of the Eleventh Finance Commission and the Fiscal Reform Facility

The **Eleventh Finance Commission** (EFC) was constituted by the President in 1998 to give recommendations on specified aspects of center-state fiscal relations during 2000-2005. The EFC recommendations were detailed in two main reports, submitted in July and August 2000, and included:

- An increase in the share of central government tax revenues to be transferred to the state governments, subject to a new cap on total tax and grant transfers at 37.5 percent of gross central receipts.
- A reallocation of tax and grant transfers toward poorer and more fiscally responsible states.
- Financial assistance for natural disasters to be provided through a scheme of state Calamity Relief Funds, with central contributions financed by temporary levy of a special surcharge on central taxes.
- Creation of an Incentive Fund from which performance-based grants could be made.
- Recommendations for specific expenditure and revenue reforms, aimed at reducing the fiscal deficits and debt levels of both the central and state governments. In particular, the EFC recommended annual limits on increases in interest payments and wages and salaries, and that explicit subsidies be reduced by 50 percent over the next five years, and eliminated by 2009/10.

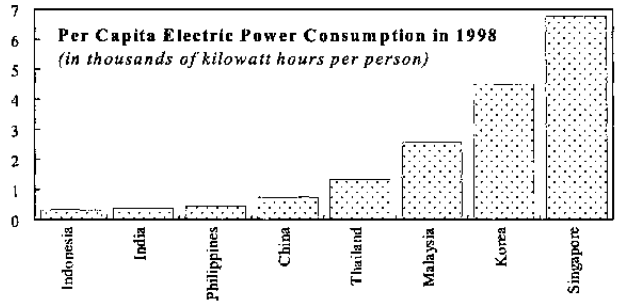
The first four of these recommendations have already been accepted by the central government and were incorporated into the 2001/02 budget, including the establishment of a **Fiscal Reform Facility**, which encompasses the formation of state-level Medium Term Fiscal Reform Programs (MTFRPs), a Monitoring Committee, and an Incentive Fund, and operates as follows:

- Each state may draw up its own MTFRP in the context of the broad parameters suggested by the EFC.
- This MTFRP will be subject to the approval of a Monitoring Committee, which includes representatives of the Ministry of Finance, Planning Commission, Reserve Bank of India, and the state government.
- The new Incentive Fund will have a corpus of Rs 53 billion in previously allocated non-plan grant funds and a new matching contribution by the central government, to be apportioned at the rate of Rs 21.2 billion (about 0.1 percent of GDP) per annum during 2000-05. In addition, other grants for specific purposes which remain unutilized due to non-observance of conditionalities attached to their release may also be credited to the Incentive Fund during 2004/05.
- The Incentive Fund will be available to all states, with potential allocations determined on the basis of relative population.
- A state will be eligible for this earmarked allocation in a given year if it achieved a minimum improvement of 5 percent in its revenue deficit (surplus) as a proportion of revenue receipts in the previous year. If a state is unable to obtain the full amount initially earmarked for it in any year, such amount will be retained in the Fund and will be available to the state in subsequent years. However, if a state is not able to draw the amount earmarked on the basis of performance during the first four years, the amount undisbursed to that state would be distributed to performing states during the fifth year on a pro-rata basis and in addition to the amounts to which they are initially entitled.

Box V.5. India: Power Sector Issues

The constitution stipulates that responsibility for electricity supply in India should be shared by the central and state governments. At the state government level, State Electricity Boards (SEBs) form the foundation of the power system, generating almost 70 percent of India's electricity supply and providing most of the distribution to consumers.

India's power sector faces severe capacity shortages, with poor reliability, frequent blackouts, and low per capita consumption relative to other countries in the region.



Source: World Bank World Development Indicators on Energy.

SEBs are also highly unprofitable—commercial losses were estimated at 1.3 percent of GDP in 1999/2000. Underlying factors include uneconomic tariff rates, with high rates charged to industrial users in order to partially subsidize low (or zero) tariffs granted to agricultural users. In addition, transmission & distribution losses are enormous, owing largely to inefficiency and corruption—official estimates indicate that more than 25 percent of power is lost or stolen during transmission, although the World Bank suggests that there is significant underreporting and the actual figure could be much higher. These factors have grown more pressing in recent years, as evidenced by further deterioration in rates of return on fixed assets in service and increasing state government support for SEBs. Moreover, the outstanding dues of SEBs—primarily to central power utilities—is currently estimated at around Rs 260 billion (1.1 percent of GDP).

Financial Performance of the State Power Sector
(in percent of GDP)

	1991/92	1999/2000
Gross subsidy	1.1	1.7
Subventions received from state governments	0.3	0.6
Commercial losses	0.6	1.3
Rate of return *(percent)*	-12.7	-41.2

Source: Ministry of Finance, *Economic Survey 2000-01*.

In recent years, there have been many efforts to reform the power sector in India, including central government- and World Bank-supported programs negotiated on a state-by-state basis, and legislative reform at the central level. Several states—notably Orissa, Haryana, Andhra Pradesh, and Uttar Pradesh—have developed power reform programs supported by grants and loans from the World Bank, with particular emphasis on separating and privatizing the generation, transmission, and distribution activities of SEBs, and setting up autonomous regulatory authorities to establish and regulate tariffs. Similarly, the Ministry of Power has recently signed memoranda of understanding (MOUs) with several states—including Karnataka, Haryana, Uttar Pradesh, Gujarat, and Tamil Nadu—providing technical and financial support in exchange for commitments to power sector reform. At the national level, the draft Electricity Bill would enable unbundling of the power sector into generation, transmission, and distribution activities.

While progress has been made—14 states have already set up their own state electricity regulatory commissions, and the SEBs of several states have been unbundled and corporatized—**reforms have proven costly to implement in short-run. Moreover, financial difficulties at some SEBs have come to a head in recent months.** U.S. energy company Enron, which operates a $3 billion power project in the state of Maharashtra, has threatened to terminate its contract owing to non-payment of dues by the Maharashtra State Electricity Board (MSEB). The state government guarantee and central government counter-guarantee have been invoked, but not honored pending a decision on the MSEB's counterclaim for a penalty payment from Enron for non-supply of power during specific time periods. In Orissa, U.S. company AES has shut down one of its generating units, also over non-payment of dues.

E. Performance of Public Sector Undertakings (PSUs)[15]

22. The PSU fiscal deficit in **2000/01** is expected to be only 1.4 percent of GDP—0.3 percent of GDP less than the budget target—owing to both higher-than-budgeted net internal resources and lower-than-budgeted plan expenditures (Chart V.5a). Net internal resources are estimated to have increased relative to the budget target, owing largely to the strong performance of oil PSUs during the year, which more than compensated for losses of engineering PSUs. The underspending on plan projects primarily reflected shortfalls in external and other sources of financing (Chart V.5b).

23. The PSU deficit in **2001/02** is budgeted to rise to 1.6 percent of GDP, as plan expenditures increase to more typical levels, and as more PSUs offer Voluntary Retirement Schemes (VRSs) in order to shed surplus staff.

24. The government's stated **divestment policy** is to: (i) bring government shareholding in nonstrategic PSUs to 26 percent or less through strategic sales, (ii) retain majority shareholding in strategic PSUs (defense, atomic energy, and railways), and (iii) protect the interests of workers. Over the last two years, three strategic sales had been completed, and a further 31 PSUs have been approved for divestment in 2001/02 and beyond. Three loss-making PSUs were closed during 2000/01, and ten more awaited closure following recent approval for winding up from the Board for Industrial and Financial Reconstruction (BIFR).

F. Oil Coordination Committee (OCC) Accounts

25. The OCC is responsible for coordinating the **cross-subsidization of key petroleum products**—diesel, kerosene, liquid petroleum gas (LPG), motor spirit, and aviation turbine fuel (ATF). Delays in hiking domestic prices in line with higher world prices during 2000/01 resulted in an OCC deficit of about Rs 60 billion (0.3 percent of GDP), and its cumulative debt stock (primarily arrears to state oil companies) rose to Rs 125 billion (0.6 percent of GDP; Chart V.6a).

26. In his **2001/02** budget speech, the Finance Minister affirmed that by April 1, 2002 the pricing of petroleum products would be fully moved to import parity, the OCC would be wound up, and the two remaining subsidies on kerosene and liquid petroleum gas (LPG) would be moved onto the central government's budget (Chart V.6b). One important issue that may have to be resolved is how the OCC's outstanding debt will be repaid, in the event that oil prices remain high or if domestic prices are lowered, and the OCC is unable to accrue a sufficient surplus during its last year.

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[15] There were 240 PSUs as of end-March 1999, according to the most recent *Public Enterprises Survey* published by the Department of Public Enterprises. In contrast, the central government budget reports financial information for somewhat less than 200 PSUs. The difference in coverage results from the budgets' inclusion of the Indian Railways (which is formally a commercial department) and some subsidiaries of PSUs that receive direct budgetary support, and its exclusion of PSUs not receiving budgetary support.

Table V.1. India: Consolidated Public Sector Operations, 1995/96-2001/02 1/

	1995/96	1996/97	1997/98	1998/99	1999/00	Budget 2000/01	Proj. 2/ 2000/01	Budget 3/ 2001/02
				(In billions of rupees)				
Total revenue and grants	2,461.2	2,617.8	3,018.4	3,331.4	3,683.4	4,327.6	4,319.9	...
Tax revenue	1,751.0	1,998.6	2,204.5	2,327.9	2,773.9	3,258.5	3,238.8	...
Nontax revenue	698.8	607.2	803.7	993.6	898.5	1,061.8	1,073.8	...
Grants	11.4	11.9	10.2	9.9	11.1	7.3	7.3	...
Total expenditure and net lending	3,426.5	3,805.8	4,310.6	5,026.9	5,878.4	6,660.6	6,602.1	...
Overall public sector balance	-965.3	-1,188.0	-1,292.2	-1,695.5	-2,195.0	-2,333.0	-2,282.2	...
Financing	965.3	1,188.0	1,292.2	1,695.5	2,195.0	2,333.0	2,282.2	...
External (net)	45.1	121.6	53.7	62.9	66.2	61.8	48.5	...
Domestic (net)	920.2	1,066.4	1,238.5	1,632.6	2,128.7	2,271.2	2,233.7	...
				(In percent of GDP)				
Total revenue and grants	20.7	19.1	19.8	18.9	18.8	20.0	20.0	...
Tax revenue	14.7	14.6	14.5	13.2	14.2	15.1	15.0	...
Nontax revenue	5.9	4.4	5.3	5.7	4.6	4.9	5.0	...
Grants	0.1	0.1	0.1	0.1	0.1	0.0	0.0	...
Total expenditure and net lending	28.9	27.8	28.3	28.6	30.0	30.8	30.6	...
Overall public sector balance	-8.1	-8.7	-8.5	-9.6	-11.2	-10.8	-10.6	...
Financing	8.1	8.7	8.5	9.6	11.2	10.8	10.6	...
External (net)	0.4	0.9	0.4	0.4	0.3	0.3	0.2	...
Domestic (net)	7.8	7.8	8.1	9.3	10.9	10.5	10.3	...
Memorandum items:								
Primary balance 4/	-2.3	-2.8	-2.9	-3.9	-5.0	-4.4	-4.3	...
Net interest payments	5.8	5.9	5.6	5.7	6.2	6.4	6.3	...
Overall public sector balance	-8.1	-8.7	-8.5	-9.6	-11.2	-10.8	-10.6	...
Central government	-4.4	-4.1	-4.9	-5.4	-5.4	-5.6	-5.3	-5.2
States and Union Territories	-2.6	-2.7	-2.9	-4.3	-4.8	-4.3	-4.5	...
Central Public Enterprises	-1.9	-2.1	-1.8	-1.4	-1.8	-1.7	-1.4	-1.6
Oil Coordination Committee	-0.2	-0.7	0.1	0.6	-0.1	0.0	-0.3	0.0
Consolidation items 5/	1.0	1.0	0.9	0.8	1.0	0.9	0.9	...
Public sector debt 6/	78.8	75.4	76.8	76.7	80.0	...	83.5	...
External debt 7/	18.4	15.7	15.1	14.6	13.4	...	13.2	...
Internal debt	60.4	59.6	61.7	62.1	66.5	...	70.3	...

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

1/ The consolidated public sector comprises the central government, state governments, central public enterprises (PSUs), and the accounts of the Oil Coordination Committee (OCC).
2/ Staff projections. Utilizes revised estimates for central government, PSUs, and OCC. For state government figures, utilizes revised estimates for central transfers to states and assumes all other budget targets are met. Ratios employ the staff's estimate of nominal GDP in 2000/01.
3/ Ratios employ the authorities' projection for nominal GDP in 2001/02.
4/ Overall balance excluding interest payments.
5/ Above-the-line items in central government accounts that cancel out in the consolidation (e.g., loans to states and public enterprises).

Table V.3. India: Central Government Operations, 1995/96-2001/02

	1995/96	1996/97	1997/98	1998/99	1999/00	Budget 2000/01	Rev. Est. 1/ 2000/01	Budget 2/ 2001/02
				(In billions of rupees)				
Total revenue and grants	1,159.4	1,317.7	1,406.5	1,576.8	1,905.1	2,134.0	2,187.9	2,460.0
Net tax revenue	819.4	937.0	956.7	1,046.5	1,282.7	1,462.1	1,459.0	1,650.3
Gross tax revenue	1,112.4	1,287.6	1,392.2	1,438.0	1,717.5	2,002.9	1,983.2	2,266.5
Of which: Corporate tax	164.9	185.7	200.2	245.3	306.9	400.4	387.2	442.0
Income tax	156.0	182.3	171.0	202.4	256.5	315.9	352.7	406.0
Excise taxes	401.9	450.1	479.6	532.5	619.0	712.5	706.8	817.2
Customs duties	357.6	428.5	401.9	406.7	484.2	535.7	497.8	548.2
Less: States' share	293.0	350.6	435.5	391.5	434.8	540.8	524.2	616.2
Nontax revenue	328.7	368.7	439.6	520.4	611.3	664.6	721.6	802.7
Grants	11.4	11.9	10.2	9.9	11.1	7.3	7.3	7.0
Total expenditure and net lending	1,675.9	1,882.8	2,147.5	2,531.1	2,969.5	3,346.8	3,332.6	3,743.2
Current expenditure	1,456.7	1,644.2	1,870.8	2,246.5	2,581.0	2,908.3	2,961.6	3,248.2
Of which: Interest payments	500.5	594.8	656.4	778.8	902.5	1,012.7	1,006.7	1,123.0
Wages and salaries	180.9	190.5	259.3	289.0	315.0	328.4	290.8	307.3
Major subsidies	124.3	140.4	182.4	212.4	233.9	214.9	259.3	278.5
Capital expenditure and net lending 1/	219.2	238.6	276.7	284.6	388.4	438.5	371.0	494.9
Overall balance	-516.5	-565.2	-741.0	-954.3	-1,064.4	-1,212.7	-1,144.7	-1,283.1
Financing	516.5	565.2	741.0	954.3	1,064.4	1,212.7	1,144.7	1,283.1
External (net)	3.2	29.9	10.9	19.2	11.8	-0.4	5.7	18.7
Domestic (net)	513.3	535.3	730.1	935.1	1,052.6	1,213.2	1,139.0	1,264.5
Of which : Market borrowing	374.7	200.1	444.0	689.9	702.8	763.8	779.5	773.5
Small savings and other funds	203.2	237.5	367.9	468.1	490.2	572.2	574.6	647.5
Divestment receipts	3.6	3.8	9.1	58.7	17.2	100.0	25.0	120.0
				(In percent of GDP)				
Total revenue and grants	9.8	9.6	9.2	9.0	9.7	9.9	10.1	9.9
Net tax revenue	6.9	6.8	6.3	6.0	6.6	6.8	6.8	6.7
Gross tax revenue	9.4	9.4	9.1	8.2	8.8	9.3	9.2	9.2
Of which: Corporate tax	1.4	1.4	1.3	1.4	1.6	1.8	1.8	1.8
Income tax	1.3	1.3	1.1	1.2	1.3	1.5	1.6	1.6
Excise taxes	3.4	3.3	3.2	3.0	3.2	3.3	3.3	3.3
Customs duties	3.0	3.1	2.6	2.3	2.5	2.5	2.3	2.2
Less: States' share	2.5	2.6	2.9	2.2	2.2	2.5	2.4	2.5
Nontax revenue	2.8	2.7	2.9	3.0	3.1	3.1	3.3	3.2
Grants	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Total expenditure and net lending	14.1	13.8	14.1	14.4	15.2	15.5	15.4	15.1
Current expenditure	12.3	12.0	12.3	12.8	13.2	13.4	13.7	13.1
Of which: Interest payments	4.2	4.3	4.3	4.4	4.6	4.7	4.7	4.5
Wages and salaries	1.5	1.4	1.7	1.6	1.6	1.5	1.3	1.2
Major subsidies	1.0	1.0	1.2	1.2	1.2	1.0	1.2	1.1
Capital expenditure and net lending 3/	1.8	1.7	1.8	1.6	2.0	2.0	1.7	2.0
Overall balance	-4.4	-4.1	-4.9	-5.4	-5.4	-5.6	-5.3	-5.2
Financing	4.4	4.1	4.9	5.4	5.4	5.6	5.3	5.2
External (net)	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.1
Domestic (net)	4.3	3.9	4.8	5.3	5.4	5.6	5.3	5.1
Of which : Market borrowing	3.2	1.5	2.9	3.9	3.6	3.5	3.6	3.1
Small savings and other funds	0.2	0.3	0.6	0.5	0.5	0.4	0.4	0.4
Divestment receipts	0.0	0.0	0.1	0.3	0.1	0.5	0.1	0.5
Memorandum items								
Military expenditure	2.3	2.2	2.3	2.3	2.4	2.7	2.5	2.5
Primary balance 4/	-0.1	0.2	-0.6	-1.0	-0.8	-0.9	-0.6	-0.6
Revenue balance 5/	-2.5	-2.4	-3.1	-3.8	-3.5	-3.6	-3.6	-3.2
Overall balance (authorities' definition) 6/	-5.2	-4.9	-5.8	-6.4	-5.4	-5.1	-5.1	-4.7
Central government debt 7/	51.1	49.4	51.1	50.7	52.2	54.5	53.9	53.2
measured at current exchange rates	59.2	56.4	58.1	57.6	59.2	...	...	...
Central government guarantees	5.5	5.1	4.9	4.2	4.3	...	...	...

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

1/ Ratios utilize the staff's estimate of nominal GDP in 2000/01.
2/ Ratios utilize the authorities' projections for nominal GDP in 2001/02.
3/ Excludes onlending to the states from Small Savings collections in all years. (This represents a change in accounting treatment relative to the last consultation cycle; see footnote 6/ below.)
4/ Overall balance excluding interest payments.
5/ Total receipts (excluding divestment proceeds) less non-capital expenditures.
6/ Authorities' definition includes divestment receipts in revenues, rather than in domestic financing; onlending to states from the Small Savings collections is included in capital expenditure and net lending through 1998/99, and excluded thereafter.
7/ External debt measured at historical exchange rates.

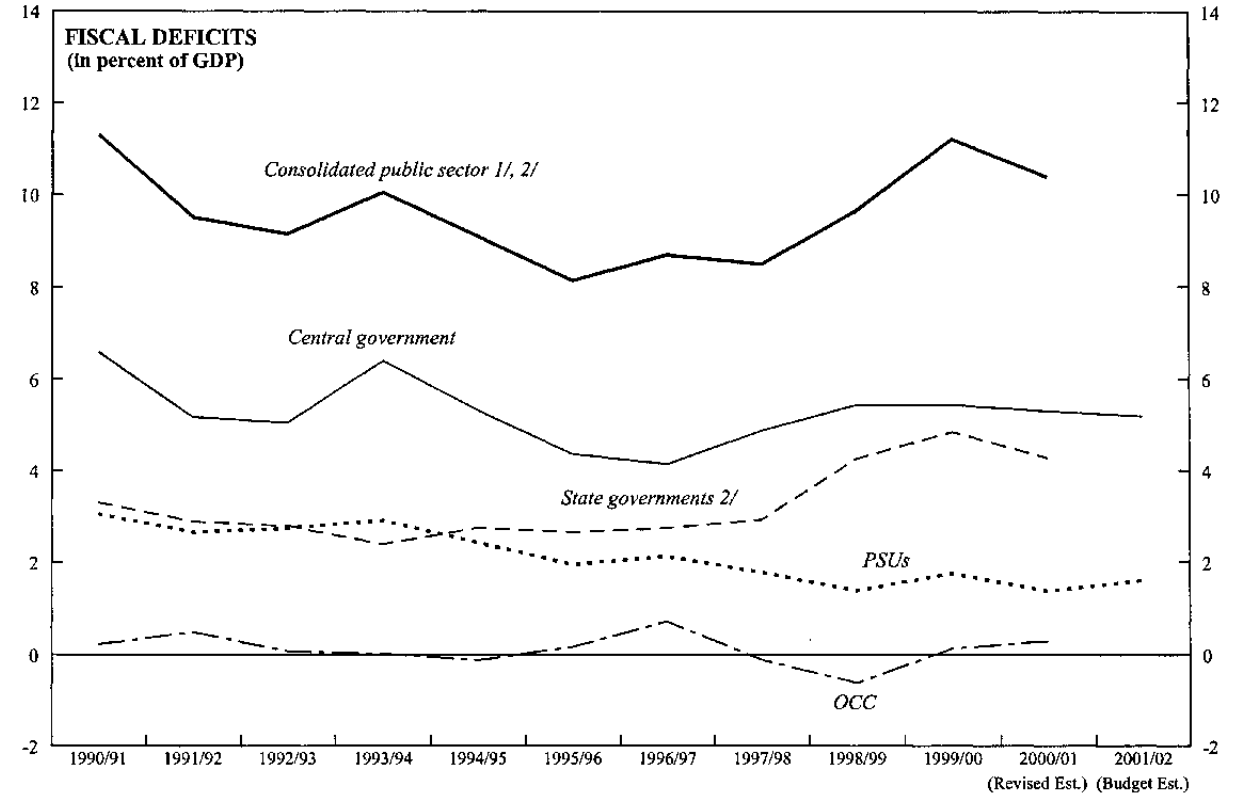
Table V.4. India: State Government Operations, 1995/96-2001/02

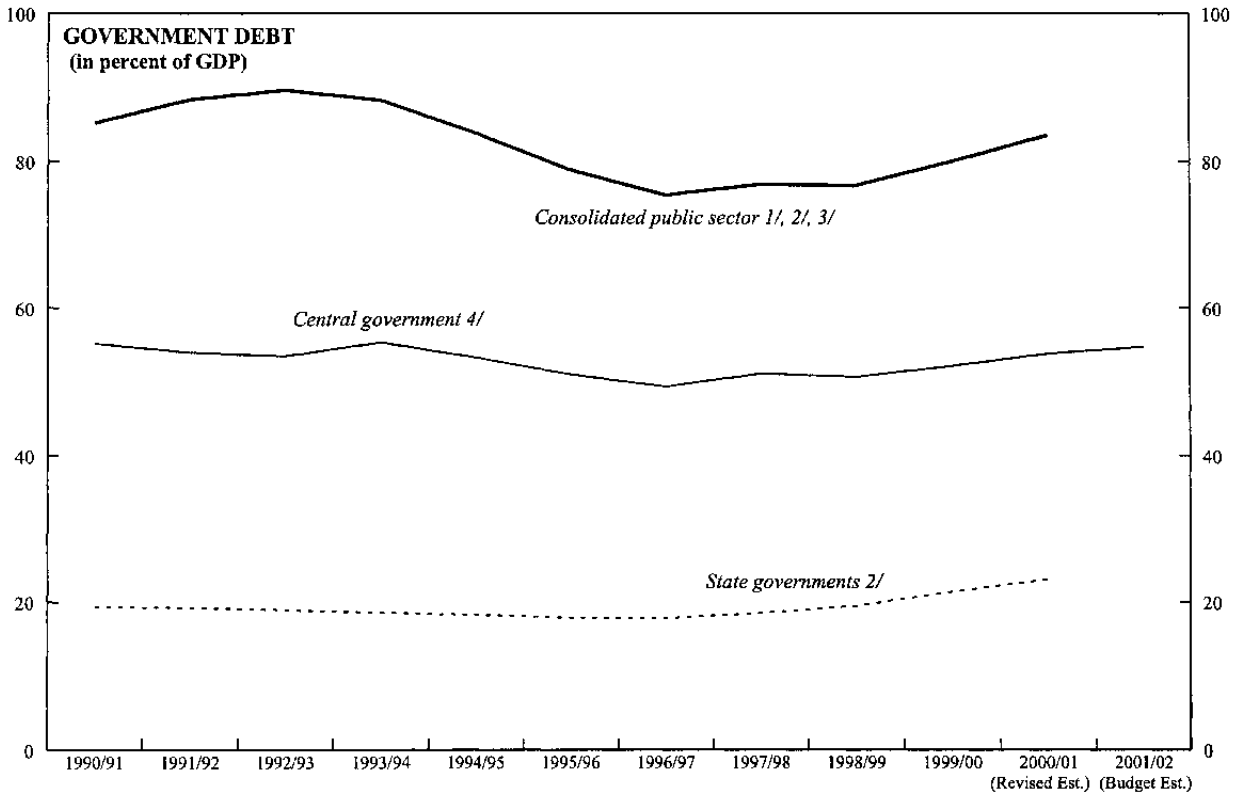
	1995/96	1996/97	1997/98	1998/99	Budget 1999/00	Rev Est 1999/00	Budget 2000/01	Rev. Est. 1/ 2000/01	Budget 2/ 2001/02
					(In billions of rupees)				
Total revenue and grants	1,380.1	1,536.3	1,721.8	1,781.5	2,167.3	2,085.6	2,526.5	...	...
Tax revenue	931.6	1,061.6	1,247.8	1,281.4	1,558.1	1,491.2	1,796.4	...	...
Share of Central Government tax revenue 3/	293.0	350.6	435.5	391.5	445.0	434.8	540.8	524.2	616.2
State taxes	638.7	711.0	812.3	890.0	1,113.2	1,056.4	1,255.6	...	...
Taxes on income	8.4	10.1	10.9	14.2	15.2	17.0	18.7	...	...
Taxes on property & capital transactions	72.7	74.2	83.1	85.3	112.0	106.8	126.0	...	...
Taxes on commodities and services	557.6	626.7	718.3	790.5	985.9	932.5	1,111.0	...	...
Nontax revenue	228.9	235.4	244.4	241.7	292.6	296.3	315.9	...	...
Grants from Central Government 3/	219.5	239.3	229.6	258.5	316.5	298.1	414.2	408.7	452.6
Total expenditure	1,694.4	1,910.8	2,165.7	2,529.1	2,949.1	3,033.0	3,467.5	...	...
Developmental	1,148.2	1,320.1	1,452.7	1,645.0	1,857.4	1,983.2	2,083.3	...	...
Social services	578.4	654.6	735.2	880.9	1,022.8	1,106.6	1,133.1	...	...
Economic services	569.8	665.5	717.5	764.1	834.6	876.6	950.2	...	...
Non-developmental	553.8	621.0	717.7	864.7	1,111.9	1,101.4	1,254.8	...	...
Less: Recovery of loans & advances	35.0	57.5	54.9	33.0	25.5	40.1	35.3	...	...
Other (net) 4/	27.4	27.3	50.3	52.3	5.4	-11.4	164.6	...	...
Overall balance	-314.3	-374.4	-444.0	-747.5	-781.9	-947.4	-940.9	...	...
Financing	314.3	374.4	444.0	747.5	781.9	947.4	940.9	...	...
Market borrowings (net)	58.9	65.2	72.8	104.7	100.7	118.3	116.7	...	...
Loans from Center (net) 3/	151.8	177.7	226.4	302.5	326.6	367.4	408.5	397.2	448.8
Asset sales	0.0	1.9	2.0	5.0	3.0	0.0	40.0	...	...
Other 5/	103.6	129.6	142.8	335.4	351.5	461.7	375.7	...	...
					(In percent of GDP)				
Total revenue and grants	11.6	11.2	11.3	10.1	10.9	10.7	11.7	...	...
Tax revenue	7.8	7.8	8.2	7.3	7.8	7.6	8.3	...	...
Share of Central Government tax revenue 3/	2.5	2.6	2.9	2.2	2.2	2.2	2.5	2.4	2.5
State taxes	5.4	5.2	5.3	5.1	5.6	5.4	5.8	...	...
Taxes on income	0.1	0.1	0.1	0.1	0.1	0.1	0.1	...	...
Taxes on property & capital transactions	0.6	0.5	0.5	0.5	0.6	0.5	0.6	...	...
Taxes on commodities and services	4.7	4.6	4.7	4.5	5.0	4.8	5.1	...	...
Nontax revenue	1.9	1.7	1.6	1.4	1.5	1.5	1.5	...	...
Grants from Central Government 3/	1.8	1.7	1.5	1.5	1.6	1.5	1.9	1.9	1.8
Total expenditure	14.3	14.0	14.2	14.4	14.8	15.5	16.0	...	...
Developmental	9.7	9.7	9.5	9.4	9.3	10.1	9.6	...	...
Social services	4.9	4.8	4.8	5.0	5.1	5.7	5.2	...	...
Economic services	4.8	4.9	4.7	4.3	4.2	4.5	4.4	...	...
Non-developmental	4.7	4.5	4.7	4.9	5.6	5.6	5.8	...	...
o/w: Interest payments	1.8	1.9	2.0	2.0	2.3	2.3	2.5	...	...
Other (net) 4/	0.2	0.2	0.3	0.3	0.0	-0.1	0.8	...	...
Overall balance	-2.6	-2.7	-2.9	-4.3	-3.9	-4.8	-4.3	...	...
Financing	2.6	2.7	2.9	4.3	3.9	4.8	4.3	...	...
Market borrowings (net)	0.5	0.5	0.5	0.6	0.5	0.6	0.5	...	...
Loans from Center (net) 3/	1.3	1.3	1.5	1.7	1.6	1.9	1.9	1.8	1.8
Asset sales	0.0	0.0	0.0	0.0	0.0	0.0	0.2	...	...
Other 5/	0.9	0.9	0.9	1.9	1.8	2.4	1.7	...	...
Memorandum items									
Primary balance 6/	-0.8	-0.9	-0.9	-2.2	-1.7	-2.5	-1.8	...	...
Revenue balance 7/	-0.7	-1.2	-1.1	-2.5	-2.0	-2.9	-2.1	...	...
Net resources transferred from central govt.	5.6	5.6	5.9	5.4	5.5	5.6	6.3	6.2	6.1
Gross borrowing against small savings	0.8	0.8	1.0	1.4	1.3	1.4	1.5	...	...
State government debt	17.9	17.8	18.5	19.4	...	21.4	22.9	...	...
Of which: Loans and advances from central go	11.1	10.9	11.3	11.6	...	12.5	13.1	...	...
State government guarantees 8/	4.4	4.6	4.8	4.7	...	5.1	...	...	...

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

1/ Ratios utilize the staff's estimate of nominal GDP in 2000/01.
2/ Ratios utilize the authorities' projections for nominal GDP in 2001/02.
3/ According to central government accounts.
4/ Includes other expenditure, and discrepancies between central government and state sources on share of central government tax revenues and grants from central government.
5/ Includes other financing, and discrepancy between central government and state sources on loans from central government.
6/ Overall balance excluding interest payments.
7/ Total receipts (excluding divestment proceeds) less non-capital expenditures.
8/ Explicit guarantees of 17 major states.

Chart V.1. India: Government Deficits and Debt, 1990/91 - 2001/02

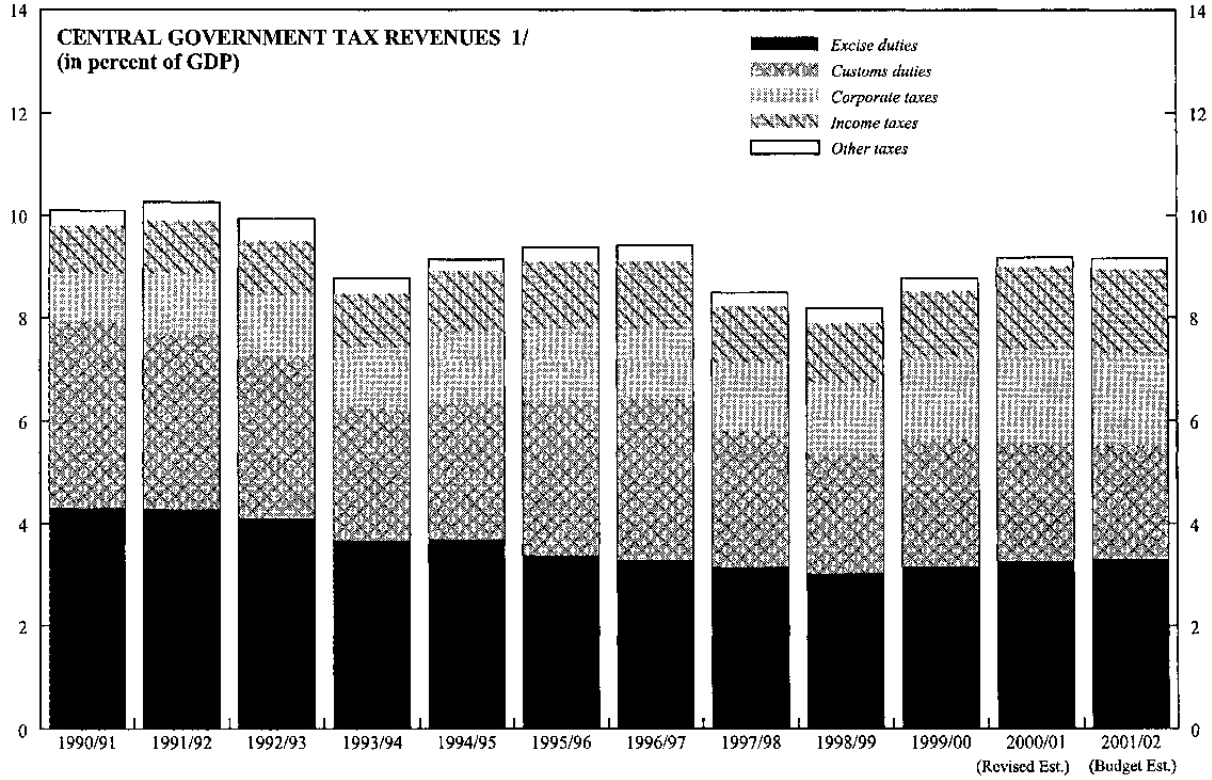


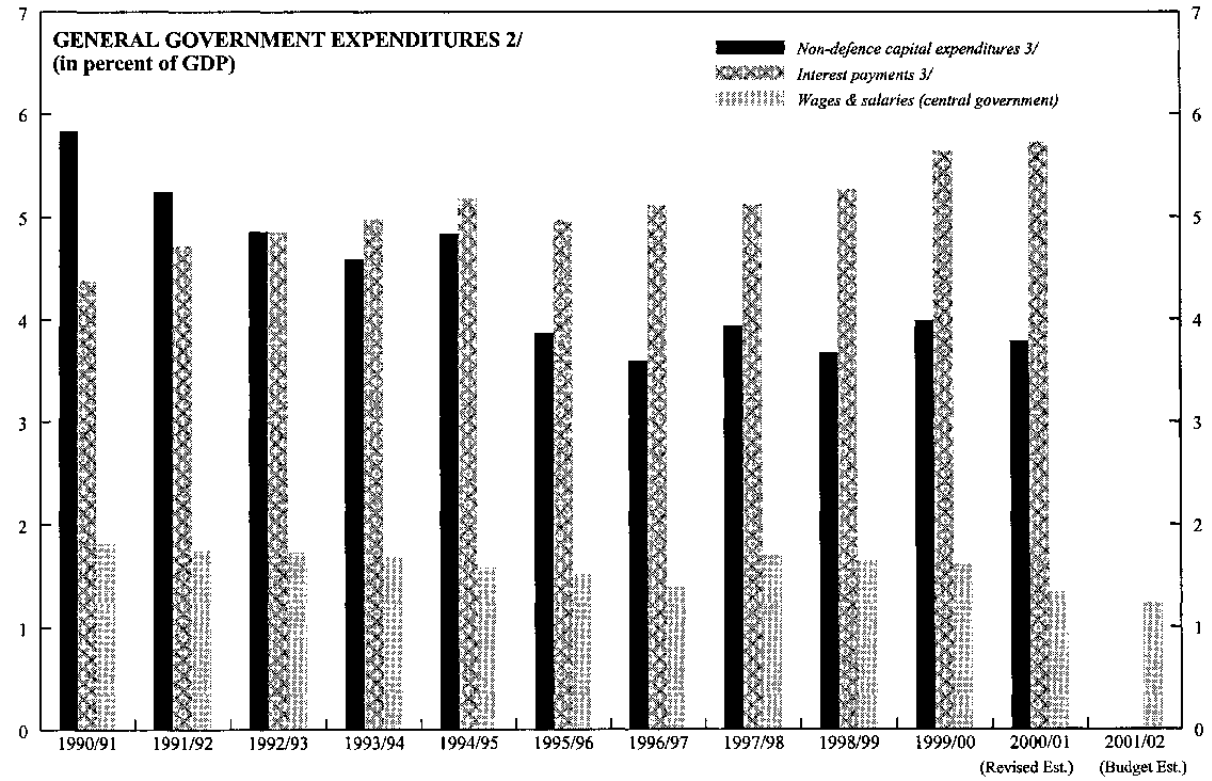


Source: Union budget documents, Reserve Bank of India, Public Enterprise Survey, and staff estimates.

1/ Consolidated public sector comprises central and state governments, central public sector undertakings (PSUs), and the accounts of the Oil Coordinating Committee (OCC). Figures are staff estimates.
2/ 2000/01 figures based on state government budget estimates.
3/ External debt valued at current exchange rates. 4/ External debt valued at historical exchange rates.

Chart V.2. India: Fiscal Trends - Central and State Governments, 1990/91 - 2001/02

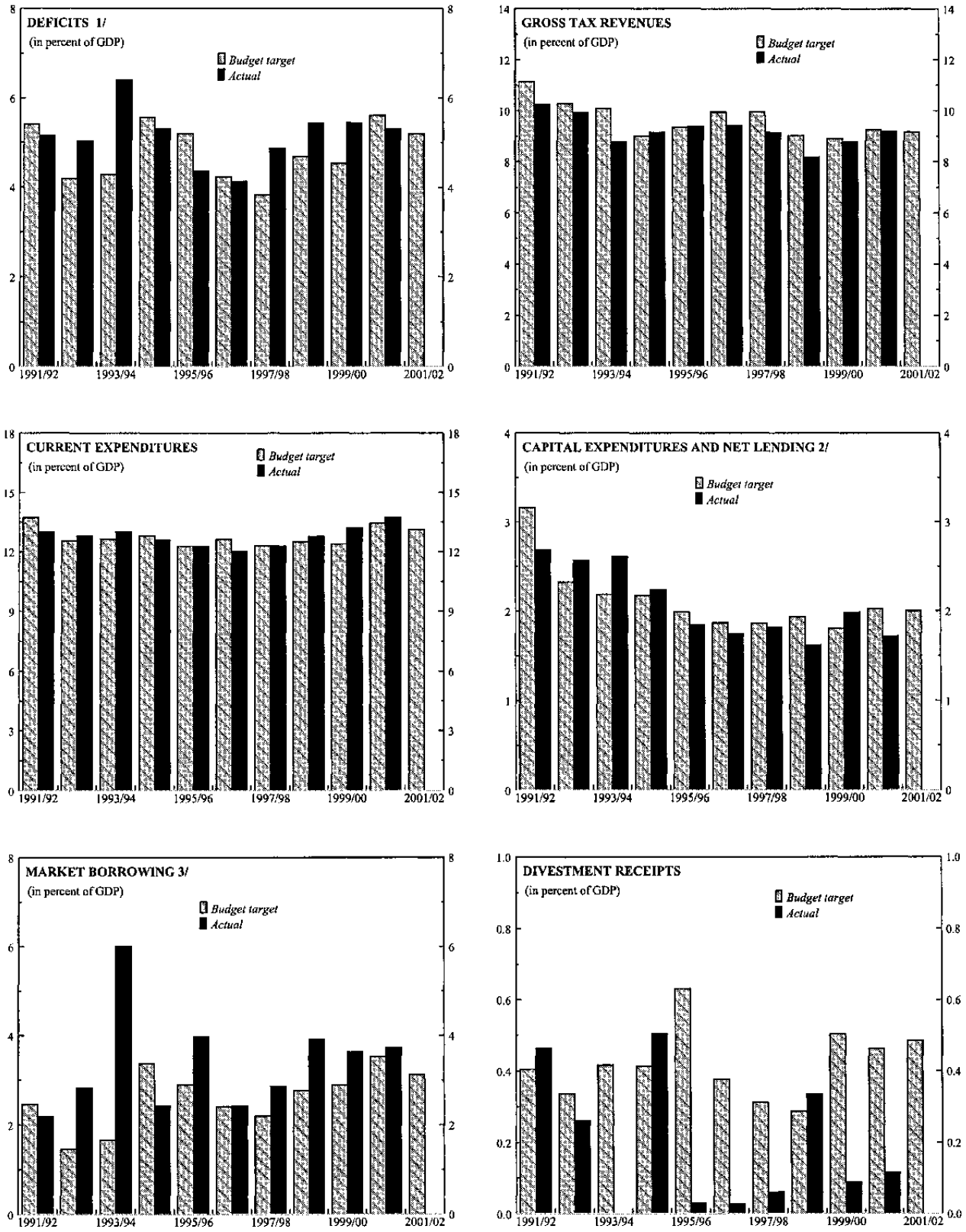




Sources:Union budget documents; Reserve Bank of India.

1/ Includes central tax revenues transferred to state governments.
2/ General government comprises central and state governments.
3/ State government figures are revised estimates in 1999/00 and budget estimates in 2000/01.

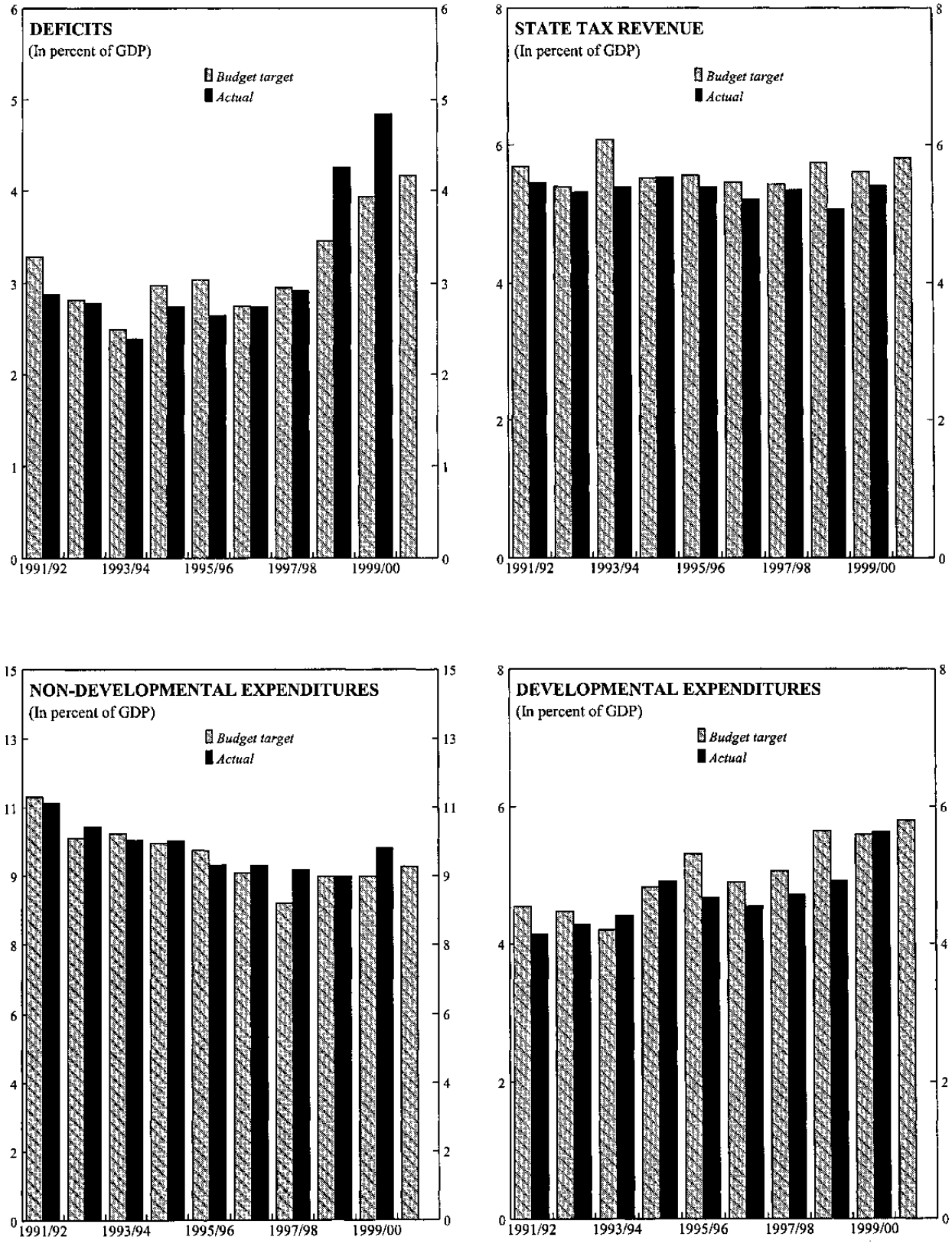
Chart V.3. India: Central Government Budget Targets vs. Outturns 1991/92-2001/02



Sources: Union budget documents.

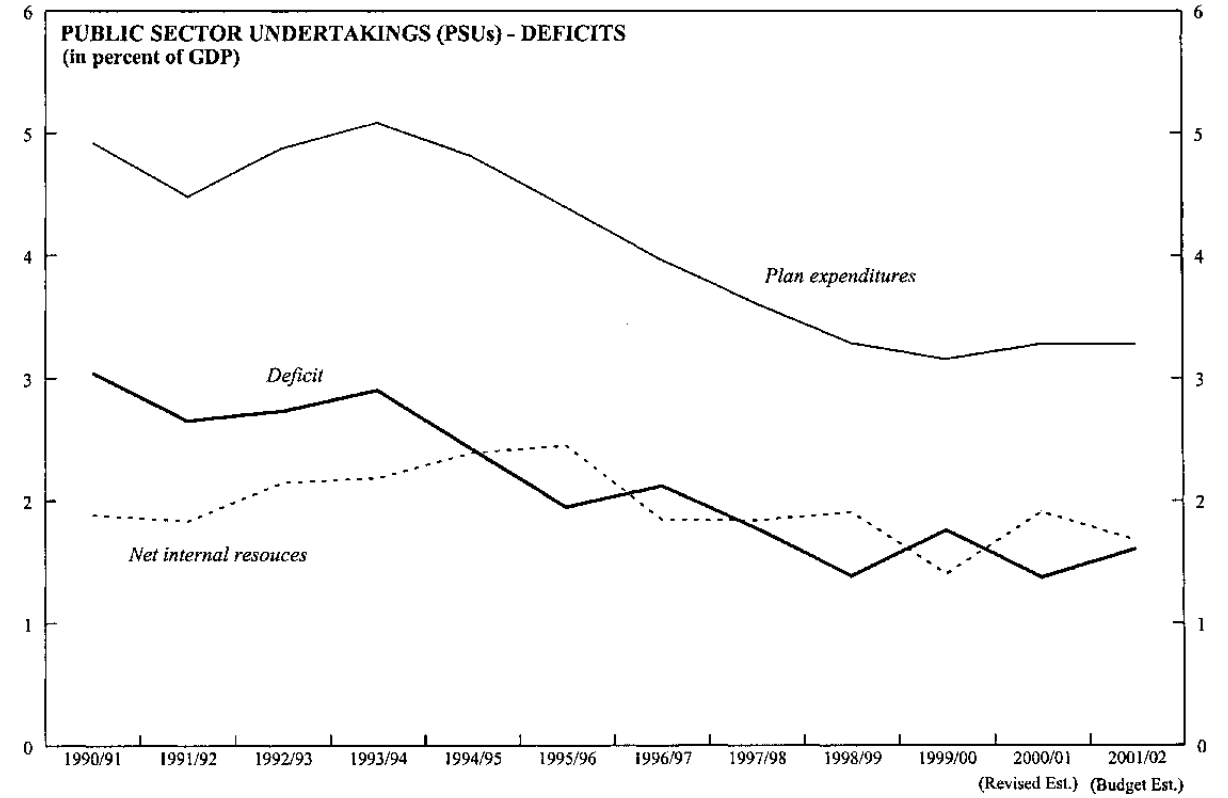
1/ Divestment receipts excluded from revenues; small savings onlending excluded from expenditures and net lending.
2/ Excluding small savings onlending.
3/ Includes 91-day T-bills.

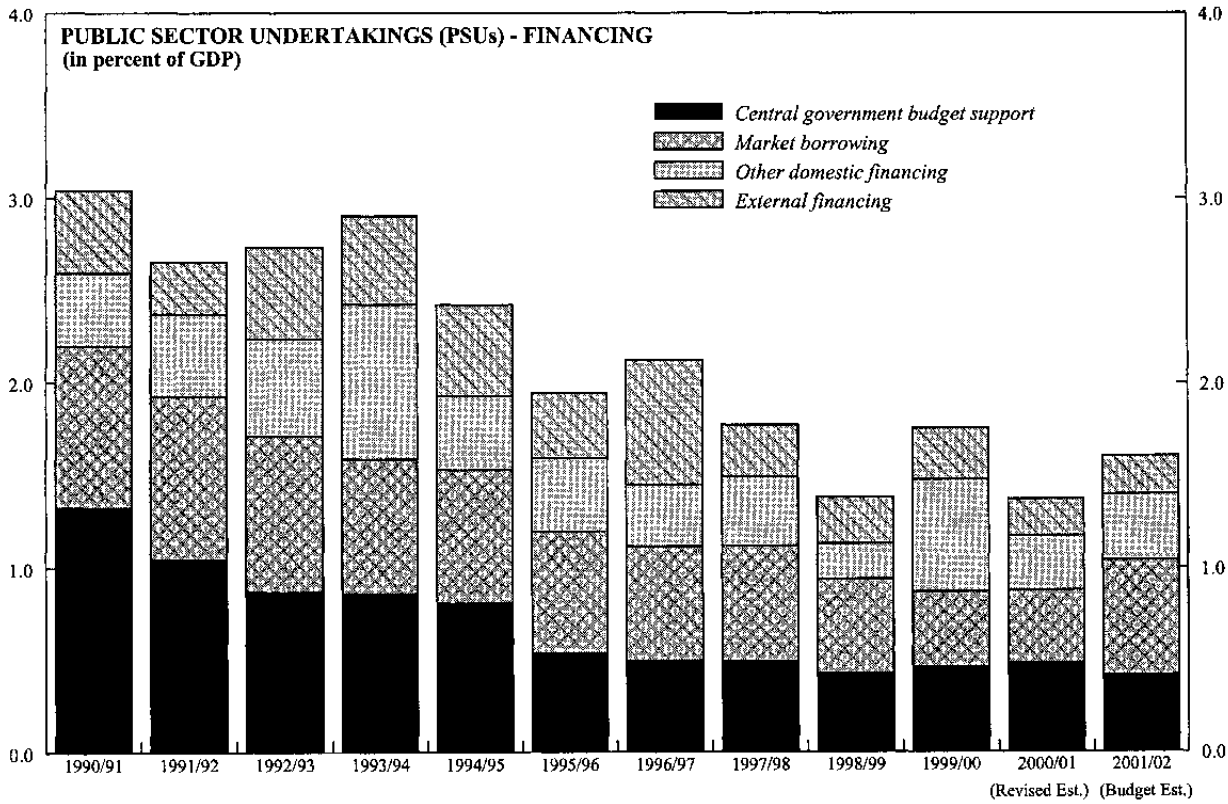
Chart V.4. India: State Governments Budget Targets vs. Outturns, 1991/92-2000/01



Sources: Union budget documents; Reserve Bank of India.

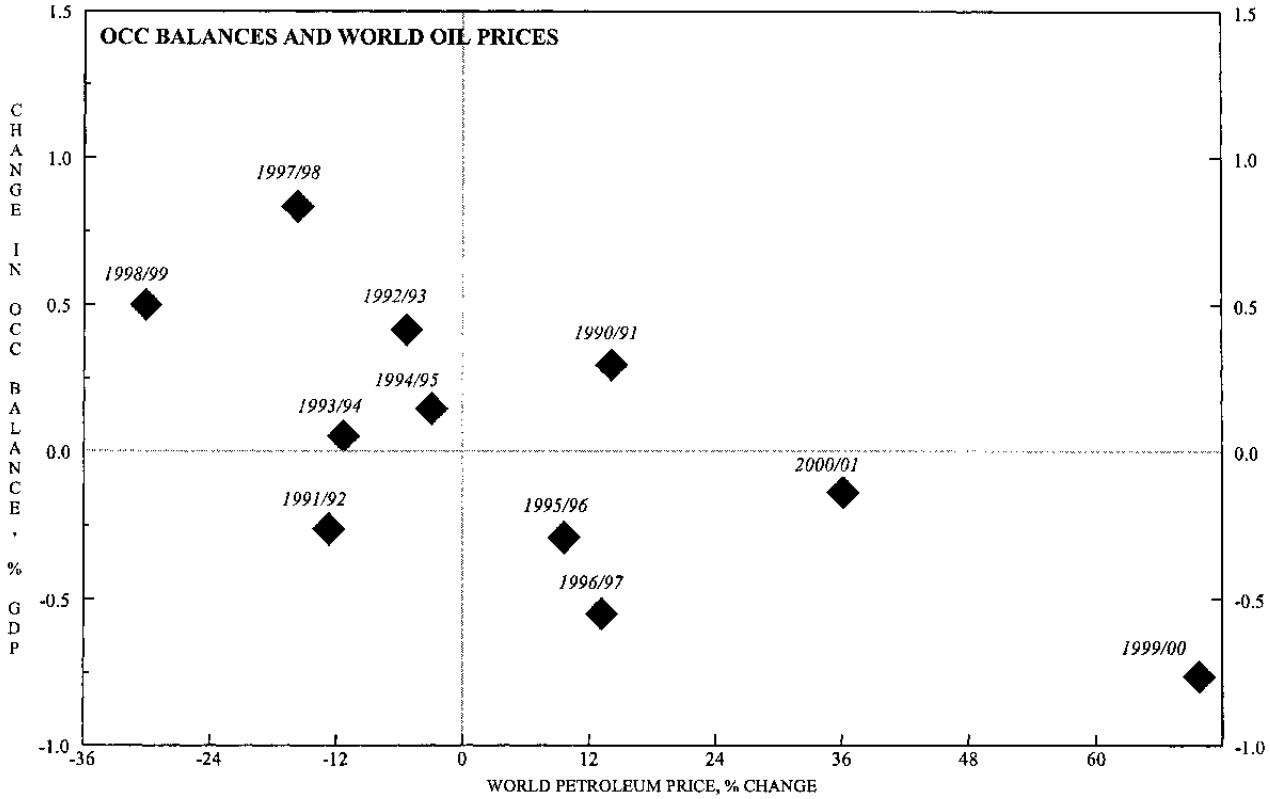
Chart V.5. India: Fiscal Indicators - PSUs, 1990/91 - 2001/02

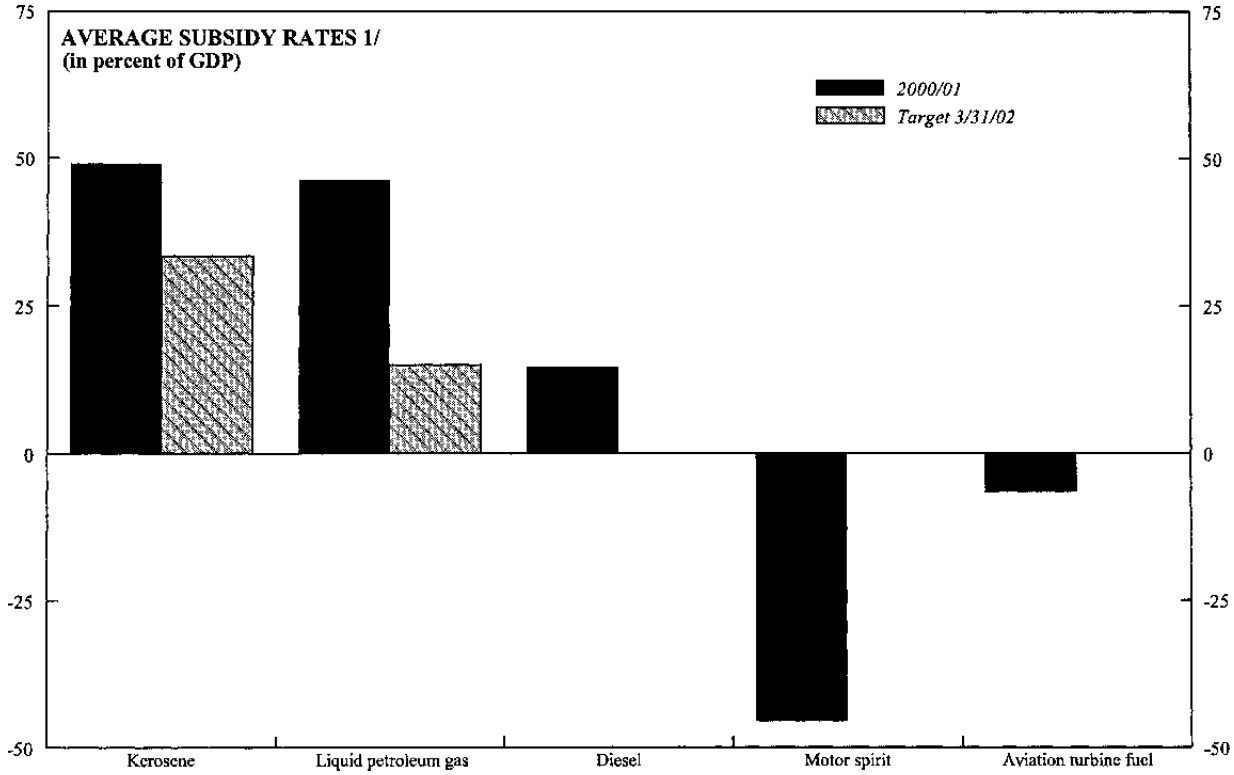




Source: Union budget documents.

Chart V.6. India: OCC Accounts, 1990/91-2000/01





Sources: Ministry of Petroleum; IMF IFS; staff estimates.

1/ Calculated as average ex-storage price less average adjusted import parity price, divided by average adjusted import parity price. Positive number indicates positive subsidy.

VI. Structural Policies and the Report of the Prime Minister's Economic Advisory Council[1]

A. Introduction

1. It has been long acknowledged among analysts and policy makers in India that productivity and growth have been constrained by a complex regulatory system and structural rigidities. There is a similar consensus that broad-based structural reforms are a critical prerequisite for moving the economy to a higher growth path and facilitating poverty reduction, and for enabling the economy to cope with a rapidly changing external environment, including market opening under WTO commitments.

2. It is also widely acknowledged that these reforms also are needed to support fiscal consolidation. Subsidies were estimated to have exceeded 14 percent of GDP during the mid-1990s, and are poorly targeted and highly distortive. Only a relatively small share of subsidies are explicitly identified in the budgets of the central and state governments—most are implicit and take the form of cross subsidies and user charges that are below economic costs.

3. Significant structural reform was introduced during the period following the 1991 balance of payments crisis, and the process continued during the latter half of 1990s at a pace that was sometimes undermined by political uncertainties and macroeconomic shocks—including the Asian crisis. During 2000/01, further progress was made in a number of key areas: rules governing foreign direct investment were liberalized; the number of small-scale industries receiving preferences was reduced; the telecom sector was further liberalized; steps were taken to facilitate the privatization of public enterprises; tax reforms were introduced; and the insurance sector was opened to private competition (Box VI.1).

4. The apparent reinvigoration of the momentum for reform culminated in the release of a long-delayed comprehensive program of "second-generation" reforms in January 2001, prepared by the Prime Minister's Economic Advisory Council (EAC). Encouragingly, many of the proposals were taken up in the Finance Minister's February 2001 budget and the government's March 2001 Export-Import policy. This chapter briefly summarizes the EAC's program, and describes the measures that have been subsequently announced.

B. The EAC Report

5. The EAC's report covered a broad range of recommendations, including industrial and agricultural policies, economic infrastructure, social sector issues, financial sector reform, and fiscal policy. The key issues are summarized below.

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[1] Prepared by Christopher Towe.

Box VI.1. India: Major Reform Initiatives in 2000/01[1]

Industry

Foreign direct investment permitted through automatic route in all industries, subject to a negative list and foreign ownership caps; removal of the garment sector from the list of products reserved for production by small-scale industries.

Infrastructure

Domestic long distance telephone service opened to private sector; corporatization of the Department of Telecom Services and Department of Telecom Operations by creating Bharat Sanchar Nigam Limited (BSNL); replacement of a fixed license fee system with a revenue sharing fee system for basic and cellular service operators.

Fiscal policy

Nonagricultural income of farmhouse made taxable; the "one-by-six" criteria for identifying potential taxpayers extended to 79 additional cities (from 54 previously); peak customs duties reduced from 40 percent to 35 percent, and the number of ad valorum duties reduced from five to four; a timetable for removing the exemption from income tax that had been allowed for all income generated from exporting was established—the exemption would be phased out over a five-year period in equal increments; excise duty system overhauled with the establishment of the CENVAT—a single rate of 16 percent, with few exemptions.

The Fiscal Responsibility and Budget Management Bill was introduced to the parliament, which would establish binding deficit reduction targets for the central government.

Financial sector

The interest rate on general provident funds was reduced from 12 percent to 11 percent; legislation was introduced to allow reduction of the minimum government shareholding in public sectors banks from 51 percent to 33 percent; the insurance sector was opened to private sector entrants, subject to minimum capital requirements and a 26 percent cap on foreign ownerships, and an insurance regulator was established.

Trade policy

Special Economic Zones were established to encourage export industries; rules restricting the import of second-hand capital goods were relaxed.

Capital account

FDI up to 100 percent was allowed in e-commerce; dividend rebalancing requirement for FDI in 22 consumer goods industries removed; sectoral cap on the amount of FDI in electricity sector projects removed; FDI under the automatic route permitted up to 100 percent in all manufacturing activities in Special Economic Zones; rules governing external borrowing under the External Commercial Borrowing window and the issuing of ADRs were relaxed.

[1] Adapted from *The Economic Survey*, 2000-2001 (Government of India).

Industrial and agricultural sector reforms

6. The EAC emphasized that high **tariffs**, preferences for **small-scale industry**, and weaknesses in **bankruptcy laws** have reduced the ability of domestic industry to restructure and take advantage of economies of scale. As a result, industry is not well placed to benefit from increased market opening under existing trade arrangements, including the withdrawal of quantitative import restrictions as of April 2001 and the withdrawal of MFA quotas in 2005. Key recommendations for reforms included: (i) a phased reduction in tariffs—from an average rate of around 34 percent to 10–12 percent—with the initial emphasis on basic intermediate goods; (ii) phased elimination of preferences for small-scale industries; (iii) elimination of the Sick Industrial Companies Act as a vehicle for bankruptcy, strengthened mechanisms for debt recovery under the Debt Recovery Tribunals, and the introduction of modern bankruptcy legislation, including amendments to the Companies Act that facilitate reorganization and/or liquidation.

7. The EAC stressed that **privatization** needs to be actively pursued, as government enterprises are extensive, inefficient, and contribute to substantial quasi-fiscal deficits. In this regard, an emphasis was laid on the government following through on its commitment to lower its equity stake in enterprises and to allow them to operate on a corporate basis. The EAC also suggested that revenues received from privatization should be used to pay down public sector debt, rather than fund general government operations.

8. **Labor market rigidities**—including legislation that effectively prohibits layoffs and requires government intervention in all labor disputes—were identified as severely constraining the scope of industrial sector restructuring and adversely affecting labor incomes. Key reforms include: (i) relax and eventually abolish the requirement under the Industrial Disputes Act for Government permission for layoffs from firms employing more than 100 workers; (ii) increase the compensation paid to retrenched workers from the present 15 days average pay for every completed year of service to 30 days; and (iii) ease constraints under the Contract Labor Act to hire labor on a contract basis. Plans to implement reforms along these lines were announced in the February 2001/02 budget, although the proposed separation benefit to be paid to retrenched workers was increased to 45 days per year of service.

9. In the **agricultural sector**, price controls, regulations, subsidies, and the tax-free status of agricultural incomes have undermined productivity and incomes in rural areas, where poverty is endemic. Key reforms recommended by the EAC included: (i) elimination of controls on the movement and stocking of agricultural commodities (food grains, edible oils, cotton or sugar); (ii) the repeal of the Essential Commodities Act, which requires sales to government procurement agencies; (iii) abolition of levies on commodities like rice, sugar, etc.; (iv) the drastic reduction in the role of government procurement agencies including the Food Corporation of India; (vi) the abolition of controls on the distribution and marketing of sugar; (vii) the dereservation of agro-processing and the freeing of milk processing to large-scale producers; (viii) the abolition of the retention price scheme for urea (fertilizer) manufacturers and the freeing of urea marketing. However, the EAC did not

address the issue of the need to promote measures at the state level to bring the agricultural sector under the tax net.

Infrastructure

10. The **power sector**, which is largely under state control, provides massive subsidies in the form of free or low cost power to the agricultural sector, and is also highly inefficient—losses due to technical weaknesses and corruption are as high as 50 percent. High tariffs charged to industrial consumers to cover losses have undermined manufacturing competitiveness and encouraged wasteful investment by industrial users in captive generating capacity. The financial situation of the state electricity boards has deteriorated as industrial users have left the system (in favor of self generation) and financial losses are presently estimated to be in the range of 1 percent of GDP. The EAC stressed that reforms should include: (i) hikes in tariffs for nonindustrial consumers to meet economic costs; (ii) privatization of the distribution system to contain costs and improve efficiency; (iii) clearance of arrears of the state electricity commissions, which some estimates place at over 1 percent of GDP.

11. Although considerable progress has been made toward **telecom reform**, the EAC noted that additional measures that would help reduce costs to the consumer include: (i) license fee reform; (ii) ensuring that service taxes do not undermine the use of telecom services as an input to production; (iii) proceeding with the planned dismantlement of the government monopoly on international long-distance service and facilitating the licensing of entrants; (iv) promoting the use of right-of-ways along railway lines for fiber optic cables.

12. The EAC emphasized that the Indian **transportation system** also is a significant impediment to industrial productivity and foreign direct investment. Notably, the Indian **highway system** is inadequate and poorly maintained, and losses by state-run road corporations are estimated at around 0.1 percent of GDP. Against this background, the EAC urged improved efforts at cost recovery, including by a greater reliance on tolls, and more private sector investment on a build-and-operate basis. Indian **ports** also are inefficient, owing to obsolete equipment, inadequate mechanized handling facilities, poor port management techniques and outdated labor practices. Corporatization and privatization must be actively pursued, coupled with a rationalization of the pricing of port services.

Social sector issues

13. **Educational attainment** in India is weak—those aged 25 and above, on average, have less than three years of schooling. The EAC stressed that improving education, especially access to primary schools, would be essential for poverty reduction. Although increased funding for education would be important, the EAC noted that the large implicit subsidy for university education needed to be severely reduced—university fees were estimated to cover only about 5 percent of costs.

14. As regards the **health system**, while life expectancy and mortality rates have improved considerably since Independence, the EAC noted that indicators are much weaker in rural areas. Increased efforts toward measures to ensure immunization, clean drinking water, and provision of sanitation facilities are critical for poverty reduction and improvements in productivity. **Social safety nets** are relatively porous in India, and appear to be largely limited to formal sector employment. The EAC called for an emphasis on employment programs, child development services, and micro credit facilities.

Financial sector reform

15. The EAC stressed the importance of continued progress in the area of **financial sector** reform, and emphasized the importance of bringing prudential and supervisory norms in the banking sector up to international standards and of implementing the government's decision to reduce its minimum ownership of **public sector banks** to 33 percent. In this latter regard, the EAC cautioned that the government's desire to retain the "public sector character of public sector banks" could undermine the benefits that would accrue from increasing competition in the sector.

Fiscal reform

16. The EAC strongly urged the government to correct the fiscal situation, cautioning that inaction could lead to inflation and exchange rate instability, low growth, and external crisis. The EAC argued that the consolidation recommended by the Eleventh Finance Commission was too modest and called for a reduction in the combined **fiscal deficit** of the central and state governments to around 5 percent of GDP by 2006/07. In order to achieve this objective, measures would be required to boost **tax revenues** at the central level by 2 percent of GDP, mainly through a widening of the excise tax base.

17. **Expenditure reforms** were also strongly recommended in a number of areas, including with regard to downsizing the civil service and rationalizing Plan outlays, in the latter case by establishing "sunset" provisions for all programs. Other recommendations included:

- **Food and fertilizer subsidies** total around 1¼ percent of GDP and are very poorly targeted. The EAC called for reforms in line with the recommendations outlined by recent reports of the Expenditure Reforms Commission, which would involve curtailing outlays, devolving responsibility to the states, and providing lump sum benefits.

- **Kerosene subsidies** are estimated at around 0.4 percent of GDP and, while these are typically met from charges on other petroleum products, large price differentials create incentives for consumers to adulterate other fuels with substantial adverse environmental effects. The EAC recommended that kerosene prices be increased significantly in the coming year, in line with the Government's commitment to eliminate the administered pricing mechanism.

- **Railway fares** for passengers do not cover costs, implying a subsidy of nearly 0.2 percent of GDP and requiring high charges for industrial users. The EAC recommended hikes in passenger fares to cover costs, a reduction in freight charges, and mechanisms to depoliticize fare setting. The corporatization and eventual privatization of the six manufacturing units of Indian Railways, and greater private sector participation in railway operations, were also recommended. In addition, the EAC also recommended increases in **postal and water charges** in order to cover costs.

- **Pension-related reforms** would include establishing a system for automatic adjustment of the rate of return on the Public Provident Fund and National Saving Certificates to 2 percent plus the rate of inflation, and shift pensions in the public service to a fully funded, defined benefit basis.

C. Recent Structural Measures

18. Encouragingly, the 2001/02 budget speech and the 2001/02 Export-Import policy statement introduced a number of important structural reform measures, and signaled a commitment to carry forward the recommendations of the EAC in a number of other important areas:[2]

- **Food subsidies**: Although details were not announced, the budget indicated that the proposal by the Expenditure Reforms Commission to devolve responsibility for managing food subsidies to the states would be adhered to. The budget also promised a review of the Essential Commodities Act, with a view to removing obstacles to the free flow of agricultural commodities.

- **Fertilizer subsidies**: The budget announced that, in line with the recommendations of the Expenditure Reforms Commission, urea prices would be decontrolled by 2006, and that beginning in April 2001, the existing retention price scheme would be replaced by a group concession scheme.

- **Sugar subsidies**: In a first step to eliminating sugar subsidies, futures/forward trading would be introduced in 2001/02.

- **Labor market**: The budget committed the government to introducing legislation that would amend the Industrial Disputes Act so that its restrictions on layoffs would apply only to firms with 1,000 workers or more, rather than the current limit of 100 worked or more. Legislation that would ease restrictions on contract labor would also be introduced.

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[2] Chapter V discusses the fiscal reforms that were introduced with the budget.

- **Small-scale industries (SSI)**: 14 previously reserved industries were opened to production by large-scale producers, and size limit for firms to qualify for SSI status and tax exemptions was doubled.

- **Power sector**: The budget announced for state-level reforms of State Electricity Boards (SEBs)—supported by conditional grants and loans under memoranda of understanding to be negotiated between the center and the states—that would require full metering, energy audits, independent tariff determination, commercialization of distribution, and SEB restructuring. A new Electricity Bill, which would facilitate SEB restructuring, would be introduced in 2001.

- **Petroleum sector**: The budget announced that the March 2002 deadline for dismantling of the administered pricing mechanism in the petroleum sector would be adhered to.

- **Social security**: Various schemes were introduced to extend security cover to workers affected by economic liberalization, including a new unemployment insurance scheme that would cover for one year 30 percent of lost compensation of workers up to a maximum of Rs 36,000, as well as modest education and pension benefits for the rural poor.

- **Banking sector and debt recovery**: Public sector banks were to be accorded full autonomy in the area of recruitment. In order to facilitate debt recovery, several additional Debt Recovery Tribunals were to be established in 2001/02. The Sick Industrial Companies Act would also be repealed and an alternate legal framework for bankruptcy would be introduced during 2001/02.

- **Securities markets**: The budget announced plans to establish a range of measures to deepen the government debt market, including a clearing corporation, a screen-based trading system, and the introduction of a Real Time Gross Settlement system.

- **Pension reform**: The budget called for proposals for reforms to the provident fund system by October 1, 2001, but also lowered the interest rate on provident fund deposits by 150 basis points.

- **Capital account liberalization**: The budget announced an easing of restrictions on outward FDI and inward FDI in nonbanking financial companies, and an increase in the limit on foreign portfolio investment from 40 percent to 49 percent of firms' equity. Subsequently, foreign ownership caps were raised to 100 percent in drugs and pharmaceuticals, hotels and tourism, courier services, airports, and mass rapid transport services, to 74 percent for Internet service providers, and to 49 percent for banks.

- **Trade policy**: The budget contained commitments to reduce the peak tariff rate from 35 percent to 20 percent in three years, and the 2001/02 Export-Import policy eliminated all remaining quantitative import restrictions. However, various measures were

introduced to mitigate the impact on domestic industry, including the requirement that some sensitive commodities could only be imported through state trading companies, that agricultural products be subject to import permits based on sanitary and phytosanitary provisions, that imports of second-hand cars would be banned, and hikes in tariff duties on certain agricultural products.

D. Concluding Remarks

19. Encouragingly, the 2001/02 budget, which was tabled in late February, reiterated the government's commitment to fiscal reform and consolidation, and signaled a willingness to press forward with many of the recommendations that had been made by the EAC. At the same time, however, considerable further work needs to be done to meet the ambitious agenda set by the EAC. Implementing the measures that were identified in the budget will require legislative support, and important reforms emphasized by the EAC still need to be tackled. However, as has been clearly emphasized by the authorities and many other analysts, determined implementation of this reform agenda is critical for ensuring that India achieves its full growth potential and succeeds in addressing the needs of the poorest of its population.

VII. Interstate Differences in Rural Poverty in India[1]

A. Introduction

1. **Over the last fifty years, India has achieved significant progress in reducing poverty**. However, progress at the national level masks substantial differences at the state level. Moreover, in recent years, some analysts have expressed concerns that the reforms of the 1990s, which were primarily aimed at liberalizing domestic markets and the external sector, raised growth but did not benefit the poor.

2. **Three main results have emerged from existing studies about India's state level poverty experiences**:[2] (i) interstate disparities in poverty have narrowed, although, they remain high; (ii) the relatively better success rate of some states in reducing poverty was at least in part due to higher growth and lower inflation; and (iii) initial conditions, such as better infrastructure, higher education, and tenancy reforms also have been significant in reducing poverty. However, these studies were largely limited to the period before 1992, and do not address whether the narrowing trend in interstate disparity in poverty was sustained during the post-reform period. Similarly, they provide no direct evidence that growth has continued to be pro-poor in the post-reform years. This chapter attempts to fill this gap.

3. **The focus here will be exclusively on rural poverty**, for two reasons: first, roughly three-quarters of India's poor live in rural areas, and thus changes in rural poverty have a much larger impact on overall poverty; second, several studies have pointed out that rural and urban poverty behave in distinct ways and analyzing both is beyond the scope of a single chapter. Moreover, this chapter focuses on the incidence of rural poverty—the proportion of the population that is poor—rather than the depth of poverty, which measures how poverty stricken the poor are.

4. **The empirical work here departs methodologically from previous studies**. The earlier studies used regression analysis to examine whether interstate differences in poverty were narrowing over time and how the pace of catch-up was related to growth and other factors.[3] Results from such analyses are useful and this chapter also carries out such exercises. However, it is possible that by imposing a particular structure (linear or otherwise) on the data, regression exercises do not fully exploit all the available information. Borrowing from the literature on cross-country studies of income convergence, this chapter also carries out nonparametric estimations (which do not impose any structure on the data) to

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[1] Prepared by Jahangir Aziz.

[2] See Ravallion and Datt (1996) for a review of India's poverty experience since the 1950s and the related literature.

[3] See Jha (2000) and Datt and Ravallion (1998) for examples of such studies in the context of interstate poverty; Aiyar (2001) conducts a similar study of interstate differences in income.

complement panel regression estimates.[4] In particular, the focus is on examining the properties of the interstate distribution of poverty, analyzing how they have evolved over time, and determining the factors that have affected their evolution.

5. **From this exercise, the following results emerge:**

- The incidence of poverty has fallen across the states over the last two decades. However, in the post-1991 reform period, poverty initially increased before declining in the later years.

- While interstate differences in poverty narrowed during the 1980s, they do not appear to have narrowed in any discernible way during the 1990s.

- Differences in interstate poverty do not appear to have been caused by differences in growth. Growth is estimated to have been pro poor in both the pre- and post-reform periods, and poverty experiences in the 1990s may have been more strongly influenced by differences in redistributive policies, human capital development, and other "structural" factors.

B. Trends in Rural Poverty

Data issues

6. **The chapter uses data on poverty from National Sample Survey (NSS) estimates.** The specific measure of poverty used is the state-level rural headcount ratio, defined as the percentage of the population in a state living below the poverty line.[5] Other data were drawn from datasets previously compiled for state-level variables by Ozler, Datt, and Ravallion (1996), Jha (2000), and the World Bank's SIMA database. Wherever necessary, the data were updated to 1997 using official publications.

7. **The poverty estimates by the NSS, however, have not been free of controversy.** Although the quality and comprehensiveness of data on poverty in India is among the best in developing countries, there are a number of areas of weakness. First, the NSS carries out two types of consumer surveys—an annual survey with limited sample size and coverage, and a

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[4] For an exposition of this methodology in the context of cross-country growth see Quah (1997). For more general overviews of nonparametric estimation see Hardle and Linton (1994) and Yatchew (1998).

[5] In India, the rural poverty line is based on a nutritional norm of 2,400 calories per day, and is defined as the level of average per capita total expenditure at which this norm can be typically attained. The Planning Commission determined this line at Rs 49 per capita monthly expenditure at October 1973-June 1974 all-India rural prices. For the urban area, the poverty line is computed at Rs 57 per month reflecting a nutritional norm of 2,100 calories.

more comprehensive survey with a larger sample conducted roughly every five years. Although estimates from the smaller samples are publicly released, they are not officially accepted as representative surveys. Consequently, official poverty estimates are available only in five-year intervals, making it difficult to study their time series properties. In the sample period under study, 1978-97, there are four large sample studies for 1977-78, 1983, 1987-88, and 1993-94. As in previous studies, to enlarge the number of available time series observations, these large sample estimates are supplemented by small sample estimates for 1986-87, 1990, 1991, 1992, 1995, 1996, and 1997.

8. **The second area of concern is related to the latest (1999-2000) large sample survey**. Prior large sample surveys were conducted on the basis of a 30-day recall. However, in the 1999-00 survey a 7-day recall questionnaire was added. Some critics have alleged that the two sets of questionnaires may have confused both respondents and enumerators such that even the 30-day recall estimates for 1999-2000 are not comparable with those of the earlier large sample studies. To avoid these difficulties, the 1999-2000 estimates are excluded from the analyses below.

9. **The discussion in this paper covers only the 14 largest states of India, for two reasons**. First, the 14 states represent over 90 percent of India's total population, and second, although data on poverty are available for the remaining 17 states and union territories, in many cases they are constructed using one of the larger states as a proxy.[6] Consequently, including the other 17 states and union territories would introduce a bias in favor of the smaller states—which represent more than 50 percent of the sample, but account for less than 10 percent of the total population—and those states (such as Assam) whose headcount ratios are used as proxies for those in the smaller provinces.

Poverty differences across India's states

10. **The incidence of poverty across India's states varies considerably**. For example, in 1978, the headcount ratio—the percentage of population below the poverty line—in Punjab was 20 percent, while that in Bihar was 66 percent. Two decades later, the headcount ratio in Punjab had fallen to 16 percent, while that in Bihar to 62 percent. In both years, Punjab remained the state with the lowest incidence of poverty, and Bihar one of the poorest states. In contrast, during the same period West Bengal reduced its headcount ratio from 56 percent to 27 percent, while Maharashtra lowered it from 70 percent to 45 percent. Therefore, while poverty rates fell in all states, the experience has been extremely uneven (Chart VII.1).

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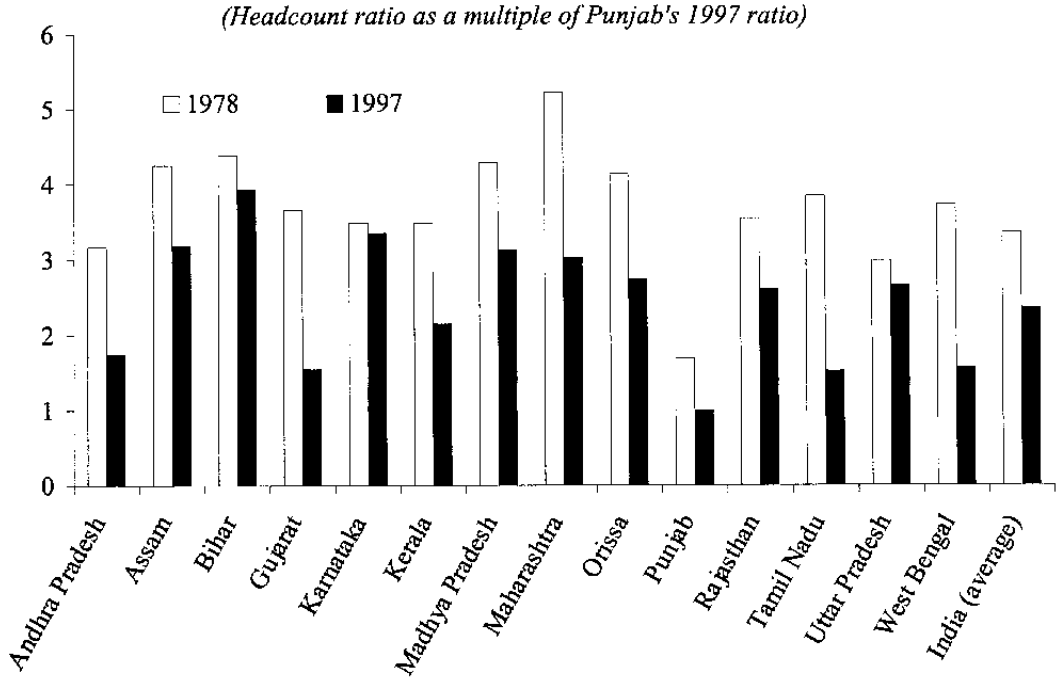
[6] The headcount ratio of Assam is used as a proxy for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, and Tripura; that of Tamil Nadu for Pondicherry, and Andaman and Nicobar Islands; Kerala's headcount ratio proxies for Lakshdweep's; the poverty line of Maharashtra is used to estimate the headcount ratio of Goa, which in turn is used as a proxy to measure poverty in Dadra and Nagar Haveli; and the headcount ratio of Punjab is used to proxy Chandigarh's.

Chart VII.1.India: Incidence of Rural Poverty in India's States
(Headcount ratio as a multiple of Punjab's 1997 ratio)



11. **A succinct way to study interstate differences is to examine the entire relative distribution of the state level headcount ratios and how it has changed over time.**[7] To do so, the kernels of the poverty ratios of states at different points in time are estimated. A kernel estimator of a set of observations—in this case the relative rankings of headcount ratios across states—is an estimated distribution function from which the observations are likely to have been drawn (for details, see Silverman (1986)).[8] Technically, the kernel estimator $f(x_k)$ of an arbitrary point x_k is defined as

$$f(x_k) = \frac{1}{Nh} \sum_{j=1}^{N} K\left(\frac{x_k - X_j}{h}\right)$$

[7] Quah (1997) uses this approach to study cross-country differences in income levels.

[8] For a formal derivation of the estimator and its statistical properties see Pagan and Ullah (1999).

where, X_j = the jth observation in the sample data; N = number of observations; h = window width/smoothing parameter; and K = kernel or weighting function, which in this exercise is assumed to be the normal distribution.[9]

12. **The kernel estimators were computed in three steps**. In the first step, for each year the headcount ratios of the 14 states were rescaled as a factor of Punjab's 1997 ratio. The resulting rankings lie in the interval [0,6]. In the second step, for a suitably large number of points spanning the interval [0,6], the frequency—i.e., the unconditional probability—with which values in this interval can occur was estimated.[10] The probability of each point was computed as the weighted average of the distance of that point from the observed headcount ratios of all the 14 states, with the weights drawn from a normal distribution centered at that point. The smoothing parameter (window width) was chosen to be around $0.9AN^{-1/5}$, where A=min(standard deviation, interquartile range/1.34), following Silverman (1986). In the third step, the frequencies of these points were plotted after the area of the frequency distribution was normalized to be 100.

13. **An examination of the interstate distribution of poverty shows that the interstate dispersion of poverty declined significantly between 1978-97** (Chart VII.2). Over the course of the two decades, the mass of the interstate distribution shifted discernibly to lower incidences of poverty. For example, this implies in 1978 an unconditional probability of 38 percent that a state's headcount ratio was more than four times that of Punjab's 1997 headcount ratio. This probability fell sharply to 3 percent by 1988.

14. **However, this decline in probability at the higher end was compensated by an increase in the probability at the lower end**. The likelihood of the headcount ratio being less than two times that of Punjab's 1997 ratio rose from 6 percent to 8 percent during 1978-88, and then to 35 percent by 1997.[11]

15. **While the year-by-year distributions are useful, they tell us little about the intertemporal dynamics between one period and another**. In particular, the panels in Chart VII.2 do not provide information about the fate of individual states. Did the progress in reducing poverty occur across the board and steadily, or did the rankings change over time?

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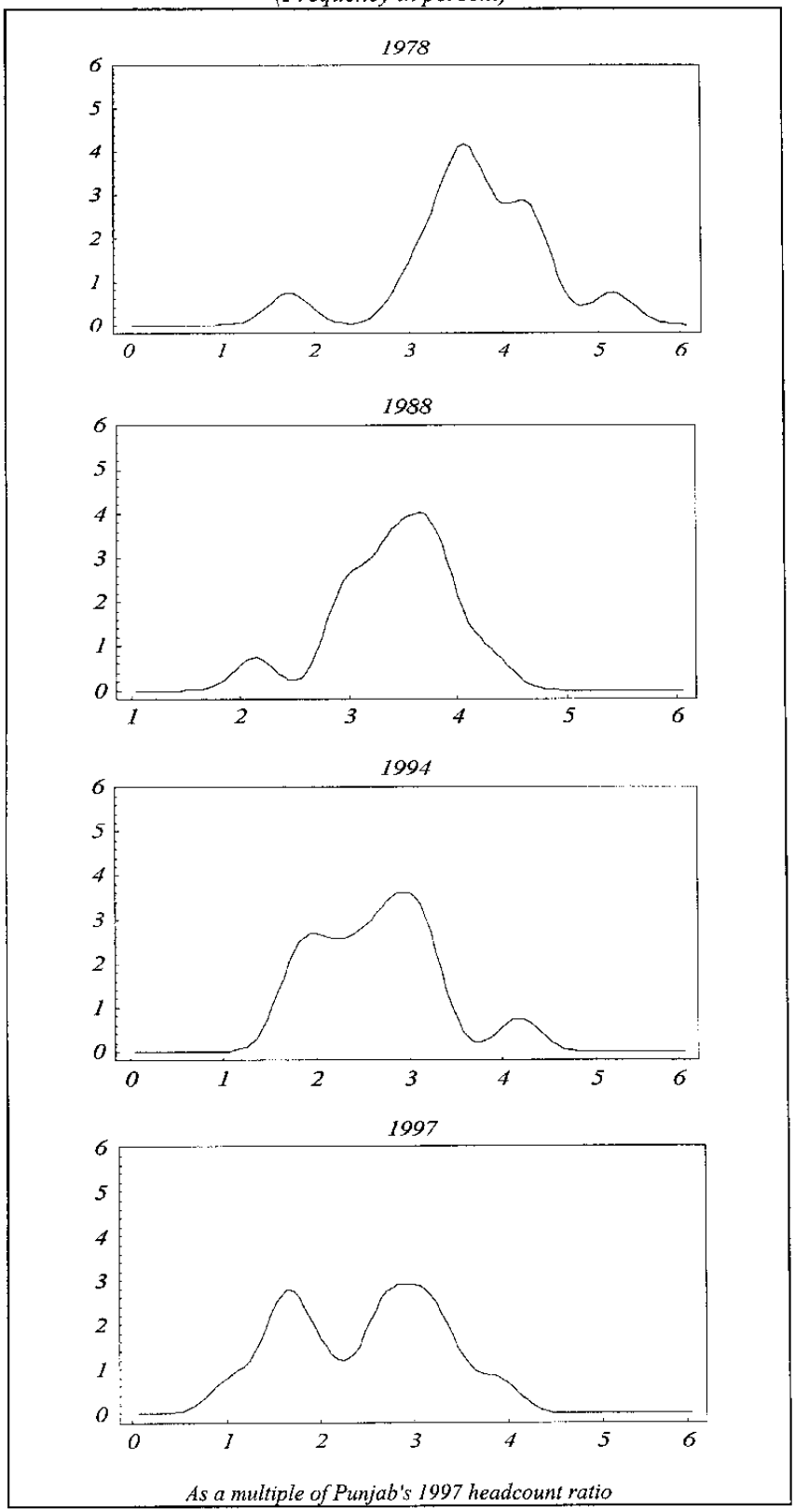
[9] The choice of the weighting function generally does not effect the kernel estimator significantly (see Silverman (1986), Hardle and Linton (1994)).

[10] For these exercises, the interval [0,6] was divided into equally spaced 100 sub-intervals.

[11] It is relatively straightforward to check the robustness of the shape of the estimated kernels by weighting each state's headcount ratio by the state's share in total population. However, it is not clear how one would interpret such distributions, since they would be estimating the frequency of how rural population is distributed across the whole country, rather than the incidence of poverty.

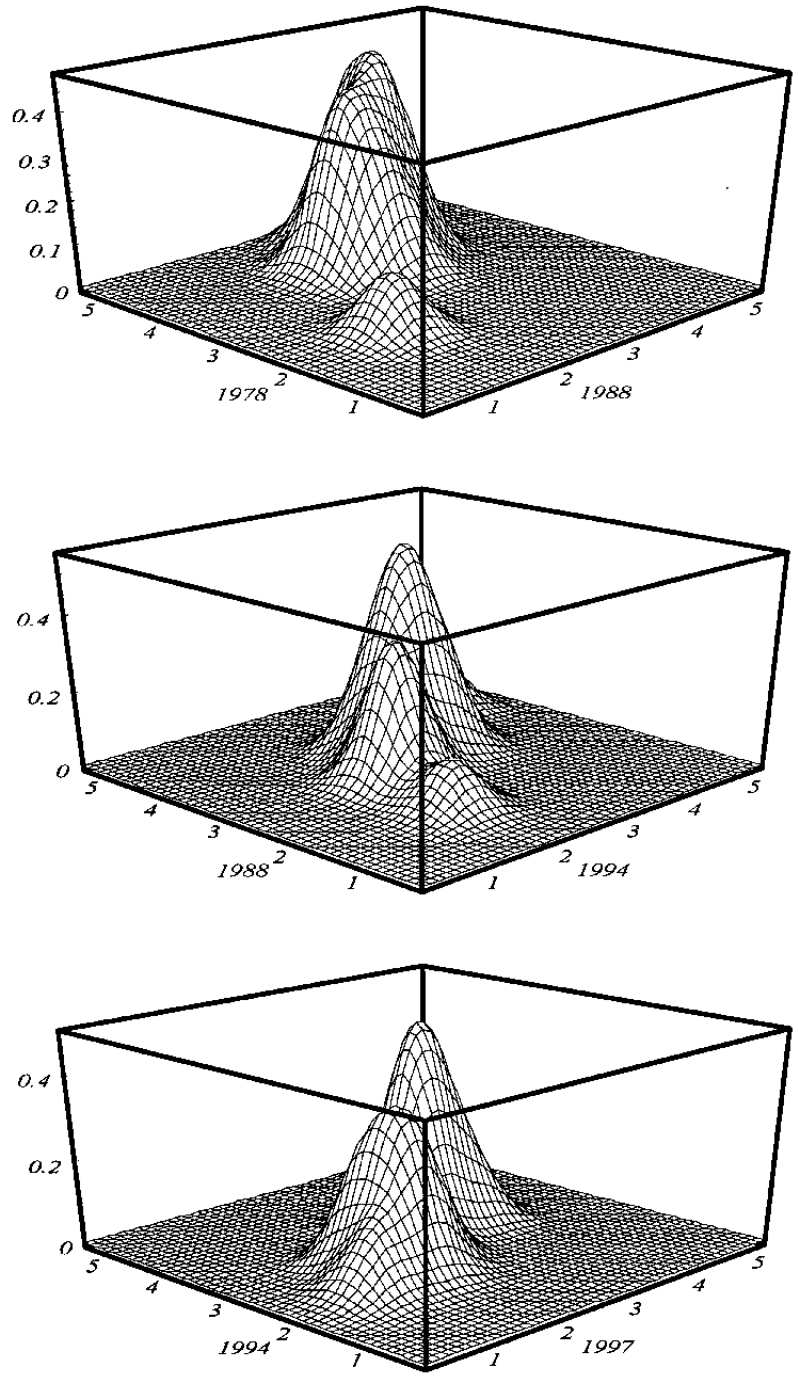
Chart VII.2. India: Estimated Interstate Distribution of Poverty, 1978-97
(Frequency in percent)



Sources: NSS (various rounds), and staff estimates.

Chart VII.3. India: Intradistribution Dynamics, 1978-97

The horizontal axes measure headcount ratio as a factor of Punjab's 1997 headcount ratio, while the vertical axis measures the frequency.
Points of the distribution that lie on the left of the north-south diagonal indicate a reduction in poverty between the initial and terminal years, while those to the right indicate an increase.



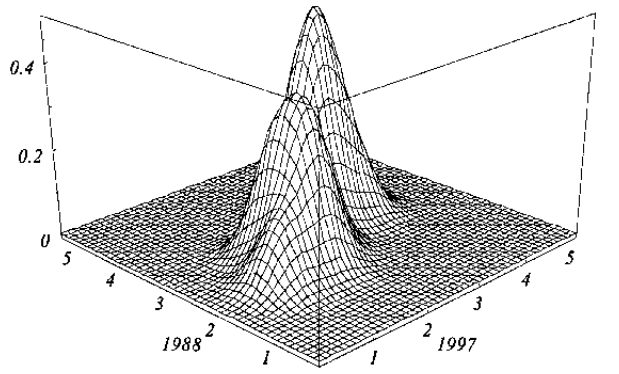
Sources: NSS (various rounds), and staff estimates.

16. **In order to address this type of question, the joint density distributions of poverty were constructed** (Chart VII.3). In each panel of these charts, the kernel of the joint distribution of relative poverty in the initial and terminal years is plotted using the bivariate version of the kernel estimator discussed above. The horizontal axes measure the relative poverty in the initial and terminal years, while the vertical axis measures the frequency. The height of the distribution shows the frequency or probability with which a particular history of poverty occurred between the initial and terminal period. Points of the distribution that lie along the north-south diagonal represent unchanged incidence of poverty, while points to the right (left) of the diagonal represent a rise (decline) in poverty between the two periods.

17. **The intradistribution dynamics differed in the 1980s and 1990s**. Between 1978 and 1988, a reduction in poverty occurred across the board. The entire joint distribution for the period is skewed to the left of the north-south diagonal. In fact, 90 percent of the mass of the distribution lies to the left of the diagonal. Moreover, states with initially higher incidence of poverty (those having poverty more than four times that of Punjab's 1997 headcount ratio) achieved the greatest reduction. This does not appear to have been the case in the 1990s. Between 1988-94, the states at the high and low ends of the distribution witnessed an increase in poverty. Overall, only 60 percent of the mass of the distribution lies to the left of the north-south diagonal, with more than a third of the states experiencing an increase in poverty. The situation changes only marginally in the next three years, such that for the period 1988-97 as a whole, only 60 percent of the experiences showed a reduction in poverty (Chart VII.4).

Chart VII. 4. India: Poverty Dynamics Between 1988-97

The horizontal axes measure headcount ratio as a factor of Punjab's 1997 headcount ratio, while the vertical axis measures the frequency.
Points of the distribution that lie on the left of the north-south diagonal indicate a reduction in poverty between the initial and terminal years, while those to the right indicate an increase.



Sources: NSS (various rounds), and staff estimates.

Convergence in poverty

18. **A natural question to ask at this point is whether there is convergence across the states in the incidence of poverty**. Put differently, did the states that had the higher initial headcount ratio also reduce poverty the most? Or is it the case that relative differences in poverty have remained the same or widened? The genesis of this question lies in the empirical growth literature, where several studies have examined whether income levels across countries or across regions within a country are converging to a common level or not. In the context of India's states, Cashin and Sahay (1996) and Aiyar (2001), among others have found that, although there is little indication of *absolute convergence*, there is evidence of *conditional convergence*. That is, growth rates of states are not inversely related to their

initial per capita income; but once differences in economic structure and policy are controlled for, income levels across states are converging.

19. **In the growth literature the convergence hypothesis is tested by regressing per capita growth rates over a period of time on initial per capita income levels**. An estimated coefficient on per capita income that is significantly *negative* is interpreted as evidence in favor of absolute convergence. When other control variables are used in the regression equation, and the estimated coefficient of initial per capita income is significantly negative, there is support for the hypothesis of conditional convergence. Following this methodology, one can regress the rate of poverty reduction on the initial level of poverty, and a significantly *positive* coefficient on the initial poverty level would suggest convergence in poverty levels. Convergence tests of this variety have been extensively used in the cross-country growth literature.[12] While they are useful, by relying on the average behavior of the states, they do not employ all the information available on interstate differences.[13] Alternatively, the interstate distribution of the rate of poverty reduction, conditioned on the initial headcount ratio, provides a more comprehensive use of the information available in interstate differences. The conditional distribution can be estimated nonparametrically using the Nadaraya-Watson estimator. Mathematically the Nadaraya-Watson[14] estimator is defined as:

$$f(x_k) = \frac{\sum_{j=1}^{N} Y_j K\left(\frac{x_k - X_j}{h}\right)}{\sum_{j=1}^{N} K\left(\frac{x_k - X_j}{h}\right)}$$

where, Y_j =the jth observation of the dependent variable and X_j = the jth observation of the independent variable. The other notations have the same meaning as defined in paragraph 11.

20. **While there is strong indication of convergence in poverty during the 1980s, there is little supporting evidence during the 1990s** (Chart VII.5). Both the ordinary least-squares (OLS) and nonparametric estimates indicate that almost uniformly the rate of poverty reduction was faster the higher the initial level of poverty was in the period 1978-88. Put differently, the further away a state was from Punjab's 1997 headcount ratio, the faster was the rate of poverty reduction. However, during the period 1988-97, both the OLS and nonparametric estimates indicate that convergence was weak. For the period as whole, the

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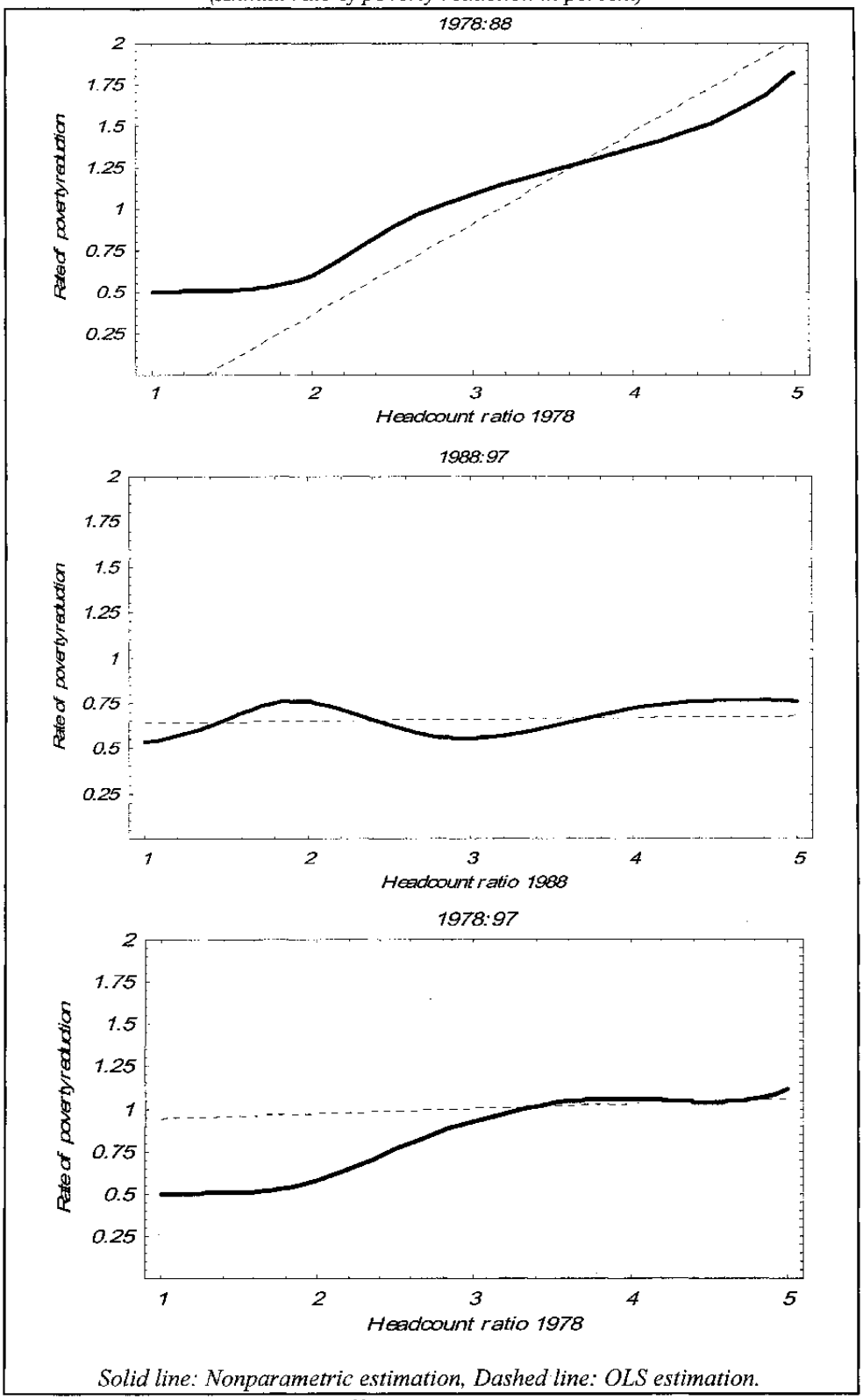
[12] Barro and Sala-i-Martin (1995) is the classic reference for this literature.

[13] In the context of the empirical growth literature, Quah (1993) and Durlauf and Quah (1998) discuss the limitations of this approach.

[14] For a technical derivation and statistical properties of the Nadaraya-Watson estimator see Pagan and Ullah (1999).

Chart VII. 5. India: Poverty Convergence Across India's States, 1978-97

(Annual rate of poverty reduction in percent)



Solid line: Nonparametric estimation, Dashed line: OLS estimation.

Sources: NSS (various rounds), staff estimates.

two methods display contrasting pictures. The OLS estimates indicate little convergence. On the other hand, the nonparametric estimates suggest convergence among states with relatively low initial poverty (headcount ratio being less than 3.5 in 1978, which comprises roughly 40 percent of the sample), and none among states with higher initial poverty.

C. Has Growth Been Pro Poor?

21. **This section focuses on the role played by growth in the intradistribution dynamics and whether it has been poverty reducing.** Studies addressing this question in the context of Indian states have generally used panel regressions to estimate whether growth reduces poverty in any significant way. Datt and Ravallion (1998) exemplify such studies. Using data from 1957-91, they found that rural poverty was reduced by higher agricultural yields and per capita nonfarm output. Other variables that mattered for poverty reduction included inflation, initial infrastructure, level of human capital, and government development spending. In this chapter, the approach in Datt and Ravallion (1998) is modified somewhat. Instead of estimating the level of poverty, the rate of poverty reduction is estimated. Guided partly by the regressors that Datt and Ravallion (1998) found to be significant, and partly by the availability of data, the following equation was tested:

$$\Delta P_{jt} = \alpha_j + \beta^{NFP} \Delta NFP_{jt} + \beta^{YLD} \Delta IYLD_{jt} + \beta^{INFL} (INFL_{jt} + INFL_{jt-1}) + \beta^{GOV} \Delta GOV_{jt} + \pi T + \varepsilon_t$$

where Δ denotes percent change, P is the headcount ratio, *NFP* is real per capita nonfarm product, *YLD* is agricultural production per hectare of net sown area, T is the time trend, *INFL* is the rural inflation rate, *GOV* is per capita real state development spending, and j refers to a state.

22. **Panel estimates indicate that growth and rural inflation affect poverty in a statistically significant way** (Table VII.1). While overall per capita growth (equation 1)

Table VII.1. India: Panel Regressions, 1978-97
(Dependent variable: change in headcount ratio)

Independent variable	(1)	(2)	(3)	(4)
Real per capita state GDP growth	-0.61 [0.00]			
Real agricultural yield growth		-0.19 [0.01]	-0.18 [0.01]	-0.19 [0.01]
Real per capita non-farm output growth		-0.36 [0.00]	-0.33 [0.00]	-0.41 [0.00]
Real per capita development spending growth	-0.08 [0.46]	-0.1 [0.36]	-0.11 [0.33]	
Rural inflation (current + lagged)	0.98 [0.00]	0.88 [0.00]	0.99 [0.00]	0.91 [0.00]
Time trend			-0.005 [0.20]	
Adjusted R^2	0.46	0.46	0.46	0.46
Durbin-Watson	2.07	2.06	2.03	2.01
Hausman Test, H_0: Random vs. Fixed Effects (p-value)	0.99	0.99	0.99	0.99

Notes: P-values of the associated t-statistic is in brackets.
Source: Staff estimates.

reduced poverty, several studies have pointed out that the composition of growth also matters. Accordingly, overall growth in subsequent estimations (equations 2-4) was replaced by agricultural yield and the per capita growth rate of nonfarm output. The likely channel by which agricultural yield reduces rural poverty is via raising agricultural real wages and increasing rural employment. In fact, real wages have a very strong impact on rural poverty (Box VII.1), although this variable is not used in the analysis since it is highly correlated with agricultural yield and data beyond 1993 are not available. In addition, nonfarm output reduces poverty by absorbing rural labor in urban industries and services sectors. Both these variables were found to be statistically significant.

23. **While some studies (e.g., Datt and Ravallion (1998)) identified a common trend decline in poverty since the 1950s, this trend decline was not significant for the sample period considered here.** Also in contrast to the estimates of other studies, public development spending during this period was not significant. Consequently, the trend and development spending were dropped from the equation to obtain the estimates shown in column 4 of Table VII.1.

24. **Although, the panel estimates confirm that growth has been pro poor, they do not provide any information on how growth has affected interstate poverty dynamics.** To understand this, information from the panel estimates was used to generate interstate distributions of poverty conditioned on growth. The intradistributional dynamics of the conditioned kernels were then contrasted with the unconditioned distributional dynamics, described in the previous section, to draw various inferences. To derive the growth-conditioned interstate poverty distribution, all variables were held constant at their 1978 levels, except for agricultural yield and nonfarm output. Conditioned headcount ratios were then computed for the sample period, using the coefficients estimates of equation (4) in Table VII.1. Next, the conditioned headcount ratios—which reflect only the impact of growth on poverty—were used to compute the kernel estimates of the interstate poverty distribution. This is similar to computing the semiparametric estimate of the interstate poverty distribution.[15]

25. **The interstate distribution of growth-conditioned poverty and its dynamics were influenced by growth.** By construction, the conditioned headcount ratios indicate what would have been the interstate differences in poverty if growth was the only factor differentiating the states. In principle, if the shapes and intertemporal dynamics of the residual kernels are different from those of the unconditioned kernels estimated in the previous section, then the differences can be used to form a judgment about the influence of growth on the way rural poverty evolved over the last two decades.

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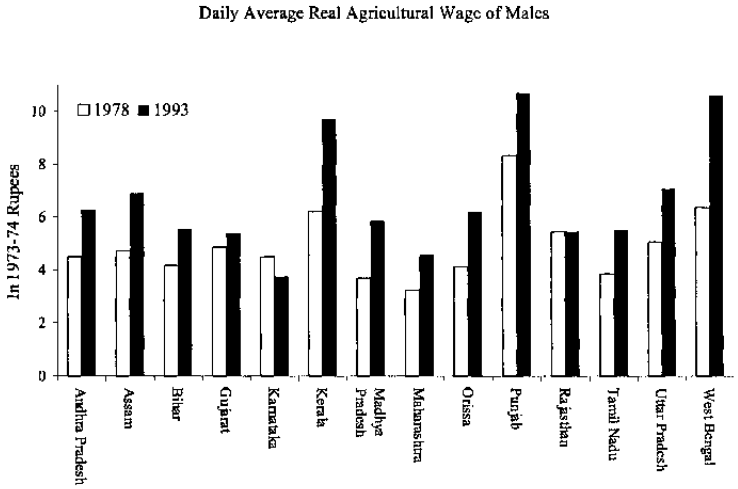
[15] See Yatchev (1998) for a heuristic discussion of semiparametric regressions; Pagan and Ullah (1999) for a more technical treatment.

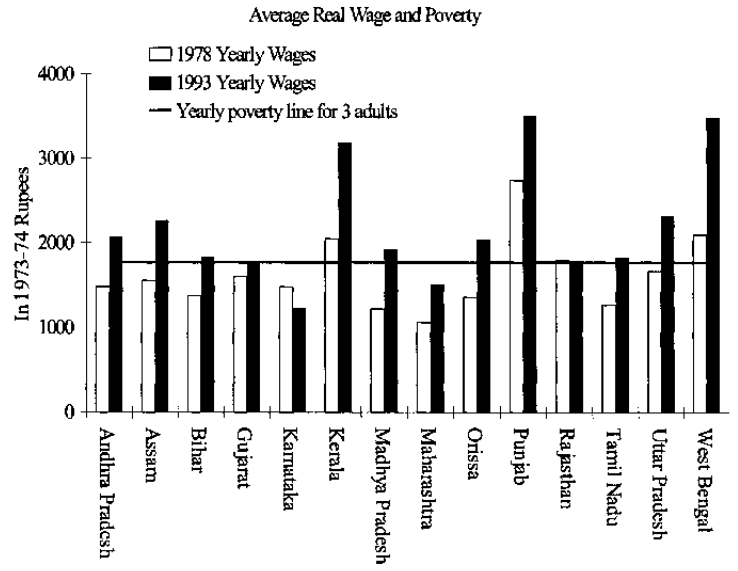
Box VII.1. India: Agricultural Wages: Some Unpleasant Arithmetic

Landless laborers and marginal farmers make up a large portion of the rural poor. Not surprisingly, conditions in agricultural labor markets—particularly agricultural wages—influence rural poverty significantly.

As with poverty, there is a wide disparity in the distribution of agricultural wages across the states in India. The disparity reflects various state-specific institutional features such as minimum wage regulations and how well they are enforced, along with differences in agricultural productivity. For example, in both 1978 and 1997, the average real wage was 40 percent higher in Kerala, Punjab, and West Bengal, than in Andhra Pradesh, Bihar, and even Maharashtra, which is one of the better-developed states. While high agricultural yields have been part of the reason why wages have been higher in some states, government policies have also contributed. For example, in West Bengal much of the improvement in real wages has been attributed indirectly to tenancy reforms of the late 1970's that led to higher agricultural yields (Banerjee, Gertler, and Ghatak, 2000).



Although, agricultural wages have increased in many states, they still remain inadequate to raise living standards above the poverty line in many regions. To see this, consider the following example: suppose a male agricultural laborer has a family unit equivalent to 3 adults (this is less than the typical family size, but in many families the female members and children also work). In order for the three adults to have a consumption basket at the poverty line, the agricultural worker needs to earn a minimum of Rs 1,746 per year, at 1973-74 prices. Assuming that the rural unemployment rate is 10 percent, and the worker's workweek covers all seven days in a week—an extreme assumption under any reasonable circumstances, and more so given significant rural unemployment. In several states the family unit would remain below the poverty line if it earned only the average agricultural wage. In 1978, in only three states—Kerala, Punjab, and West Bengal—would the hypothetical family unit have been above the poverty line. In 1993, despite significant increases in real wages, in as many as five states—Bihar, Gujarat, Karnataka, Maharashtra, and Rajasthan—the hypothetical family would have been barely at or below the poverty line.

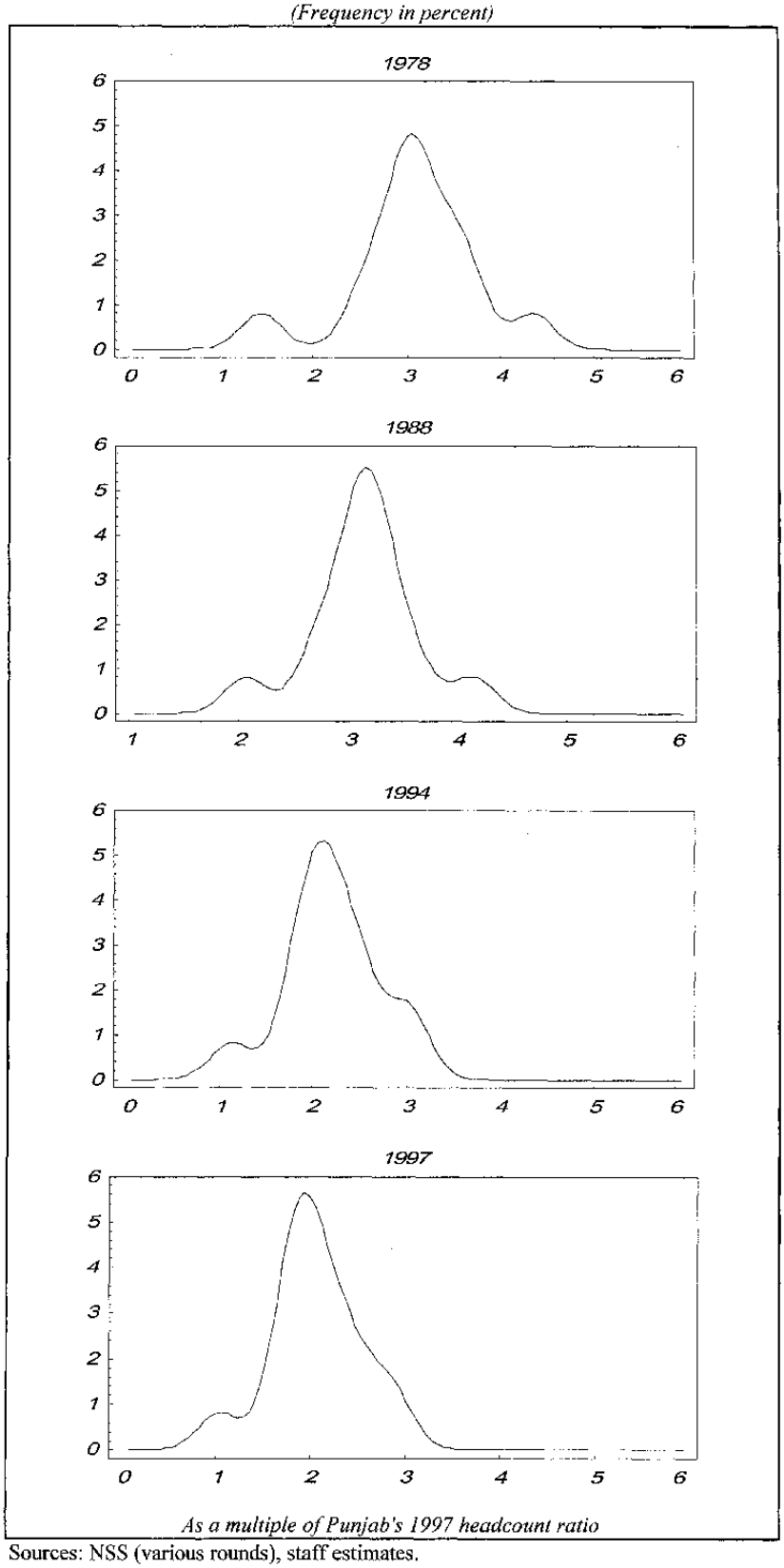


26. **Indeed, the conditioned residual kernels (Chart VII.6) are strikingly different from the unconditioned kernels in Chart VII.2.** In particular, there is a continued leftward movement in the conditioned kernels over time, including during the 1990s.[16] This result suggests, for example, that the probability of achieving poverty two times that of Punjab's 1997 headcount ratio increased from 8 percent in 1978 to 14 percent in 1988, and then to 44 percent in 1997, conditional on the differential growth experiences of the states. In contrast, for the unconditioned distribution, this progression was from 6 percent in 1978, to 8 percent in 1988, and then to 35 percent in 1997. Thus, if poverty was recalculated based solely on the growth experiences of the states during this period, the headcount ratios of these states would have generally been closer to Punjab's 1997 headcount ratio than otherwise.

27. **The intradistribution dynamics of the conditioned kernels also corroborate the positive impact of growth on reducing poverty discussed in the previous paragraph.** However, more interesting is the intradistributional dynamics of the residual poverty distributions, i.e., the interstate distribution of poverty after removing the impact of interstate differences in growth. By construction the interstate distribution of residual poverty includes only the influences of the interstate differences in all the factors not related to growth. In contrast to the unconditioned joint distribution kernels (Chart VII.3), the kernels in Chart VII.7 are skewed markedly to the right of the north-south diagonal, indicating that interstate differences in non-growth factors tended to worsen poverty and widen poverty differential across the states in all the three sub-periods. For example, in the unconditional case, 90 percent of the mass of the joint poverty distribution for 1978-88 was to the left of the north-south diagonal. For the residual joint distribution only 52 percent of the mass lies to the left of the north-south diagonal. For 1988-94 and 1994-97, the pattern is similar. Thus, both parametric (OLS regressions—Table VII.1) and semi-parametric estimates (the residual joint distributions—Chart VII.6 and VII.7) indicate that growth during the 1980s and 1990s was poverty reducing, while nongrowth factors tended to raise poverty.

[16] Note, that since Punjab's 1997 headcount ratio is also stripped of all influence except growth, the conditioned and unconditioned kernels are directly comparable.

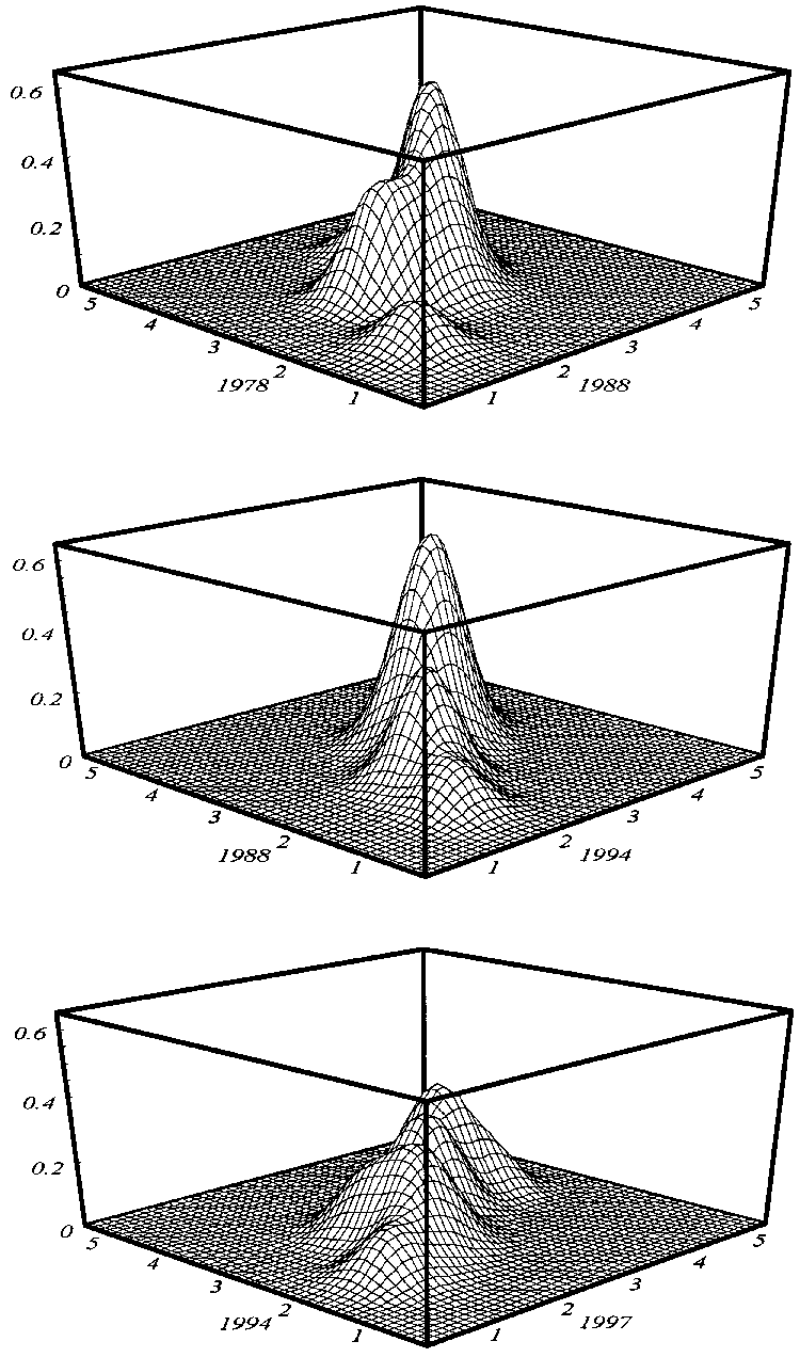
Chart VII.6. India: Interstate Distribution of Conditioned Poverty, 1978-97
(Frequency in percent)



Sources: NSS (various rounds), staff estimates.

Chart VII.7. India: Intradistribution Dynamics of Residual Poverty, 1978-97

The horizontal axes measure headcount ratio as a factor of Punjab's 1997 headcount ratio,
while the vertical axis measures the frequency.
Points of the distribution that lie on the left of the north-south diagonal indicate a reduction
in poverty between the initial and terminal years, while those to the right indicate an increase.



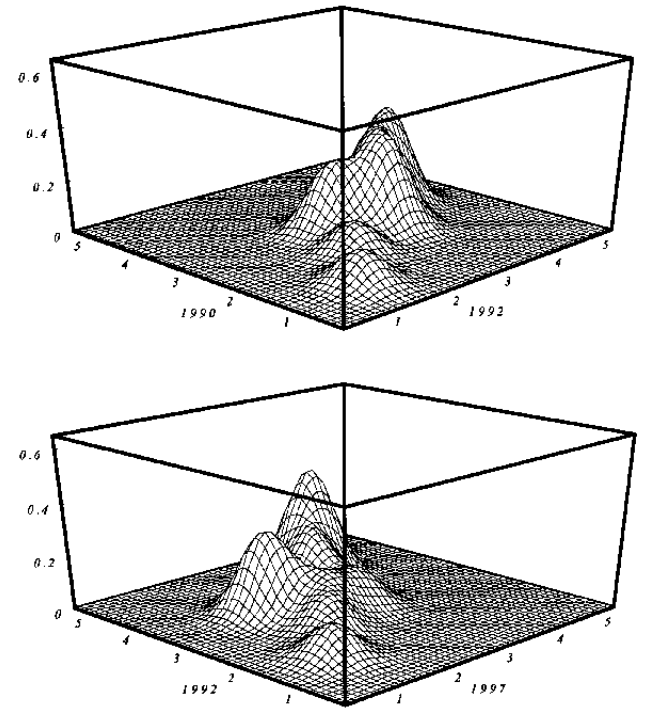
Sources: NSS (various rounds), and staff estimates.

D. Poverty Dynamics During the Reform Period

28. **In recent years, some analysts have raised concerns that the reforms of the 1990s have not benefited the poor.**[17] Critics contend that while liberalization raised GDP growth, the associated decline in poverty was muted, especially when compared to the 1980s. Although evidence discussed above does not support this hypothesis, experiences of other countries that underwent stabilization and reform efforts suggest that poverty generally rises in the initial years of reform, followed by a reversal in the later years. To understand whether such a phenomenon occurred in the case of India's 1991 reforms, the 1990s are divided into two subperiods, 1990-92 and 1992-97—the early and later reform years. The exercise of the previous sections is then repeated for these two sub periods.

Chart VII.8. India: Poverty Dynamics in the Early and Late Reform Years

The horizontal axes measure headcount ratio as a factor of Punjab's 1997 headcount ratio, while the vertical axis measures the frequency.
Points of the distribution that lie on the left of the north-south diagonal indicate a reduction in poverty between the initial and terminal years, while those to the right indicate an increase.



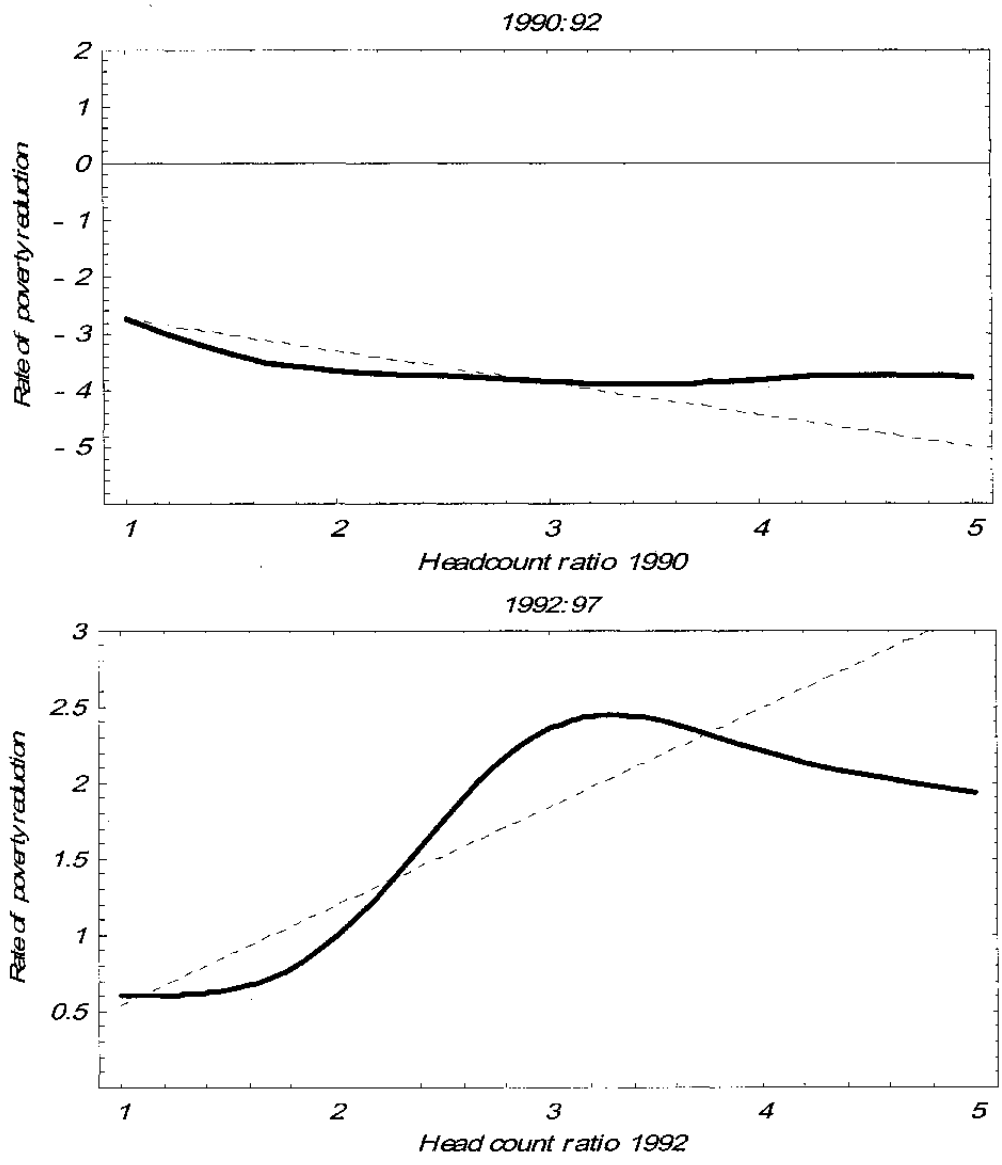
Sources: NSS (various rounds), and staff estimates.

29. **The poverty dynamics suggest that, while poverty worsened in the immediate aftermath of the reforms, the trend was reversed in the later years.** As seen in Chart VII.8, by 1992, the joint distribution shifts to the right of the north-south diagonal, indicating an almost uniform tendency for poverty to increase. In sharp contrast, by 1997 the tendency is reversed as the joint distribution shifts to the left of the north-south diagonal.

30. **The nonparametric estimates provide some evidence of mild widening of relative poverty differentials during the early reform period, and states with higher initial**

[17] See Gupta (1995) and Tendulkar and Jain (1995). Both these papers, however, use data available only to 1992. Extending the data period to 1997, Datt (1999) reached the conclusion that the average trend in rural poverty at the all-India level remained flat in the 1990s.

Chart VII. 9. India: Poverty Convergence During the 1990s
(Annual rate of poverty reduction in percent)



Solid line: Nonparametric estimation, Dashed line: OLS estimation.

Sources: NSS (various rounds), staff estimates.

(1990) levels of poverty experienced mildly larger increase in poverty (Chart VII. 9). However, in the later years standard convergence exercises points to strong convergence, although nonparametric estimates indicate that states with lower initial poverty gained the most in relative terms in reducing poverty. Thus, relative differences in poverty may have widened in the later reform years too and, putting the estimates from the two sub-periods together, it would appear that relative differences may have widened in the 1990s overall.

31. **Although somewhat muted in the early years, growth remained poverty reducing during the reform period**. In the early years, the growth-conditioned joint distribution is distributed evenly along the north-south diagonal, indicating that based solely on growth, some states would have experienced a worsening in poverty. However, in the later reform period, the intradistribution dynamics indicate that growth reduced poverty strongly—almost the entire joint distribution is skewed to the left of the north-south diagonal.

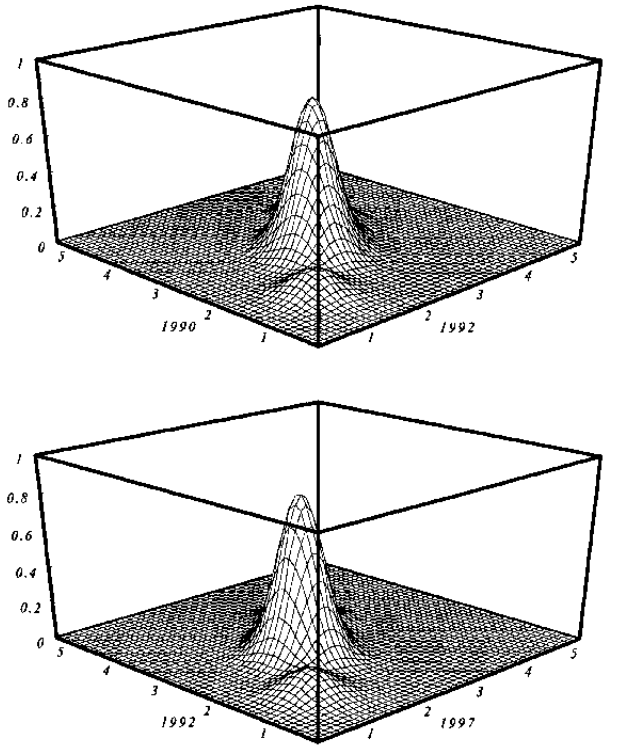
E. Conclusions

32. **The aim of this chapter was to shed light on the dynamics of interstate differences in poverty over the last two decades**. In so doing, the chapter extended previous studies on interstate differentials in rural poverty in India in two directions. First, the time period under study was extended to 1997, allowing an investigation into interstate differences in poverty in the post-reform period. Second, standard regression analyses were supplemented with nonparametric estimates of behavior of the interstate distribution of rural poverty to provide a more complete picture of poverty dynamics during the last two decades.

33. **Key findings are that poverty generally declined in most states over the last twenty years**. However, poverty increased during the early years of the 1990s reform period, before declining again in the later years. While relative differences in poverty narrowed during the 1980s, this tendency appears to have reversed somewhat during the next decade.

Chart VII.10. India: Conditioned Poverty Dynamics in the Early and Late Reform Years

The horizontal axes measure headcount ratio as a factor of Punjab's 1997 headcount ratio, while the vertical axis measures the frequency.
Points of the distribution that lie on the left of the north-south diagonal indicate a reduction in poverty between the initial and terminal years, while those to the right indicate an increase.



Sources: NSS (various rounds), and staff estimates.

34. **The paper also found that growth has been pro poor, even during the post-reform period**. In particular, earlier econometric results establishing a positive link between growth and poverty reduction continued to hold during the 1990s. In addition, there is evidence that the widening of poverty differentials in the post reform period was largely due to the influence of nongrowth factors—such as, perhaps, changes in redistributional policies, human capital development, and other factors that have been identified in the literature to have an impact on poverty. That is, growth—as proxied by agricultural yield and per capita nonfarm output growth—would have reduced the incidence of poverty in the absence of counteracting nongrowth factors.

References

Aiyar, Shekhar. (2001), "Growth Theory and Convergence Across Indian States: A Panel Study," in Tim Callen et al. editors, *India at the Crossroads: Sustaining Growth and Reducing Poverty*, International Monetary Fund, Washington DC.

Banerjee, Abhijit V., Paul J. Gertler, and Maitreesh Ghatak. (2000), "Empowerment and Efficiency: Tenancy Reform in West Bengal," Working Paper, University of Chicago.

Barro, Robert and Xavier Sala-i-Martin. (1995), *Economic Growth*, McGraw-Hill, New York.

Cashin, Paul and Ratna Sahay. (1996), "Internal Migration, Center-State Grants, and Economic Growth in the States of India," *International Monetary Fund Staff Papers*, Vol. 43, No.1.

Datt, Gaurav (1999), "Has Poverty Declined Since Economic Reforms? Statistical Data Analysis," *Economic and Political Weekly*, December 11, pp. 3516-3518.

Datt, Gaurav and Martin Ravallion. (1998), "Why Have Some Indian States Done Better than Others at Reducing Poverty?" *Economica*, Vol. 65, No. 1, pp. 17-38.

Durlauf, Steven N., and Danny T. Quah. (1998), "The New Empirics of Economic Growth," *Centre for Economic Performance Working Paper* No. 384, January.

Gupta, S.P. (1995), "Economic Reform and Its Impact on Poor," *Economic and Political Weekly*, June 3.

Hardle, Wolfgang, and Oliver Linton. (1994), "Applied Nonparametric Methods," *Cowles Foundation Discussion Paper No. 1069*, Yale University.

Jha, Raghbendra. (2000), "Growth, Inequality and Poverty in India: Spatial and Temporal Characteristics," *Economic and Political Weekly*, March 11.

Ozler, Berk, Gaurav Datt, and Martin Ravallion. (1996), "A Database on Poverty and Growth," mimeo, Policy Research Department, World Bank.

Pagan, Adrian, and Aman Ullah. (1999), *Nonparametric Econometrics*, Cambridge University Press.

Quah, Danny. (1993), "Galton's Fallacy and Tests of the Convergence Hypothesis," *The Scandinavian Journal of Economics*, 95 (4), pp. 427-443, December.

Quah, Danny. (1997), "Empirics for Growth and Distribution: Polarization, Stratification, and Convergence Clubs," *Journal of Economic Growth*, 2 (1), pp. 27-59, March.

Ravallion, Martin and Gaurav Datt. (1996), "Poverty and Growth: Lessons from Forty Years of Data on India's Poor," mimeo, World Bank, Washington D.C.

Silverman, Bernard W. (1986), *Density Estimation for Statistics and Data Analysis*, Chapman and Hall, New York.

Tendulkar, Suresh D., and L.R. Jain. (1995), "Economic Reforms and Poverty," *Economic and Political Weekly*, June 10.

Yatchew, Adonis. (1998), "Nonparametric Regression Techniques in Economics," *Journal of Economic Literature*, Vol. XXXVI, No. 2, pp. 669-721.

VIII. Postal Savings in India[1]

A. Introduction

1. **The postal savings system in India consists of various small savings schemes of the Central Government administered through the Post Office Savings Bank under the Government Savings Bank Act (1873) and the Government Savings Certificates Act (1959).**[2] The Post Office Savings Bank has 154,000 branches that are widely dispersed across India, and its outstanding deposits amount to 9½ percent of GDP.

2. **The principal focus of the postal savings system is to attract small-lot savings from small- and marginal-income earners, including farmers, the self-employed, and housewives.** The stated objective is to encourage thrift and to provide savings vehicles for retirement and old age, particularly for those segments of the population in remote and rural areas with limited access to the banking system. The Post Office Savings Bank has used its extensive geographical reach—90 percent of its branches are in rural areas—to meet these objectives, evolving in the process into a significant financial institution.

3. **To attract deposits, the postal savings system offers competitive interest rates, along with significant tax incentives** (Box VIII.1). In the second half of the 1980s, the central government sought to broaden the postal savings deposit base with the introduction of new schemes—the *Indira Vikas Patra* (IVP) in 1986 and *Kisan Vikas Patra* (KVP) in 1988—targeted at higher income savers. These schemes tended to have either no upper limit or a very high upper limit on the deposit amount and thus appealed to all types of depositors. The postal savings system has also increasingly focused on attracting deposits in semi-urban and urban areas.

4. **Attractive rates of returns on postal savings schemes, along with easy accessibility, have helped the system mobilize large inflows.** Deposits rose from 2.8 percent of GDP in 1970/71 to 9.4 percent of GDP in 1999/2000; deposit growth was particularly rapid during the 1970s and 1980s, but slowed in the 1990s (Chart VIII.1). By contrast, bank deposits have steadily increased as a share of GDP during the past three decades, so that postal deposits have declined relative to bank deposits during the past ten years (Chart VIII.2).

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[1] Prepared by Sudip Mohapatra.

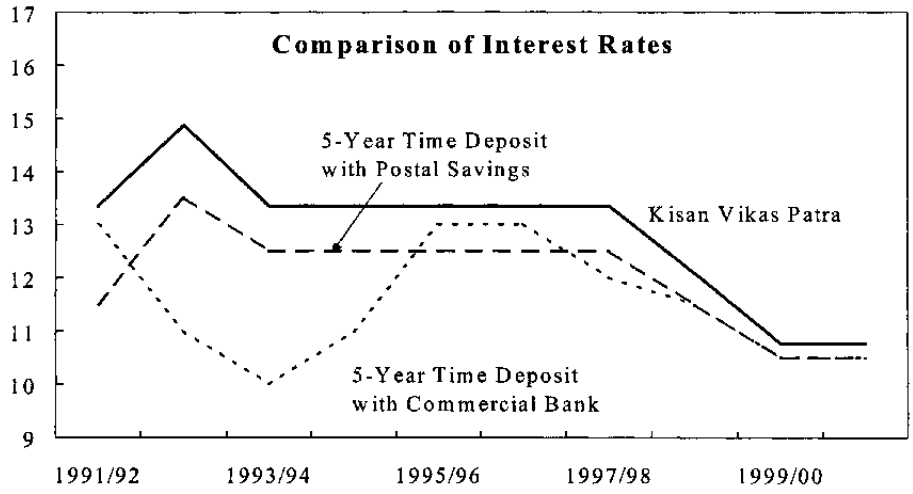
[2] This chapter excludes small savings schemes run outside the exclusive purview of the Post Office Savings Bank such as the Deposit Scheme for Retiring Government Employees, the Deposit Scheme for Retiring Employees of Public Sector Companies, and the Public Provident Fund scheme. These schemes are largely administered through the commercial banks.

Box VIII.1. India: Interest Rates on Postal Savings Schemes[1]

Interest rates on postal savings schemes are set by the Ministry of Finance and published in the Government Gazette. The Department of Posts, which administers the system through the Post Office Savings Bank, communicates these rates to all its branches across the country. The process of communicating interest rate changes is time-consuming, especially for schemes where fresh savings certificates need to be printed and distributed, and this can cause deposit-taking to come to a halt. This has tended to discourage frequent changes to interest rates.

Historically, there have been no formal guidelines for setting postal savings rates, although, in order to make these schemes attractive, rates have typically been kept above commercial bank deposit rates of similar maturity. Traditionally, this was not thought to disadvantage banks excessively since postal savings schemes were largely concentrated in rural areas and did not compete with bank deposits. However, direct competition with the banks has become more intense in the period since the schemes began to target higher-income and urban savers. State governments have been strong proponents of maintaining high postal saving rates, reflecting their concern that cuts would reduce their access to these funds.

As the Chart shows, postal savings rates have tended to be more rigid than rates on bank deposits. During the period up until 1994 bank deposit rates were set administratively by the RBI and were reviewed twice a year. Since then, bank deposit rates have been gradually deregulated and have become more market determined.



The substantial narrowing of postal savings and bank deposit rates that occurred in the early 1990s began to adversely affect the mobilization of postal savings deposits. At the request of the state governments, the central government appointed the Rangarajan Committee (1991) to examine the relationship between postal savings and commercial bank deposit rates, resulting in large hikes in postal savings rates. The Gupta Committee (1998) looked into issues relating to the determination of postal savings rates in a more deregulated banking environment, and recommended benchmarking these rates to similar commercial bank deposit rates with a positive margin of 50 basis points. To avoid frequent changes, it suggested that the rates be reviewed only once a year.

Though the government has not accepted the recommendations of the Gupta Committee, it has attempted to align the interest rates structure of the postal savings system with that of the commercial banks and other financial institutions by effecting the first major cuts in deposit rates effective January 1999, and the 2001/02 budget announced further cut in postal savings rates.

1/ For details, see, *Report of the Committee on Small Savings, Ministry of Finance, Government of India (1991)* and *Report of the Committee on Small Savings, Ministry of Finance, Government of India (1998).*

5. **The slowdown in the growth of postal deposits during the 1990s may be attributable to several factors.** These include a narrowing of the interest rate differential with bank deposits, the growing popularity of mutual fund schemes, especially those run by the state-owned Unit Trust of India, and the floating by public sector financial institutions of bonds that offer similar tax benefits as postal savings schemes. The more recent pickup in growth may reflect increased efforts by states to mobilize additional financing and tighter application of tax withholding on bank deposits.

6. **The administration of the postal savings system is complex and involves several agencies.** The Ministry of Finance frames the rules and regulations for the schemes, the National Savings Organization (NSO) under this ministry has responsibility for devising strategies for running the postal savings system, and the NSO is supported by Small Savings Directorates (SSDs) in the state governments (Box VIII.2). The postal savings schemes, however, are operated through the Department of Posts under the Ministry of Communication, which acts as an agent on behalf of the Ministry of Finance and is compensated for the services rendered.

Box VIII.2. India: National Savings Organization (NSO)

The National Savings Organization (NSO) was set up in 1948 under the Ministry of Finance, to promote business under the postal savings schemes. The NSO not only focuses on strategies to popularize the savings schemes in an effort to increase the deposit base but also advises the government on measures to spread the national savings movement in the country. It has a wide network of offices at state and district levels which work in co-ordination with state government departments, postal authorities, and other non-government organizations for developing institutional arrangements for marketing and taking deposits.

One of the NSO's major efforts has been the recruitment of a large pool of agents to work on a "door-to-door" basis with potential depositors. At present there are about 232,000 agents under the Standardized Agency System (SAS), and about 168,000 agents under Mahila Pradhan Kshetriya Baachat Yojana (MPKBY), who receive commissions based on the amount of deposits they raise. The MPKBY is an agency scheme, exclusively for educated unemployed women to supplement their family income. Commissions are paid to these agents primarily by the Post Office Savings Bank, rather than by the NSO.

Over the years, the NSO's role as the prime intermediary in the national savings movement has eroded. The state governments, which had no direct role in the process of deposit mobilization in the initial years, have become actively involved so as to maximize the postal savings funds that they use to finance their deficits. Beginning in the mid-1980s, state governments started their own Small Savings Directorates (SSDs) at the state level and set up supporting institutional arrangements in the villages. The SSDs, which often have functional overlap with the NSO, have now largely taken over the field jobs, including the recruitment of agents and the provision of extra commissions (above those paid by the center). Thus the responsibility of mobilizing savings has gradually shifted in favor of the office of the District Magistrate/Collector, who has the responsibility to meet the target deposit mobilization set by the SSD, and away from the District Savings Officer who represents the NSO.

The active participation of state government agencies has limited the role of the NSO whose functions are now more advisory in nature, although it continues to play an active role in the few states that have not set up their own SSDs. In light of the very limited role now being played by the NSO, the central government's 2001/02 budget announced that the institution would be downsized to 25 staff from its current staff strength of 1,191.

B. Financial Products

7. **There are currently seven types of postal savings schemes, six of which offer tax rebates** (Box VIII.3 and Table VIII.1). The bulk of the deposits are mobilized through the KVP and the *National Savings Certificate* (NSC), which target higher-income groups and offer very attractive returns. Under these two schemes, which accounted for 62 percent of outstanding deposits in March 1999, depositors are issued certificates, and are not required to open accounts with the Post Office Savings Bank.[3]

Table VIII.1. India: Amount Outstanding under Postal Savings Schemes

Scheme	Outstanding as of End-March 1999 (Rs Million)	Percent of Total
Kisan Vikas Patra	672,140	44.9
National Savings Certificate- VII	258,310	17.3
Post Office Monthly Income Scheme	202,930	13.6
Indira Vikas Patrika (discontinued)	124,300	8.3
Post Office Recurring Deposit Account	111,390	7.4
Post Office Savings Account	76,500	5.1
Post Office Time Deposit Account	42,190	2.8
National Savings Scheme 1992	8,200	0.5
Total	***1,489,760***	***100.0***

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

8. The **KVP scheme** is the most popular, accounting for 45 percent of deposits in 1999. The scheme has historically offered high nominal interest rates, with the initial deposit amount typically doubling by maturity.[4] In addition, KVP deposits are highly liquid and can be pledged as collateral for loans from commercial banks. The scheme does not offer any tax exemptions and is popular among farmers whose income is tax-exempt. However, it has also attracted high-income investors outside the farm sector, possibly as a vehicle for tax evasion.

9. By contrast, **the NSC scheme**, which accounted for about 17 percent of postal savings deposits in 1999, provides substantial explicit tax benefits. Not only is interest earned

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[3] The IVP was the first certificate scheme designed to attract deposits from high-income groups. However, it fell out of favor after the introduction of the KVP (which had better liquidity features), and was discontinued in July 1999.

[4] Prior to 1999, the certificate offered to double the initial deposit amount in 5½ years implying a compound annual interest rate of 13.4 percent. Following the recommendations of the Gupta Committee, the interest rate on the KVP was reduced on January 1, 1999, in line with rates offered by the public sector financial institutions, so that the certificate matured in 6 years. With the most recent cut in postal savings rates (March 1, 2001), the certificate matures in 7¼ years.

Box VIII.3. India: The Taxation of Income from Postal Savings

Investments in six of the seven postal savings schemes offer rebates of income tax. The exception is the Kisan Vikas Patra (KVP), which does not offer rebate on income tax since the scheme is intended for farmers whose income is already tax exempt in India.

Interest income earned on the other six schemes is eligible for income tax rebate under two different sections of the Income Tax Act, 1961. Under Section 10, interest income earned from Post Office Savings Account is completely exempt from income tax. Under Section 80L, interest income earned under Recurring Deposit Accounts, Time Deposit Accounts, the Monthly Income Scheme, the National Savings Scheme 1992 (NSS-1992) and National Savings Certificates VIII (NSC-VIII) is tax exempt up to an upper limit of Rs 12,000 per financial year.

In addition, investment in NSS-1992 and NSC-VIII enjoys a tax rebate under Section 88 of the Income Tax Act. Under this provision, the depositor is provided a tax credit of up to 20 percent of the amount deposited, subject to a maximum of Rs 12,000 per annum (in the case of authors, artists, musicians, actors, sportsmen, and athletes, the amount of rebate is 25 percent of the investments subject to a limit of Rs 17,500). Furthermore, annual interest earned from NSC-VIII scheme is recognized as reinvestment for tax consideration under Section 88.

Thus an investment in NSC-VIII scheme (6-year maturity) would enjoy tax rebates from three sources:

- A 20 percent tax credit under Section 88 in the initial year of investment;
- A tax exemption on interest income under Section 80L with a cap of Rs. 12,000 per annum; and
- A 20 percent tax rebate under Section 88 on the amount of annual interest income which are treated as reinvestment.

By contrast, investors in government securities only benefit from tax concessions under Section 80L.

All investments in postal savings schemes (including KVP) are also free from wealth tax.

Tax on interest income is not deducted at source under any of the postal savings schemes. The reporting of such income is left to individual investors when filing their annual tax returns. Furthermore, investors in the KVP scheme may find it particularly easy to hide the total investment amount since they are issued a certificate and do not need to open an account with the Post Office Savings Bank.

tax free, but 20 percent of initial deposits (subject to an annual maximum) can be applied as a tax credit. Furthermore, interest accrued during the first five years is treated as a reinvestment into the scheme and qualifies for an additional tax rebate.

10. The other schemes are principally geared toward low- and marginal-income earners. Most popular among these are the **Monthly Income Scheme** and the **Recurring Deposit Account** (RDA), which together accounted for about one fifth of outstanding postal savings deposits in 1999. The RDA is a payroll savings scheme (as is the National Savings Scheme 1992 or NSS-1992), which allows both private and public sector wage earners to make automatic investments through monthly salary deductions.

C. Government Policy and Costs of the System

11. **The funds raised by the postal savings schemes are made available to the central and state governments as long-term loans.** While the system of onlending was revised beginning in fiscal year 1999/2000 with the creation of the National Small Savings Fund (NSSF), the essential features of the arrangement have not changed (Box VIII.4). State governments receive the largest share of postal savings collections (currently 80 percent). Postal savings represent a favorable source of finance—the loans are for 25 years with an initial moratorium of five years on payment of both interest and principal. There are no restrictions on the use of the funds, and the recipient governments tend to use them as general budgetary support. This contrasts with the practice in Japan, where postal saving collections are to be earmarked mainly for infrastructure investment (Box VIII.5). The proportion of the states' fiscal deficits financed by postal savings collections has risen from about 20 percent in 1979/80 to over 28 percent in 1999/00.

12. **Currently the NSSF lends postal savings funds to the central and state governments at a rate of 12½ percent.** This rate is set to cover the explicit cost of raising postal savings deposits, which includes interest to the depositors, commissions to the agents, remuneration of the Department of Posts, and the operational expenditure incurred through NSO.

13. **Increasing state fiscal deficits during the past decade have spurred efforts by state governments to mobilize postal savings deposits, in order to soften the constraints implied by central government limits on market borrowing.** State governments have created small savings directorates and taken various measures to promote deposits. These have included the appointment of Savings Committees at district and block level, which set targets at the village level for which the village extension officer is directly responsible. Progress is monitored in the monthly meeting of the District Savings Committee coordinated by the District Collector. Some of the state governments have offered extra commissions to the agents over and above what is paid by the NSO through the Post Office Savings Bank, and have also used lotteries as inducements to investors. In addition, 400,000 persons across India are employed to collect postal savings, raising concerns that the system is being used to assist low-income households.

Box VIII.4. India: Loans Against Small Savings Collections[1]

The accounting of small savings collections in India has undergone changes in the recent past to make the system more transparent and amenable to financial scrutiny. A separate *National Small Savings Fund* (NSSF) under the Public Accounts of the central government was established with effect from April 1, 1999. Starting in 1999/00, the funds raised through the postal savings schemes are deposited with the NSSF. Principal repayments and interest payments are also made out of this fund, and the balance (net collection) is invested in central and state government securities as per agreed norms. Costs incurred in running these schemes are also charged to this fund.

Under the previous system of accounting, it was difficult to assess the financial impact of small savings on central government finance since small savings transactions were carried out under two separate accounts with different budgetary treatments. Small savings deposits were treated as capital receipts and withdrawals as capital expenditure under the Public Account of India, while interest paid to depositors and the costs of operating the schemes were treated as revenue expenditure under the Consolidated Fund of India. Furthermore, all transactions related to the states flowed through the Consolidated Fund of India, with the center's onlending of small savings funds to the state governments treated as capital expenditure (and repayment of those loans as capital receipts), while interest paid by the states to the center was treated as revenue receipts. One consequence of this complex system of accounting was that the funds onlent to the states were recorded as a non-plan expenditure of central government; thus any buoyancy in small savings collections led to a rise in the official measure of the center's fiscal deficit.

Currently, 80 percent of the net collections (gross collections minus withdrawals by depositors) in Small Savings Schemes in each state (50 percent in case of Deposit Scheme for Retiring Government Employees and Public Sector Companies) are invested in the respective state government securities, and the remaining 20 percent (50 percent in case of special deposits) are invested in central government securities. Additional funds are also provided as an incentive to the states depending on their collection performance. Currently, this amount is equal to 2.5 percent of the net collections in the state for every 5 percent increase in the ratio of net collection to gross collection over the all-India ratio of net collection to gross collection.

The government securities (both central and state) held by the NSSF have a maturity period of 25 years with an initial moratorium of five years on interest and principal repayment, and carry a fixed interest rate. The interest rate, currently 12½ percent, is revised periodically and is based on the cost of collection.

1/ For further details, see *Report of the Committee on Small Savings, Ministry of Finance, Government of India, 1999.*

Box VIII.5. India: The Postal Savings System in Japan

The Postal Savings System in Japan is the largest financial institution in the world, public or private, with an asset base of $2 trillion in 1996. Its deposit base has risen steadily from around 11 percent of bank deposits in 1965 to more than 45 percent in 1996. By contrast, postal savings banks in most Western European countries are witnessing a decline in their deposit base. Countries like the Netherlands, Germany and New Zealand have opted for privatization, while the postal savings system in the United States was abolished in 1966.

The success of postal savings in Japan through the early-1980s was attributed to the attractive features offered by the postal savings instruments. Nearly 90 percent of total postal saving deposits consisted of 10-year *teigaku* deposits, which offered higher fixed interest rates than commercial banks, tax exemption on interest income (up to specified ceiling), the possibility of withdrawing deposits with only a nominal interest penalty, and an explicit government guarantee. Though the total amount that could be deposited in postal savings accounts by individuals was in principle subject to a nominal ceiling, enforcement was weak and depositors could open multiple accounts and thereby enjoy larger tax benefits.

Under the oversight of the Ministry of Finance's Trust Fund Bureau, the funds deposited in the postal savings system were channeled—through the Fiscal Investment and Loan Program (FILP)—into the general government sector, government financial institutions, and public corporations. The FILP—often considered the second budget in Japan—supported fiscal policy objectives, in particular infrastructure investment, but also invested funds directly in government bonds. FILP borrowers were charged a low, fixed statutory rate of interest (around 6 percent in the early 1980s).

However, with interest rates witnessing a declining trend in the early 1980s, the system was reformed in several directions. The statutory rate of interest on FILP loans was replaced with a more flexible interest rate that was tied to the prime lending rate. Tax exemptions on interest income were mostly withdrawn, and interest rates on postal savings deposit were set more in line with those in private financial institutions. The changes had the expected effect of slowing the growth of postal savings relative to that of deposits in private banks, and the ratio of postal savings to total deposits declined to around 29 percent in 1990, after having reached 36 percent in 1986.

The shift in deposits to the banking sector was reversed after the Japanese asset-price bubble burst, following a general decline in interest rates amidst weakening economic activity in the early 1990s and the emergence of strains in the banking sector due to a deterioration in asset quality. In spite of better returns offered on some bank deposits, depositors were attracted by the more liquid features of the postal savings deposits as well as the full government guarantee it carried. As a result, postal savings deposits rose sharply, reaching over 45 percent of bank deposits in 1996.

14. **The explicit and implicit costs of the postal savings system are considerable.** The postal savings schemes offer higher interest rates compared to the commercial banks; tax rebates are provided that raise effective rates of return and lower government revenue; commissions are paid to agents by the central and state governments; and expenses are also incurred for advertisements and other marketing efforts. As a result, the effective cost of these funds is high compared to tapping the debt market directly.[5]

15. **Estimates of the cost of the four main schemes are illustrated in Table VIII.2.** Taking into account the tax revenue forgone, commissions paid to agents,[6] and the nominal interest rate paid, estimates for the effective interest cost in 2000/01 range from 21.1 percent

Table VIII.2. India: Effective Cost of Postal Savings Schemes, 2000/01
(Percent per annum)

Schemes	Nominal Interest Rate (Compounded)	Tax Benefit		Commission Paid to Agents	Effective Interest Cost
		Exemption Under Section 88	Exemption Under Section 80L/ Section 10[1]		
NSC-VIII[2]	11.30	5.02	1.50 to 4.62	0.17	18.1-21.1
NSS (1992)[3]	9.16	4.66	1.14 to 3.44	0.24	15.2-17.5
P.O.T.D.[4]	10.50	...	1.39 to 4.12	0.20	12.1-14.8
KVP[5]	11.25	...	...	0.15	11.4

Source: Staff estimates. The implicit cost of the tax rebate is estimated by spreading the total rebate amount over the maturity structure of the scheme. The tax rebate is not uniform across deposits since the amount of tax rebate varies based on each depositor's taxable income bracket. Income tax rates for the fiscal year 2000/01 (inclusive of rebates) were 11 percent, 22 percent, and 34.5 percent.

1/ Estimated at lowest income tax rate of 11 percent and highest rate of 34.5 percent.
2/ Compound interest rate estimated on a maturity of 6 years.
3/ Compound interest rates estimated on a maturity of 4 years.
4/ Post Office Time Deposit. Compound interest rate on 5-year time deposit.
5/ Compound interest rate on a maturity of 6.5 years.

[5] Mohanty, M. S., and N. Raje, 1998, "Effective Cost of Small Savings," *RBI Occasional Paper*, Vol. 19 No 3, September.

[6] The cost of commissions, which are paid once to the agents when the deposit is raised, is estimated by spreading the amount of the commission over the maturity of the scheme. The commission rates are as follows: (i) for Post Office Savings Account no incentive is paid; (ii) for Recurring Time Deposit the commission is 4 percent on the amount of deposit (exclusively for MPKBY agents); (iii) for Post Office Time Deposit, Post Office Monthly Income Scheme, NSC-VIII, NSS 1992 and KVP, the commission is 1 percent of the amount of deposit; and (iv) for Deposit for Retiring Government Employees and Deposit for Retiring Employees of the Public Sector Companies the incentive is 0.5 percent of the deposit amount. These do not include extra commissions paid by state governments to agents for large deposits.

for deposits raised through for NSC-VIII to as low as 11.4 percent for deposits under the KVP. However, these estimates do not include the administrative cost of running the scheme through the Department of Posts and the NSO. Adding these costs would increase the estimates by close to another 2 percentage points.[7]

16. **Concern has been expressed, including by the Reserve Bank of India, regarding the adverse effect of inflexible returns on postal savings deposits on financial market development.**[8] In its recent semi-annual policy statements (see, for example, Mid-term Review of Monetary and Credit Policy, October, 1999), the RBI noted that although bank deposit rates were deregulated in 1994, banks were slow to adjust their rates downward for fear of possible deposit flight to the postal saving system. The RBI argued that this has led to a downward rigidity in the interest rate structure.[9]

D. Reform Considerations

17. **It has become increasingly obvious that the current system has significant drawbacks, including with regard to the high cost to the government, the adverse effect on the banking system, and macroeconomic management.**[10] Important reform issues therefore include the inflexibility of postal saving deposit rates; their tax treatment; the way in which these funds are provided to state and central governments; and the administration of the schemes.

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[7] This is calculated for 1998/99 by dividing the reimbursement paid to the Department of Posts by the Finance Ministry (Rs 9,698 million) plus the cost of running the NSO (Rs 158 million) by the gross collection of postal deposits (Rs 548.3 billion).

[8] Similar concerns have been expressed regarding other government contractual savings schemes, e.g., the Public Provident Fund scheme (PPF), the General Provident Fund scheme (GPF), and the Employee Provident Fund scheme (EPF).

[9] The central government responded to these concerns by cutting administered interest rates around budget time in each of the last three years. While the differentials between interest rates on postal savings schemes and commercial bank deposits have narrowed, the administered rates on government sponsored saving instruments continue to imply a lower bound for bank deposit rates.

[10] See the Report of the Prime Minister's Economic Advisory Council, January 2001 and the 2001/02 Budget Speech.

Rate setting

18. **Interest rates on postal saving schemes have been adjusted only infrequently**. Since the core group of small savers includes vulnerable groups with limited alternative sources of income, the decision to lower rates has been highly politicized. State governments have also resisted reductions in interest rates, on fears that a migration of postal savings deposits to the banks would constrain budget financing.

19. **In order to address these concerns, an Expert Committee was struck in early 2001 to review the system of administered interest rates and is expected to report in August 2001**. Options that have already proposed to introduce greater flexibility include setting the nominal rate equal to a fixed margin over the inflation rate. The difficulty with this approach—which was described in the January 2001 report of the Prime Minister's Economic Advisory Council—would be to define the appropriate real interest rate, and to establish the appropriate measure of inflation. An alternative and simpler option might be to follow the recommendation of the Gupta Committee and tie postal savings rates to some market-determined interest rate of similar maturity, possibly the rate of return on the assets in which the deposits are invested.

Tax preferences

20. **Since many small savers earn low incomes and typically do not pay taxes, existing tax incentives seem unnecessary, particularly given that interest rates on postal savings remain at least as high as those on other savings instruments.**[11] Indeed, the existing tax preferences tend to benefit higher-income depositors disproportionately, and are difficult to justify on equity or efficiency grounds. They are also likely to shift deposits away from longer-term investments in provident fund and life insurance schemes. Moreover, in spite of the significant reduction in postal savings rates in recent years, the continuation of the significant tax advantages enjoyed by these schemes tend to reduce the franchise value of banks, which have begun to face increasing competitive pressures owing to deregulation.

21. **There is also a need to address the use of the postal savings system as a possible vehicle for tax evasion**. Most notably, there is no withholding of tax on interest earned on the KVP scheme, which makes it particularly attractive to higher-income households. Indeed, some analysts have suggested that the recent growth of postal saving deposits has, at least in part, reflected stricter tax withholding by banks. Against this background, there would seem considerable merit in introducing tax withholding on interest paid under the KVP.

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[11] Similar recommendations are made in the Shome Report of The Advisory Group on Tax Policy and Tax Administration for the Tenth Plan (Planning Commission, May 2001), which argues for the abolition of various incentives under the Income Tax Act, including those under Sections 88 and 80L.

State finances

22. **The postal savings system has served to soften budget constraints at the state level, thereby undermining fiscal discipline**. In particular, while the central government has the ability to limit state borrowing from the market, it is unable to constrain the states' automatic access to funds that are deposited in the postal saving system. This has facilitated an increase in state government deficits, and a rapid build up of state debt, with pressures now by the states for debt relief.[12] Hardening the states' budget constraints by limiting access to postal savings finance would complement the center's initiatives to increase fiscal responsibility at the state level. One option would be to adjust state government borrowing ceilings for unbudgeted borrowing against postal savings schemes. An alternative would be to eliminate the central and state governments' automatic access to these funds, and require the funds to be invested in *marketable*—rather than special issue—government securities.

Simplifying administration

23. **There would seem considerable scope for reforms to simplify the administration of the postal saving system**. Although the principal responsibility for the postal savings schemes lies with the NSO, the system is operated by the Department of Posts, with the state government agencies also playing an important role. Significant efficiency gains could be achieved by doing away with the multi-agency approach, providing responsibility for the entire system to the Department of Posts, and running the system on a commercial basis. This would allow a careful reconsideration of the significant commissions paid to agents for attracting deposits. Moreover, the use of the system as a vehicle for promoting employment for economically-disadvantaged persons should also be reconsidered (Box VIII.2)—it would be preferable to provide such support transparently through the government's budget.

Maturity mismatch

24. **Funds directed toward the states through the postal saving system also imply a substantive maturity mismatch**. Loans to the states from the NSSF carry a maturity of 25 years, while the average maturity of postal deposits is in the range of five years. Thus, while the annual yield on the two instruments is similar, the difference in maturity leaves the government highly exposed to shifts in investor preference or yields. This suggest the need to bring the maturity of NSSF loans to governments in line with the maturity of deposits; i.e., to five years. Reform of the system could be complemented by other measures such as allowing postal saving deposits to be managed by professional money managers, and to be invested in both government and private securities.

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[12] The states have suggested a number of options including: (i) treating small savings loans as loans in perpetuity; (ii) a complete write-off past loans (principal and interest); (iii) waiving or reducing past interest; (iv) providing future loans interest-free or as grants. These options were generally rejected by the recent report of the Eleventh Finance Commission.

25. **Many of the reform issues discussed above are similar to those that have been tackled recently by the Japanese postal savings system.** In particular, the Japanese government has introduced a number of reforms geared toward making the system more dynamic and consistent with a free market environment. These include measures to increase the flexibility with which postal saving rates are set; to reduce the tax benefits applying to postal saving deposits; to increase the efficiency of the system by better product design and delivery; and to liberalize the portfolio choices available to the system.

E. Conclusion

26. **The current postal saving system has represented an important means of mobilizing savings, especially in rural India, and has provided a captive source of fiscal financing**. However, these funds are expensive, owing to their significant tax advantage and the operational inefficiencies of the system. Moreover, the automatic provision of these funds to the states has undermined fiscal discipline and exposed the system to a significant maturity mismatch. The inflexibility and generosity of the rates paid on these deposits has also tended to undermine broader financial reform efforts.

27. **Looking ahead, there would appear considerable scope to reform the postal saving system by reducing these tax advantages and increasing the flexibility with which deposit rates are adjusted**. More fundamental reforms could also include revamping the administration of the system in favor of the establishment of a single agency responsible for operating the postal savings schemes, preferably on a commercial basis.

Chart VIII.1 India: Postal Savings Deposits vs. Bank Deposits
(In percent of GDP)

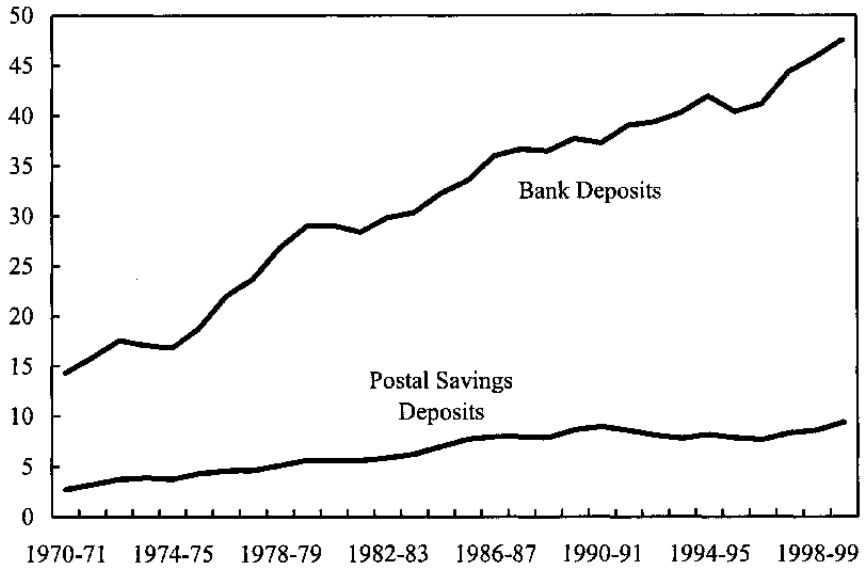
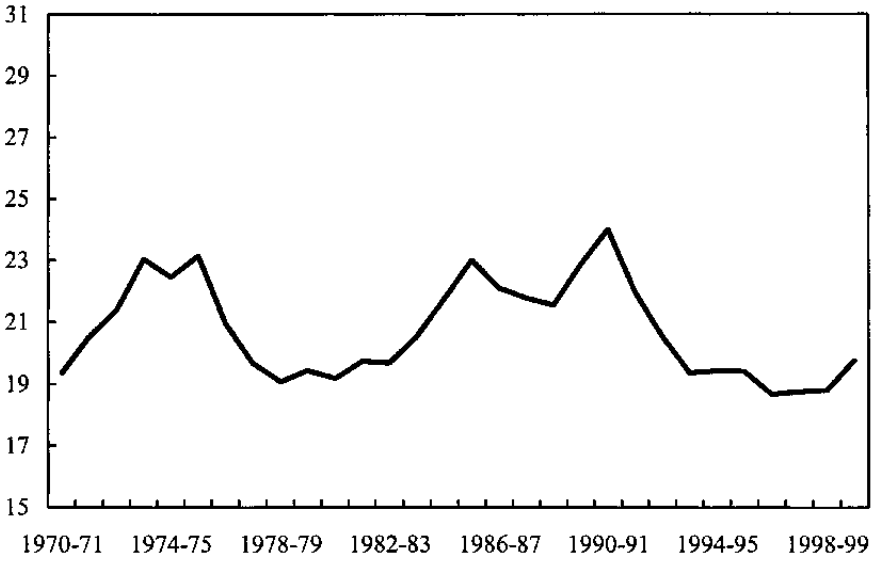


Chart VIII.2 India: Postal Savings Deposits as Percent of Bank Deposits
(In percent)

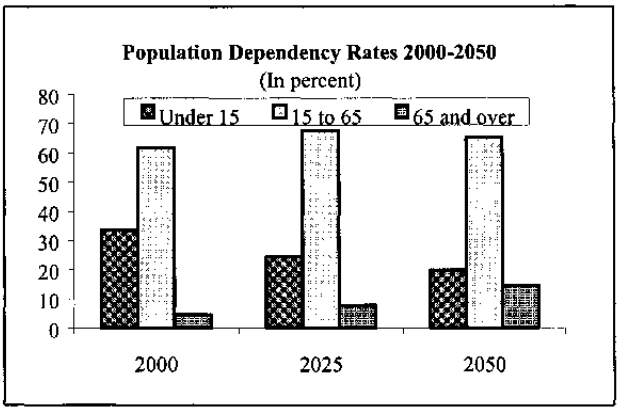


Sources: Reserve Bank of India, Handbook of Statistics on Indian Economy; Union Budget documents; Central Statistical Organization.

IX. Pension Reform in India[1]

1. **Pension reform is a subject of active debate in India today, for several reasons.** First and foremost, the coverage of existing pension programs is extremely narrow—only about 11 percent of the current working-age population. Second, the system is complex and has not achieved the objective of ensuring adequate savings for retirement. Third, the pension system for government employees is likely to place increasing pressure on the budget in the years ahead.

2. **In contrast with many other countries, demographic pressures on the pension system are a less pressing concern in India.** Currently (according to projections by the U.S. Bureau of the Census), roughly 7 percent of the population is over 60, with less than 5 percent over 65. These proportions are projected to increase to roughly 20 percent and 15 percent, respectively, by 2050. Two countervailing trends are likely to mitigate the effect of this increase. First, the share of the population below working age is projected to decline significantly. Consequently, the total dependency rate is likely to fall for the next 20–30 years. In addition, mortality rates are projected to decrease, leading to a substantially longer life expectancy and an increase in the normal retirement age. The total dependency rate with a working age of 20–65 is projected to be roughly the same in 2050 as the present dependency rate with a working age of 15–60.



3. This chapter describes and evaluates the current system of pensions and provident funds, and the proposed revisions contained in the Old Age Social and Income Security (OASIS) report commissioned by the Ministry of Social Justice and Empowerment.

A. The Current System of Pensions and Provident Funds

4. **Currently, India has a complex of different provident fund and pension schemes, targeted at different segments of the labor force.**

The Organized Sector

5. Most workers in the organized private sector participate in two schemes, the defined-contribution **Employees Provident Fund** (EPF) and the defined-benefit **Employees Pension**

[1] Prepared by Robert Gillingham and Daniel Kanda.

Scheme (EPS).[2] These workers constitute 49 percent of the salaried work force and slightly more than 7 percent of the estimated total work force.

6. **Employees Provident Fund.** The EPF was established in 1952 and participation is mandatory for private and public enterprises in 177 specified sectors (excluding Jammu and Kashmir) that employ more than 20 persons. As of March 1999, the EPF covered about 23.1 million workers in 318,430 establishments. Establishments outside these 177 sectors may voluntarily join the EPF. There were 22,502 such establishments as of March 1999. The system covers those employees whose initial basic wages and "dearness" allowances were below Rs 5,000 per month. Workers whose wages later exceed this threshold are required to contribute on only the first Rs 5,000 but may voluntarily contribute on amounts in excess of this amount.

7. The Employees Provident Fund Organization (EPFO) oversees the EPF. Contributions can be deposited into a fund managed by the EPFO, but employers can also seek an exemption to manage their own funds, as long as they meet regulatory requirements enforced by the EPFO. As of March 1999, there were 315,307 nonexempt establishments, accounting for 82 percent of contributors and 64 percent of contributions, in the EPF (Table IX.1). Not only were exempt establishments larger, but the average wage on which contributions were calculated was almost three times as large. In recent years, however, the share of workers in exempt establishments has been decreasing, along with their relative wages. With few exceptions, employees are required to contribute 12 percent of wages, with employers making contributions of 3.67 percent.[3] Benefits are paid out as a lump-sum upon retirement.

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[2] These workers also participate in the Employees' Deposit Linked Insurance Scheme (EDLIS), a third program overseen by the EPFO, which pays a lump-sum death benefit to the survivors of workers who die before retirement. The benefit is equal to the accumulated balance in the worker's EPF account up to a maximum of Rs 35,000. Employers contribute 0.5 percent of workers' salaries, and until 1996 the government also contributed 0.25 percent. Funds contributed up to March 1997 are invested in the Public Account, while subsequent contributions are invested according to the guidelines for EPF investments. At end-March 1997 accumulated funds were Rs 19 billion. The average rate of return for the EDLIS portfolio is 8.7 percent per annum. Establishments that wish to be exempted from this program must demonstrate that their employees already enjoy comparable or superior benefits, without additional contributions. As of end-March 1998, 7,261 establishments had been exempted. Since this is a life insurance rather than a pension plan, it is not analyzed here, although to the extent that premiums do not cover benefits, it represents a potential drain on public finances.

[3] For five industries—essentially industries suffering from economic stress—the contribution rates are 10 percent for employees and 1.67 percent for employers.

Table IX.1. India: Employee Provident Fund and Employee Pension Scheme, 1996/97–1998/99

	1996/97	1997/98	1998/99
Number of establishments	277,555	299,204	318,430
Exempt	2,970	2,948	3,123
Nonexempt	274,585	296,256	315,307
Members of EPF (in thousands)	20,289	21,219	23,119
Exempt	4,536	4,403	4,109
Nonexempt	15,753	16,816	19,010
Members of EPS (in thousands)	18,324	18,549	20,481
Exempt	3,425	2,384	1,889
Nonexempt	14,899	16,165	18,592
EPF contributions (billions of rupees)	59.7	68.2	78.0
Exempt	30.6	31.7	28.4
Nonexempt	29.2	36.4	49.5
EPS contributions (billions of rupees)	27.9	32.2	36.3
Employer/employee contributions	24.5	28.5	32.0
Government contributions	3.5	3.7	4.4
Memorandum items:			
Average monthly wage base for EPF member (rupees)	1,565	1,709	1,793
Exempt	3,583	3,834	3,677
Nonexempt	984	1,152	1,386

Sources: EPFO 1998/99 Annual Report and Fund staff estimates.

8. To cover administrative expenses, nonexempt employers contribute 0.65 percent of wages, while those from exempt funds contribute 0.09 percent of wages to cover expenses related to their supervision by the EPFO. The difference in administrative costs provides a strong incentive to seek exempt status. Prior to retirement, employees may make partial withdrawals for specified purposes like house construction, illness, natural disasters, and higher education of children. Employees may also withdraw 90 percent of the balance in their accounts in the year before retirement.

9. Returns paid on funds managed by the EPFO are set annually by the government and are usually announced around the time of the government's annual budget—the rate had been fixed at 12 percent since 1989/90, but was reduced to 11 percent in July 2000. The government's 2001/02 budget announced a further 150 basis point cut in returns.[4] Exempted funds may not credit members with a return lower than that announced by the EPFO, and shortfalls from investment income on fund assets must be made up from employers' other

[4] The EPFO resisted this cut, and initially only approved a 75 basis point reduction in returns.

income. When employers declare a return higher than that declared by the EPFO, the excess is treated as taxable income for the employer. The real compounded rate of return enjoyed by contributors has averaged 1.9 percent per annum since 1977, which has helped cause balances in EPF accounts at retirement to be very low. For example, in 1998/99 EPF retirement claims averaged less than Rs 19,000.

10. Perhaps the most serious drawback of the EPF is the regulations for the investment of contributions. Funds are required to be invested in government and government-guaranteed securities, or securities issued by public enterprises or government-owned banks. Partly reflecting the fact that most of these securities pay less than the required return on deposits, 85–90 percent of funds had in the past been invested in a special deposit scheme (SDS) of the government. The SDS provided a 12 percent yield from 1986 to July 2000, and an 11 percent yield in 2000/01. However, since April 1997 new subscriptions cannot be invested in the SDS, though interest earned from the SDS can be reinvested. The average rate of return on the EPF portfolio has been estimated at 12.1 percent per annum. Given the required rate of return on deposits, it is clear that there is no room for the accumulation of reserves to meet contingencies. As of end-March 1999, accumulated funds under management by the EPFO were Rs 413 billion. Total assets including exempt establishments were Rs 700 billion.

11. **Employees Pension Scheme.** The EPS, also overseen by the EPFO, was established in 1995 as a replacement for the Family Pension Scheme (FPS), which had provided survivor benefits. Its membership is lower than that of the EPF; as of March 1999 it covered about 20.5 million workers, with 1.9 million of them belonging to exempt establishments. Establishments may be exempted from the EPS if they provide benefits that are at least as good. However, the rules for exemption from the EPS are not entirely transparent, and there is currently a case before the Supreme Court regarding the conditions under which schemes may be exempted from the EPS.

12. The EPS is currently funded by employer and government contributions—8.33 percent and 1.16 percent, respectively, of employees' basic wages plus dearness allowance. However, exempt funds do not receive the government contribution. The EPS provides pension benefits that are calculated on the basis of a worker's average salary in the twelve months preceding retirement, and a multiplicative factor calculated as years of service divided by seventy. The maximum replacement rate is 50 percent, and workers who have more than 20 years of service or have reached the retirement age of 58 years of age get credit for two additional years of service. Consequently, a 58-year-old worker with 33 years of service can retire with the maximum replacement rate. Finally, early retirement is possible at age 50 with a reduction in benefits for each year between the age of retirement and 58. A portion of EPS benefits is payable as a lump sum at retirement. The tax treatment of EPS benefits is similar to that of EPF benefits. Survivor and disability benefits also are provided by the EPS.

13. Up to 1997, assets inherited from the FPS and the government contribution to the EPS were invested in the Public Account of the Government of India—which earned 8.5 percent interest—and interest paid was reinvested in the Public Account. Other

contributions were invested in accordance with the guidelines for EPF investments. However, new investment in the Public Account was suspended in April 1997, so that all new contributions since then have been invested in accordance with EPF guidelines. Because of the investments in the Public Account, the average nominal rate of return on the EPS portfolio has been estimated at roughly 10 percent per year, about 2 percent less than that for the EPF. As of end-March 1999, accumulated funds in the EPS were Rs 220 billion.

14. **Special provident funds.** There are also some mandatory provident funds linked to specific occupations or states, such as the Coal Miners Provident Fund (1948), the Assam Tea Plantation Provident Fund (1955), the Jammu and Kashmir Provident Fund (1961), and the Seamens' Fund (1966). Although managed by different trusts and fund managers, they all generally follow the same investment and return rules as those funds regulated by EPFO. Total membership in these schemes is roughly 2 million.

15. **Voluntary programs.** There are also a number of voluntary **group pension plans** that exist primarily because of rules barring high-income employees from participating in the EPF system. These pension schemes are either privately run by managers appointed by employers, or are run by the Life Insurance Company (LIC). The provisions of the Insurance Act 1938 and the LIC Act 1956 make the LIC the only enterprise allowed to provide annuity schemes to the Indian public, since the annuity business is considered a part of the life insurance business. As a result, privately run pension schemes can accumulate and invest funds, but are required to purchase annuities on behalf of retiring employees from the LIC. Although they are neither mandatory nor sponsored by the government, they are mentioned here because they receive tax preferences and because they are subject to restrictive investment and annuity regulations.[5]

16. As of March 1998, the total accumulated funds for these group pension plans was about Rs 65 billion (Gupta, 1998), of which the LIC managed Rs 49.7 billion on behalf of 4719 schemes. Annuity payments arising out of these schemes, covering about 210,000 persons, totaled Rs 3.1 billion in 1998. Voluntary **individual annuity schemes** can also

[5] Contributions to these schemes by employers are tax deductible up to a limit of 27 percent of workers salaries. Employee contributions attract tax credits of 20 percent of the contribution, up to a maximum contribution of Rs 60,000. Income from investments is tax exempt. At retirement, one third to one half of benefits may be withdrawn as a lump-sum payment, which is tax exempt. However, annuity payments are taxable as income. Returns on investment have exceeded those for the EPF. Between 1996 and 1998, gross returns exceeded 14 percent, while the net return received by members was 12.5 percent. As with other pension plans, withdrawals before retirement are not permitted.

receive preferential tax treatment.[6] In 1998 there were about 670,000 such annuities, which paid out about Rs 14.5 billion.

The Informal Sector

17. There are no mandatory retirement-saving programs for the self-employed or for workers in the informal and unorganized sectors of the economy. Although these workers are ineligible to join the EPF even on a voluntary basis, they can join the **Public Provident Fund (PPF).** Members of the PPF can contribute between Rs 100 and Rs 60,000 per fiscal year, and PPF accounts mature in 15 years. Early withdrawals are permitted after five years. Three fourths of net PPF contributions have been distributed as loans to state governments at 14 percent interest, while the remainder is invested in the public account of the central government. The PPF and EPF earned identical returns until January 15, 2000, at which time PPF returns were reduced to 11 percent while EPF returns continued to be 12 percent. With the reduction in EPF rates to 11 percent in July 2000, PPF and EPF rates again became identical. The rates have since diverged, as the 2001/02 budget ordered a 150 basis point reduction in the rates for provident funds which the EPFO has not fully implemented. The PPF has not been marketed aggressively, and net collections have grown slowly. As of March 1998, there were 2.76 million accounts in the PPF, representing less than one percent of the working population, with total outstanding balances of approximately Rs 50 billion.

18. The poorest elderly are covered under a separate social assistance program—the **National Old Age Pension Scheme (NOAPS)**—that provides a benefit of Rs 75 per month. However, relatively few elderly have applied for this benefit and, in any case, coverage is limited to 10 percent of the population over 65.[7]

Civil Service Retirement Programs

19. Civil servants participate in a noncontributory pension plan, a contributory provident fund, an insurance plan, and mandated gratuity pay. The government has recently set up a commission in the Ministry of Finance to estimate the contingent liabilities arising from these schemes.

20. **Civil service pension system.** The CSPS covers federal and state civil servants, a workforce of over 12 million (Table IX.2). Workers make no contributions, and benefits are financed directly from the respective federal or state government budgets. The CSPS pays a retirement benefit at age 60 that is based on years of service and average salary in the last

[6] Contributions to these schemes are tax exempt up to a maximum of Rs 10,000. However, as with other pension schemes, annuity payments are taxed as income.

[7] In addition to NOAPS, the poorest elderly may also be eligible for social assistance at the state level. Unfortunately, little information is available on the design and financing of these programs, which appear to vary significantly across states.

year of service. The accrual rate is slightly over 1.5 percent replacement per year of service, so that a worker with 33 years of service will get a 50 percent replacement of final salary, as in the EPS. Survivor benefits are also provided. Within the central government, pension schemes are organized by occupation, with separate schemes—which have somewhat different rules of eligibility—for railways, telecommunications, defense, and line ministry personnel. Civil service salaries and benefits are adjusted in line with civil-service compensation every 10 years by the decennial Pay Commissions.

Table IX.2. India: Civil Service Pension System, 1998

	Wage Bill				Pension Outlays			
	Number (thousands)	In Billions of Rupees	In Percent of GDP	Average Wage	Number (thousands)	In Billions of Rupees	In Percent of GDP	Average Benefit
Central government	4,648	340.9	2.25	6,113	3,603	111.4	0.73	2,576
Railways	1,564	107.4	0.71	5,723	1,060	35.1	0.23	2,758
Telecommunication	852	57.4	0.38	5,609	235	7.5	0.05	2,657
Defense	1,036	87.8	0.58	7,059	1,844	49.5	0.33	2,236
Other	1,195	88.3	0.58	6,161	464	19.3	0.13	3,473
State governments	7,600	396.1	2.61	4,343	3,673	86.1	0.57	1,954
Total	12,248	737.0	4.86	5,014	7,276	197.5	1.30	2,262

Sources: Shah (2000) and Fund staff estimates.

21. Both pay and pensions can be adjusted during the intervening years by a dearness allowance. The Fifth Pay Commission prescribed minimum and maximum pensions of Rs 1,257 and Rs 15,000 per month, respectively, in 1999. Workers may borrow funds from their accumulated pensions for certain purposes, such as purchasing a house, and on retirement may also withdraw a part of the pension as a lump-sum payment. As of March 1998, total outlays due to pensions at the state and central government level amounted to about 1.3 percent of GDP. The largest component of the central government pension bill as of March 1998 was for defense personnel (0.33 percent of GDP).

22. **Government Provident Fund.** The GPF is a defined-contribution plan in which employees contribute 8.33 percent of their salaries, and receive a lump sum upon retirement. GPF funds are deposited in the Government of India Public Account, and no explicit interest accrues. Consequently, the system has essentially operated on a pay-as-you-go basis. Between 1986 and March 2001, participants have received an average rate of return of about 12 percent. In line with other major provident funds, the 2001/02 budget ordered a 150 basis point reduction in GPF returns. As of 1996, accrued balances were about 1.2 percent of GDP (Patel, 1997).

23. **Other civil-service plans.** There is also an **insurance scheme** into which employees pay a small monthly premium determined according to civil-service rank. It provides a survivor benefit equal to a multiple of the monthly premium in the event a worker dies prior to retirement. Otherwise, it provides a lump-sum payment equal to the accumulated premiums. Upon retirement civil servants also receive a **lump-sum gratuity** based on final salary and years of service (one-half month for every year of service). Workers can also make early withdrawals against their gratuity for specified purposes such as housing costs.

B. Problems with the Current System

Coverage and equity

24. The most serious problem with the current pension system is that it fails to reach the vast majority of the population, particularly the poor, who have no alternative safety net and do not have the financial resources to save for old age. The average income of the workers covered by the EPF/EPS and the CSPS/GPF is roughly Rs 2,900 per month, a large multiple of the average income of workers in the informal sector. Similarly, the average EPS (CSPS) benefit is on the order of Rs 1,000 (Rs 2,000), compared with the NOAPS, which has a benefit of Rs 75 per month and reaches only a small proportion of the elderly poor.

25. In addition, benefits net of contributions and the implicit rate of return on contributions vary substantially across program, occupation, sector, etc. This results in inequities, and means that pension rights are not portable, creating impediments to labor mobility.

Fiscal sustainability

26. Potential fiscal problems reflect the large unfunded liability of the system, and are concentrated in three areas:

- **Civil Service Pension System.** As Table IX.2 demonstrates, there is a fundamental imbalance between wages and pension benefits in the civil service which reflects several factors. First, given the average dependency rate of 59.4 percent, the pension age is almost certainly too low (Table IX.3).[8] Second, even with a low pension age, the average replacement rate is still over 45 percent. Consequently, the pension bill is over 25 percent of the wage bill. The situation is much more serious at the central government level, particularly in the areas of defense and railways.

[8] The only other explanation would be that there has been a drastic reduction in the size of the civil service, and the high number of current beneficiaries is a result.

Table IX.3. India: Parameters of the Civil Service Pension System

	Pensioners/ Wage Earners	Average Pension/ Average Wage	Pension Outlays/ Wage Bill
Central government	77.5	42.1	32.7
Railways	67.8	48.2	32.7
Telecommunication	27.6	47.4	13.1
Defense	177.9	31.7	56.3
Other	38.8	56.4	21.9
State governments	48.3	45.0	21.7
Total	59.4	45.1	26.8

Sources: Shah (2000) and Fund staff estimates.

- **Employees Pension Scheme.** The financial position of the EPS appears unsustainable in the long run. The World Bank estimates that the cash-flow deficit in the EPS will grow to almost 1 percent of GDP over the next several decades. With a retirement age of 58, 33 years of service, a life expectancy at age 58 of 17.2 years, a contribution rate of 8.33 percent and inflation of 3 percent, the implicit *real* rate of return on contributions necessary to fund pensions *abstracting from survivor and disability benefits and any indexation for inflation* is 4.5 percent.[9] This rate of return is well beyond the feasible return under the current restrictive investment regulations, and the survivor and disability benefits, and any ad hoc indexation for inflation, simply add to the imbalance.

- **Tax preferences.** The tax preferences in the current pension system add to the strain on government finances, and almost certainly benefit the highest-income workers. Contributions by employees and employers into retirement saving schemes are tax exempt up to Rs 60,000, so that the maximum tax free contribution per worker is Rs 120,000, well beyond the limits of participation in the mandatory schemes. In addition, the tax system provides a significant incentive to realize benefits as lump-sum distributions rather than annuities or programmed withdrawals, which appears to be counter to the objective of assuring retirement income.[10]

[9] This calculation is for a hypothetical worker whose real income increases at a 5 percent rate between ages 25 and 50 and is stationary thereafter.

[10] Interest income and lump-sum withdrawals from provident funds are tax exempt, but benefits or annuities are not.

Investment policy and administrative rates of return

27. Investment rules in India require most funds to be placed in public sector instruments, and there are strict limits on investments in corporate bonds and equities. This has severely reduced their return, and imposed an implicit tax on contributors.[11] It has been estimated by the World Bank that a mixed portfolio, with one third of funds invested in a broad equity index since 1979 would have resulted in EPF balances more than twice the actual balances in 1999. In the 1990s, provident funds held 30 percent and 46 percent of the net aggregate domestic liabilities of the central government and state governments, respectively. Thus, these funds represent an important source of captive financing for fiscal deficits.

28. By contrast, a prudent-investor paradigm would allow pension and provident funds to take prudent risks in order to increase returns. This approach would not necessarily require more active fund management than has been the case in India, where for the most part fund managers are only authorized to purchase and hold specific securities to term. Higher returns can be achieved by investing in funds that mimic the average return of selected markets.

29. A related problem is that the government instruments in which provident funds invest are not freely marketable, and they bear an administered, rather than a market-based, rate of return. The setting of rates is highly politicized, which has caused the decline in administered rates to lag the drop in market rates. This has contributed to fiscal pressures, as well as pressure on the banking system, which faces difficulty in competing for deposits.

Regulation and administration

30. Trustee-managed pension funds and funded gratuity plans are not supervised by any statutory body, and the data on their operations are available only with a substantial lag. Also, although the EPFO supervises exempt EPF funds, there is a relative paucity of data regarding the operations of the exempt funds. The EPFO does not publish its audit and actuarial reports, nor are these reports prepared in a timely manner. In addition, there is an implicit conflict of interest in having the EPFO approve and supervise exempt provident funds, since the existence and growth of these funds reduce the resources under EPFO management.

31. The weak regulatory environment is reflected in the quality of service provided by the mandatory schemes. Delays in processing claims, crediting interest to members, and issuing annual account statements are common. For example, during 1994/95–1997/98, between 20 percent and 50 percent of interest earned was not received in the year earned. Improvement of service is a major reason for setting up exempt funds in the EPF.

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[11] In 1998, investments were allowed in corporate bonds with a minimum AAA rating up to 2 percent of fund inflows. However, the majority of funds have not yet been invested in corporate bonds.

Multiple uses of retirement saving

32. Retirement savings can be used for many purposes in advance of retirement—including higher education of children, housing, funerals, and weddings of family members. This has resulted in very small shares of contributions that are distributed at and after retirement, and suggests that the system is not adequately ensuring a sufficient level of post retirement income.

C. Ongoing Reform Efforts

33. In response to growing concern about the current system of provident and pension funds, and its likely adverse impact on poverty amongst the elderly, a number of groups have evaluated how the current system should be changed. Recently, the World Bank has completed its analysis of old-age income security and suggested a set of reform options. In addition, the Asian Development Bank Institute, the Asian Development Bank, and the Colombo Plan Secretariat organized a conference in November 2000 in New Delhi with a major emphasis on pension reform in India. On a parallel track, the Ministry of Finance has convened a committee to evaluate reform options for the civil service retirement plans. Each of these efforts builds on the work of the Old Age Social and Income Security (OASIS) project.[12]

Project OASIS

34. In 1998, the Ministry of Social Justice and Empowerment asked an eight-member expert committee that constitutes Project OASIS to examine the current vehicles for retirement saving and recommend changes to encourage saving by a broader cross section of workers. The committee report (Ministry of Social Justice and Empowerment, 2000) details many of the problems with the current system described above, including the need to insulate retirement saving policy from politics, better target tax incentives, and reach out to the informal sector. To achieve these goals, the committee recommended that the existing scheme be augmented by a system of Individual Retirement Accounts (IRAs) with the following features:

- IRAs would not be linked to employers, but rather to workers, and each worker would be given a unique account number that would not change with employment.

- To ensure accessibility to a broad cross section of the labor force, the minimum contribution would be initially set at Rs 500 per year, with flexible conditions for payment in order to encourage participation by workers who do not earn a steady income. Contributions would be tax exempt up to Rs 60,000 per annum.

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[12] Project OASIS, in turn, built on earlier analyses by Patel (1997) and Dave (1999).

- To minimize transactions costs, (i) a system of "points of presence" (post offices, banks, etc.) would be established to collect contributions and distribute benefits, and (ii) a depository would be created to pool individual contributions into large blocks of funds, which would then be passed on to fund managers. The depository would also be the main record keeper.

- To give workers a choice regarding the investment of their funds, and to substantially increase returns from their historical levels, a system of six competing private pension fund managers (PFMs) would be established. Each PFM would offer three investment portfolios, distinguished by level of risk and return, from which workers could freely choose.

- At retirement at age 60, workers would be required to use at least a portion of their balances to purchase annuities from insurance companies. The report anticipates that with the recent liberalization of the insurance sector, a competitive market for annuities would emerge in the near to medium terms.

- To narrow the focus of the plan on retirement, the proposed system bans early withdrawals, except where account balances exceed Rs 200,000. Even in these cases, the withdrawals would be subject to a 10 percent tax to discourage such behavior. The plan would allow workers to take out loans of up to Rs 5,000 against balances that exceed Rs 10,000. However, in such cases subsequent contributions would first be applied towards loan repayment, so that minimum contributions would equal the sum of loan repayment and Rs 500.

- To ensure the smooth functioning of the system, prevent abuse and fraud, and safeguard workers' investments, an independent regulator would be set up to license PFMs, oversee the entire system, disseminate information about the performance of the PFMs, and make improvements to the system where necessary.

- To encourage individuals to purchase annuities upon retirement, all lump-sum withdrawals would be taxable, while income from annuities would be tax exempt.

- A National Senior Citizen's Fund (NSCF) would be established to encourage, catalyze and complement NOAPS and private-sector efforts to improve the quality of life of the elderly. The present government contribution to the GPS would be redirected to this fund for three years to provide initial capital, and then discontinued. In addition, 25 percent of all premature and lump-sum withdrawal taxes would be deposited in the fund.

35. With respect to existing provident and pension funds, the OASIS report makes the following recommendations:

- The EPF would be restructured along the lines of the IRA program, with premature withdrawals curtailed, workers given the option to switch to the IRA plan and exempt funds switching over to same investment strategy used for the IRAs.

- Government contributions to the EPS should be discontinued, and the EPS would (i) implement a uniform 10 percent (employer) contribution, (ii) adopt the IRA investment guidelines, (iii) perform an annual actuarial review and adjust parameters to assure the system is self-financing, and (iv) move away from lump-sum distributions toward annuities.

- Because the Ministry of Finance had already appointed a committee to review the CSPS, the OASIS committee recommended only that the system be made contributory and put on a self-financing basis.

- The PPF should phase out its current system and channel all new contributions into a new fund (PPF-2) that does not rely on small saving instruments (see Appendix IX.1 and Chapter VIII). This new fund would be segregated from the Public Account, and would be managed professionally in an open and transparent fashion.

- NOAPS would be continued because, despite its limitations, it still plays an important role.

36. The government is committed to reforming the system broadly along these lines, and formal reform proposals are expected in the Fall of 2001.

Assessing the OASIS proposal

37. The OASIS committee recommendations appear a broadly appropriate response to the problems of the existing system. However, there are several issues that bear further consideration:

- **An almost complete reliance on voluntary thrift.** The report recognizes that the overall fiscal situation in India requires a pension system based on self-help and thrift. However, it remains to be seen how poor workers in the informal sector would be able to set aside sufficient resources to provide even minimal support in old age. Therefore, it would be appropriate to explore options for a redistributive element, combined with mandatory participation. The proposal for the NSCF moves in this

direction, but options for additional funding could be explored, including a redirection of a larger share of the fines for premature withdrawal.[13]

- **Overoptimism regarding returns.** The report implicitly assumes a real rate of return of 6 percent, which appears overoptimistic. In order to achieve a rate of this magnitude, assets would need to be invested entirely in equities, which would expose depositors to significant risk. Therefore, in preparing the reform plan it will be important not to overestimate the gains or underestimate the risks from these reforms.[14]

- **The administrative infrastructure for regulating pension policy, managing investments and maintaining records.** The combination of "points of presence," a depository, and private fund management is an innovative approach, aspects of which have been implemented or are under consideration in other countries. However, the cost estimate of 0.25 percent of fund balances may be optimistic, given the complexity of the scheme. The objective of encouraging PFMs to compete on fees rather than performance promises also appears appropriate, but care would be needed to ensure that differences in fees can be distinguished from differences in risks. The experience of the Thrift Saving Plan—essentially a provident fund for U.S. government federal employees—might be informative. In this case, the plan trustees specify the indexed funds to be offered, firms compete on fees to provide them, and the plan participants can mix their investments.[15]

- **Rate of return guarantee.** The report also recommends that the nominal value of contributions be guaranteed for long-term (10 years or more) participants. In other words, the value of the fund would never fall below the sum of contributions for these investors. This appears an innocuous guarantee, since it provides for zero *nominal* growth, but could be very expensive in the event of deflation or a substantial equity market correction.

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[13] Two possible options for covering more of the poor would be to (i) provide matching contributions to IRAs to entice more workers into the system or (ii) expand the coverage and benefits of NOAPS to directly subsidize living expenses for the elderly poor.

[14] For instance, in the discussion of annuitization, the report foresees a range of rates of return from 3 percent with a safe portfolio—higher than the rate of return on U.S. government bonds—to (implicitly) almost 9 percent—much higher than the expected return on an all-equity portfolio.

[15] A wide range of additional ideas is presented in Shoven (2000) and Mitchell (1998).

- **Annuitization.** The report expresses the opinion that liberalization of the insurance industry will allow it to offer "fair-priced" annuities to retirees. However, even in the most developed financial markets the transactions costs in the purchase of an individual annuity are very high. It would be useful to consider options similar to the depository that could pool risks efficiently and purchase group annuities, so that retirees would not have to forego such a high percentage of their savings.

Reforms to the defined-benefit programs

38. The OASIS report is largely silent on needed reforms to the EPS and CSPS. One aim of pension reform should be to unify and rationalize the rules under which these systems operate. At the very least, all new employees in each plan could be enrolled under new rules that are as similar as possible. A more ambitious goal would be to design a transition rule under which existing employees would be phased into the new system. The design of the new system will need to reflect carefully considered decisions on the following dimensions.

- **Sustainable self-financing.** It will be important for the EPS and CSPS to internalize the costs and benefits of the new system to both employers and employees. At least prospectively, contributions should be sufficient to finance benefits, without the need to resort to additional budget transfers. Standardizing contribution and benefit rules across the two systems would reduce the appearance of inequity and promote mobility between the public and private sectors.

- **Level of benefits.** A primary purpose of these defined-benefit plans is to allow for the sharing of risks across cohorts.[16] The system can be structured so that all workers of different ages receive the same rate of return on their contributions, regardless of the particular draw from the distribution of rates of return experienced during their lifetimes. The question to be answered is what overall replacement rate should be expected from the pension system, and what share should be obtained from a defined-benefit system and what share from a defined-contribution system.

- **Retirement age/replacement rate.** There is a clear trade-off between retirement age and replacement rate in a defined-benefit plan. As noted in the OASIS report, life expectancy at the current retirement age of 60 is over 15 years, and will grow in the future. By increasing the age for "normal" retirement, a larger replacement rate can be achieved with a given contribution rate. For a given replacement rate, the contribution rate could be cut by between a quarter and a third.

- **Wage base for setting pensions**. Basing pensions on average wages over the last year of employment weakens the link between contributions and benefits. For given average lifetime wages and contributions, a worker with a flat wage profile will

[16] The benefit formula could also be designed to redistribute within generations as well as across generations.

receive a smaller pension. Increasing the averaging period would eliminate this inequity, and to give appropriate credit for the timing of contributions and account for inflation, wages should be indexed in calculating the average. A number of options exist, but the choice will need to be consistent with structure of benefits and the degree of funding in the system. The replacement rate will have to be consistent with the chosen index, as well as the average rate of return earned by the pension fund's assets. To be consistent with the defined-benefit design, the wages should be indexed with long-run average rate of growth in the index chosen. Otherwise, the intergenerational risk-sharing will be foregone.

- **Indexation of benefits**. Even a modest inflation rate can rapidly erode benefits. At 5 percent inflation, real benefits fall by 40 percent in the first 10 years. Ignoring inflation puts the beneficiaries at substantial risk; requiring the budget to maintain real benefits shifts that risk to taxpayers. Neither is equitable. Rather, allowance for expected inflation should be built into the benefit and contribution structures, and indexation should be automatic and transparent. In this way, workers can finance their own inflation protection. Indexation is expensive, however. For instance, for a 4 percent real rate of return on investment and 5 percent inflation, the contribution rate necessary to fund a given replacement rate is on the order of 30 to 40 percent higher with indexation than without.

- **Special consideration for certain occupations.** The expected work life is shorter in some occupations than in others—two examples are military service and mining. The pension system may need to reflect these differences, but it should do so explicitly, avoiding arbitrary and unintended cross-subsidies. If one occupation requires an earlier retirement age, it should show up as a compensating difference in total compensation. Then, either compensation net of contributions will be higher, or a larger share of compensation will be saved for retirement. Prospectively, for example, the higher costs of military retirement should be reflected in higher contributions for active military.

- **Transition.** If all new employees are hired into a new, restructured system, the question then becomes what to do with existing employees. One option is to pick an age—say 35—and require all younger workers to join the new system. Their ultimate benefit could then be a blend of the benefits under the old and new rules, weighted by years of service under each. Finally, if it is in the best interest of the employer—either private or public sector—for older workers to switch, they could be offered an incentive to do so.

D. Concluding Remarks

39. In summary, the foregoing discussion suggests that reform of the retirement saving system in India could follow four separate tracks:

- **Institute OASIS-like reforms** to improve the administration and management of provident funds and expand their coverage.[17]

- **Restructure the EPS and CSPS** to obtain a financially sound first-tier pension that is both self-financing and appropriately sized. This would need to be coupled with reforms that stopped the accumulation of actual and contingent government liabilities in both systems and eliminated the explicit government subsidies to the EPS.

- **Estimate the "tax expenditures"**—that is, foregone revenues—that result from the current tax preferences for retirement saving and make explicit decisions about the appropriate size and progressivity of these preferences.

- **Begin to plan if and how retirement income for the poor can be enhanced.**

40. Encouraging steps have already been made toward addressing these reform priorities during the past year. Although demographic trends do not appear as pressing in India as in many other countries, the fiscal constraint is severe, and it will be important to avoid delaying reform and to ensure that it is consistent with a sustainable public sector position.

[17] This is not to argue that the exact OASIS proposal be implemented, but rather that its principles be adopted and its innovative proposals for structure be given careful consideration in the reform process.

India: Small Saving Schemes

There are a large number of small-saving schemes, which provide small savers with significant tax advantages—in most cases interest earned is tax exempt and deposits are deductible from taxable income. However, these schemes are not in general intended to be retirement saving schemes, and their tax advantages mean that they attract a substantial amount of funds that would otherwise be invested in provident and pension funds. The 1999/2000 budget estimates indicate that by the end of the 1999/2000 fiscal year total outstanding deposits would be Rs 1,802 billion (9 percent of GDP). Details of these schemes as of end-2000 are as follows:

- Post Office Savings Accounts (POSA) are limited to Rs 50,000 per individual. These are current rather than time deposits, and currently the rate of return for the POSA is 4.5 percent per annum.

- Post Office Time Deposits (POTD) are unlimited in their size and may have one-, two-, three-, or five-year maturity, paying 9, 10, 11, and 11.5 percent rates of return, compounded quarterly but payable annually, respectively. Interest income is tax exempt up to Rs 10,000.

- Deposits to the National Savings Scheme (NSS) are limited to Rs 40,000 per individual, and are deductible from taxable income. Deposits have a maturity of four years from the end of the year of opening the account, and carry an 11 percent rate of return.

- Deposits in the Post Office Monthly Income Scheme (POMIS) are limited to Rs 204,000 per individual, and are of a six-year maturity with a 12 percent rate of return. There is a 10 percent bonus upon maturity, and a 5 percent discount in case of premature withdrawal.

- There is no investment limit for the National Savings Certificate (NSC), and deposits are deductible from taxable income up to annual limits. Deposits have a six-year maturity, and pay an 11.5 percent rate of return.

- Deposits in the Indira Vikas Patra (IVP) and Kisan Vikas Patra (KVP) are doubled in a specified period (currently 6 years). There is no maximum on the size of deposits, but interest is not tax exempt.

- Post Office Recurring Deposit Amount (PORDA) requires a minimum investment of Rs 10 per month, has a five-year maturity, and an 11.5 percent rate of return.

- The Deposit Scheme for Retiring Government Employees (DSRGE) and the Deposit Scheme for Retiring Employees of Public Sector Companies (DSREP) have a minimum investment amount of Rs 1,000, and total deposits cannot exceed the

employee's total retirement benefits. There is no maturity period, and they have a 9 percent rate of return, payable half yearly.

Deposits to small savings schemes flow to the central government, and three fourths of net collections (gross collections less withdrawals) of small saving in each state are onlent to the state in the form of long-term loans—typically 25 years. In order to encourage collections, for every 5 percent increase in the rate of small savings in a state above the national average an additional long-term loan of 2.5 percent of net collections is also given. Also, 50 percent of net collections under the DSRGE and DSREP in each state are advanced to the state as long-term loans. The rate of interest charged by the center on these loans is currently 14 percent, with a grace period of five years.

The treatment of small savings in the central government's budget changed in 1999/2000. Up to 1998/99, inflows of deposits were treated as capital receipts, and the amounts onlent to the states were treated as government spending (net lending). A National Small Savings Fund (NSSF), into which all small savings and provident fund collections would be paid, was established in April 1999. All withdrawals by depositors are also made out of the NSSF. For 1999/2000 the total inflow into small saving schemes is projected to be about Rs 250 billion, compared with Rs 290 billion in 1998/99.

References

Aaron, Henry, and Robert Reischauer, 2001, *Countdown to Reform: The Great Social Security Debate* (New York: Century Foundation Press).

Dave, S.A., 1999, "Restructuring Pensions for the Twenty-first Century," in *India: A Financial Sector for the Twenty-First Century,* ed. by James A. Hanson and Sanjay Kathuria (New Delhi: Oxford University Press).

Diamond, Peter, 1998, "The Economics of Social Security Reform," in *Framing the Social Security Debate: Values, Politics, and Economics,* ed. by R. Douglas Arnold, Michael J. Graetz, and Alicia H. Munnell (Washington: National Academy of Social Insurance).

Feldstein, Martin, Elena Ranguelova, and Andrew Samwick, 1999, "The Transition to Investment-Based Social Security When Portfolio Returns and Capital Profitability Are Uncertain," NBER Working Paper No. 7016 (Cambridge, Massachusetts: National Bureau of Economic Research).

Geanakoplos, John, Olivia S. Mitchell, and Stephen P. Zeldes, 1998, "Would a Privatized Social Security System Really Pay a Higher Rate of Return?" in *Framing the Social Security Debate: Values, Politics, and Economics,* ed. by R. Douglas Arnold, Michael J. Graetz, and Alicia H. Munnell (Washington: National Academy of Social Insurance).

Gupta, P.C., 1998, "LIC's Experience with Management of Pension and Superannuation Funds," paper presented at the Conference on Old Age Social and Income Security, Goa, India, November.

Heller, Peter S., 1998, "Rethinking Public Pension Reform Initiatives," IMF Working Paper 98/61 (Washington: International Monetary Fund).

———, and Robert Gillingham, 1999, "Public Versus Private Roles in Funded Pension Systems," in *Policy Issues in Pensions Reform,* Proceedings of the Second APEC Regional Forum on Pension Fund Reform, Viña del Mar, Chile, April.

Mackenzie, G. A., Philip Gerson, and Alfredo Cuevas, 1997, *Pension Regimes and Saving* IMF Occasional Paper No. 153 (Washington: International Monetary Fund).

Ministry of Labour, 2000, *46th Annual Report 1998–99,* draft report (New Delhi: Employees' Provident Fund Organisation).

Ministry of Social Justice and Empowerment, 2000, *The Project OASIS Report* (New Delhi).

Mitchell, Olivia S., 1998, "Administrative Costs in Public and Private Systems," in *Privatizing Social Security*, ed. by Martin Feldstein (Chicago: University of Chicago Press).

Patel, Urjit R., 1997, "Aspects of Pension Fund Reform: Lessons for India," *Economic and Political Weekly,* September, pp. 2395–2402.

Pillai, S. Mohanan, 1996, "Social Security for Workers in Unorganised Sector: Experience of Kerala," *Economic and Political Weekly,* Vol. 31 (August), pp. 2098–2107.

Shah, Ajay, 2000, "Issues in Pension System Reform in India," Indira Gandhi Institute for Development Research (mimeographed; Bombay, India).

Shleifer, Andrei, 1998, "State Versus Private Ownership," NBER Working Paper No. 6665 (Cambridge, Massachusetts: National Bureau of Economic Research).

Shoven, John B., 2000, *Administrative Aspects of Investment-Based Social Security Reform* (Chicago: University of Chicago Press).

Simon, Julian L., 1990, "Great and Almost-Great Magnitudes in Economics," *Journal of Economic Perspectives,* Vol. 4 (Winter), pp. 149–56.

Weaver, Carolyn, 1997, "Government Guarantees of Private Pension Benefits: Current Problems and Market-Based Solutions," in *Public Policy Toward Pensions,* ed. by Sylvester J. Schieber and John B. Shoven (Cambridge, Massachusetts: MIT Press).

World Bank, 1994, *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth,* (Oxford: Oxford University Press).

———, 2000, *India: The Challenge of Old Age Income Security,* draft report (Washington).

X. Foreign Exchange Market Developments and Policies[1]

1. **The exchange rate for the Indian rupee was unified and officially floated in 1993, and in the IMF's classification of exchange arrangements the rupee is currently classified as a managed float.** The Reserve Bank of India plays an active role in the foreign exchange market, and analysts have observed that the rupee/dollar rate exhibits extended periods of stability, before undergoing discrete adjustments.[2]

2. **This chapter briefly reviews the structure and recent developments in the Indian foreign exchange market.** Particular emphasis is laid on how the rupee's volatility compares with that of other floating currencies. In addition, the dynamics of the offshore market and their implications for the adjustment of the onshore spot rate are examined, and the responsiveness of the spot rate to intervention, are also analyzed.

A. Overview of the Indian Foreign Exchange Market

3. **Following the 1991 balance of payments crisis, India shifted from a fixed to a flexible exchange rate regime.** This process began with the transition from a basket-linked managed float to a dual exchange rate system in March 1992, and culminated in the adoption of a unified and flexible exchange rate system in March 1993. This shift was accompanied by an easing of restrictions on current transactions and the achievement of full current account convertibility in August 1994.

4. **Since the shift to a flexible exchange rate system, the rupee/dollar rate has exhibited periods of stability, broken by discrete, sharp movements.** For example, the rupee underwent step adjustments against the dollar in the period leading up to its float, but was virtually unchanged at Rs 31.4/$ until August 1995. At that point, concern regarding competitiveness led to foreign exchange market pressures, and the rupee depreciated by about 12 percent against the dollar from this point to end-1995. The exchange rate remained in a narrow range until spillovers from the Asia crisis caused the rupee to depreciate by about 15 percent between September 1997 to July 1998. More modest movements occurred around August 1999, related to concern that the elections would disrupt the reform momentum, and again in May-August 2000, associated with fears that higher oil prices would undermine the balance of payments.

5. **The movement in India's nominal effective exchange rate has closely mirrored the rupee/dollar rate, and the exchange rate has been relatively stable in real effective terms** (Chart X.1). In particular, the rupee/$ and nominal effective exchange rate have been

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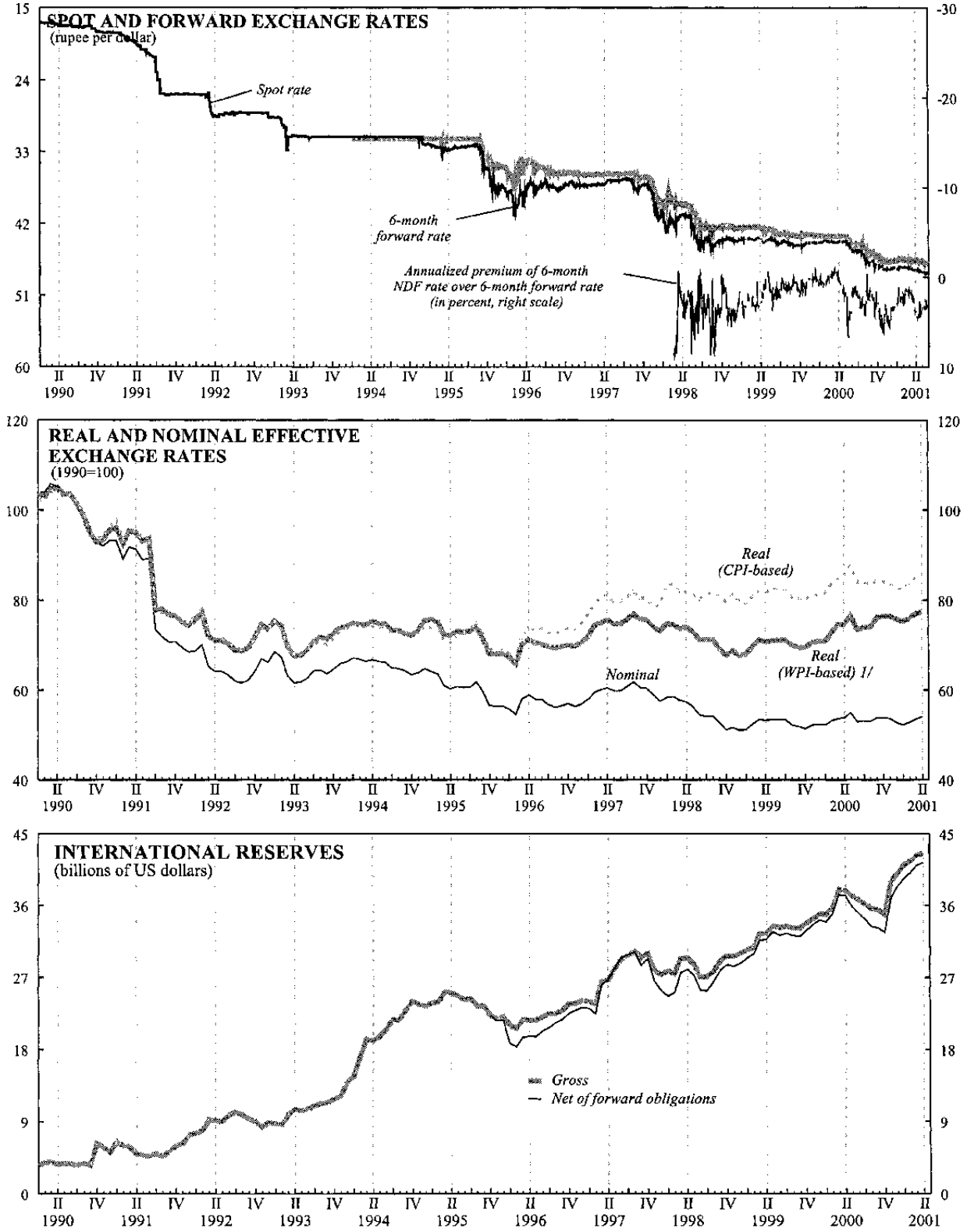
[1] Prepared by Taimur Baig, Alexander Hammer, and Christopher Towe.

[2] For example see "India's exchange regime rate: need for a rethink," *Perspectives*, ICICI, September 9, 2000.

Chart X.1. India: Exchange Rates and Reserves, 1990-2001



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

1/ Index based on WPI for India and CPI data for partner countries.

almost perfectly correlated (i.e., with a correlation coefficient of 0.96), reflecting the high weight on the dollar and currencies closely linked to the dollar, and the nominal effective exchange rate depreciated by around 20 percent between March 1993 and July 2000. However, the real effective rate has remained stable and fluctuated within a relatively narrow band around its 1993 value.[3]

6. **The Reserve Bank of India (RBI) is active in the foreign exchange market**. In its public statements, the RBI has often noted that the thinness of the foreign exchange market, as well as leads and lags in large transactions (including those related to debt service and oil payments) can result in excess volatility. Thus, on a day-to-day basis, the RBI will intervene with a view to evening out supply and demand and to ensure that markets remain orderly.

7. **The RBI's shorter-run intervention also can be placed in the context of its view regarding the consistency of the real effective exchange rate (REER) with longer-term fundamentals**. Although the authorities have not defined a specific target for the REER, the RBI has stated that it "would not hesitate to take actions to quell persistent volatility or misalignment. The broad objective of the exchange rate policy will be to ensure a reasonably stable real effective exchange rate."[4]

8. **The RBI utilizes a range of instruments to influence conditions in the foreign exchange market**. Besides policies to affect domestic money market and credit conditions, as well as intervention in the spot market, the RBI undertakes both forward and swap transactions in support of its exchange rate objectives. These swap transactions, for example, involve the simultaneous loan of rupees and borrowing of foreign exchange, which would be unwound at some preset period in the future.

9. **Administrative measures to influence exchange market conditions also are actively used**. During the period of the Asian crisis, measures taken to reduce downward pressure on the rupee included restricting the scope for market participants to rebook forward transactions and the imposition of a 15 percentage point interest rate surcharge on import finance in December 1997, and a further increase in the surcharge and a halving of the export refinance limits in January 1998. As the rupee came under pressure in mid-2000, the RBI again resorted to a variety of administrative measures including imposing temporary interest

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[3] Note that REER calculations for India typically use the WPI as the domestic price index, in view of its timeliness and quality compared to the CPI.

[4] See the RBI's *Annual Report: 1995-96*, September 1996, p. 86. Similarly, the 1999-2000 Annual Report states the RBI's policy objective as "ensuring that the external value of the rupee is realistic and credible as evidenced by a sustainable CAD [current account deficit] and reserve position" (p. 115). The level of the REER at the time of the float of the rupee is often used as a benchmark for gauging the appropriate level of the exchange rate—for example, see the Government's 1995-1996 *Economic Survey*.

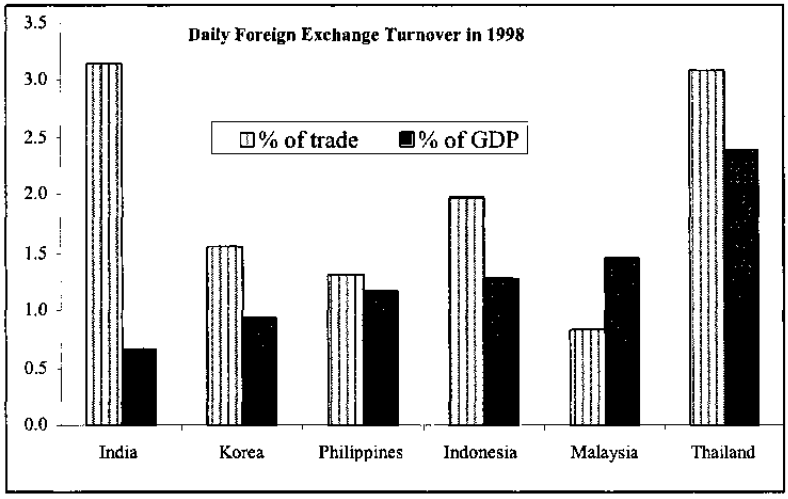
surcharges on import finance in May, and tightening repatriation requirements on exporters in July.

B. The Structure of the Indian Foreign Exchange Market

10. **Foreign exchange transactions in India remain highly regulated.** All transactions are required to be effected through authorized dealers (ADs)—commercial banks specifically authorized by the RBI to engage in foreign exchange market transactions. The market is dominated by the State Bank of India, which is majority owned by the RBI and is responsible for conducting foreign exchange transactions related to oil imports and debt service on behalf of the government and government-owned enterprises. Transactions in the interbank market and between ADs and their customers may be for foreign exchange on a spot or forward basis.

11. **Significant steps toward liberalizing current account transactions were taken with the unification of the exchange rate.** The foreign exchange budget was eliminated and exchange controls on trade-related transactions were abolished in 1993, and most other restrictions on current account transactions were lifted in 1994, culminating in India's formal acceptance of the IMF's Article VIII. Exchange regulations were further liberalized with the Foreign Exchange Management Act of 2000, but foreign exchange regulations are still significant. For example, Indian residents are still required to surrender foreign exchange to authorized dealers within pre-specified time limits (usually 90 days).

12. **There has been less progress toward easing restrictions on capital account transactions.** In early 1997, a high-level committee issued a report—the Tarapore Report—calling for the establishment of capital account convertibility within a three-year period. However, with the onset of the Asia crisis, as well as difficulty in achieving some of the macroeconomic and structural preconditions that were highlighted by the Report as necessary for successful liberalization, progress in this area has not been rapid. Although regulations have been eased on longer-term capital inflows—including foreign ownership limits on foreign direct investment and limits on borrowing abroad by domestic corporations—and portfolio inflows by foreign institutional investors are relatively uninhibited, restrictions on short-term capital flows are significant.



13. **The rapid growth of external trade and an easing of restrictions on transactions have facilitated an increase in spot market volumes in recent years.** Average monthly turnover increased to $109 billion in 1998/99, from $50 billion in

1993/94, but declined to $95 billion in 1999/2000, owing to restrictions on rebooking forward contracts (RBI, 2001). BIS estimates for April 1998, which exclude double counting by local dealers, put daily turnover at around $2½ billion (BIS, 1999). Comparing the BIS figures against a group of East Asian countries, India's foreign exchange turnover as a share of GDP appears strikingly low, although as a percentage of trade turnover, the ratio is quite large. These two ratios underline the fact that trade, as a proportion GDP, is still relatively small in India.

14. **Although restrictions on participation in the forward market have eased in recent years they remain significant**. For example, in 1998 the authorities began allowing foreign portfolio investors to fully participate in India's forward market, but only for incremental investments. Foreign institutional investors were allowed to take forward cover in the domestic market for up to 15 percent of the market value of outstanding investment at end-March 1999 plus the increase in market value/inflows after end-March 1999—FIIs were allowed to exceed these limits on a case-by-case basis. As discussed above, forward contracts may only be written in the case of a matching current account transaction, and in order to restrict the use of the forward market as a speculative vehicle, participants are restricted from canceling and rebooking contracts.

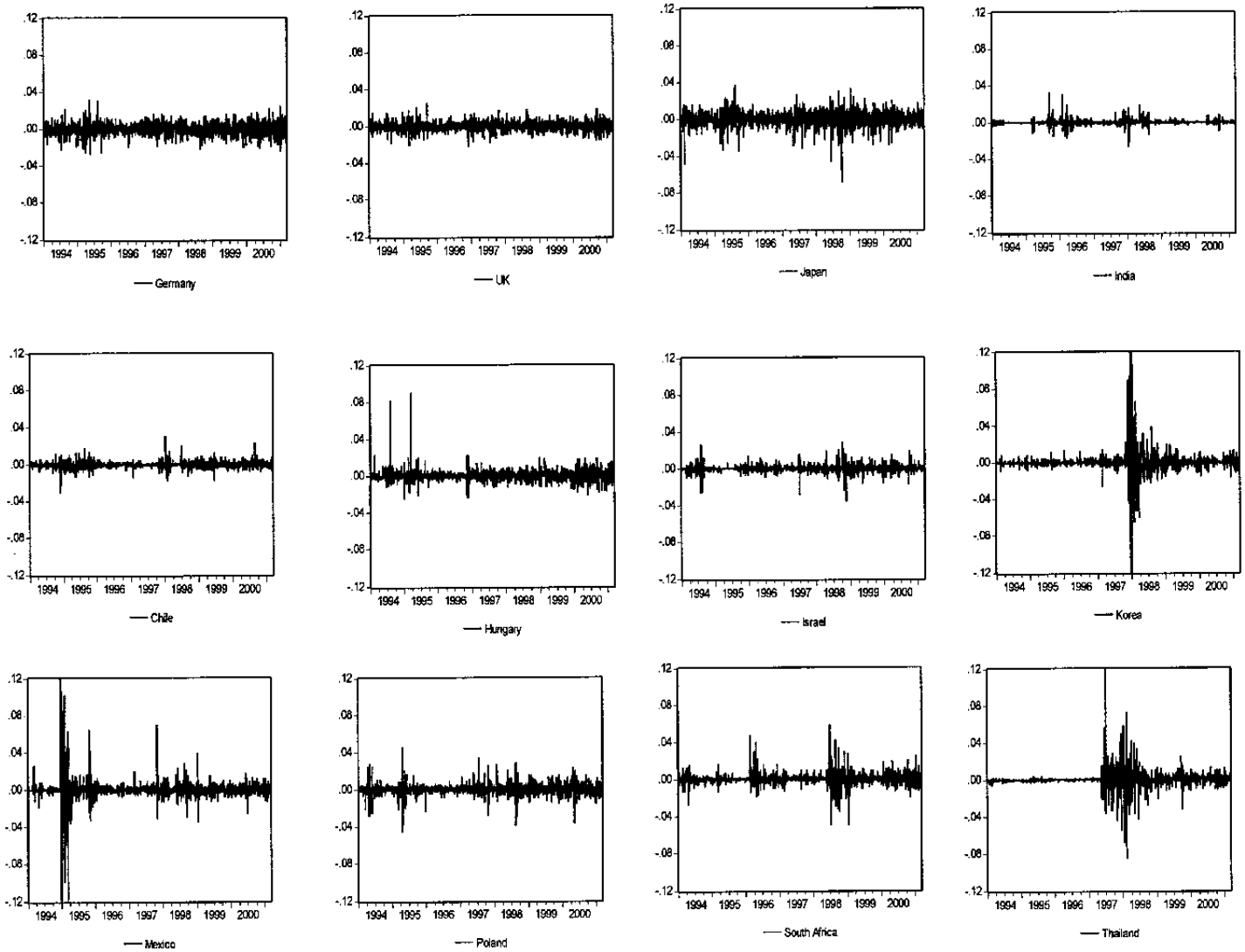
15. **The forward market has grown in importance in recent years, although it remains susceptible to occasional large mismatches and turbulence**. Volatility has been compounded by the tendency of Indian corporates and importers to refrain from covering their exposure during periods of exchange rate stability and to rush to hedge when spot market pressures arise (RBI, 2001). Moreover, the requirement that forward contracts cannot be entered into without an underlying current account transaction means that the market remains shallow at shorter maturities (seven days or less) and the market for longer-term contracts (i.e., greater than one year) has only just begun to develop.[5] However, as the RBI has recognized in recent reports, the lack of regular two-way movement of the exchange rate appears to reduce the incentive for participants to use the forward market in a consistent and orderly manner.

C. Gauging the Flexibility of the Rupee

16. **The rupee has been remarkably stable against the U.S. dollar, especially compared to other floating exchange rates**. The lack of movement in the rupee/dollar rate is illustrated in Chart X.2, which shows that the volatility of the rupee/dollar rate has been relatively modest and that the number of days when the rupee depreciated significantly

[5] As reported by BIS (1999), only 22 percent of India's total forward contracts have a maturity of seven days or less, whereas the world average for the same was 51 percent.

Chart X.2. Daily Exchange Rate Movements (log difference)



exceed the number of days it appreciated.[6] Moreover, since 1996, the standard deviation of the daily and monthly percentage changes in the rupee/dollar rate have been consistently lower than that of other floating currencies (Table X.1). In contrast to the movement toward increased exchange rate flexibility by other countries since the Asian crisis in 1997, the rupee appears to have displayed a trend toward greater stability. Indeed, the present volatility of the rupee resembles that of currencies that previously had very tight linkages to the dollar (e.g., the Korean won and the Thai baht before the Asian crisis).

17. **Consistent with greater exchange rate stability, India's interest rate and reserves volatility was correspondingly greater** (Tables X.2 and X.3). Despite relatively significant capital account restrictions, exchange rate stability seemingly required significantly greater volatility (on a monthly basis) in India's interest rates than in other comparator countries.[7] Although less clear cut, it also appears that monthly reserves volatility has been greater than for other countries.

18. **Summary indices of exchange rate flexibility illustrate the relative stability of the rupee**. Following Glick and Wihlborg (1997) and Bayoumi and Eichengreen (1998), an index of exchange market flexibility was constructed by dividing the standard deviation of exchange rate movements by a measure of exchange market pressure (Table X.4).[8] Although cross-country comparisons are difficult given definitional differences with the data, the index shows a trend toward less flexibility for the rupee, consistent with the previous results and in contrast to the other countries in the comparator group.

19. **Regression analysis confirms the rupee's tendency to closely track the U.S. dollar** (Table X.5). Following Frankel and Wei (1994) and McKinnon (2000), the Swiss franc was used as a numéraire for measuring exchange rate variation, and for a representative sample of exchange rates, the following regression equation is estimated using daily data:

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[6] Between 1994 and 2000, the number of days the rupee depreciated was 63 percent more than the days it appreciated. In over 90 percent of the days, the currency moved by less than half a percentage point, but in those cases when the daily movements were greater than 0.5 percent, the ratio was closer to 50 percent.

[7] Note that fluctuations in reserves may reflect valuation adjustments, debt repayments, and other factors that do not necessarily represent foreign exchange market intervention. Moreover, forward market intervention, which is common in some of the countries in the sample, is not fully captured by the gross reserves figures.

[8] The index is calculated using the following formula: Flexibility Index = SDEX / (SDEX+SDREV), where SDEX = standard deviation of exchange rate changes (log difference), and SDREV = standard deviation of the ratio of changes in reserves over lagged stock of base money.

$$\text{dlog(local currency/SF)} = \beta_1 + \beta_2 \text{ dlog(USD/SF)} + \beta_3 \text{ dlog(JPY/SF)} + \beta 4 \text{ dlog(DEM/SF)} + \varepsilon$$

where SF is the Swiss franc, USD is the U.S. dollar, JPY is the Japanese yen, DEM is the German mark, and dlog is log first difference operator.

20. **The estimates show that the rupee's movement can be almost entirely explained by the dollar.**[9] This is in contrast to most of the other floating exchange rates in the sample, and even some exchange rates that were closely linked to the dollar before the Asian crisis. This tendency for the rupee to move closely with the dollar against other currencies was particularly evident in 2000, when the dollar's strength contributed to substantial depreciation of the currencies of most of India's trading partners in Asia and Europe, while the rupee/dollar rate remained relatively stable.

D. Offshore Markets

21. **An offshore, nondeliverable forward (NDF) market for the rupee also exists, chiefly in Singapore and Mauritius.** These transactions involves forward transactions for rupees that settle solely in dollars, and are reportedly used mainly by high net-worth nonresidents with limited access to the onshore forward market to hedge their rupee exposure.[10] The market also provides the opportunity for non-Indian firms with rupee receivables (e.g., from exporting products to India) to sell their rupees forward against the dollar. Foreign banks, which are not allowed to hedge their capital on-shore, also may access the NDF market through their parent operations to balance their rupee exposure.

22. **Capital account restrictions and market segmentation means that the NDF and onshore markets are not well integrated**. This "inefficiency" can be illustrated statistically. In particular, a simple regression was estimated relating the percent change in the spot rupee/dollar rate—pch(e)—to the lagged change in NDF premium—the difference between the NDF and onshore six-month forward rate as a percent of the current spot rate, (P). In the absence of segmentation, there should be no gap between the offshore and onshore rates and any gap that might result would not provide leading information for movements in the spot

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[9] The coefficient on the dollar is statistically indistinguishable from one. Broadly similar results were obtained with estimates that dropped the yen and mark variables from the regressions.

[10] NDF markets have evolved mainly to allow financial market participants in countries with underdeveloped or highly restricted financial markets to hedge their foreign exchange exposure. The NDF market differs from the onshore market in that settlement does not involve the actual exchange of currencies—upon the expiration of the contract, the parties involved simply exchange the dollar equivalent of the difference between the contracted forward rupee/dollar rate and the then-prevailing spot rate.

exchange rate. In other words, the coefficient on the lagged premium should be insignificantly different from zero.

23. **However, the results suggest that the NDF premium provides significant leading information regarding movements the spot rate**. In particular, the estimates suggest that the gap between the offshore and the onshore forward premium is significant in the equation explaining the movements in the spot exchange rate.[11]

$$\underset{}{pch(e) = -0.19\ pch(e_{-1}) + 0.10\ P_{-1} - 0.06\ P_{-2},} \qquad R^2 = 0.10,\ LM(1) = 0.38$$
$$\underset{(3.21)}{} \qquad \underset{(3.53)}{} \quad \underset{(2.18)}{}$$

The estimates indicate that pressure on the exchange rate may at times be felt first in the offshore market, with a drop in the NDF rate relative to the onshore forward rate. In subsequent days, the spot rate begins to depreciate, and the lag structure suggests an overshooting in response that is only partially offset in subsequent days.

E. Foreign Exchange Market Intervention

24. **As noted above, the RBI actively intervenes in both the spot and forward foreign exchange markets**. Although in its public statements, the RBI emphasizes that its intervention is geared toward avoiding excessive volatility, the stability of the dollar/rupee rate raises questions about the extent to which intervention has been successful in affecting the level of the exchange rate.

25. **A simple regression was estimated to test this proposition**. Following the approach used by Bhaumik and Mukhopadhyay (2000), an equation was estimated that related the log difference of the rupee/dollar exchange rate—dlog(e)—to the log difference of reserves in millions of dollars—dlog(R). If intervention were successful, the expectation would be that a decrease in reserves (i.e., intervention in support of the rupee) would have slowed the rate of depreciation, or that the sign on dlog(R) would be positive.

26. **The results of this exercise, however, do not suggest that intervention had the expected effect on the exchange rate**:[12]

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[11] Absolute value of t-statistics are in parentheses; LM(1) is the Breusch-Godfrey test for first-order serial correlation; and the constant term was not significant and was dropped from the regression. The sample period was June 2, 1999 to August 7, 2000.

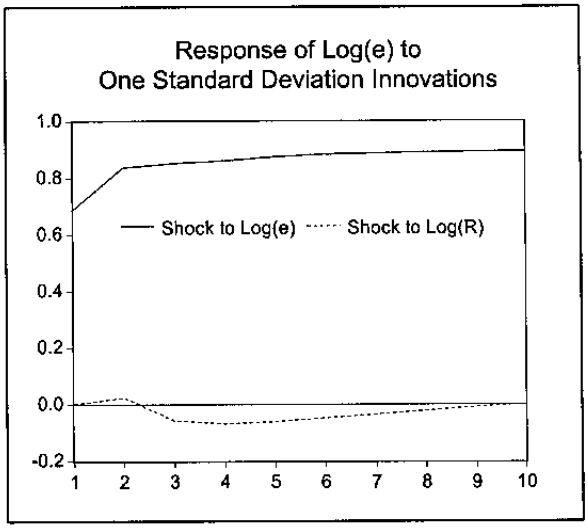
[12] The regression used weekly data from April 4, 1995 to January 26, 2001; t-statistics are in parentheses; the ARCH statistic tests for serial correlation.

$$\text{dlog}(e) = 0.22 - 0.03\ \text{dlog}(R_{-2}) + 0.21\ \text{dlog}(e_{-1}), \qquad R^2 = 0.06,\ \text{ARCH}(1) = 0.40$$
$$(2.73)\quad (2.31)\qquad\qquad (3.69)$$

The reserve variable was only significant at the second lag and the sign of its coefficient was negative, indicating that a decrease in reserves was associated with depreciation two weeks following. This result does not appear to be related to the frequency of the data as it mirrors the conclusions of Bhaumik and Mukhopadhyay, who used monthly data, and tests over various sub-periods revealed similar results.

27. **One possible explanation for the anomalous sign is simultaneity**. For example, the equation coefficients could reflect the effects of the RBI's reaction function, in which intervention "generally coincided with conditions of excess demand in the market" (RBI, 2001, p. IV-14). In other words, intervention would normally take place in response to a depreciation of the rupee. In order to examine this possibility, and to explore the relationship between reserves and the exchange rate in more detail, a simple bivariate vector auto-correction model was estimated using the same variables.[13]

28. **The results confirm the existence of a cointegrating relationship between the level of reserves and the exchange rate, but the negative correlation was retained even in this framework.** As summarized below, the long-run correlation between the exchange rate and reserves remained negative, and simulations of the model's response to a one standard-deviation shock confirmed again that the impact of intervention—defined as a change in reserves—has a small and largely negative effect on the exchange rate.



[13] Augmented Dickey Fuller tests did not reject the hypothesis that the data were non-stationary in levels, and the Johansen test could not reject the hypothesis of cointegration.

Vector Error Correction Estimates[1/]

Dependent Variable	Constant	dlog(e_{-1})	dlog(e_{-2})	dlog(R_{-1})	dlog(R_{-2})	EC	
dlog(e)	0.001	0.211	-0.025	0.006	-0.033	0.003	R^2=0.06
	(2.72/)	(3.61)	(0.43)	(0.43)	(2.38)	(0.41)	
dlog(R)	0.003	-0.322	-0.326	0.077	0.080	-0.151	R^2=0.10
	(1.62)	(1.35)	(1.35)	(1.36)	(1.42)	(4.44)	

Error correction (EC) equation: log(e) = 10.03 – 0.68 log(R) +0.34 Trend
(2.67) (4.25)

[1/] T-statistics are in parentheses; EC is the error from the error correction equation.

29. **These results contrast somewhat with those described in earlier sections.** In particular, in Section C. it was suggested that the relatively high degree of volatility of foreign exchange reserves was related to the stability of the rupee. However, the analysis in this section does not confirm a causal relationship, and does not indicate that the rupee's stability has been achieved to any significant degree by intervention in the spot market. This could reflect either the tests' lack of power, the possibility that intervention has only an effect on a day-to-day basis that is not reflected in weekly data, or that the exchange rate responds to a range of instruments at the authorities' disposal, including its intervention in the forward market and the use of administrative restrictions.

F. Concluding Observations

30. **The discussion above suggests that the rupee's exchange rate exhibits a number of characteristics**:

- **The real exchange rate has been relatively stable since 1993,** without displaying a trend and consistent with the authorities' desire to maintain competitiveness.

- At the same time, compared to most other floating exchange rates, **the rupee has displayed an unusual lack of volatility against the U.S. dollar since the rate was unified in 1993**. Although the rupee/dollar rate has adjusted over time, this has occurred principally as discrete, level changes, and on a day-to-day basis, the rupee has been relatively stable.

- **The stability of the rupee has been associated with relatively greater variability in domestic interest rates and reserves**. However, there does not appear to be a significant statistical relationship between the authorities' intervention in the spot market and the exchange rate, at least at weekly or lower frequencies.

- **Evidence of market segmentation can be found by examining the relationship between the spot exchange rate and the premium between the offshore and onshore forward rates.** The gap between the NDF and the onshore forward rate appears to provide leading information regarding movements in the spot rate.

31. **The experience of the Asian crisis has illustrated the importance of exchange rate flexibility, and suggests the need for continued efforts to broaden and deepen the Indian foreign exchange market.** Considerable progress has already been made in liberalizing the foreign exchange market since the unification of the exchange rate in 1993. However, the pressure for further liberalization will grow as restrictions on capital account transactions are progressively eased and derivative and other instruments become increasingly available to financial market participants. Against this background, it will be important to ensure that the foreign exchange market develops in a manner that allows it to absorb shocks and day-to-day volatility in the exchange rate without requiring administrative measures and frequent official intervention to maintain orderly conditions.

References

Bayoumi, Tamim and Barry Eichengreen, "Exchange Rate Volatility and Intervention: Implications of the Theory of Optimum Currency Areas," *Journal of International Economics*, 45 (1998), p.191-209.

Bank of International Settlements, *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity, 1998*, May 1999.

Bhaumik, Sumon Kumar, and Hiranya Mukhopadhay, "RBI's Intervention in Foreign Exchange Market: An Econometric Analysis," *Economic and Political Weekly*, January 29, 2000, 373-376.

Frankel, Jeffrey and Shang-Jin Wei, "Yen Bloc or Dollar Bloc? Exchange Rate Policies of the East Asian Economies," in Takatoshi Ito and Anne Krueger (editors), *Macroeconomic Linkage: Savings, Exchange Rates, and Capital Flows*, Chicago: University of Chicago Press, 1994.

Glick, Reuven, and Clas Wihlborg, "Exchange Rate Regimes and International Trade," in Peter Kenen and Benjamin Cohen (editors), *International Trade and Finance: New Frontiers for Research*, Cambridge: Cambridge University Press, 1997.

McKinnon, Ronald, "After the Crisis, the East Asian Dollar Standard Revisited," Mimeograph, Stanford University, 2000.

Muhleisen, Martin, "Foreign Exchange Markets: Developments and Issues," in *India Selected Issues*, IMF Staff Country Report No. 98/112, October 1998.

Reserve Bank of India, *Report on Currency and Finance, 1999-2000,* January 2001.

Table X.1. India: Exchange Rate Volatility, 1996-2000 1/

	Daily Data					Monthly Data				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
India	**0.43**	**0.27**	**0.39**	**0.11**	**0.17**	**1.99**	**2.08**	**1.53**	**0.47**	**0.77**
Germany	0.41	0.62	0.56	0.60	0.77	2.05	2.92	2.06	2.03	3.70
Japan	0.48	0.75	1.08	0.83	0.63	2.04	3.84	6.30	2.60	3.44
UK	0.38	0.52	0.46	0.44	0.57	1.88	2.62	1.77	1.81	2.40
Average	**0.42**	**0.63**	**0.70**	**0.62**	**0.65**	**1.99**	**3.13**	**3.38**	**2.15**	**3.18**
Chile	0.19	0.24	0.44	0.38	0.37	0.80	1.38	1.57	2.69	1.89
Korea	0.23	2.65	1.75	0.48	0.42	0.93	10.06	7.49	2.86	2.44
Mexico	0.34	0.66	0.66	0.59	0.47	2.49	2.66	3.56	2.71	2.44
Poland	0.25	0.57	0.72	0.60	0.68	1.14	2.02	3.92	2.88	3.91
S. Africa	0.69	0.31	1.14	0.63	0.60	0.25	1.74	3.39	1.60	1.03
Thailand	0.08	1.71	1.58	0.56	0.45	0.34	8.45	8.93	3.08	2.18
Average	**0.29**	**1.02**	**1.05**	**0.54**	**0.50**	**0.99**	**4.39**	**4.81**	**2.64**	**2.31**

1/ Standard deviation of daily/monthly movements (percentage change) against the U.S. dollar.

Table X.2. India: Interest Rate Volatility,1996-2000 1/

	1996	1997	1998	1999	2000
India	**6.75**	**3.00**	**5.55**	**1.92**	**1.72**
Germany	0.15	0.10	0.10	0.17	0.11
Japan	0.02	0.03	0.05	0.04	0.05
Average	**0.08**	**0.06**	**0.07**	**0.11**	**0.08**
Chile	2.30	3.35	6.35	2.42	1.74
Korea	1.30	2.27	1.99	0.29	0.08
Mexico	4.14	2.23	5.19	2.01	1.36
Poland	1.56	2.60	1.68	2.14	0.81
S. Africa	0.72	0.42	1.59	0.40	0.19
Thailand	1.84	5.54	4.76	0.35	0.41
Average	**1.98**	**2.73**	**3.59**	**1.27**	**0.76**

1/ Standard deviation of monthly changes in interest rates.

Table X.3. India: Reserves Volatility, 1996-2000 1/

	1996	1997	1998	1999	2000
India	**3.49**	**4.92**	**3.63**	**1.87**	**4.23**
Germany	1.47	1.27	4.29	5.96	3.90
Japan	2.39	1.17	2.62	3.27	2.41
UK	5.37	3.30	2.81	4.82	6.62
Average	**3.08**	**1.92**	**3.24**	**4.68**	**4.31**
Chile	3.12	2.67	3.39	4.11	1.92
Korea	3.77	8.50	4.97	1.90	1.60
Mexico	4.12	3.91	3.65	1.18	4.31
Poland	3.14	2.36	4.45	2.94	1.71
S. Africa	21.04	17.91	7.04	4.52	1.81
Thailand	1.40	9.18	4.17	2.10	2.12
Average	**6.10**	**7.42**	**4.61**	**2.79**	**2.25**

1/ Standard deviation of percentage monthly changes in reserves.

Table X.4. India: Exchange Rate Flexibility, 1996-2000 1/

	IMF Exchange Rate Regime Classification 2/	1996	1997	1998	1999	2000
India 3/	*Managed floating*	**0.62**	**0.49**	**0.47**	**0.33**	**0.24**
Japan	*Independently floating*	0.67	0.86	0.83	0.63	0.76
Switzerland	*Independently floating*	0.28	0.36	0.27	0.30	0.39
Israel	*Crawling band*	0.17	0.24	0.50	0.38	0.38
Chile 4/	*Independently floating*	0.30	0.46	0.43	0.51	0.63
Korea 5/	*Independently floating*	0.19	0.44	0.50	0.31	0.30
Mexico	*Independently floating*	0.26	0.29	0.33	0.62	0.28
Poland 6/	*Independently floating*	0.20	0.35	0.34	0.33	0.50
S. Africa	*Independently floating*	0.13	0.43	0.64	0.56	0.65
Thailand 7/	*Independently floating*	0.09	0.31	0.50	0.41	0.38
Czech Rep.	*Managed floating*	0.40	0.33	0.61	0.50	0.55

1/ Calculated as SDEX/(SDEX+SDREV), where SDEX is the standard deviation of log differences of the exchange rate against the U.S. dollar, and SDREV is the standard deviation of the changes in the central bank's reserves divided by the lagged stock of base money.
2/ Source: *International Financial Statistics,* International Monetary Fund, May 2001.
3/ Reclassified from independent float to managed float: December 2000.
4/ Moved from crawling band to independent float: September 1999.
5/ Moved from managed float to independent float: December 1997.
6/ Moved from crawling band to independent float: April 2000.
7/ Moved from fixed peg to independent float: July 1997.

Table X.5. India: Exchange Rate Regressions—Co-movement with the U.S. Dollar 1/

	1996			1997			1998			1999			2000		
	Dollar Coefficient	Reject Null 2/	Adj. R^2	Dollar Coefficient	Reject Null 2/	Adj. R^2	Dollar Coefficient	Reject Null 2/	Adj. R^2	Dollar Coefficient	Reject Null 2/	Adj. R^2	Dollar Coefficient	Reject Null 2/	Adj. R^2
India	1.14**	Yes	0.65	0.99**	No	0.87	0.95**	No	0.72	1.01**	No	0.97	1.01**	No	0.95
UK	1.34**	Yes	0.80	1.33**	Yes	0.76	1.47**	Yes	0.85	1.43**	Yes	0.86	1.45**	Yes	0.82
Mexico	1.07**	No	0.74	1.17**	Yes	0.62	1.00**	No	0.56	1.16**	Yes	0.66	1.08**	No	0.73
Poland	0.87**	Yes	0.80	0.91**	No	0.58	0.86**	Yes	0.39	0.83**	Yes	0.49	0.80**	Yes	0.43
S. Africa	0.99**	No	0.36	0.98**	No	0.82	0.60**	Yes	0.20	1.05**	No	0.58	0.77**	Yes	0.49
Thailand	0.94**	No	0.98	0.74**	No	0.10	0.83**	No	0.17	0.84**	No	0.56	0.81**	Yes	0.71

1/ Regression Model: dlog(local currency/SF) = b1 + b2 dlog(USD/SF) + b3 dlog(JPY/SF) + b4 dlog(DEM/SF); where SF - Swiss Franc, USD - US Dollar, JPY - Japanese Yen, DEM - German Mark.

2/ Null hypothesis for Wald Coefficient test: coefficient estimate on the US dollar is equal to one.

** denotes significance at 1 percent level.