INDIA'S BOP CRISIS AND EXTERNAL REFORM:
Myths and Paradoxes

Arvind Virmani

December 2001

INDIAN COUNCIL FOR RESEARCH ON INTERNATIONAL ECONOMIC RELATIONS
Core-6A, 4th Floor, India Habitat Centre, Lodi Road, New Delhi-110 003

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FOREWORD

This paper provides a comprehensive review of India's Balance of Payment Crisis and External Reforms. The paper was presented on September 3, 2001 at the first of series of ICRIER Seminars on "Ten Years of Economic Reforms". The session was chaired by Prof. John Williamson of the Institute of International Economics, Washington D.C. Prof. T.N. Srinivasan, Samuel C Park Jr. Professor of Economics, Yale University was the principal discussant. The papers presented at these seminars will be revised for publication in a book.

Given the contemporary importance of the issues and policies addressed in this study, this paper would be of interest to academicians, policymakers and others working in this area.

Arvind Virmani
Director & Chief Executive
ICRIER

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INDIA'S BOP CRISIS AND EXTERNAL REFORMS:
MYTHS AND PARADOXES*

I. INTRODUCTION

For most people the story of Indian reforms starts in the nineties, following the BOP crisis of 1990-91. There was a detectable increase in the rate of growth of the Indian economy in the 1980s arising from the liberalisation initiated in the eighties.[1] Two significant elements of this liberalisation were gradual decontrol of industry and liberalisation & rationalisation of the import regime for exporters. Expansionary fiscal policy may also have played a role though its net effect is controversial.[2] Nevertheless our analysis of reforms focuses on the nineties because their scope was much wider and deeper than that seen in the eighties. This was particularly so in the case of the external sector which is the focus of the current paper.

The next section (II) analyses the BOP crisis of 1991-1992 as a backdrop to the external sector reforms that followed. A BOP crisis results from a combination of underlying weakness & policy inconsistencies and a shock that triggers the crisis. In the Latin American crisis of the 1980s the underlying problem was thought to be the government's budget. In India the role of the fiscal deficit in the macroeconomic problem and its solution was recognised in 1991. The broader and multifaceted role that fiscal profligacy in terms of the mismatch between the cost and return on borrowed funds has played in the crisis is analysed in sub-section B of section II. In addition, exchange rate policy is found to have played an important role in the BOP crisis of 1990-91.[3] It is shown that a more flexible and market sensitive policy in 1990 may have helped avert/head-off the impending crisis.

The conventional wisdom among the prominent resident Indian economists at the time of the BOP crisis was that it was caused by a rising trade deficit.[4] The role of invisibles is shown to be much more important than envisaged by anyone at that time or by those who have written since on the BOP crisis. The analysis also reveals that the rupee depreciated (in real terms) in the eighties at a rate equal to that in the post oil-shock seventies, and the trade deficit was on a down trend in the second half of the eighties. The paper shows that *though neither a rising trade deficit nor a*

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* The paper was written when the author was Adviser, Planning Commission. The views expressed are strictly personal.

I would like to thank Prof. T. N. Srinivasan, Dr. Isher Ahluwalia, Dr. Surjit Bhalla, Dr. Roberto Zagha, Dr. Suman Bery, Dr. John Williamson, Dr. Urjit Patel, Dr. Homi Kharas, Dr. James Gordon, Mr. Sudhir Mulji, Dr. Willima Wadhwa Dr. Shankar Acharya, Mr M. S. Ahluwalia, Prof. Suresh Tendulkar and Mr. R. S. Lodha for their comments on earlier versions of the paper.

fixed exchange rate were the cause of the crisis, a faster depreciation and consequent reduction of the trade deficit could have staved off the crisis.

Though the main focus of the paper is on the external sector the analysis also sheds some light on the effect of policy reforms and of the fiscal deficit on growth. Economic reforms during the eighties are hypothesised to increase the productivity of existing resources and to raise private investment & exports. Higher private investment and exports will along with a higher fiscal deficit also lead to an increase in aggregate demand. The paper finds that the facts are consistent with a reform-stimulated explanation of higher growth during the eighties, but not with the fiscal explanation. Two possible and related mechanisms through which this may have occurred are, that import liberalisation resulted in greater openness and rise in exports and a much faster growth in import of capital goods. The greater access to embodied and dis-embodied technology coupled with increased competition likely raised the productivity of private investment and raised the growth rate of the economy.

Section III gives a summary of the broad based and fairly comprehensive external sector reforms that followed the BOP crisis.

Section IV starts with the macroeconomic adjustment undertaken in 1991-92. The contribution of fiscal deficit reduction, exchange rate depreciation and other factors in the dramatic reduction in the current account deficit by 2.8% of GDP in 1991-92 is quantified. The section then goes on to analyse the external sector reforms in the nineties and their impact and puts them in comparative international perspective. *External reforms were among the most successful reforms undertaken in India during the nineties*. These reforms have opened up the economy, strengthened the external account and made it much less vulnerable to shocks. India's trade share rose by 0.11% of world trade during the nineties raising India's world ranking by 6 positions. India also became more open in terms of capital flows with its rank in terms of FDI inflows rising by 9 positions. Equity inflows increased even more rapidly to raise India's rank among the emerging markets by 8 positions during the nineties. In 1999 only 13 emerging markets received more FDI than India and only 5 received more equity inflows. Of these China, S. Korea, Thailand and Brazil had larger inflows of both FDI and foreign equity than India during this year.

Paradoxically, however, the Indian economy remains relatively closed. As shown in section IV, international trade and FDI are still small relative to the size of the economy. There is a 15 position difference between India's trade rank and its GDP rank (both in terms of US$ value). India's customs tariff rates are still among the highest in the world with only two countries known to have a higher weighted average tariffs. The contribution of FDI to Gross domestic investment (GDI) is still miniscule with India ranking 126th in terms of the ratio of FDI to GDI. Further

reforms that enhance openness will therefore strengthen not only the external sector but also the competitiveness of the Indian economy.

II. PRELUDE TO CRISIS: THE EIGHTIES

The BOP crisis hit India in 1990-1, but it had been building for at least a half a decade preceding that year. The rising fiscal deficit and gradually increasing overvaluation contributed to the rising imbalance. Inadequate exchange rate adjustment in response to the external and domestic shocks during 1990-1 triggered the crisis. The period from mid-1989 to mid-1991 was packed with a series of political developments, one following on another without let-up. The break-up of the Soviet empire and the unification of Germany followed the policy of Glasnost. Iraq invaded Kuwait and set off another oil shock. Domestically there were three changes of government and unprecedented socio-political upheaval. Underlying macroeconomic imbalances that had been building up over the eighties came to a head as a result of these shocks and, along with the inadequate policy response, resulted in a BOP crisis in 1990-91.

A. SHOCKS: EXTERNAL & DOMESTIC

External shocks contributed to the deterioration of trade and current account balances during 1990. These shocks also made it imperative for government to act effectively and quickly to address the macro-economic problems. This interacted with the political uncertainty in hampering the formulation of effective policy changes and its speedy implementation. The combination of domestic and external factors triggered a BOP crisis in 1990-91.

1. Break-up of Soviet Bloc

Rupee trade with the Soviet bloc was an important element of India's total trade in the eighties. Exports to Eastern Europe constituted 22.1% of total exports in 1980 and 19.3% in 1989. A significant proportion of trade constituting imports of capital goods and defence equipment was financed by long-term trade credits. With the introduction of Glasnost and the breaking away of the E European countries several rupee payment arrangements were terminated in 1990-91. Thus for instance the rupee payment arrangement with the former GDR came to an end in December 1990 with German re-unification and that with Poland ended in January 1991. As a consequence of these and other political developments in Eastern Europe including the USSR, the flow of new rupee trade credits declined abruptly in 1990-91. Their export share also declined to 17.9% (1990-1). These developments also gave rise to concerns about future difficulty in exporting to these markets. These fears actually proved justified as the share of E. Europe in exports collapsed to

10.9% in 1991-92.[5] The break down of traditional arrangements also meant an interruption of new rupee credits and a consequent increase in the net repayment on rupee debt account.

2. Iraq-Kuwait War

The Gulf crisis began with the invasion of Kuwait by Iraq at the beginning of August 1990. Crude oil prices rose rapidly thereafter. Thus the price of Brent Chicago was 56% higher at the end of August 1990 (over the price a year ago), 91% at the end of September 1990 and 140% higher at the end of November.[6] Unlike in the case of earlier oil shocks, however this one was over as rapidly as it began. Oil prices at the end of December were only 39% higher (than a year earlier) in January 1991 they were higher by only 13% and by February end they were almost back at the level prevailing at the end of February 1990. For the 5-month period August 1990 to January 1991, crude oil prices were higher by about 65% than in the corresponding period of the previous year.

What was for most countries a temporary shock was much more lasting for India, because of its dependence on Kuwaiti & Iraqi crude supplies including long-term supply contracts with the latter. The effect of the oil price increase was therefore multiplied for India by a more permanent disruption of oil supplies from Iraq. Short- term purchases from the spot market had to followed up by new long term contracts at higher prices. As a result the oil import bill increased by about 60 per cent in 1990-1 and remained 40% above the 1989-90 level the next year.

Because of the substantial presence of Indian migrants in these two countries there was also an effect (partly temporary & partly permanent) on workers remittances from these two countries. Some direct costs had also to be incurred (on a one-time basis) for repatriation of these workers from Kuwait. Exports to these two countries were also affected because of the UN trade embargo.

3. Political uncertainty

As is well known to capital market watchers capital markets respond not only to the real economy but also to non-economic factors and risks. This in turn implies that capital markets are sensitive to political developments and uncertainties that may affect economic management. It is therefore necessary to understand the socio-political backdrop of the BOP crisis.

General elections were held in November 1989, followed by the installation of a new government under Shri. V. P. Singh as prime minister. As this was a coalition government containing many prime ministerial aspirants, there were news reports of intense competition for the job of leader & PM. These reports of internal conflict between coalition partners and their leaders continued to surface off and on till the announcement of the acceptance of the Mandal commission report on reservation for Other Backward Castes in August 1990. The announcement of OBC

reservations in government also set of a series of demonstrations & agitations for and against reservation, which continued for months. One of the enduring images of this agitation was the setting himself on fire by a young man in the centre of Delhi. Shri. Chander Shekhar and his supporters broke off from the government and he became Prime Minister with the support of the Congress party in November 1990. Doubts about the stability of this government soon arose, and the government fell at the end of 1990-91 with the withdrawal of Congress support. General elections were again held in May 1991 and Shri Narasimha Rao (Congress) formed the government thereafter.

4. Confidence

From the market perspective this entire period was characterised by a high degree of political uncertainty interspersed with socio-economic turmoil, which gradually undermined confidence in India. Given the non-economic preoccupation of the government, this inevitably raised questions about the ability of the Government of India to manage the Indian economy and to deal with the economic shocks to which it was subject.

B. MACROECONOMIC IMBALANCE

The higher growth rate in the eighties (relative to the seventies) was accompanied by higher fiscal deficits, rising current account deficits and larger external debt. The worsening fiscal situation, in the presence of inadequate flexibility of the exchange rate led to a rising current account deficit. Given the highly controlled and restrictive FDI and foreign portfolio equity (FII) policy, the higher current account deficit translated into rising levels of external debt. The low (and perhaps falling) productivity of government expenditure also directly contributed to external vulnerability, by lowering the rate of return on the borrowed funds. Similarly the declining trend in concessional aid and the consequential recourse to private sources of external borrowing contributed to the rise in the interest costs (income outflow). The cost of servicing external debt was therefore rising faster than the return from its use.

As the perceived risk in international lending traditionally rises with outstanding external debt, this along with the increasing private sourcing of external borrowing made capital flows vulnerable and open to politically related perceptions. The World Bank's Debt reporting system provides information about sources and uses of international debt.[7] The proportion of Long term Public and publicly guaranteed external debt sourced from private creditors rose sharply from 9.1% of total long term debt in 1980 to 31.2% in 1990. From the user side, private non-guaranteed long-term debt more than doubled (2.3) from 10.4% of GNP in 1980 to 24.2% of GDP in 1990.[8] Given the heavily controlled nature of capital inflows during the eighties, the central government,

public sector units and public financial institutions remained the main borrowers in the international market. Thus if the fixity of the exchange rate contributed to excessive external borrowing the main borrowers so affected would have been the central government and public institutions.

There is evidence of growing overvaluation of the exchange rate in the late eighties. During 1990-91 the Balance of Payments gap opened significantly and the need for devaluation was quite clear. The crises cannot, however, be attributed to trade imbalances. The liberalisation of external trade (and domestic industry) during the eighties not only contributed to the higher growth rate, but also put the trade-GDP ratio on clear downtrend from its 1979 oil shock level. The overvaluation manifested itself through the invisibles account and the capital account.

The highly controlled external payments regime and the public banking oligopoly meant that the transactions costs of remitting money through the official markets were high. The ban on import of gold meant that large domestic demand for gold could only be met through gold smuggling into India. This in turn meant a demand for foreign exchange in the underground ("Hawala") market for foreign exchange. This created a significant premium in the "Hawala" market. High transactions costs coupled with the Hawala premium provided an incentive for a substantial proportion of labour remittances by non-resident Indians (and some types of service earnings) to be channelled through the Hawala market. Increased overvaluation of the exchange rate increased the incentive for diversion and slowed the flow of remittances (private transfers) and service earnings through the official foreign exchange market.

An unusual combination of external and domestic political developments between end 1989 and early 1991 accentuated all these vulnerabilities to produce the BOP crisis in India. *This BOP crisis was more akin to the earlier (1980s) debt crises in Latin America than to the subsequent Asian crisis as it had its origins in government finances & functioning rather than in the private sector*. Both external government debt and the private sourcing of external debt rose rapidly in Mexico, Argentina and Brazil before the crisis of 1982. Public & publicly guaranteed long-term debt as a proportion of GNP more than doubled (2.2 to 2.3) between 1970 and 1980, from 6.7% to 15.7% in Mexico, from 6.4% to 13.3% in Argentina and from 7.9% to 18.2% in Brazil. Over the same period, Private (source) debt as a proportion of total long-term debt rose to 71.2% (from 34.3%) in Mexico, 49.4% (from 24%) in Argentina and 58.8% (from 30.6%) in Brazil.

1. Fiscal Profligacy

An important underlying cause of the BOP crisis was the weakening fiscal situation. This included a rise in the share of government consumption expenditure, a declining rate of return on

government investment and an unsustainable tax structure (including excessively high tax rates). The rise in the government fiscal deficit over the eighties was only the most visible symptom of this fiscal deterioration. The gross fiscal deficit of the central government [expenditure - revenue + net lending (to States, public institutions, PSUs)] has been on an upward trend since 1971-72 (figure 1). It rose from 3.5% of GDP (at current market prices) in 1970-71 to 8.4% of GDP in 1986-87 (table 1).[9] The up-trend in the fiscal deficit was however interrupted in the subsequent three years, when it declined to reach 7.3% of GDP in 1989-90, but jumped to 7.8% of GDP in 1990-91. The combined fiscal deficit of the Central and State governments also reached its peak of 9.8% in 1986-87 and declined to an average of 8.6% in the next two years. It jumped thereafter to 9.3% of GDP in 1990-91 suggesting that the earlier decline was temporary and the basic fiscal problems had not been solved (table 1). The rise in the fiscal deficit, represented not merely the excess of government investment over its saving, but also borrowing to finance current expenditure that yielded no financial return. Even the return to government investment was not commensurate with the cost of borrowed funds.[10]

The initial direct impact of an increase in the fiscal deficit is to increase aggregate demand. This increase in demand will be divided between domestic and external demand depending on the proportion of non-tradable goods & services in the government demand and on the exchange rate regime. There is also a direct impact on the financial side depending on the pattern of financing. Bond financing will tend (ipso facto) to raise interest rates or draw bank credit away from the private sector (crowding out of private investment) while borrowing from the central bank will increase the monetary base and accelerate inflation. All these will affect the private investment-saving balance, which if it improves will offset part of the direct impact of the increased fiscal deficit leading to a less than proportionate increase in the current account deficit. We find that inflation was the least important effect of the fiscal deficit.

There is evidence of crowding out of private borrowing by government borrowing during the eighties. If the fiscal deficit of the central govt. is regressed on private investment (both in changes in ratio to GDP) the co-efficient is –0.316.[11] This suggests a crowding out of about 0.32% for every 1% increase in the fiscal deficit. If private investment is dropped from equation (1), the co-efficient on fiscal deficit becomes about 0.371 showing that these coefficients are consistent with the coefficients estimated in equation (1).[12]

Figure 1: Current Accout Deficit (CAD) & Fiscal Deficits (FD)

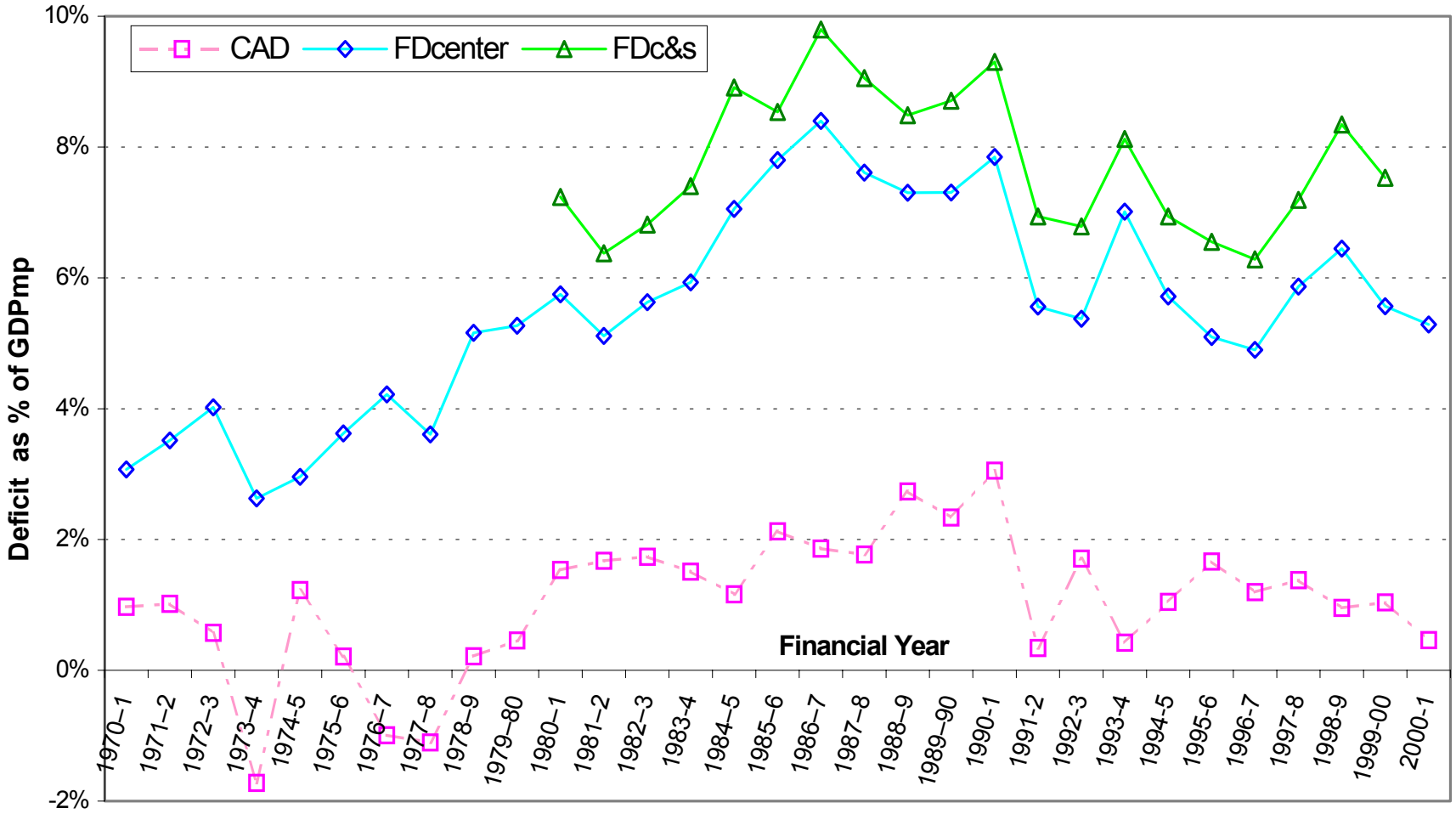


TABLE 1 : BALANCE OF PAYMENTS ($ mi or %)

	1985–6	1986–7	1987–8	1988–9	1989–90	1990-1	1991-2	1992-3	1993-4	1994-5	1995-6	1996-7	1997-8	1998-9	99-00	2000-1
External Debt ($ mi. March 31st)																
Total Debt				64075	75857	83801	85285	90023	92695	99008	93730	93470	93531	97666	98435	100255
(% of GDP)				23.7%	26.7%	28.7%	38.7%	37.6%	33.8%	30.9%	27.1%	24.7%	24.4%	23.6%	21.9%	21.6%
Concessional				31814	35443	38426	38187	40097	41112	44845	41944	39489	36944	37258	38193	36032
(Share of total)				49.7%	46.7%	45.9%	44.8%	44.5%	44.4%	45.3%	44.7%	42.2%	39.5%	38.1%	38.8%	35.9%
(% of GDP)				11.8%	12.4%	13.1%	17.5%	16.7%	15.0%	14.0%	12.2%	10.4%	9.6%	9.0%	8.5%	7.8%
Private share of MLT (%)													14.5%	14.8%	13.4%	
Short Term				3889	7501	8544	7070	6340	3627	4269	5034	6726	5046	4274	3933	3462
(Share of total)				6.1%	9.9%	10.2%	8.3%	7.0%	3.9%	4.3%	5.4%	7.2%	5.4%	4.4%	4.0%	3.5%
(% of GDP)				1.4%	2.7%	2.9%	3.2%	2.6%	1.3%	1.3%	1.4%	1.8%	1.3%	1.0%	0.9%	0.7%
(/FCur Resrv)				0.92	2.23	3.82	1.26	0.99	0.24	0.21	0.30	0.30	0.19	0.14	0.11	0.09
MLT debt maturing within yr (% of MLT)												8.0%	7.7%	7.3%		
Ratio to GDPmp (%)																
Fiscal Deficit: Center	7.8%	8.4%	7.6%	7.3%	7.3%	7.8%	5.6%	5.4%	7.0%	5.7%	5.1%	4.9%	4.8%	4.5%	4.1%	
FD Center & States	8.5%	9.8%	9.1%	8.5%	8.7%	9.3%	6.9%	6.8%	8.1%	6.9%	6.6%	6.3%	7.2%	8.3%	7.5%	
Curnt Act Deficit	2.1%	1.9%	1.8%	2.7%	2.3%	3.1%	0.3%	1.7%	0.4%	1.0%	1.7%	1.2%	1.4%	1.0%	1.0%	0.5%
Trade Deficit	3.4%	3.0%	2.6%	3.2%	2.5%	3.0%	1.0%	2.3%	1.5%	2.8%	3.2%	3.9%	3.8%	3.2%	4.0%	3.0%
Invisibles, net	1.3%	1.1%	0.8%	0.5%	0.2%	-0.1%	0.7%	0.6%	1.1%	1.8%	1.6%	2.7%	2.4%	2.2%	2.9%	2.6%
Private Transfers	1.0%	0.9%	1.0%	0.9%	0.8%	0.7%	1.4%	1.5%	1.9%	2.5%	2.4%	3.2%	2.9%	2.5%	2.7%	2.7%
Income(Interest)	-0.3%	-0.4%	-0.5%	-0.9%	-1.0%	-1.2%	-1.4%	-1.4%	-1.2%	-1.1%	-0.9%	-0.9%	-0.9%	-0.9%	-0.8%	-0.8%
Capital Inflow (adj)*	1.6%	2.0%	1.9%	2.4%	2.2%	1.5%	1.5%	1.4%	2.5%	2.1%	2.1%	3.3%	2.6%	2.1%	2.9%	2.5%
External Assistance	0.6%	0.6%	0.8%	0.8%	0.6%	0.7%	1.1%	0.8%	0.7%	0.5%	0.3%	0.3%	0.2%	0.2%	0.2%	0.1%
Commercial Borrowing	0.4%	0.8%	0.4%	0.6%	0.6%	0.7%	0.6%	-0.1%	0.2%	0.3%	0.4%	0.7%	1.0%	1.1%	0.1%	0.9%
NRI Deposits, net	0.6%	0.5%	0.5%	0.9%	0.8%	0.5%	0.2%	0.8%	0.4%	0.1%	0.3%	0.9%	0.3%	0.4%	0.5%	0.4%
Rupee Debt Service	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.4%	-0.3%	-0.4%	-0.3%	-0.3%	-0.2%	-0.2%	-0.2%	-0.2%	-0.1%
Reserves(Inc is -v)	0.3%	0.2%	0.3%	0.3%	0.3%	0.4%	-1.4%	-0.3%	-3.2%	-1.4%	0.8%	-1.5%	-0.9%	-0.9%	-1.4%	-1.3%
Foreign Invest(**mi**)	$0	$195	$434	$357	$410	$103	$133	$557	$4,235	$4,807	$4,805	$6,153	$5,390	$2,412	$5,117	$2,911
Direct (FDI)						$96	$129	$315	$587	$1,343	$2,151	$2,906	$3,562	$2,480	$2,167	$2,342
(growth rate)							34%	144%	86%	129%	60%	35%	23%	-30%	-12.6%	8.1%
Portfolio						$5	$4	$242	$3,649	$3,579	$2,747	$3,418	$1,828	-$68	$3,024	$1,083
(cumulative share)						0.3%	0.6%	11.5%	60.7%	66.6%	63.8%	61.5%	56.1%	51.4%	52.5%	51.3%
Import UVI fuel	295	165	201	193	244	383	407	441	435	447	511	649	540	439		
(growth rate)	3.9%	-44%	22%	-4.0%	26%	57%	6.3%	8.4%	-1.4%	2.8%	14.3%	27%	-17%	-19%		
REER change:FY	-2.6%	-8.2%	-5.4%	-5.8%	-2.4%	-3.6%	-15.1%	-11.1%	7.9%	7.2%	-3.7%	0.3%	5.0%	-5.3%	-0.2%	5.0%
REER change:CY	-1.9%	-7.8%	-7.3%	-3.8%	-4.6%	-2.3%	-12.4%	-4.0%	-6.6%	8.7%	-0.7%	-3.4%	6.4%	-3.5%	-2.3%	

The crowding out was reflected both in the real interest rate and credit to private sector. The growth of net bank credit to government accelerated sharply to 20.5% per annum during the eighties from 15% in the seventies (table 2). Over the same period net credit from the banking system to the commercial sector decelerated to 17.2% from 18.9%. Real inter bank call money rates, real rates on bank deposits and lending were all higher during the eighties. Real rates on these three rose from an average of –0.9%, -2.7% and 2.6% during the seventies to 1.5%, 0.8% and 8.5% (respectively) during the eighties. Despite rising interest rates and decelerating bank credit private investment increased from an average of 10.0 % of GDP in the seventies to 12.0% of GDP in the eighties. One of the implications of this analysis is that a lower fiscal deficit would have resulted in even higher private investment and overall growth of the Indian economy would have been even higher than it was. This tends to support the hypothesis that policy reforms rather than fiscal expansion was responsible for the acceleration in growth during the eighties.

The effect of the increase in fiscal deficit on inflation depends on the change in the pattern of financing and in particular the degree of monetization.[13] In the seventies and eighties a significant proportion of the deficit was financed by borrowing from the RBI (monetization).[14] The growth of net RBI credit to government accelerated from an average of 14.5% per annum in the seventies to 20% in the eighties (table 2). Monetary growth was however restrained because of slower growth of other sources of money (including foreign exchange reserves) and it declined marginally to 17.2% per annum in the eighties (from 17.5% in the seventies). The average (WPI) inflation decelerated much more noticeably to 8% per annum during the eighties from an average of 9.4% during the seventies. The downtrend in inflation was even sharper than suggested by this decadal change and contrary to the money growth trend. The inflation rate was 9.3% per annum during the first half of the eighties and fell to 6.7% per annum during the second half of the eighties. The former was driven primarily by the second oil shock but rising primary food prices also contributed to the high inflation. The decline in the inflation rate cannot be explained by monetary tightening as its growth rate accelerated from an average of 16.8% per annum in the first half of the eighties to 17.5% per annum in the second half.

TABLE 2 : BALANCE OF PAYMENTS (US $ mi) Growth Rates

	Financial Year Averages							
	1970-79 Seventies	1980-89 pre-crisis	1992-00 post-crisis	1990-99 Nineties	1980-4 1st half	1985-9 2nd half	1990-4 1st half	1995-9 2nd half
Exchange Rate (ER): 36 Country Trade weighted								
Real Effective(reer)	-2.1%	-2.0%	0.0%	-1.9%	0.8%	-4.9%	-2.9%	-0.8%
Standard Dev	5.8%	4.6%	6.4%	7.4%	4.6%	2.4%	10.4%	4.0%
Nominal effective	0.4%	-3.0%	-4.6%	-6.5%	0.4%	-6.5%	-9.2%	-3.8%
Standard Dev	2.2%	4.8%	6.5%	7.9%	2.7%	3.8%	10.2%	4.9%
REERcy	-3.9%	-1.7%	-0.7%	-2.0%	1.6%	-5.1%	-3.3%	-0.7%
Inflation WPI	8.5%	7.2%	6.7%	7.9%	6.5%	7.8%	10.5%	4.6%
Standard Dev	9.4%	3.9%	3.2%	3.6%	5.3%	1.5%	2.1%	1.8%
Money supply	17.5%	17.2%	17.4%	17.3%	16.8%	17.5%	17.5%	17.1%
Bank Credit net	17.2%	18.5%	14.0%	14.4%	19.7%	17.3%	13.8%	15.0%
Commercial	18.9%	17.2%	14.6%	14.3%	18.3%	16.1%	13.3%	15.4%
Government	15.0%	20.4%	13.4%	14.5%	21.9%	18.9%	14.5%	14.6%
RBI credit to Govt	14.5%	20.0%	5.6%	7.1%	22.2%	17.8%	6.8%	7.5%
Payment (BOP)								
Exports, f.o.b.	17.3%	8.3%	10.8%	8.6%	5.2%	11.4%	9.9%	7.2%
Imports, c.i.f.	20.6%	7.8%	12.7%	9.7%	6.3%	9.4%	9.9%	9.5%
Foreign Investment			114%	102%			189%	14.5%
FDI			49%	52%			98%	15.0%
Customs Export								
Total ($)	16.6%	8.1%	10.9%	8.6%	4.5%	11.6%	10.0%	7.3%
Quantum Index	6.9%	5.4%	10.2%	10.0%	2.7%	8.0%	10.9%	8.9%
Unit Value Index	10.2%	10.3%	7.7%	9.5%	10.1%	10.5%	12.6%	5.7%
Manfufacture ($)	18.4%	10.4%	10.9%	9.7%	2.2%	18.6%	11.5%	7.8%
Primary	14.9%	2.4%	8.9%	6.2%	-0.1%	4.9%	6.7%	5.6%
Oil	20.3%	109.6%	-11.9%	-14.5%	231.1%	-11.9%	1.5%	-30.6%
Customs Import								
Total ($)	21.9%	7.2%	11.4%	9.6%	6.3%	8.2%	7.3%	12.0%
Quantum Index	7.1%	7.5%	16.3%	12.7%	6.9%	8.2%	12.9%	12.5%
Unit Value Index	16.3%	8.0%	4.2%	6.9%	8.0%	8.0%	7.6%	6.0%
Manfufacture ($)	18.7%	11.1%	14.5%	8.5%	6.4%	15.8%	5.9%	11.1%
Mach & Equip	14.2%	13.4%	9.4%	1.7%	9.9%	16.8%	5.3%	-2.0%
Primary	15.8%	4.6%	19.5%	12.5%	10.4%	-1.3%	17.1%	7.9%
Oil	54.1%	3.3%	5.5%	15.8%	-0.8%	7.5%	13.2%	18.3%
Net Exports ($ mi)								
Non-oil	$493	-$2,136	$1,894	$1,809	-$1,413	-$2,858	$2,539	$1,079
Manufacture	-$207	-$2,686	-$1,220	-$1,131	-$2,258	-$3,880	$212	-$2,473
Primary	$684	$1,026	$2,594	$2,477	$814	$845	$2,091	$2,864
Oil	-$1,487	-$3,944	-$7,211	-$6,810	-$4,572	-$2,811	-$5,381	-$8,240
World Merchandise Export Gr (%)								
Value ($)	20.2	6.6	6.1		3.6	9.6	6.7	5.9
Volume	6.0	3.7	6.7		2.1	5.4	5.5	7.0
Unit Value	13.4	2.7	-0.7		1.4	3.9	1.1	-1.0

Sources: Handbook of Statistics on the Indian Economy, RBI; WTO World Merchandise Trade Data

A simple model of real aggregate demand and supply would suggest that policy reform that shifts the supply function outward would tend to raise output and lower prices while a rise in aggregate demand due to the fiscal deficit would tend to raise prices and outputs.[15] To the extent that a policy reform also leads to a shifting out of the demand function, for instance by increasing private investment or raising exports, the price decline would be moderated. The limited de-control and de-licensing of industry and imports that eased the oppressive restrictions on production, investment and imports, raised the efficiency of the economy and thus shifted the supply curve to the right. The rise in the fiscal deficit simultaneously increased aggregate demand. The rise in the growth rate of output and fall in the rate of price inflation are consistent with the explanation that economic reforms were more important than the fiscal deficit in raising the growth rate.[16]

The above facts are also consistent with a Mundell (1968) type model as a rise in the fiscal deficit (a rightward shift in the real balance line), with monetary growth remaining unchanged or tightening marginally, would raise the domestic interest rate, increase domestic product and widen the current account deficit. If the money supply was tightened too sharply, however, the current account deficit would narrow & eventually disappear and the income gains would be reduced or eliminated. A tight money explanation for lower inflation in the eighties does not therefore appear to be consistent with the facts as interpreted within the framework of this model. Lower inflation was due in our view not to tighter monetary policy but to greater economic efficiency or productivity that raised output and moderated inflation.

In the long term the effect of the rising fiscal deficit was a build up of national external debt (and government domestic debt), which would raise the cost of capital for the economy and increase the external risk and thus leave the economy vulnerable to shocks.

Like the fiscal deficit the current account deficit was also on an upward trend since the late seventies though the pattern was not identical (figure 1). In 1989 the danger that the fiscal deficit problem could spill over into the current account was recognised by the handful of economists within the government who thought about macro-economic issues.[17] Even within this limited set of economists, however, opinion on the urgency of the problem varied. A few thought that the problem needed to be addressed urgently, while others thought that the problem could be addressed gradually over the next five years.[18] Though three years were too short a period, it

could be argued that the upward trend in the central fiscal deficit had been broken during 1987-88 to 1989-90 period and were it not for the external and domestic shocks the BOP crisis could have been avoided. On the other hand at that time it could equally be argued that a central fiscal deficit of 7.8% of GDP was too high to be sustainable and consequently the BOP crisis was a disaster waiting to happen.

2. Trade Deficit Trends

The evolution of the current account deficit and its components is relevant to understanding the BOP crisis, the debates about economic policy and the reform choices that followed the crisis. Traditionally there has been a dichotomy in discussions about the external sector in India. One set of discussions used to take place in the context of economic planning, where the focus was on savings gap and the need to bridge it through foreign saving and on the consistency of the latter with the projected current account deficit over the five year Plan. These were more long term in nature. The second set of discussions was related to external aid and other means of financing the current account deficit. Though the annual discussion on external aid entered the public domain the discussions relating to short-term BOP management generally remained internal (finance ministry/RBI).

Till the BOP crisis the public debate about the external sector focussed primarily on trade and its components (partly because of the paucity of data). Periodically there was also some discussion on remittances by non-resident Indians (NRI). In the late eighties the public debate among the economic elite as well as the intelligentsia was therefore mainly about rising imports and trade deficit. These concerns were raised mainly with a view to questioning even the limited import liberalisation that had taken place in the eighties.[19] The explicit or implicit policy recommendation that traditional economists derived from this was, that the problem required a halt to further import de-control or perhaps even a reversal.

The BOP data for the full decade tends to support these arguments, as imports rose much faster than exports during the eighties. Imports increased by 2.3% of GDP (from 5.6% of GDP in the seventies to an average of 7.9% of GDP) during the eighties, while exports increased by an average of only 0.3% point of GDP (table 3). The source of the increase was however somewhat different than was thought. The value (US$) of oil imports which virtually doubled after the second oil (price) shock in 1979,[20] contributed about one-third the increase in import-GDP ratio. Non-customs

TABLE 3 : BALANCE OF PAYMENTS (percent of GDP at current market prices)

Financial Year Averages

	1970-79 70s	1980-89 pre-cris	1992-00 post-cris	1990-99 90s	1980-4 1st hlf	1985-9 2nd hlf	1990-4 1st hlf	1995-9 2nd hlf	Max	Min
Fiscal Deficit: Center	3.6%	6.6%	5.2%	5.5%	5.6%	7.7%	6.3%	4.7%	8.4%	0.2%
FD Center & States		8.1%	7.2%	7.4%	7.3%	8.9%	7.6%	7.2%	9.8%	6.3%
Curnt Act Def	0.1%	1.8%	1.1%	1.3%	1.5%	2.2%	1.3%	1.2%	3.1%	-1.7%
Goods &Services Def	1.5%	3.7%	3.1%	3.0%	4.1%	3.2%	2.2%	3.7%	5.2%	0.4%
Trade Deficit	1.2%	3.2%	3.1%	2.9%	3.5%	3.0%	2.1%	3.6%	4.3%	0.3%
Exports, f.o.b.	4.4%	4.7%	8.5%	8.0%	4.7%	4.7%	7.3%	8.7%	9.5%	3.1%
Imports, c.i.f.	5.6%	7.9%	11.6%	10.9%	8.2%	7.7%	9.4%	12.3%	12.8%	4.0%
Export/Import ratio	0.80	0.59	0.74	0.74	0.57	0.61	77.8%	70.7%	0.94	0.52
non-Customs Import	0.3%	0.7%	1.8%	1.6%	0.5%	1.0%	1.3%	1.9%	2.6%	-0.1%
Invisibles, net	1.1%	1.4%	2.0%	1.6%	2.0%	0.8%	0.8%	2.4%	2.9%	-0.3%
Non–factor Service	0.3%	0.4%	0.4%	0.3%	0.6%	0.3%	0.3%	0.4%	0.9%	-0.1%
Private Transfers	0.6%	1.1%	2.5%	2.2%	1.3%	0.9%	1.6%	2.7%	3.2%	0.2%
Official Transfers	0.6%	0.2%	0.1%	0.1%	0.3%	0.2%	0.1%	0.1%	2.7%	0.0%
Income (incl Interest)	-0.3%	-0.4%	-1.0%	-1.1%	-0.1%	-0.6%	-1.3%	-0.9%	0.2%	-1.4%
Capital Inflow (adj)*	0.9%	1.6%	2.4%	2.2%	1.1%	2.0%	1.8%	2.6%	3.3%	-1.7%
Foreign Investment	0.0%	0.0%	1.1%	0.9%	0.0%	0.1%	0.7%	1.2%	1.6%	0.0%
FDI (from quarterly)			0.5%	0.4%			0.2%	0.7%	0.9%	0.0%
Portfolio (from qrtrly)			0.6%	0.5%			0.5%	0.6%	1.3%	0.0%
External Assistance	0.7%	0.6%	0.4%	0.5%	0.6%	0.7%	0.8%	0.2%	1.5%	-1.9%
Pvt or Mrkt (ECB+NRI)	0.2%	0.9%	0.9%	0.9%	0.5%	1.2%	0.7%	1.1%	1.6%	0.0%
Commercial Borrowing	0.1%	0.4%	0.5%	0.5%	0.3%	0.6%	0.3%	0.6%	1.1%	-0.1%
NRI Deposits, net	0.1%	0.4%	0.4%	0.4%	0.2%	0.7%	0.4%	0.5%	0.9%	0.0%
Rupee Debt Service	0.0%	0.0%	-0.2%	-0.3%	0.0%	0.0%	-0.4%	-0.2%	0.0%	-0.4%
Reserves(Inc -, Dec +)	-0.5%	0.2%	-1.1%	-1.0%	0.1%	0.3%	-1.2%	-0.8%	1.0%	-3.2%
Customs Data:DGCI&S										
Import: Total	5.3%	7.2%	9.8%	9.3%	7.7%	6.7%	8.2%	10.4%	11.0%	3.4%
Import: Oil	1.2%	2.0%	2.2%	2.1%	2.8%	1.2%	2.0%	2.1%	3.6%	0.3%
Import: Non-oil	4.0%	5.2%	7.6%	7.2%	4.9%	5.5%	6.1%	8.3%	8.9%	3.1%
Import: Manfactures	2.7%	4.1%	6.6%	6.3%	3.7%	4.5%	5.4%	7.2%	7.5%	2.2%
Export: Total	4.5%	4.6%	8.4%	7.8%	4.6%	4.5%	7.2%	8.5%	9.3%	3.3%
Export: Manfactures	2.5%	2.8%	6.3%	5.9%	2.5%	3.1%	5.4%	6.5%	6.7%	1.8%
Other Ratios										
Export/Import ratio	0.87	0.64	0.86	0.85	0.61	0.68	0.88	0.82	1.06	0.53
Manufactured Exports										
Ratio to Total	55.7%	60.7%	76.1%	75.4%	54.7%	66.7%	74.7%	76.2%	80.0%	50.9%
Ratio to Regd Manuf	7.2%	6.4%	13.2%	12.4%	5.9%	6.8%	11.3%	13.7%	14.1%	5.1%
Net Imports of Manufacturred goods										
Ratio to GDP manuf	1.8%	8.9%	2.5%	2.3%	7.7%	10.1%	-0.2%	4.8%	13.7%	-6.2%
Machinery & Equipment Import										
% of Manufactur Imprt	26.0%	29.0%	29.6%	29.7%	26.6%	31.4%	31.1%	28.4%	36.3%	19.1%

Source: Handbook of Statistics on the Indian Economy, RBI

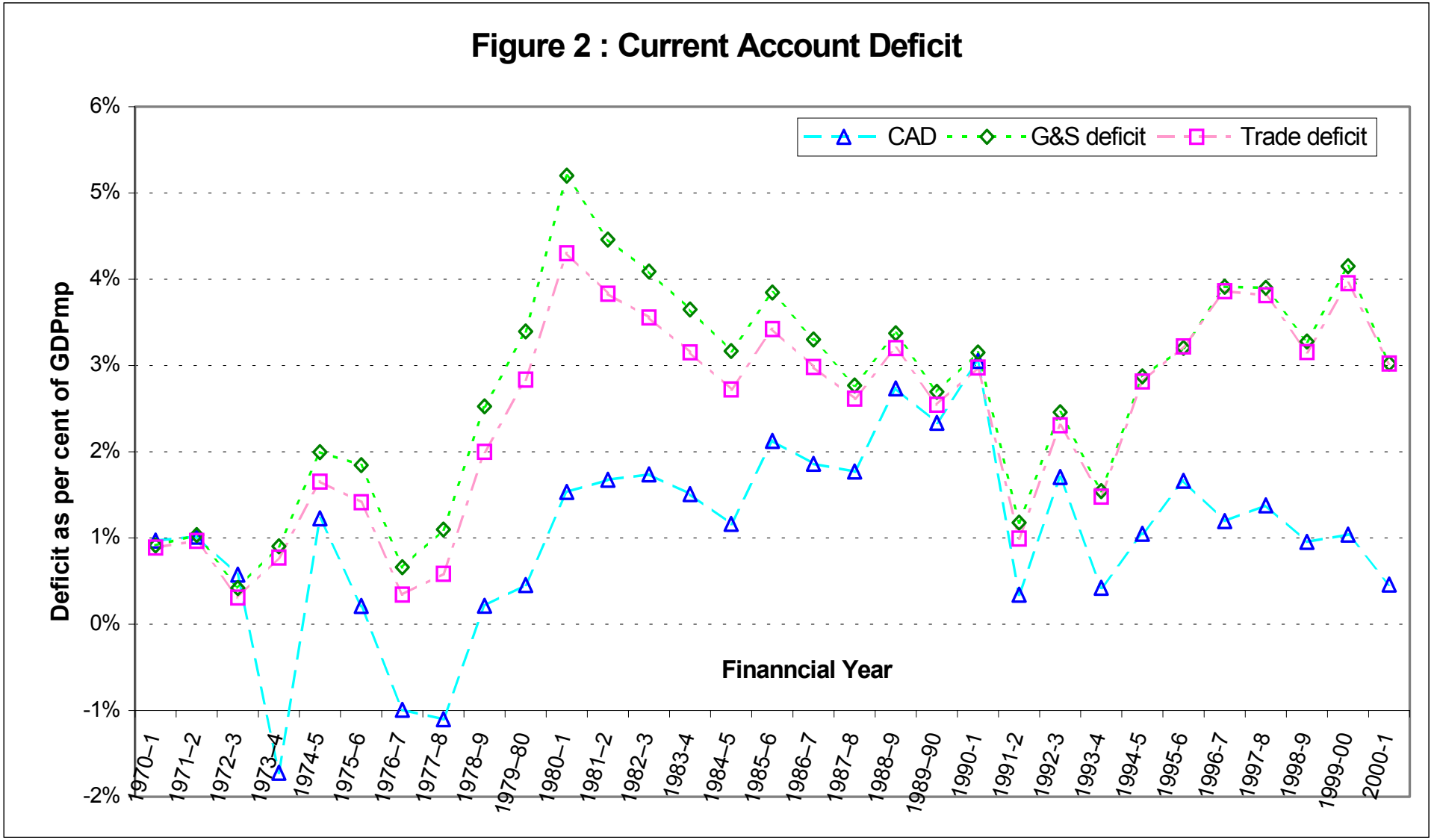
imports, which were on a very clear up trend during the eighties, showed an average increase of only 0.4% of GDP from the seventies and thus contributed about a fifth of the increase (table 3).[21] Non-oil non-customs imports that were the focus of import liberalisation during the eighties contributed about half the total increase in the import-GDP ratio. As a consequence the trade deficit increased from an average of 1.2% of GDP in the seventies to an average of 3.2% of GDP in the eighties. An improvement in the invisibles surplus offset part (0.3%) of the increase. The current account deficit rose therefore rose sharply from an average of 0.1% of GDP during the eighties to an average of 1.8% of GDP during the eighties.

The current account was in reality not under duress during the eighties (i.e. till 1989-90) because of the trade deficit, which was on a declining trend during the eighties (figure 2). The trade deficit after shooting up to an average of 3.5% of GDP in the first half of the eighties declined to an average of 3.0% of GDP in the second half of the eighties. In contrast, the current account deficit which also shot up to 1.5% of GDP during the 1st half of the eighties increased further to 2.1% of GDP during the 2nd half of the eighties (table 3).

The increase in the trade deficit from 2.5% of GDP in 1989-90 to 3.2% of GDP in 1990-91 was not historically unprecedented as it had touched 4.3% of GDP in 1980-81, the last time that India was forced to take recourse to IMF facilities (table 1). Both the sharp rise in trade deficit during the eighties and the declining trend thereafter was due largely to the second oil shock in 1979, as the step jump in oil prices raised the value of imports and resulted in declining growth rates over the following decade as oil prices remained stable. The trade deficit (as a % of GDP) was therefore on a downtrend during the eighties (figure 2). The import-GDP ratio fell from an average of 8.2% in the first half to 7.7% during the second half of the eighties, even though non-oil imports increased by 0.6% of GDP between two periods (table 3). The export GDP ratio remained unchanged at 4.7% over these two periods. Contrary to the belief of many resident Indian intellectuals and economists, neither the trade deficit nor total imports were drifting upwards.

The limited loosening of import controls (primarily for exporters) during the eighties (along with some industrial de-licensing) also had other positive effects. The former included a much easier regime for import of capital goods by exporters along with lower import duties subject to export commitments. A combination of these changes and the gradual depreciation of the REER resulted in the rise in India's

Figure 2 : Current Account Deficit



merchandise export share from 0.42% of world exports in 1980 to 0.47% in 1985 and to 0.52% of world exports in 1990 (table 4).[22] The share of machinery & equipment imports in non-oil imports increased from an average of 26% in the seventies to an average of 29% in the nineties (table 3). The trend was upward during the eighties as the share averaged 27% in the 1st half of the eighties and 31% in the 2nd half of the eighties (table 3). As shown by Srinivasan (1996) capital import liberalisation can lead to an increase in the sustainable rate of growth of the economy. Even though the initial liberalisation was in capital goods for use of exporters, the rules were flexible enough for their effect to be felt in the domestic economy.[23] This is one likely explanation of the growth acceleration during the eighties.

3. Invisibles Trends

This upward drift in the current account deficit arose from the shrinking *surplus on the invisibles account, which followed an inverted U pattern during the eighties*. After rising from 1.1% of GDP in the seventies to an average of 2.0% of GDP in the first half of the eighties, it fell to an average of 0.8% of GDP in the second half of the eighties (table 3). Underlying the long-term deterioration in the invisibles balance were all three major sub-components (figure 3). The non-factor service surplus increased from an average of 0.3% of GDP in the seventies to 0.6% of GDP in the 1st half of the eighties and then declined back to 0.3% of GDP in the 2nd half of the eighties (table 3). Similarly private transfers rose from 0.6% of GDP to 1.3% of GDP and then declined to 0.9% of GDP over the same three periods. Finally the income deficit went from an average of 0.3% of GDP (seventies) to 0.1% of GDP (1980-84) and then to 0.6% of GDP (1985-89). Thus in a medium-term perspective the invisible balance was a much more significant element in the BOP crisis of 1990-91 than the Trade deficit.

The declining invisible surplus was driven by the income deficit, which was rising up to the crisis year (figure 3)). Given low levels of cumulated foreign investment, the most important component of income outflow was the interest on external debt. Thus as was to be expected the rising debt-GDP ratio led to rising interest payments. The rise in interest payments was however accentuated by the fall in concessional (IDA) lending from the multilateral development banks resulting in higher average interest rates. It is also possible that the interest rate paid on NRI deposits was raised to offset slowing inflows.

Table 4: Global Share, Comparitive Rates and Rank of India

Item / Country	Share/Ratio/Growth 1980	1985	1990	1995	1999	International Rank 1980	1985	1990	1995	1999	Set/ Nos
Share of India in World (%)											
Export	0.42	0.47	0.52	0.60	0.67	45	45	33	31	32	All
Import	0.72	0.79	0.67	0.67	0.75	33	24	29	28	26	All
Trade	0.57	0.63	0.60	0.63	0.71	43	33	33	31	27	All
Export Growth (decadal average)											
		1980s		1990s			1980s		1990s		
India		7.7%		8.9%			52		46		
Asia		**9.4%**		8.7%							
World		5.4%		6.3%							
Customs Tariff Rate (weighted average)											
India			32.2		29.5			69		68	70
(Change)					-41%					22	
Sri Lanka			20.1		22.5					66	
Bangladesh			22.0		22.0					65	
Nepal			17.7		18.0					60	
China			16.8		15.7					51	
Thailand			21.0	15.0						49	
Chile			10.0		9.9					34	
Import Duty Collection/Import											
India	26.4	44.1	42.2	24.8	21.1	97	115	107	104	103	
(Total no.)						100	115	108	111	114	
FDI Inflow net ($)											
India						40	39	43	28	33	all
Share in Low-Mid Inc/em (%)					1.2	22		22		14	em
Ratio to GDI											
India	0.2	0.2	0.2	2.3	2.1	78	89	99	108	126	all
Korea, S.	0.0	0.8	0.8	1.0	8.5	83	81	92	124	85	all
China	0.0	1.4	2.8	12.5	10.5		68	71	44	75	all
Portfolio Investment, Equity ($ mi.)											
Korea, S.		94	518	3559	12426		1	8	4	1	52
South Africa				4571	3855			1	2	2	52
China		0	0	2807	3732			17	5	3	52
Thailand		44	449	2154	2527		2	9	7	4	52
Brazil		0	0	4411	1961			17	3	5	52
India		0	105	1517	1302			14	10	6	52
Interest Rate Spread (Lending rate - LIBOR)											
	80-84		85-89	90-94	95-99			85-89	90-94	95-99	
India	3.5		8.6	11.6	8.6			55	45	37	97
Thailand	3.5		4.9	7.6	7.1			30	28	33	97
Korea, S	0.4		2.3	4.2	5.2			18	11	26	97
Malaysia	-3.5		1.0	3.0	3.1			13	8	19	97
China	-6.7		0.9	4.5	2.9			10	15	17	97

Sources: WTO trade data set & World Bank WDI 2001

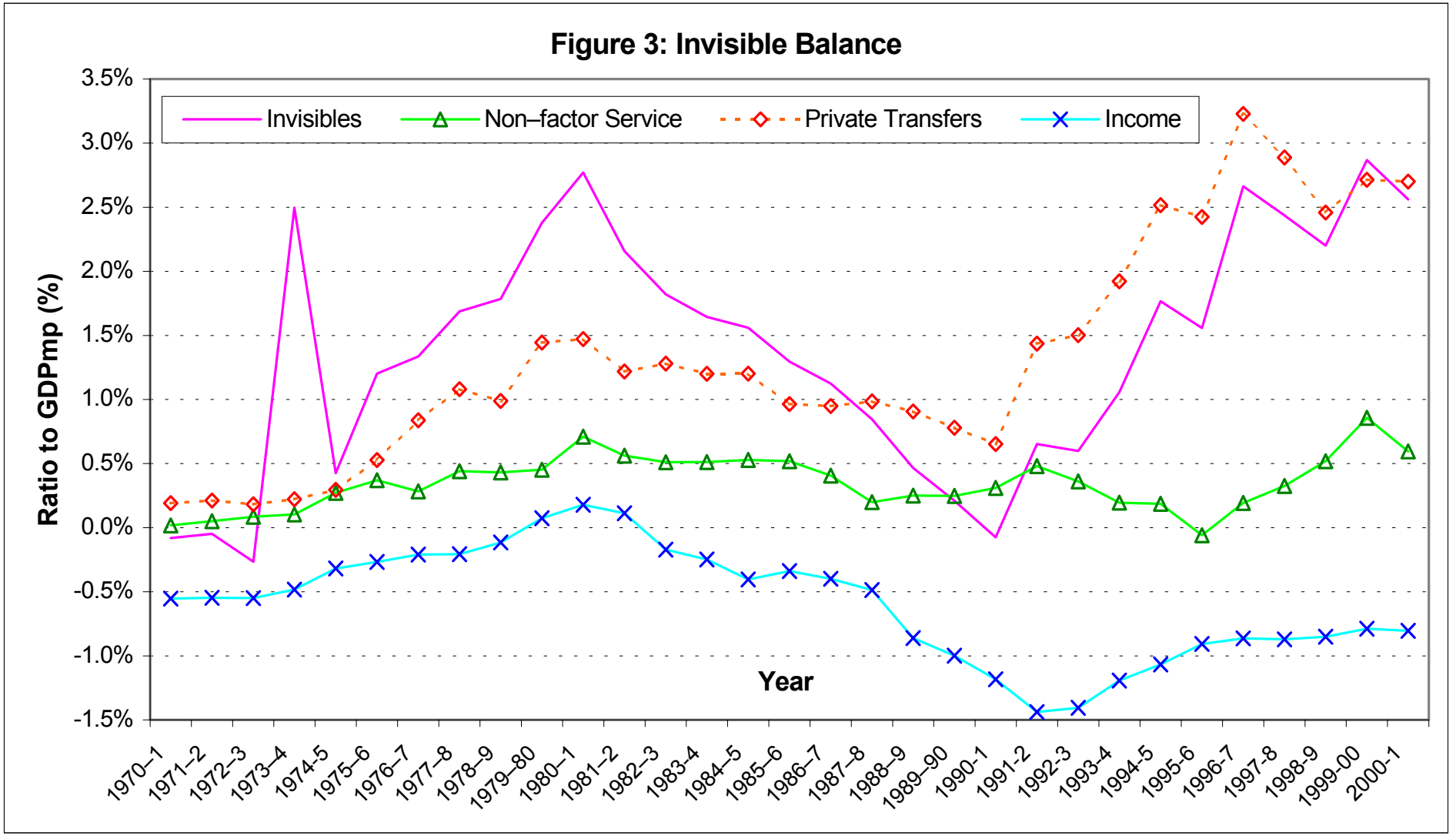


Figure 3: Invisible Balance
Invisibles
Non–factor Service
Private Transfers
Income
Ratio to GDPmp (%)
3.5%
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
-0.5%
-1.0%
-1.5%
Year
1970–1
1971–2
1972–3
1973–4
1974-5
1975–6
1976–7
1977–8
1978–9
1979–80
1980–1
1981–2
1982–3
1983–4
1984–5
1985–6
1986–7
1987–8
1988–9
1989–90
1990-1
1991-2
1992-3
1993-4
1994-5
1995-6
1996-7
1997-8
1998-9
1999-00
2000-1

In a fundamental macro-economic sense the rising level of income outflows is closely linked to the deterioration in the fiscal situation. The cost of national borrowing was rising faster than the returns from the investment made with these borrowed funds. This was linked to the low productivity of government expenditure. Further given the controlled external trade & payment system there was not enough incentive to generate external resources in line with the rising cost. Thus the issue of sustainability of the current account was closely linked with the sustainability of the overall fiscal situation, of which the rising fiscal deficit was a visible symptom.

4. Borrowing & Debt

Despite the sharp rise in the current account deficit, its financing did not appear to be especially difficult during the first half of the eighties. The real problem was the debt that this borrowing created. The rise in external debt to be sustainable must be put to productive use by the borrower so that the return exceeds the cost of borrowing. The ultimate borrower in this case was primarily the government and its public sector units.

It was widely believed during the seventies and the eighties that the Indian economy could on a long-term basis support current account deficits of 1.8% to 2.2%. This seemed to be confirmed by the experience of the eighties, in that financing of an average deficit of 1.8% did not require exceptional efforts only small changes in the debt policy (NRI, ECB). This 0.8% of GDP increase in the current account deficit was financed by an increase in external commercial borrowing (0.3% of GDP), NRI deposits (0.3% of GDP) and "Other capital"(0.3% of GDP). *The real problem was that this external debt was being funnelled into financing the government's deficit*.

External assistance declined by about 0.1% of GDP during the eighties, primarily because of a decline in concessional IDA lending by the World Bank (table 3). As a result total international debt increased during the eighties and its composition shifted from official to private sources. Foreign debt increased from 14.4% (10.5%) of GDP at the end of March 1986 (1980) to 19% of GDP at the end of March 1989 (table 1).[24] Over the same period the share of debt arising from external commercial borrowing (ECB) increased even more dramatically from 16.5% (8.2%) to 27.5%. Thus the external capital flows to India became much more market sensitive over the eighties. The second consequence of the decline in concessional lending was a rise in the average interest cost of external borrowing. Thus for instance US$ interest rates on one year FCNR deposits which were 10.5% in April 1985 declined to reach a low of

8.0% in September 1986 and then went steadily up to reach a high of 11.0% in March 1989.[25] The third consequence of this shift was a decline in the average term (maturity) of the debt. Foreign aid tended to the extremely long term, while India's access to External commercial borrowing centred around 5 years and FCNR deposits were of even shorter average maturity. The fourth consequence was an increase in the government's "quasi-fiscal" deficit in the sense that NRI external debt was explicitly or implicitly guaranteed by the government against exchange risk.

As a part of the conventional Plan process a Working Group on Balance of Payments was set up in 1989 for the next (eighth) Plan.[26] The report of the Eighth Plan Working Group on BOP noted the above facts and cautioned that *total external debt as well as the short-term debt was becoming excessive*. It therefore recommended that the proportion of short-term debt in total debt should be reduced over the eighth plan period. It also noted the negligible contribution of FDI in financing the current account deficit and consequent imbalance in the nation's external debt-equity ratio. Its second major recommendation was to raise the level of FDI during the eighth plan while keeping a careful watch on total external debt. As a result of the election of a new government in 1989 the Eighth Plan formation process had to be restarted subsequently.

5. Exchange Rate, Fiscal & External Balance

Many BOP crises have been preceded by an appreciation of the real exchange rate arising from a fixed rate regime that is not responsive to market conditions. Such appreciation resulted in declining export growth and rising trade deficits that in turn were a contributory factor in crises. In India slowness in depreciating the controlled exchange rate of the rupee also contributed to the creation of a BOP crisis, but till 1989-90 this effect was felt more through the invisibles (and perhaps the capital account) rather than the trade account. A faster depreciation during the second half of the eighties would, however, have strengthened the trade account and private remittances and thus reduced the probability of a BOP crisis.

Prima facie the nominal exchange was not visibly more inflexible during the eighties than in the seventies. The standard deviation of the growth rate of the nominal effective exchange rate (36 country trade weighted) more than doubled from 2.2% during the seventies to 4.8% in the eighties (table 2). Over the same two periods the standard deviation of the Wholesale Price Index more than halved. The trade weighted 36-country real exchange rate depreciated at an average rate of 2.1% during the period

1976-7 to 1979-80 and by an average of 2.0% during the eighties (table 1 & figure 4).[27] The real depreciation of the rupee contributed to the relatively high rate of growth of manufactured exports and to its rising share in overall exports as well as to the relatively fast growth of total exports compared to growth of world exports. As a result the share of India's exports in world exports also increased steadily during the eighties. The current account deficit was however rising because of fiscal pressures.

To find the impact of the fiscal deficit on the current account deficit the following reduced form equation is estimated using data for the past three decades.

CAD = f (FDc, REER, Ipvt, t)

Where CAD is the ratio of the current account deficit to GDP, FDc is the fiscal deficit of the central government as a ratio to GDP, REER is the 36-country trade weighted real effective exchange rate (1985 = 100) and Ipvt is the ratio of private investment to GDP. The time trend represents the upward trend in the private saving rate. The fiscal deficit of the Central government is much more exogenous than that of the States given constitutional limitations on the latter's ability to borrow. As a longer time series is available for the REER in calendar years than for the fiscal years (April to March), the former is used. The estimation is done in first difference form with the rate of growth taken for REER. The results are as follows:

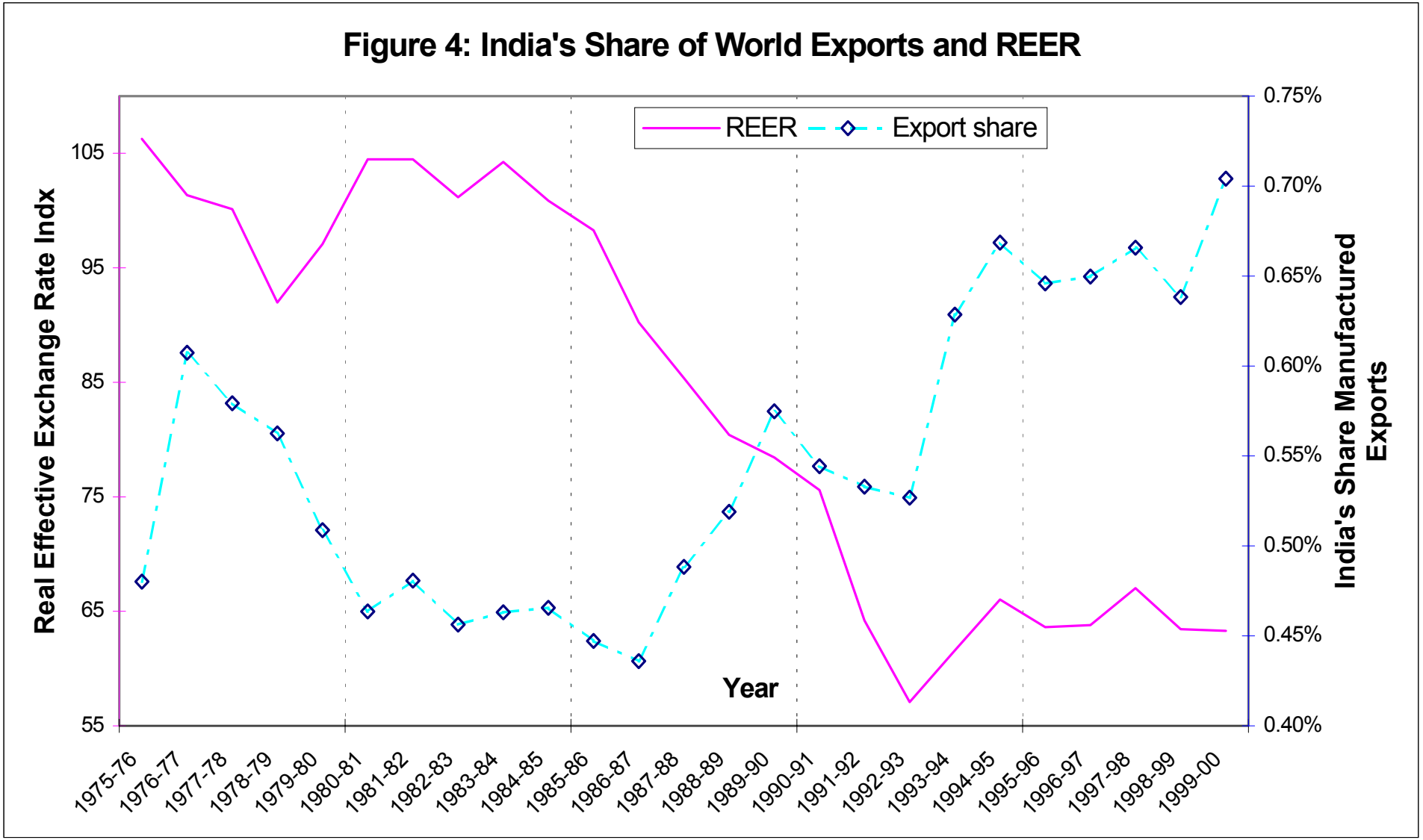
(1) $\Delta CAD = 0.001 + 0.466\ \Delta FD + 0.078\ \text{Greer} + 0.301\ \Delta Ipvt$

(0.56) (2.80) (2.94) (3.23)

$R^2 = 0.568$, R^2 (adjusted) = 0.516, F = 10.95

Where, ΔCAD =CAD-CAD(-1), ΔFD = [FDc-FDc(-1)] , $\Delta Ipvt$ = Ipvt-Ipvt(-1), Greer = Rate of growth of REER and numbers in brackets are t values.[28]

Figure 4: India's Share of World Exports and REER



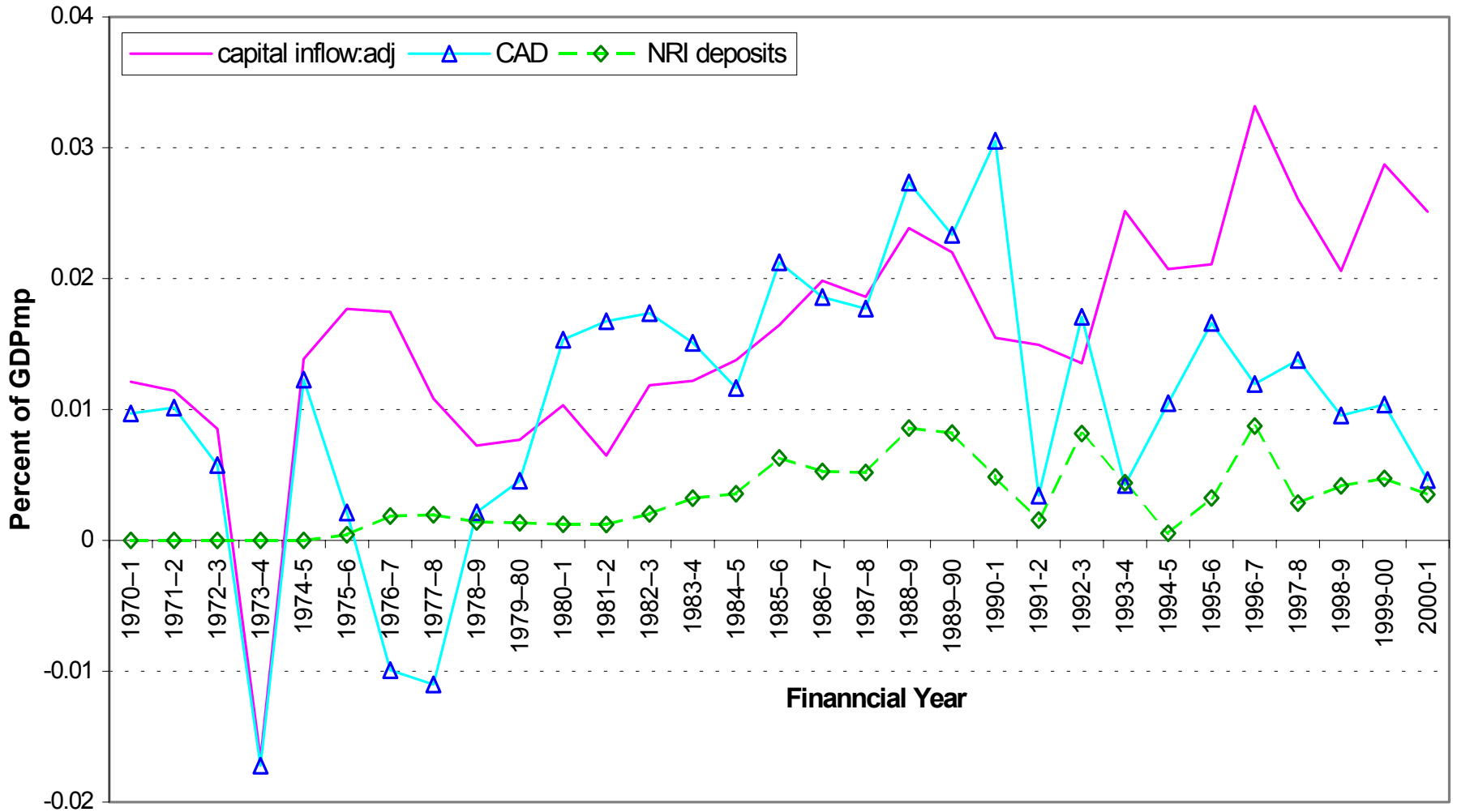
Thus every percent point of GDP increase in the fiscal deficit of the Central government resulted in an increase of 0.47 per cent of GDP increase in the current account deficit.[29] It is also clear that the exchange rate has a powerful impact in countering the effect of the fiscal deficit. A 6% per cent depreciation of the real effective exchange rate is sufficient to counter and nullify the impact of a 1% point increase in the fiscal deficit. The effect of private investment on the current account is also statistically very significant with a 1% point increase in its ratio to GDP resulting in a 0.3% point increase in CAD.

The average fiscal deficit of the central government increased by 2% points of GDP between the seventies and the first half of the eighties. This contributed about 1% point of GDP to the 1.4% of GDP increase in the current account deficit over the two periods (as per our estimated equation). The REER (annual) however appreciated by an average of 1.6% per annum during the 1st half of the eighties. Thus it added about 0.12% point of GDP to the current account deficit. In contrast the average current account deficit increased by only 0.7% of GDP between the 1st and 2nd half of the eighties despite the fact that the fiscal deficit of the Centre increased by 2.1% of GDP. About half the fiscal contribution of 0.84% of GDP to the CAD was neutralised by the average real effective depreciation of 5.1% per annum during the 2nd half of the eighties. The latter reduced the external deficit by 0.40% of GDP.

The rate of depreciation was not however, fast enough to eliminate the external imbalances that were developing. One result of this overvaluation was an incentive to increase diversion of private transfers (migrant worker remittances) and non-factor service inflows from the official to the "Hawala" channels. This was reflected in their declining ratio to GDP (figure 5).

The most readily available indicator signalling an overvaluation of the rupee from the overall perspective of the Balance of payments was the foreign exchange reserves. Reserves after building up for three years declined in 1985-6 (table 1). This decline continued through the rest of the eighties. Thus the average reserve usage increased from 0.1% of GDP per annum in the first half of the eighties to an average of 0.3% of GDP during the 2nd half of the eighties (table 3). This situation was clearly and visibly unsustainable and a depreciation of the rupee would have resulted naturally if it were not controlled by the RBI (Government). By the end of the eighties (i.e. in 1989-90), therefore there was evidence of overvaluation from the overall perspective of the Balance of Payments (BOP).

Figure 5: Balance of Payments



With the exception of external commercial borrowing and Non-resident Indian's (NRI) inflows, the exchange control regime as well as the tax environment, however, continued to worsen during the eighties. Though the limited liberalisation contributed to the acceleration in industrial and GDP growth, the exchange controls and rising tax rates ensured that the overall market environment remained highly inflexible.

C. RESULT: BOP CRISIS OF 1990-91

The timing of a crisis depends on the size and nature (temporary/permanent elements) and its effect on the key components of the current and capital account. The effect on the capital account is in turn critically dependent on the underlying macroeconomic imbalance. The external economic shocks resulted in a sharp deterioration of both the current account and "normal" capital flows (excluding "other capital") in 1990-91. The gap between these opened up in 1991-92 to reach 1.5% of GDP (figure 5). The current account deficit increased from 2.5% of GDP in 1989-90 to 3.0% of GDP in 1990-1 while the normal capital inflows (adjusted) declined to 1.5% of GDP in 1990-1 (from 2.2% in 1989-90). ***The overvaluation of the rupee consequently increased***. The government/RBI chose not to correct the additional imbalance arising from this shock, through a devaluation, worsening the situation to the point of a significant BOP crisis.

A substantial part of the increase of 1.5% of GDP in the gap during 1990-91 can be linked directly to the external shocks (table 1). The value of oil imports increased by 0.6% of GDP, while inflows on rupee debt account and NRI deposits declined by 0.4% and 0.3% of GDP respectively. Though a part of the oil price increase could rationally be expected to reverse within 12 months, the rest of the decline could be seen as longer lasting. The rest of the decline was due to the trend decline in invisibles. Thus about 1.2% of GDP increase in the BOP gap in 1990-1 could be viewed as being of a permanent nature and thus requiring an economic solution. *A real depreciation of the rupee by about 15% in 1990-1 would have solved the immediate problem*. Based on the estimated equation (1) this would have reduced the current account deficit by about 1.2% of GDP in 1990-1, with the rest of the gap filled by temporary accommodation.

Political developments made it difficult to take this or other economically rational steps. These political developments also undermined confidence in the

government's ability to limit the problem to the short-term. Despite attempts to get temporary BOP support including a sharp rise in short term borrowing in 1990-91, reserves were drawn down by 0.4% of GDP in that year. The jump in the short-term debt to foreign currency reserve ratio from 2.2 in March 1990 to 3.8 in March 1991 heralded the arrival of the BOP crisis. *The rise in this ratio from 0.9 in March 1989 to 2.2 in March 1990 was a fairly strong precursor* (table 1).

The invisibles surplus of 0.2% of GDP in 1989-90 was converted to a deficit of 0.1% of GDP in 1990-91. This was driven by the income deficit, which touched 1.0% of GDP in 1989-90 and 1.2% of GDP in 1990-1 (table 1). The long-term link between debt and investment outflows is attested to by the fact that the income outflow was at its peak of 1.44% of GDP in 1991-92 and declined marginally to 1.41% of GDP in 1992-93, while the debt-GDP ratio reached a peak at end-March 1992 (stock values are only available for end-March of each year). Both the debt and income outflows declined as a proportion of GDP in the subsequent three years. The connection is less precise in subsequent years because equity flows (FDI, FII) were beginning to play a more important role.

The capital account the other side of the Balance of Payments had at the end of the eighties a significant market determined component. In addition to FDI whose contribution was negligible, External Commercial Borrowing (ECB) plus NRI deposits at 1.5% of GDP were over two-thirds of normal capital flows (i.e. excluding "other capital") of 2.4% GDP in 1988-89 (table 1). They averaged a little less than two-thirds of normal capital flows in the second half of the eighties (1.3% as against 2.0%). The decline in normal capital flows in 1990-91 was due not only to a slow down in NRI inflows by 0.3% of GDP but also to a net outflow of 0.4% of GDP on rupee debt repayments (table 1). External commercial borrowing flows and Foreign Aid increased marginally (by 0.1% of GDP each) because of special efforts to obtain emergency financing. The net effect was a decline in the normal capital flows from 2.2 % of GDP in 1989-90 to 1.5% of GDP in 1990-91.

The widened gap between the current account deficit and "normal" capital was filled by "Other capital" inflows (0.7%) including borrowing against pledge of gold, use of IMF CCFF and Standby facilities (0.4% of GDP) and further reserve draw down (0.4% of GDP). A reserve build up of an average of 0.5% of GDP during the eighties had been converted to an average annual draw down of 0.1% of GDP during the first half of the eighties. Reserve usage increased to an average of 0.3% of GDP

during the second half of the eighties. 1990-91 was the sixth consecutive year in which reserves were drawn down to meet external payments obligations. This was one indicator of the underlying deterioration of the Balance of Payments that was perhaps not taken seriously enough during the second half of the eighties. Solving this accumulated problem would have required a real depreciation larger than 15%.

An important debt indicator that was not available in any Indian publication in the eighties was the short-term debt obligation. Short-term debt, which was 6.1 % of total debt in March 1989, had already reached 9.9% of total debt by March 1990 (table 1). It rose to 10.2% of total debt by March 1991 signalling that a BOP crisis had been brewing for more than a year. The ratio of short-term debt to foreign currency reserve (i.e. excluding gold & SDRs) rose at an even faster rate because reserves were falling. Short-term debt, which was 90% of foreign currency reserves in March 1989 exploded to 2.2 times reserves by March 1990 and reached an unprecedented 3.8 time foreign currency reserves by March 1991. From our present vantage point it is no surprise therefore that by March 1991 the International Credit rating agencies (Moody's and Standard & Poor's) had downgraded India's long tern foreign debt rating to the bottom of the investment grade. The credit rating went below investment grade in May (S&P)-June (Moody) 1991.[30]

The series of import and credit control measures introduced in the second half of 1990-91 managed to ration imports and reduce non-oil imports by 0.3% of GDP, but were unable to stave off the BOP crisis as they did not address the underlying problems. The fundamental issues of macroeconomic imbalance and the severe (post shock) overvaluation of the rupee had to await the elections of May 1991 and the formation of a new government in June 1991. The first quarter of 1991-92 was over before a new strategy could be initiated. During this quarter, industrial production declined by about 2% (over the first quarter of 1990-91).

III. RESPONSE: COMPREHENSIVE REFORM

One result of the BOP crisis of 1990-91 was to create the conditions under which a retired professional economist with wide experience in government and universally well regarded for his sincerity and integrity could become the Finance Minister of India. The Prime Minster of the time deserves full credit for grabbing this opportunity, despite the heartburn that it caused among the members of his party and despite heading a minority government. The new finance minister, having been the government's top economic bureaucrat during the previous decade, had been instrumental in raising economic expertise within the government, by bringing a number of market-savy economists into the government. He was, therefore, relatively well positioned to make the move from a socialist inspired approach to economic development to a market oriented approach.

A new approach to economic development policy was initiated by the new government in July 1991. It recognised that only correcting the underlying macro-economic imbalance and replacing the oppressive system of controls by the discipline of market competition could overcome the BOP crisis. The new finance minister and his chosen team of advisors were aware that in many countries the classical macro solution for a BOP crisis had led to a slowing of private investment and growth in the two years (and often for longer periods) following the macro adjustment. They were also aware of the remarkable growth rates and poverty reduction achieved by the more open economies of East & South Asia during the previous two decades. Extensive decontrol and de-licensing was recognised as necessary to release the productive potential of Indian entrepreneurs, reduce the period of private investment & growth slow down and raise the underlying growth rate of the Indian economy. It was also clearly recognised that the best way to put the Balance of Payments on a long-term sustainable path was through comprehensive liberalisation of international trade, finance/capital inflows and the exchange regime. *Phasing and timing of liberalisation was however determined not only by the exigencies of the economic situation but also the problem of calming genuine fears, convincing ideological diehards and overcoming vested interests, both within and outside the government*.

The comprehensive import control (QR) regime was gradually dismantled, starting with capital and intermediate goods and moving after a period of slowdown to

consumer goods. The slowdown was due to the differing nature of these two sets of goods. In the former the gainers and losers are more evenly balanced while in the latter potential beneficiaries being fragmented and un-organised beneficiaries are no match for concentrated number of easily organised opponents. Tariff rates were brought down over a decade from a peak rate of about 300% to a peak rate of 35%. The problem of over dependence on debt and the high proportion of short term debt was addressed by liberalising FDI and foreign equity (FII) inflows while keeping a very tight lid on short term debt obligations and maintaining the control regime for external commercial borrowing. A comprehensive reform of the exchange control regime was undertaken based on thorough intellectual & administrative preparation. The illegal foreign exchange markets and its link with smuggling and invisibles transactions was addressed by a comprehensive liberalisation of gold imports.

A. MACRO-ADJUSTMENT

The macro-economic response to BOP crisis as it existed at the start of 1991-2 was the classic textbook one of expenditure compression through a sharp fiscal correction and expenditure switching through devaluation. The fiscal deficit of the Centre was reduced from 7.8% of GDP in 1990-1 to 5.6% of GDP in 1991-2. The nominal exchange rate (NEER) was depreciated by 18% in 1991 resulting in a real effective depreciation of 12.4%. In terms of our estimated equation, the fiscal squeeze and the real depreciation reduced the current account deficit by 1.03% of GDP and 0.97% of GDP respectively. The total effect of these two measures was therefore to reduce the CAD by 2.0% of GDP out of the total actual decline of 2.8% of GDP. The decline of 1.6% points in the private investment rate contributed about 0.5% to the reduction. The remaining decline of 0.3% of GDP can perhaps be attributed to the overall increase in private confidence arising from the major economic reforms initiated in 1991-2.

B. TRADE REFORM

Export pessimism was not just a belief but also almost an ideology among the resident economic elites of India for decades. The two prominent exceptions to this belief in academic circles, Professors Jagdish Bhagwati and T. N. Srinivasan were both NRIs. Among the domestic exceptions were the new finance minister himself, who as an academic had done work on exports (Singh (1964)), and the economist who was to later become his finance secretary. The conventional wisdom among the

domestic Indian experts as encapsulated in Nayyar (1976) & J. Ghosh (1990) was that Indian exports were supply-constrained and not very responsive to relative price changes. The alleged failure of the 1966 devaluation was cited as one of the proofs of this proposition. The attitude of the elites was reflected in the negative reaction that a 1989 planning commission research paper, which showed high relative price elasticities of demand for manufactured exports and imports elicited in the upper reaches of the Planning Commission [see A. Ghosh (1991)].[31] It did, however, help subsequently in persuading some sceptics and dispelling some fears.

For non-economic participants in the decision-making process the main argument against import bans was that by providing infinite protection to manufactured goods such bans biased the economy against agriculture and labour intensive manufactures. The QRs also favoured large, capital-intensive manufacturing and mining thus contradicting and undermining the policy of encouraging small-scale industry. Removal of QRs and the reduction of the high tariffs on manufactured goods would therefore favour agriculture and labour-intensive manufactured exports.

1. Import Controls: QRs

Though trade reform had begun in the 1980s, the import control regime was still incredibly complex in 1990-91. This was particularly true of the duty-free input import regime for exporters (based on the efficiency principle of either not taxing or refunding input taxes). A significant effort was made to clean up this complex regime in July-August 1991 by introducing the "Exim Scrip" a freely tradable import licence (30% of export value as import entitlement from Limited permissible list) the premium on which effectively constituted a dual exchange rate.[32] The existing Cash Compensatory System, which varied by product category & perceived domestic value addition was abolished. QRs were eased on 96 items by moving them from Restricted to Limited permissible category. The removal of QRs on 37 items by moving them from LP to OGL category was however overwhelmed by a reverse movement of 110 items. QRs were also lifted on 6 items (de-canalised) and eased on 16 (move from canalised to LP). Procedural improvements were also made in the capital goods import regime for exporters. Export controls were also lifted on 116 items.

The trade policy of April 1 1992 freed imports of almost all Intermediate & capital goods. Only 71 items remained restricted/licensed (3 banned, 7 canalised).

These consisted mainly of dual use goods like office equipment and consumer goods. Special Import Licence (SIL) was given to star exporters for importing restricted items. The trade policy of April 1 1993 removed 146 items from the negative (restricted) list of exports. Kerosene, LPG, LSHS, waxes, fertiliser (Phosphoric potash) were de-canalised. In the April 1994 policy, the scope of Special Import Licence was expanded, and second-hand capital goods (with a residual life of 5 yrs) allowed to be imported. The import policy of April 1995 put 78 consumer goods in the freely importable category. At this point, out of a total of 5021 6-digit items on the Harmonised Tariff System's List, 3000 were freely importable while 1487 were importable using the freely tradable SIL. Further progress was made in 1996-97 by lifting of QRs on over 100 items and movement about 70 items to SIL.

After the initial major step of removing QRs on a host of intermediate and capital goods in April 1992 further liberalisation was a painful and slow process requiring infinite patience. Two main problems had to be overcome by those who believed that import liberalisation would benefit the economy and the people as a whole. The commerce ministry, institutionally charged with promoting exports was conditioned to thinking in terms of export incentives. Thus they had a strong incentive to preserve the list of items importable under SIL so that premiums would remain as high as possible in the belief that this was the best way to benefit exporters and exports. They had to be slowly and gradually convinced that exchange rate adjustments would provide the same incentives in a much more efficient manner.

The other set of objections came from producer ministries who were convinced (without being able to produce any data or hard facts), that producers of consumer goods would suffer if QRs on consumer goods imports were lifted. Unlike in the case of intermediate & capital goods where user groups or ministries could provide support, consumers were not represented in the discussions and arguments about the benefits to consumers were seldom heeded. The evidence of (no negative effect) provided by earlier removal of QRs on intermediate goods spread extremely slowly. Other arguments relating to the visible availability of certain smuggled consumer goods, which had little impact on domestic producers, were sometimes effective. The fact that tariff rates were still quite high did sometimes help to calm the fears of neutral participants. It was only the loss of the WTO case against India, however, that finally led to the complete elimination of QRs previously justified on

BOP grounds on April 1st 2000. Otherwise the process of removal of QRs on consumer durable goods could have dragged on for another half decade or more.

2. Customs Tariffs

The overall objectives of customs tariff reform were clear from the beginning: To reduce overall protection by reducing the average rate of tariffs and reduce the arbitrary distribution of protection among industries by reducing the dispersion of tariffs. An incredible array of general, specific and end-use exemptions had also been built up over the decades in response to the demands of vested interests, backed by little or no economic analysis of the costs or benefits. Though economists working on India's customs tariffs had some idea of its complexity in terms of multiplicity of rates and end-use exemptions, none initially had a detailed knowledge of the system and its incredible array of exemptions.

In addition to the array of industrial interests & producer ministries opposed to the lifting of QRs, customs tariff reform faced two additional difficulties. The revenue department, charged with collecting revenues understandably had an inbuilt resistance to reduction of any tariff. Secondly the secrecy of the Budget process meant that it was difficult to bring in expertise from outside the revenue department. Secrecy could also be used as a handle to keep information asymmetric and at critical points dismiss arguments as based on imperfect practical knowledge.

The Chelliah committee on tax reform, which outlined a broad structure of peak tariff rates for different categories of goods, proved important in overcoming bureaucratic inertia. Its report helped reformers to keep the focus on peak tariff reductions despite pressures on customs revenue. The other was to mount an exercise within the ministry of finance to collect and analyse all available information on customs duties and customs revenue collection. It was only after this detailed knowledge had been acquired that economists could begin to effectively cut through the jungle of exemptions and reduce the multiplicity of rates and start removing the negative protection & other anomalies. Because of the budget secrecy issue mentioned above, the only route available was to prepare detailed tariff reform papers that applied economic principles to the detailed structure of tariffs and exemptions. This detailed knowledge could not however be brought to bear at the critical decision-making budget formulation stage and tariff rationalisation was often incomplete or internally inconsistent. This was also partly due to the pressures from public sector

units and opposition from their ministries, which expressed themselves through their ministers at the budget formulation stage.

With the peak customs tariff rate at around 300% in 1990-91 it was apparent from the start that there was a lot of "water in the tariff." The first step was therefore to cut the peak rate to half (150%) in the 1991-92 budget and follow it up by another cut in the peak rate to 110% in the 1992-93 budget. Because of the potential role of capital goods imports in investment and modernisation the reduction of the import duty on capital goods was accelerated by reducing the general rate to 55% in 1992-3. Some categories of capital goods were set even lower (50% for electronic industry).

The momentum of peak-rate reductions (to 85% in 1993-4, 65% in 1994-5, and 50% in 1995-6) was maintained, often by taking recourse to the recommendations of the Cheliah committee. The fiscal problem did however constrain the pace of tariff reduction, as there was always a pressure on those recommending faster peak rate reductions to produce offsetting gains in revenue. As the peak rate recommended by this committee was 50% this recourse was no longer available once the peak rate had been reduced to 50%. The next peak rate reduction (to 40% in 1997-98) was based on internal recommendations and was part of a bold tax reform plan announced by the finance minister.[33] The peak rate was raised to 45% in 1998-99 by imposition of a surcharge and a special additional duty of 4% was imposed as an analytical counterpart of the State sales taxes on domestically produced goods. The nominal peak rate was reduced to 40% in 1999-2000, but the surcharge was increased to 10% on items having a duty of less than 40%. The peak rate was reduced to 35% in 2000-1, reducing the effective peak protective duty to about 38%. This surcharge was removed in 2001-2 bringing the effective peak rate down to 35%.

Peak rate reductions, along with a gradual elimination of exemptions also helped reduce the variance of rates. Rates on capital goods (general & project linked) were simultaneously reduced to 35% in 1993-4 and 25% in 1994-95 where they came to rest. The well-known (to economists) issue of negative protection for the capital goods industry, which surfaced occasionally in public debate, was addressed in the detailed customs reforms papers papered from 1992 onwards.[34] Following from these, an attempt was made to rationalise the metal-capital good chain. A similar exercise was done for the chemicals chain. The 1993-94 budget set the rate for ferrous metals at 75% to 85% and non-ferrous metals at 55%. The widely dispersed rates on machine tools were also reduced to three (40%, 60% and 80%). Chemicals feed stock

rates were integrated at 15% and on major intermediates at 40%. Rates on personal (baggage) imports were reduced from 225% to 100%. The 1994-5 budget rationalised machine tool rates to 35% and 45% and rates on medical equipment to 0% 15% and 40% depending on social value. It reduced rates on steel & non-ferrous metals to 50%. There was also an attempt to prune end use notifications. In the 1995-96 budget 80% of capital goods rates were unified at 25% and metals at 35% & 40%.

As a result of these customs tariff rate reductions, the customs duty collection rate, which includes "additional duty," the counterpart of domestic excise taxes (CVD) went from 47% in 1990-91 to 44% in 1991-92, 37% in 1992-93, 30% in 1993-94, 29% in 1994-95. The movement in the collection rate since then has fluctuated, rising to 31% in 1996-97 before falling to 27% 1997-98 and 23% in 1998-99. It rose again to 24% in 1999-2000.

3. Exports

The import control system for exports was primarily directed to providing duty free access to imported inputs (intermediate goods) and reduced duty access to capital goods used in export production. Profits from exports were completely exempt from income tax. 100% Export Oriented Units (EOU) and Export Promotion Zones (EPZ) had the additional incentive of 5/8 year tax holiday for profits arising from the 25% Domestic Tariff Area (DTA) sales that were allowed. This incentive system was pretty much in place by the end of the eighties. Paradoxically, concern with misuse of the duty free system sometimes made the system even more cumbersome for honest exporters than the normal system for local producers. The chief objective during the reforms was to simplify the system while making it as comprehensive as possible. In the April 1993 trade policy the EOU-EPZ system was expanded to agriculture & allied exports with 50% DTA sale allowed. Under the Export Promotion Capital Goods (EPCG) scheme for exporters (i.e. obligation to export) the concessional duty on capital goods was reduced to 25% (3 times import) & 15% (4 times import). In April 1994 an Electronic Hardware Technology Park scheme was introduced on par with the EPZ. The concept of Free Trade Zone was finally accepted in 1999-2000.

C. FOREIGN EQUITY OPENING

The long-term considerations arguing for raising the flow of foreign equity capital relative to debt were known even before the crisis.[35] The BOP crisis reinforced these arguments for encouraging external equity vis-à-vis debt financing.

The emergency loans taken from multilateral and bilateral sources to meet the BOP crisis, resulted in a further rise in foreign debt. Foreign debt, which had risen to 25.1% of GDP at end March 1991 (from 22,9% a year earlier) rose further to 33.8% of GDP by end March 1992 (table 1). Part of this rise was due to the rise in the rupee value of foreign debt because of the July 1991 devaluation (or conversely the fall in the dollar value of the GDP due to the devaluation). The need to dispense with these emergency loans and repay them as soon as possible added to the urgency of opening up equity flows to India.

1. Foreign Direct Investment (FDI)

In India's traditional policy framework, Foreign Direct Investment was treated as just another form of foreign saving to plug the "domestic saving gap." In the new reform approach its many other advantages, such as the bundling with knowledge (technology), trade (export) and investment were fully recognised. Given the need for creating confidence among foreign investors FDI policy reform formed part of the first package of industrial reforms in July 1991. The attempt at de-control of FDI took the form of an Automatic route through the RBI that basically constituted a registration procedure. FDI with up to 51% (from 40%) foreign equity was thus freed for a historically defined list of 34 "priority" (intermediate & capital good) industries and international trading companies (dividend balancing condition remained).[36] The 51% level was chosen as this allowed foreign companies to amalgamate profits and losses from such a company into those of the parent company for tax purposes. Technology import was also put under the automatic route subject to conditions on royalty (< 5% domestic, < 8% export) and lump sum payment (< Rs. 1 crore). Any FDI or technology import had to be approved by a newly created Foreign Investment Promotion Board (FIPB). The FIPB was chaired by the Principal secretary to the Prime Minister, so as to ensure speedy approval of FDI proposals outside the ambit of the automatic route.

Within the next nine months, the dividend balancing condition was removed for all except consumer industries. The dividend balancing condition on consumer goods was finally removed in 2000-1. 51% foreign equity was also allowed for FDI in oil exploration, production, refining and marketing and captive coalmine. Non-resident Indians (NRI) and overseas corporate bodies (OCB) were allowed 100% equity in priority industries. This was made automatic in 1997-98. Disinvestments by

foreign investors no longer required RBI permission. Use of own trademarks allowed, and India signed MIGA.

In 1996-97 the automatic approval list was expanded to 48 industries, with three mining related activities allowed 50% and 9 infrastructure activities allowed 74% foreign equity. The latter was raised to 100% two years later. A significant step was taken in 1999-2000 with the introduction of a negative list approach with all other sectors open to automatic approval. Foreign equity limit in manufacturing was eliminated at this time, while some sector specific limits such as in Telecom and Civil aviation remained.

A study done by private international consultancy organisation in 1992 showed that both the FDI policy and its implementation through RBI automatic route and FIPB were comparable to those in S.E. Asia and China. By FDI policy is meant any element of policy that discriminates against (or provides preferential treatment to) foreign nationals and companies wanting to invest in a country relative to the country's nationals and companies. Though domestic policies and procedures that are formally neutral between foreign and domestic investors may have a differential impact on foreigners, these are conceptually distinct from FDI policy. In practice they be as, if not more, important than FDI policy per se.

The gradual liberalisation of FDI rules is an example of phasing being dictated by various pulls and pressures arising from public attitudes (East India company syndrome), organised pressure groups and political resistance. Unlike trade policy where the Commerce ministry is formally responsible and tariff policy for which Finance is responsible, the responsibility for FDI policy for any sector or sub-sector falls within the purview of the ministry that deals with that particular sector. To the extent that the Industry ministry deals with general industrial policy it is also responsible for FDI policy for general industry. Finance also comes into the picture, as it is responsible for the BOP aspects of FDI. For this reason FDI policy for industry made much faster progress within the government and significant resistance to speedier liberalisation came only from outside the government (industry and their civic/public supporters). Because of the universal agreement on the need for FDI in infrastructure sectors, liberalisation for these sectors was also reasonably fast, though in some of these sectors the limit has got stuck below 50%. The resistance to change came mainly from public monopolies or public-private bilateral monopolies that could convince the concerned ministers. Reform of domestic investment policy as well as

of FDI policy in other sectors such as real estate has been relatively slow because responsibility is widely dispersed.

2. Portfolio Capital: FII

As shown in a recent review (2001) of financial sector issues by the World Bank (figure 4.5, page 172) among the emerging economies, India was among the early openers of the equity market to foreign portfolio investment. According to this study only Mexico started a Country Fund for foreign equity investment about 6 years prior to India, while the S. Korean fund was set up only one year before India's. In 1992-93 direct portfolio investment by Foreign Institutional Investors in Indian equity market was allowed. At this time the degree of opening was greater than in almost all East & S.E. Asian emerging economies, but perhaps less than that in the large Latin American emerging economies. In addition to the general objective of raising equity flows there were two other considerations that weighed positively in this decision. Though the domestic saving rate was relatively high the availability of risk capital in the equity market was relatively low. It was thought that the flow of foreign equity would help in developing the domestic equity market, by bringing in world best practice & stimulating competition. Secondly, because equity markets respond much faster than FDI, it was hoped that the foreign equity investors would come in quickly, learn about and disseminate the opportunities available in India (window to the world) and thus help draw in more FDI. Given residual suspicions and fears, as safety precaution all such foreign equity had to be channelled through Foreign Institutional Investors registered with SEBI and RBI (for FERA). The FII category was however quite wide and included pension funds, mutual funds, Asset Management Companies, investment trusts, institutional portfolio managers etc. Both primary & secondary market investments up to 24% of the total equity of any company were allowed. A 70:30 equity: debt ratio was allowed to equity funds. The dividend tax was limited to 20% and the long-term capital gains tax to 10%. Raising of foreign equity funds through Global Depository Receipts was also allowed & encouraged.

The process of reform thereafter was incremental and dependent on the exigencies of the situation including the perception of the BOP situation by the RBI and the fears of equity flow reversals in Delhi. Investment in equity of unlisted companies was allowed in 1996-97 subject to corporate governance type safeguards. 100% debt funds were also allowed to invest in Gilts and listed company securities

the same year, with entry into primary treasury options and access to unlisted company debt securities allowed in 1998-99. The company-specific aggregate foreign equity limits were subsequently raised to 30% (1997-98), and then to 40% & 49% (2001-2), subject to the company boards' discretion. At present foreign nationals can directly invest in the Indian equity market through any SEBI registered investment intermediary. A special regime for Venture capital funds has also been put in place.

3. Indian FDI

In the attempt to raise equity inflows, the potential gains from Indian investment abroad were not overlooked. Just as in the case of inward FDI it was recognised that outward FDI also had the potential to raise the general level of technology and management available to Indian industry. The effort to compete globally could help industry upgrade domestically. The first step was taken in 1992, by putting a time limit of 30 days for approving outward FDI up to $2 million. This limit was raised progressively in subsequent years and its scope expanded.

D. DEBT

The cautious policy towards debt flows was outlined in 1992-93. This included tight control on short-term borrowing and a cap on total External Commercial Borrowing (ECB). At this point, ECB was to have a minimum maturity of 5 years, and could only be used for purchasing capital goods abroad. Priority within the cap was given to Infrastructure, exports, small & medium Enterprises. This policy was gradually liberalised. The strict short-term debt policy resulted in the closing of the FC (B&O) deposit scheme in July 1992, withdrawal of FCNR of less than 1 year in May 1993, and FCNR of less than 2 years in October 1993. As a result of this policy short-term debt declined from 6.1% of total external debt at end-March 1989 to 3.5% of total debt at end-March 2001. Short-term debt was less than 9% of foreign currency reserves at end-March 2001. Even if we include medium and long-term debt with residual maturity of less than a year, it would be less than 30% of foreign currency reserves (i.e. excluding gold & SDRs).

Another element of this policy was to eliminate external commercial borrowing by the government, increase scrutiny of borrowing by public sector companies and to increase the share of private sector in ECB. As a consequence government's share in external debt fell by about 20% points between March 1989

and March 2001, while external private debt had risen to 14.8% of total debt by March 1999.

New institutional structures were created to ensure that control and monitoring of External Commercial Borrowing was economically rational and consistent with the liberalised approach. A High Level Committee on debt management and a Task force on external debt statistics to provide regular reports were set up. A unit was also set up for aggregate debt monitoring & management support. The first status report on External Debt was produced in October 1993. This unit evolved into the External Debt Management Unit (EDMU), which helped improve debt monitoring & management.

The External Commercial Borrowing policy was gradually liberalised, though the Asian crisis revived diffuse fears about liberalisation. It was clear to those who studied the Asian crises that the problem was one of short-term debt, which remained under strict control. In fact it was argued that the missed lesson of the Asian crisis was that medium-long term debt above 1 year (and certainly above 3 years) was not a problem and could freed completely. Greater attention would have to be paid to monitoring and modelling the residual maturity of this MLT debt.

E. EXCHANGE CONTROL

1. Partial Convertibility: LERMS

The Exchange market reform was an example of the most surprising (to the public & outside observers) yet most thoroughly prepared and carefully executed reform. A number of development policy research papers done at the Planning commission between 1989 and 1991 had suggested the possibility of introducing a "dual exchange rate" system to ease the transition from a heavily controlled trade regime to a free market system encompassing both trade and payments.

After the introduction of "Exim Scrips" by the commerce ministry in August 1991, the last paper in this series spelt this out more explicitly in September 1991. This paper envisaged a complete de-licensing of intermediate & capital goods imports and inclusion of these along with, "all currently permitted service trade, technology and labour payments (including remittances)" in the "full fledged Market determined Dual exchange rate."[37] It was noted that the most important reason for switching over to this system was its self-equilibrating property, which would automatically ensure BOP balancing. This system was however administratively tied to what was called a

Foreign exchange certificate (FEC), a more comprehensive cousin of the "Exim Scrip" applicable to services and with proportions of 85% to 90% (instead of 30%). It was suggested that the system could be operated through FEC accounts with authorised banks.

Based on these initial thoughts a comprehensive concept paper on liberalising the foreign exchange market using a dual exchange rate was prepared in November 1991. After several round of comments and discussion, the final version of this paper, "Towards Rupee Convertibility; A Free Market Exchange Rate Channel" was prepared in February 1991which formed the economic background of the decision to move to partial convertibility.[38]

The Liberalised Exchange Rate Management System (LERMS) was announced in the budget and spelled out by RBI the next day. Exporters & remittances would surrender 40% of exchange at the official rate (which was left unchanged at 25.89), while the rest would be converted at the free market rate. This effectively meant that export proceeds were taxed at 0.4 times the difference between the market and official exchange rate. 100% Export oriented units and Export Processing Zones could sell the entire amount at the market rate and were thus not taxed in this way. All capital act transactions (except IMF, multilateral flow against rupee expenditure) would also be at the market rate. Exporters could retain up to 15% of earning in a foreign currency act with an authorised bank. The exchange surrendered at the official rate was to be used by the government for official transactions, thus effectively subsidising these uses by the difference between the market and official rate. Compared to a market exchange rate the system represented a cross tax subsidy scheme in which exporters subsidised certain type of government related imports. This was explicitly designed to minimise the immediate impact on the fiscal situation as well as to reduce any risk on this account at a time when a reduction of the fiscal deficit was thought to be essential for reducing the macro-economic balance.

The announcement of this system in the budget for 1993-94 (18 months after the crisis) took the country as well as foreign observers by surprise. The extent of excitement among common people, those who may never have the opportunity to undertake foreign exchange transactions took even those involved in its preparation by surprise. Even the common person welcomed the freedom that it implied and the confidence that it denoted on the part of the government. Many intellectuals and

economists predicted that there would be huge capital outflows and the rupee would sink to Rs. 40 per USD on the market channel. Some sceptics even predicted a free fall to Rs. 50 per USD. The market exchange rate opened around Rs. 31.27 per US$ in March 1992 and rose to Rs. 30.87 per US$ in January 1993.

Joint Finance ministry, RBI and commerce ministry committees were set up to monitor and manage the system after it was announced and to iron out any kinks that emerged.[39] Several difficult issues such as how to deal with rupee trade arrangements, the alleged adverse effect on exporters and other were hammered out during the year. By the end of 1992 it was clear that the scheme was even more successful than was hoped for by its initiator the ministry of finance. It had been thought earlier that a second year of transition could perhaps be necessary, in which the surrender ratio would be reduced along with a reduction of the number of items on the official exchange channel. The performance of the exchange market, however, gave decision makers the confidence to move directly to an integrated, market based exchange rate system in 1993-4 by eliminating the official channel. Thus the cross tax-subsidy (exporters to govt.) was in operation for only one year. On integration the exchange rate depreciated to Rs. 32.43 per US$ in February 1993, but appreciated thereafter. Till August 1995 it remained below the peak reached in February 1993. Only in September 1995 did it depreciate to Rs. 33.58 per US$.

As the RBI retains the right to intervene (and does intervene) to even out excessive volatility in the exchange rate, in international terminology this system is classified as a "managed float."

2. Gold Import

In October 1991the Remittance in Foreign Exchange Immunity scheme (1991), was introduced for repatriation of funds. This was followed by longer term structural attempts to decriminalise transaction that are considered legitimate in a free and open society and to move them from the "Hawala" to the open market

Reform of the ban on gold imports also received attention in the run up to the 1992-93 budget. Though there were no official statistics, knowledgeable people were agreed that most gold smuggling was financed by labour and other remittances through the "Hawala" (unofficial/ underground) market. The "hawala" operators had a network of agents in the mid-east and other countries, who bought the remittance earnings of Indian migrants and sold it to the smugglers. The rupee leg of the

transaction was completed in India by collecting the payments from the smugglers agents in India and paying the beneficiaries of the worker remittances.

Thus it was essential to liberalise gold imports to eliminate smuggling and ensure that labour remittances to India were sent through official rather than Hawala markets. This would reduce the size of the "Hawala" market and strengthen the newly liberalised market exchange rate channel.

The only contentious issue among the experts was on what duty rate to set. One side argued for a very low duty rate close to 0, with the hope that this could eliminate gold smuggling in one fell sweep. The other side argued that the duty rate should be set competitively to the smuggling margin. Based on available information about normal smuggling costs and risks through the sea route, a duty rate of about 15% was judged to be optimal for maximising revenues.[40] As there is little domestic production of gold the customs duty can be viewed as the notional counterpart (CVD) of a domestic indirect tax on gold.[41] It was further argued that this could be lowered subsequently if smuggling remained high. The former argument however prevailed.

As silver or gold is one of the first quasi-financial assets to be acquired by all households including the poor, gold import liberalisation was expected to benefit the common man by making it cheaper and easier to buy gold.[42] There was some fear that the government would be accused of wasting scarce foreign exchange on inessential consumption. All the experts on the subject were however convinced that opening of gold imports would merely shift the whole market above the line with no adverse effect on BOP. There would also be a benefit in terms of additional customs revenue. The compromise solution was to allow gold imports only by returning Indians.[43] They were allowed to import Gold up to 5 Kg at a duty of Rs. 220 per 10 gm. (3%). Subsequently silver import was also freed at a duty of Rs. 500 per Kg.[44] These duty rates were made applicable in 1994-95 to gold and silver imported as personal baggage.

Further liberalisation of gold imports took place through a transfer of gold to list of commodities importable under the Special Import License (SIL). The SIL was an entitlement given to exporters to import specified items such as gold whose import was otherwise restricted or banned list. Subsequently selected banks were allowed to import and sell gold freely in the domestic market. The case for complete freedom for gold imports rested on the argument that this would allow specialist gold import and sale companies to come in and thus reduce margins through competition. This would

also allow customs tariffs on gold to be closer to those on other commodities. The counter argument, that import of gold has monetary implications and thus must be handled differently from other commodities has, however prevailed so far. Prima facie with all vestiges of the gold standard removed this argument is not very convincing.

By comparing the estimates of the World Gold Council on import of gold into India, with the official Indian data on imports one can get an idea of the trends in smuggling of gold into India. If it is assumes that the difference represents the amount of gold that is smuggled into India, then the supply of gold through the smuggled gold declined from virtually almost 100% before liberalisation to 48% by 1995-6 and 39% by 1996-97. Up to 1996-97 most (87% of) imports were through the NRI baggage route, which had been opened up in 1992. 13% were through the special import license given to exporters, a route that was opened subsequently. After the opening of the normal (OGL) route to selected importers the proportion of imports through the normal route increased rapidly to reach 42% in 1997-8, 93% the next year and 99% in 1999-2000. However, even in this year about 36% of gold imports were through the smuggling route. A rise in import duties during 1998-99 (to Rs. 400/ 10gm in January 1999) increased the incentive for smuggling, which increased rapidly to 54% of total import the next year (59% in 2000-1). To eliminate smuggling, gold import needs to be treated like any other import, so that anyone can import it (unrestricted OGL). The duty rate can be set (keeping in mind that gold is a relatively easily smuggled high value good) so as to maximise customs revenue collection.

3. Current Account Convertibility

Restrictions relating to the non-trade elements of the current account were also addressed subsequently. The foreign exchange rules for business travels were the first to be eased. In 1994 several measures for liberalisation of current account transactions were announced. These included indicative limits for travel etc. on the basis of which foreign exchange could be bought by citizens directly from authorised FE dealers. In August 1994 India accepted the IMF article VIII and thus the rupee officially became convertible on the current account. Further liberalisation of exchange purchase rules for current act transactions took place in 1995-6 with Authorised Dealers allowed to sanction funds above indicative limits themselves and 1997-98 with higher indicative ceilings for travel, studies medical and other service

purchases from abroad. A new Foreign exchange Act was introduced in 1999-2000, based on a conceptual approach that current account convertibility must be codified in the new law and capital controls minimised and based on a regulatory rather than control approach.[45]

IV. IMPACT OF NINETIES' REFORM

External sector reforms have been the most successful of all the reforms that were undertaken in the nineties. They have confounded all the fears of Indian critics and the sceptics that imports would go through the roof and current account deficits would balloon. They confirmed the faith of the reformers that a well-regulated market based foreign trade and payments system would be more efficient and equally stable. Both the trade and invisibles account are now much more resilient than they were in the eighties. Capital inflows are now much more diversified and therefore much less risky for the country. Both FDI and portfolio flows increased rapidly through the mid-nineties. The strength of the external account rests substantially on the flexibility of the "managed float" in responding to changes in demand-supply conditions in the exchange market. Difficulties and temporary weakness have emerged and will arise in the future *if and only if* considerations other than market supply-demand determine the management of the floating exchange rate.

One result of the success of the capital flow liberalisation was the unprecedented surge in equity capital inflows between October 1993 and November 1994. Based on our analysis and internal discussions we developed a macro-management strategy for this "Dutch Disease" problem that was quite different from the standard one proposed by the IMF.[46] Though other countries in other time periods have undoubtedly used variants of the same policy our experience in this regard may also have useful lessons for others.

Even in the case of the successful trade, and capital account liberalisation, however, the country has not in my view moved as far or as fast as it could have without taking undue risk. The Asian crisis and the economic sanctions share some of the blame as they the revived the primal fears of the sceptics, which were gradually being laid to rest. Too often, however, has this spectre been used to avoid or slow down sector external reform. The 1990s experience shows that external liberalisation will pay further dividends probably in the form of higher growth.

Contrary to the perception of many outside observers the Indian economy has become more open relative to other emerging economies. India's ranking with respect to trade, FDI and portfolio flows has improved noticeably over the eighties. Only in the case of tariffs is there is no relative improvement, probably because India was a complete outlier. There is however still a very long way to go to attain a ranking in trade, and FDI that is commensurate with the size of the economy. Trade as well as FDI remain pathetically low when measured as ratio to GDP and ranked accordingly. China's success in trade and FDI is not only a challenge but also a message of hope; that India too can make a quantum jump by greater opening of the economy and ensuring that domestic economic policies are conducive to the exploitation of the growth potential of trade and FDI.

A. TRADE

The opening of the economy to international trade has successfully raised the share of trade in GDP. Goods and services trade has increased from an average of 15.1% of GDP during the eighties to an average of 24.8% of GDP in the nine years (1992-3 to 2000-1) after the crisis. Similarly merchandise trade, which had averaged 12.6% of GDP in the decade of the eighties, has increased significantly to an average of 20.1% of GDP in the post crises period (table 3). Contrary to the expectations of reform critics, the change on the import side has been less than on the export side. Exports (imports) increased from 4.7% (7.9%) of GDP in the decade before the crisis to 8.5% (11.6) in the nine years succeeding it (i.e. post crisis period). As a consequence the proportion of imports financed by exports has increased from 0.59 in the pre-crisis period to 0.74 in the post-crisis period (table 3).

For a dis-aggregated view one has to go from the payments data to customs data. The growth of customs exports in US$ value accelerated from an average of 8.1% during the pre-crisis years to an average of 10.9% during the post-crisis years (table 2). This increase in growth was solely due to the acceleration in the quantum of exports, whose growth rate almost doubled from 5.4% per annum in the first to 10.2% per annum in the second period. This compensated for a deceleration in the growth of unit values from 10.3% per annum in the pre-crisis period to 7.7% per annum in the post-crisis period. The net terms of trade have actually improved in the post-crisis period. Despite the slowing down of unit value growth rates they remain high by

World standards. World merchandise (manufacture) export unit values increased by 2.7% (2.9%) per annum during the eighties and 0% (0.5%) per annum in the nineties.

Manufactured exports responded well to the trade reform. Manufactured exports increased from an average of 60.7% of total exports in the eighties to an average of 76.1% of total exports after the crisis (table 3). As result the ratio of manufactured exports to GDP more than doubled from a pre-crisis average of 2.8% to a post-crisis average of 6.3%. Its share of total exports also increased from 60.7% to 76.1% between the two periods.[47] The importance of manufactured exports to domestic manufacturers has correspondingly increased. This is best captured by the ratio of manufactured exports to GDP from registered manufacturing, which has also more than doubled from a pre-crisis average of 6.4% to a post-crisis one of 13.2%. Thus even with the many domestic controls and policy distortions still hampering manufacturing in India this has sector has demonstrated its comparative advantage vis-à-vis other tradable sectors.

On the import side oil and non-oil imports have followed a significantly different path. Oil imports have increased marginally by 0.2% of GDP after the crisis (table 3). Non-oil imports have in contrast jumped from a pre-crisis average of 5.2% of GDP to a post-crisis average of 7.6% of GDP. Given the relatively low price elasticity of demand for oil, the changes in value ($) of oil imports have been largely driven by OPEC determined prices and to a small extent by domestic disruptions in supply.[48]

Elasticity pessimists in India have generally been very concerned about the effect of opening of the economy on the manufacturing sector ("de-industrialisation"). That these fears have proved unjustified can be seen from the value of net imports of manufactured products (Import-export). This has fallen dramatically from a pre-crisis average of 8.9% of GDP to a post-crisis average of 2.5% of GDP (table 3). In fact exports of manufactures exceeded imports of manufactures (i.e. a net surplus) during each of the four years from 1991-2 to 1994-5. This shows that manufacturing trade was highly responsive to the exchange rate devaluation of July 1991 as predicted in Virmani (1991).

Despite all these changes in the trade account, the trade deficit has not changed significantly in the post-crisis period. It averaged 3.1% of GDP in the post-crisis period, compared to 3.2% in the eighties and 3.0% in the second half of the eighties. The trade balance was in fact stronger than is apparent from the bare

numbers, as the post crisis imports include a substantial proportion of gold imports that earlier were not captured in the import numbers (smuggled). The break-up of the USSR also disrupted established trade patterns and new markets had to be found to replace those lost in the USSR & E. Europe. Further despite the Asian crisis in late 1997-98, the trade balance improved in 1998-99.

Paradoxically, these changes in exports and imports have occurred despite the fact that the Real Effective Exchange rate averaged the same in the post crisis period as in the pre-crisis decade. This is however quite misleading as the real effective exchange rate depreciated by an average of 1.9% per annum in the nineties, because of a depreciation of 15.1% in 1991-92 and 11.1% in 1992-93 (tables 1 & 2). The real depreciation rate was therefore only 0.1% per annum slower than in the eighties and 0.2% per annum slower than in the seventies. As a result India's share in world exports continued to increase from 0.52% in 1990 to 0.67% 2000 (table 4). Because of gradual lifting of QRs and reduction in customs tariffs this increase was higher than in the previous decade.

Several commentators have, however raised the issue of a slowing and perhaps even some reversal of reforms (tariffs, exchange rate management) during the second half of the nineties and its affect on exports and balance of trade. A comparison of the performance in the second half of the nineties relative to that in the first half can shed some light on this issue. The ratio of exports to GDP, which was identical during the two halves of the eighties (4.7%) jumped to 7.3% in the 1st half of the nineties and thence to 8.3% in the 2nd half of the nineties. It was 9.5% of GDP in 2000-1 (table 1).

The trajectory of India's share in world merchandise exports shows a similar trend. India's share of world trade increased by 0.08% point between 1990 & 1995 and by 0.07% point between 1995 and 2000 (table 4).

The share of manufactured exports in India's total exports also increased during the nineties. It went from an average of 74.7% during the 1st half of the nineties to an average of 76.2% in the 2nd half of the nineties(table 3). This increase was however significantly less than 8% point increase in the share of manufactured exports between the 2nd half of the eighties and the 1st half of the nineties. The deceleration in manufactured export growth rate over the nineties may be partly due to the slowing of real effective depreciation to 2.9% per annum during the 1st half and to 0.8% per annum during the 2nd half of the nineties (table 2 & figure 4).

The trade deficit after falling sharply in 1990-1994 (2.1% of GDP) has increased even more sharply in 1995-1999 average 3.6% of GDP (table 3). This is higher than in 1980-1984 (3.5%). It touched 4% of GDP in 1999-2000 but fell back to 3% in 2000-1. The increase in the import GDP ratio over the nineties is driven by the increase in manufactured imports (tables 2 & 3). The net imports of manufactured goods, which become negative (i.e. net exports) have risen in the 2nd half of the nineties. They still remain well below that in the 1st half of the eighties. There are a number of reasons for these developments. The euphoria that preceded the Asian crisis created large capacities in many (un differentiated) products in Asia, that has been putting downward pressure on global prices of manufactured goods. This combined with the slower pace of real depreciation (0.8% per annum) during the 2nd half of the nineties compared to the 1st half (2.9% per annum), to eliminate any remaining "water under the tariff." Indian manufacturing is therefore subject to competitive pressure for the first time. The solution is to increase competitive efficiency further through faster tariff reductions combined with greater freedom to exchange markets to depreciate.

Another factor is the slow speed of fundamental reform in the power and railway sectors that has raised the effective cost (direct cost, rationing, quality) of these two vital non-tradable goods. This means that the real exchange rate as measured by the ratio of the virtual cost of non-tradable goods to prices of tradable goods has probably risen faster than the tariff adjusted real exchange rate. When the real cost of other domestic distortions such as labour inflexibility is added, this denotes a loss in competitiveness of Indian producers of import substitutes that has not been fully compensated by firm specific productivity improvements. As long as the overall balance of payments is in equilibrium the solution lies in domestic reform rather than in faster exchange rate depreciation. This recommendation does not however apply when the economy is subjected to external shocks such as the Asian crisis or the lagged effect of external economic sanctions. In this situation the exchange rate must be allowed to adjust in preference to seeking special financing through government owned financial institutions.

Imports of capital goods as a percent of manufactured imports have also fallen after rising to a peak of 33% during 1993-4 to 1996-97, though they were still in the 2nd half of the nineties a higher proportion of manufactured imports than in the 1st half of the eighties. This rise is partly due to the decline in FDI from 1997-98 onwards

and partly to the decline in domestic investment (GDI) over the same period. The ratio of capital goods imports ($) to domestic production of capital goods (IIP), which rose during the FDI and GDI boom of 1993-4 to 1996-97, has since fallen. This is a precursor of lower productivity growth in future. Elimination of remaining controls on domestic investment & production (SSI reservation, outsourcing (CLA), drugs, sugar, petroleum, fertiliser, coal, rail transport), regulatory & other reforms in infrastructure and elimination of remaining restrictions on FDI (next sub-section) can help revival of both GDI and FDI.

B. CURRENT ACCOUNT

The invisibles account improved significantly in the post crisis period with inflows rising from the average of 1.4% of GDP in the eighties to 2.0% of GDP in the pre-crisis period (table 3). Thus these invisible flows are back to the high levels seen in the first half of the eighties (i.e. five years). That some of this improvement is due to the reform of gold policy can be seen from the big jump in remittances through official channels. Private transfers, which had averaged 1.1% of GDP in the pre-crisis period, have more than doubled to 2.5% of GDP in the post-crisis period (table 3). The investment & other income outflows after rising to a peak of 1.4% of GDP in 1991-2 and 1992-3 declined progressively to 0.8% of GDP by 2000-1 (table 1). As indicated above, in the earlier years external debt was the driving factor while in the latter years FDI and portfolio flows have also started playing a role.

Contrary to popular perception *non-factor services, which include software exports, have not played a role in this improvement. This is primarily because software exports have offset declines in other non-factor services*. The sharp increase in software exports is reflected in miscellaneous receipts (not net) from 0.6% of GDP in the eighties and 1st half of the nineties to 1.3% of GDP in the 2nd half of the nineties. The improvement on this account has however been offset by a deterioration in net travel receipts. This points to the need for addressing the basic problems that bedevil foreign tourists coming to India, like lack of hygiene & health (tourist sites and hotels), information (about tourist sites, places & cities) and common curtsey (from immigration counters to local transport to tourist sites) & entertainment at tourist destinations.[49]

The most critical areas of infrastructure reform from the tourism perspective is transport. The quality and efficiency of airports and domestic airlines can be

improved through increased competition. Domestic airlines must be allowed to enter into joint ventures with foreign airlines and the foreign equity proportion raised at least to the level of Telecom. Airport services can be unbundled so that government can focus on improvement in air traffic control & landing equipment and security & safety procedures. The rest can then be left to the private sector. Railway transport can also play a part in tourism earning if the metro railway stations are privatised and turned into clean commercial hubs and the supply of passenger rail services opened up to private entry and competition (with no price control).

There was also a minimal effect of the Asian crisis on invisibles with a decline of 0.2% of GDP in the invisible surplus in 1998-99 and a strong bounce up the next year (table 1). The improvement in invisibles earning has ensured that there was little criticism of the current account liberalisation.

As a result of the strengthening of the invisibles account, the current account deficit averaged 1.1% of GDP in the post-crisis period (table 3). There is no evidence of deterioration in the current account over the decade, with the CAD being marginally lower in the 2nd half (1.2%) of the nineties compared to the 1st half (1.3%). The CAD is lower than the pre-crisis average of 1.8% of GDP, the 1.5% average of the 1st half of the eighties. The position was even better (0.5%) in 2000-1. The external reforms have therefore been successful in putting the current account balance on a sustainable path.

C. FISCAL DEFICIT

The total fiscal deficit during the past five years is comparable to the fiscal deficit in the 1st half of the eighties. This has not prevented the current account deficit from declining dramatically. The difference in impact is due to the external sector and other reforms that have improved the flexibility of the economy. The fiscal adjustment that has taken place during the nineties may however be underestimated because quasi-fiscal elements such as exchange guarantees have also been absorbed. The high fiscal deficit may in future act as a drag on economic growth even if its impact on the external deficit is lower.

The central government fiscal deficit declined from an average 6.6% of GDP during the pre-crisis decade of the eighties to an average of 5.2% of GDP in the post-crisis period (1992-3 to 2000-1). This 1.4% of GDP decline was double the 0.7% of GDP decline in the current account deficit between the two periods (table 3). Using

the co-efficient of our estimated equation, the decline in the fiscal deficit explains about 0.65% of the improvement in CAD while the rest is explained by the average real effective depreciation of 0.7% per annum in the post-crisis period.

Underlying this unchanged quantitative picture are a number of changes that may have affected the links between the fiscal deficit and the external account and other variables. Firstly exchange guarantees on NRI deposits had to be paid by the government after the 1991 devaluation. There has also been a conscious effort to reduce exchange and interest guarantees on debts incurred by Public financial institutions and public sector units. The reduction of Statutory SLR requirements on banks to hold govt. securities coupled with payment of market interest on these liabilities have eliminated the implicit tax on banks while raising govt. interest payments. Customs duty reforms have similarly raised the efficiency of the tax system, while reducing revenue collections. Capital expenditures have been cut much more sharply then salaries and wages, thus decreasing the share of tradable goods in the govt. expenditure basket. The overall result is that the Primary deficit has fallen much faster than the fiscal deficit (by 2.5% point of GDP); the efficiency of the tax system has increased while the quality of expenditure has declined.

Prima facie the fiscal picture appears bleaker if one looks at the total deficit of the Centre and the States (C&S). The total fiscal deficit (C&S) has declined by only 0.9% of GDP, from an average of 8.1% of GDP in the pre-crisis decade to an average of 7.2% in the post-crisis period (1992-3 to 1999-2000). The total fiscal deficit (C&S) increased by 1.6% of GDP between the 1st & 2nd half of the eighties. It then declined by 1.7% of GDP in the post-crisis period. Though the average fiscal deficit in the second half of the nineties (7.2% of GDP) was marginally lower than in the first half off the eighties (7.3% of GDP) in 1999-2000 it was again up to 7.9% of GDP (table 1). Such a high fiscal deficit also makes it difficult to respond to cyclical fluctuations with an active fiscal policy. Further the underlying problem of efficiency and productivity of government expenditures remains to be addressed. Thus the fiscal problem remains a potential threat to the economic health of the country.

Regression equations using a slope dummy for the post crisis period, suggest that the impact of the central fiscal deficit on the current account is a fraction of what it was till 1991-92.[50] Similar results are obtained if the Central govt. Primary deficit is used in the equations instead of the central govt. fiscal deficit. This is not surprising given the fundamental changes in the external sector. One of these has

been to reduce the share of government in total external debt thus reducing the direct link between the fiscal deficit and external borrowing. More generally the reduction in controls and restrictions have changed the nature of the link between government behaviour and private actions. Thus one outcome of the fiscal & external sector reform (including the managed floating exchange rate) has been to reduce the external spill over effect of the fiscal deficit on the current account deficit as well as its effect on inflation (more open economy).

D. CAPITAL FLOWS

The capital account of the balance of payments has also shown corresponding improvement. Capital inflows (excluding "other capital") increased from an average of 1.6% of GDP in the pre-crisis decade to an average of 2.2% of GDP in the post-crisis period (table 3). Even more significant than the overall increase was the increase in foreign investment inflows from negligible in the eighties to an average of 1.1% of GDP in the post-crisis period. The contribution of External assistance (and rupee debt) declined by 0.2% of GDP (each). The contribution of External Commercial Borrowing increased by 0.1% of GDP while that of NRI deposits remained unchanged. Thus the objective of raising the equity-debt ratio of external liabilities has been achieved.

FDI responded extremely quickly to the new policy announcement in July 1991, recovering to $129 mi in 1991-2 itself and then more than doubling to $315 million the next year (table 1). It continued to grow fairly rapidly to reach $3.56 billion by 1997-98. Between 1990-91 and 1997-98 FDI grew at a compound annual rate of 67% (simple average of 73% for 1991-92 to 1997-98). This rapid growth was followed by the Asian crisis and economic sanctions, resulting in a decline of about 30% in 1998-99 and 13% in 1999-2000. Though much of the decline in 1998-99 was part of the over all decline in FDI flows to emerging markets because of changed risk perceptions, India did not share in the recovery of flows in 1999-2000. Despite positive growth in 2000-1 India's share in FDI to emerging markets, remains below the peak reached in 1997-98.

During 1990-1 to 2000-1 about half of the foreign investment inflow was FDI and the other half portfolio (FII & GDR). This suggests that the opening of the equity market has been relatively more successful than the opening of FDI. This is not due to FDI policy alone. In the manufacturing sector where 100% automatic FDI is

allowed in all areas open to large domestic industry there is only one specific restriction that applies to FDI but not domestic investment. This is the requirement that an existing foreign direct investor must obtain a no objection from the Indian JV partner before starting a new independent unit. This restriction has no relevance to green field investors and those without a domestic JV partner, but may have slowed the growth of existing FDI. The more important problem in the case of FDI in the manufacturing sector is domestic policy constraints such as SSI reservation and labour policy, rules & procedures that make China a more attractive destination than India. This discourages both Foreign and Indian companies from investing in a slew of labour intensive exportable sectors.

In the case of Infrastructure, foreign equity limits exist in two major sectors, Aviation and Telecom. The 49% limit in Telecom has clearly had a negative affect on FDI inflows into this sector and should be removed. The ban on foreign airlines in domestic aviation has been a more important factor in aviation and needs to be removed forthwith. A generic problem affecting many infrastructure sectors has been one of regulatory capture (and potential capture-creating regulatory risk) by Public sector monopolies abetted by their supervisory ministries. This problem has taken an excruciatingly long time to sort out thus slowing investment in infrastructure. A modern independent regulatory system in all infrastructure sectors would help to accelerate both foreign (FDI) and domestic investment.

In the case of the power sector the most fundamental problem is the "T&D Mafia," that has a vested interest in maximising power theft by consumers. This problem has to be addressed through a special police task force that arrests the corrupt employees and sequesters their ill-gotten gains. Some amendments may also be required in the, "The Prevention of Corruption Act" to make it possible to freeze the financial returns from investment of stolen power by employees. A break up of the "T&D mafia" will also make it easier to solve the secondary problem of raising user costs to economic levels. It will also make it possible to attract private entry into the power sector within a competitive generation industry and well regulated distribution & transmission sub-sectors. In the meanwhile greater transparency in the implicit tax-subsidy arrangements and their replacement by an explicit tax-subsidy regime will make it possible for private generators to operate outside the strangle hold of the SEBs.

In non-infrastructure services, particularly in some service sectors that have attracted large investments in other countries, domestic reforms as well as liberalisation of FDI has been painfully slow. The entire policy framework for private entry into provision of urban infrastructure, real estate, housing and retail trade (particularly grocery super markets) needs to be reformed to attract both domestic and foreign investment.[51]

Equity flows also responded quickly to the policy change, rising from almost nil in 1991-92 to $244 million in 1992-93 and then to an incredible $3.57 billion in 1993-94 followed by another $ 3.8 billion in 1994-95 (table 1). The quarterly build-up of equity flows was even starker and created issues for monetary and exchange range management. Equity flows increased from $307 million in July-Sept 1993 to $ 935 million in Oct-Dec 1993 and to $2283 mi in Jan-March 1994, before stabilising at a lower rate of about $1 billion a quarter in the next three quarters. Thus the four quarters of calendar year 1994 saw a portfolio inflow of $ 5.5 billion with an unprecedented $ 6 billion flowing in over a 12 month starting in mid October 1993.

In analysing the reasons it was found that this was partly due to the push provided by the reduction of US interest rates, but mainly due to the opening of the equity market and the favourable environment created by the broad based economic reforms.[52] Given the accelerated build up, part of this incredible flow was therefore viewed as a portfolio stock adjustment. In the absence of any historical data it was, however, difficult to determine how much of the increased flow was temporary and how much permanent. In dealing with the monetary and exchange rate implications of the flow a three fold strategy was suggested. (a) To absorb the temporary part of the upsurge in reserves and to partially sterilise the reserve build up. The inflation rate would be carefully watched so that the sterilised proportion could be stepped up if pressure built up on the inflation front, (b) To not sterilise the permanent increase in the inflow so that it could increase the capital available in the economy, reduce real interest rates and stimulate investment, and (c) to accelerate the opening of the current and capital account to improve the efficiency of the economy so that these permanent inflows would be productively utilised.

The build up of reserves meant that the nominal exchange rate would not appreciate. It was our argument that partial (incomplete) sterilisation was essential to allow this newly available source of saving to be translated into lower interest rates that would stimulate investment. In our implicit model it was understood that there

would be some pressure on prices, but *it was our judgement that the real appreciation would be lower through this channels than if the capital flow was translated instantaneously into a nominal appreciation* (i.e. no purchases by the RBI to build reserves).[53] Given the thinness of the foreign exchange market, nominal appreciation to equilibrate an inflow of $6 billion over 12 months would have been in the double digits. Inflation as measured by the wholesale price index in fact increased by about 4.3% in 1994-95 (relative to the average inflation in 1993-4 & 1995-96).

There was an alternative monetarist view that this equity flow was due to the high Indian interest rates produced by the higher fiscal deficit in 1993-94. Responding to the fears of the monetarists, part of the inflow, could be sterilised. Our preferred alternative to the monetarist approach was however, to accelerate the pace of external liberalisation, including on capital account, and thus absorb the permanent component of the inflow to increase efficiency of resource use and thus stimulate investment and growth.

India's debt statistics reflect the reduction in the dependence on debt. The total external debt to GDP ratio has declined from a peak of 33.8 % at end March 1992 to 19.8% of GDP at end March 2000 (table 1). The share of short term in total debt has been reduced from a peak of 10.2% on March 31st 1991 to 4.1% on March 31 2000. The ratio of short-term debt was only one-tenth of foreign currency reserves (excluding SDRs & gold) at the latter date. On end March 1999 medium & long term debt of residual maturity less that one year was less than 1.5 times the short term debt, which was about 4.5% of total debt and 1/10th of reserves. Thus even if the residual short term debt element of the medium & long term repayments coming due within the year 1999-2000 is added to the short term debt, this constituted only a quarter of foreign exchange reserves at the beginning of the year.

The effectiveness of the external sector reforms was demonstrated by the ease with which the balance of payments weathered the double whammy of the Asian crisis in late 1997-8 and the nuclear related economic sanctions imposed in early 1998-9. The current account deficit declined as a percent of GDP in the subsequent years. As anticipated, the most clear and significant effect of this shock was on equity inflows, which declined from 1.3% of GDP in 1997-98 to 0.6% of GDP in 1998-99 (table 3). It had been anticipated that FDI may slow down temporarily and equity inflows stop for a while.[54] FDI flows did in fact decline by 31% in 1998-9 and by 12.6% in 1999-2000 before recovering the next year (table 1). Our forecast of

portfolio flows turned out to be marginally over-optimistic. There was an outflow in each of the 1st three quarters of 1998-99, of $423 mi, $117 mi and $149 mi respectively (table 2A). Almost the entire outflow was, however made up in the last quarter of 1998-9 with an inflow of $ 621 mi, leaving a net outflow of $68 mi for the year as a whole. As a result total foreign investment declined from 1.3% of GDP in 1997-98 to 0.6% of GDP in 1998-99. They recovered quickly to 1.1% of GDP the next year (table 1).[55]

E. BOP & REER

The strengthening of the Balance of Payments as a result of the external sector reforms was (also) reflected in the overall balance and the real exchange rate. There was an annual average reserve accumulation of 1.1% of GDP in the post crisis period compared to the annual draw down of 0.2% of GDP during the pre-crisis decade. The real effective exchange rate showed no depreciation on average during the post crisis period after depreciating by an average of 2% per annum during the eighties.

The issue of temporary fluctuations and anticipated temporary shocks and how to deal with them has arisen in the context of the borrowing through India Millennium Deposits in 2000-1. Consumption-smoothing arguments suggest that short-term borrowing or temporary draw down of reserves would be justified if an adverse shock to imports, exports or an item of the capital account is temporary. The alternative is to let the exchange rate depreciate when the adverse shock hits and then appreciate after the shock has reversed itself. Medium-term borrowing is, however, inappropriate to meet a short-term shock. If the external fluctuation is of uncertain duration, the policy choice between external borrowing and allowing the currency to depreciate is much more stark. In the case of a shock that could last more than a year, the exchange rate should be allowed to depreciate sufficiently to improve the trade balance and make the financing unnecessary. The lesson of the 1990-91 BOP crisis is that external borrowing through government owned financial institutions is a palliative, which ultimately weakens (rather than strengthening) the external balance.

F. COMPARATIVE PERSPECTIVE

The comment has often been made that though India may have stepped up the pace of reforms during the nineties, it has not improved its position vis-à-vis other countries as they have all been reforming at the same or faster pace. This paper

addresses this issue for the external sector using a number of parameters for which international comparative data is available.

India's merchandise export growth increased from 7.7% per annum during the eighties to 8.7% per annum during the nineties (table 4). This was faster than the rate of growth of world exports at 5.4% and 6.3% for the two periods respectively. As a result the share of India in World exports improved from 0.42% in 1980 to 0.52% in 1990 and further to 0.67% in 2000. India's growth was however slower than the average for Asia during the eighties, but rose above it in the nineties. India's growth ranking consequently improved from 52 during the eighties to 46 during the nineties. Most of the economies whose GDP growth was faster than India's during these decades, like China, Korea, Singapore, Thailand, Malaysia, Ireland & Vietnam also had a faster growth of exports. Other countries like Hong Kong, Bangladesh, Sri Lanka & Mexico had a faster growth of exports than India, but their per capita GDP growth was slower than India's.

The improvement in the trade share was from 0.57% in 1980 to 0.60% in 1990 and further to 0.71% in 2000 (table 4). This improvement was reflected in the country ranking (total trade in US$ or share of trade). This ranking improved from 43 to 33 to 27 (table 4). Thus the improvement in rank was less than commensurate with the improvement in share, suggesting that a number of competitor countries improved even more. The import rank was slightly better and the export rank slightly lower than the trade rank.

Given that India's GDP in US$ was 12th highest in the world India's trade rank (in terms of US $ value of trade) of 27 clearly shows that India is still a very closed economy. Economies that are smaller than India's in US $ GDP, but are relatively large like Korea, Australia, Russia, Netherlands, Switzerland, Belgium & Sweden have a higher value of trade than India. The reasons are not far to seek. At the end of the decade India still had the highest tariffs in the World with only a few exceptions. Of the 70 countries for which (weighted) average tariff rates are available in the World Development Indicators India had the third highest rates (table 4).[56] Only Pakistan and Cameroon had higher rates. Despite the fact that the India had reduced its tariff rates by 40% over a five-year period (the 22nd highest reduction), its overall rank improved by only one position. In fact this happened only because Cameroon raised its tariff rates sharply.

Among the countries having a lower weighted average tariff than India (29.5%) are its neighbours, Sri Lanka (22.5%), Bangladesh (22%), Nepal (18%) and China (15.7%). This creates additional problems of import diversion and smuggling. The fact that India has some form of free trade arrangement with several of its neighbours means that it becomes profitable to import many items into these countries and then export them to India. Any objective assessment would suggest that Indian industry can surely compete with industry in these countries and there can be no rationale for an average rate higher than that of Nepal. Thus the commitment made in the last budget, to reduce peak rates to 20% must be implemented as soon as possible. In fact it should be our endeavour to bring the weighted average rate subsequently down to that of Thailand (15%) and then to that of Chile (9.9%).

Customs duty collection rates are available for a larger set of countries (about 114 in 1999). According to these India ranked 103rd in 1999 (table 4).[57] Only 11 out of the 114 countries had a higher customs duty collection rate than India. Among the 11 countries are Malawi, Myanmar and Syria. Even though the collection rates for India (and possibly other countries) includes the counterpart of domestic taxes this is offset by exemptions such as for inputs & capital goods used by exporters.

The comparative picture with respect to FDI contrasts somewhat with that for trade. India's position at 39th with respect FDI inflows (US $ value) was better than its trade rank in 1980 (table 4). India's overall rank however worsened during the eighties to reach 42nd in 1990. Since then it has improved significantly to 33rd in 1999, but is now worse than its trade rank. If the rich countries are excluded as is often done and consider only the emerging markets & developing countries, then India was ranked 14th in 1999 up from 22nd in both 1980 and 1990. Even Russia and Angola however had more FDI inflow than India in 1999.

Domestic resistance to further opening of FDI has focused on the fear of foreigners taking over Indian industry/economy. A good way to quantify this fear in a comparative perspective is to look at the share of FDI in gross domestic investment (GDI). In 1999 the ratio was only 2.1% for India compared to 5.3% for Russia, 8.5% S. Korea, 10.5% for China & Mexico, 21.3% for Brazil 23.8% for Thailand and 25.1% for Singapore (table 8A). What is most telling is that both China and Singapore have among the highest domestic saving rates in the World. They recognise that the knowledge, initiative and international marketing links that comes with FDI is much more important than the fact that it also constitutes use of foreign

saving in the domestic economy. In terms of the comparative rank this puts India at 126 out of 201 countries, with only about 25 countries having a lower role for FDI in the domestic economy. Thus fears about the role of foreign investment in the Indian economy are quite unjustified given the very low proportion of FDI in Indian GDI.

The position with respect to portfolio flow is better than for FDI. In the WDI data base only emerging market data is available. According to this India's rank has improved from 14th in 1990 to 6th in 1999 (table 4). Only S Korea, S. Africa, China, Thailand and Brazil received more portfolio flows in 1999. Except for S. Africa the other four countries also received more FDI than India in 1999. Because of foreign equity holding limits, the weight of Indian equity in emerging market equity indices has been reduced in the past year.

The improved access to external capital markets during the nineties has reduced the relative interest cost to the Indian Economy. The lending rate spread over LIBOR gives some indication of this convergence. Because of fluctuations we use five-year averages over the last 15 years. India was ranked 55th over 1985-89, 45th over 1990-94 and 37th over 1995-99 (table 4). Thus the opening of the capital account has also helped lower the relative cost of capital, but India still has a long way to go.[58]

The comparative picture presented above confirms, for those who still need such confirmation, that foreign direct investors are not knocking down our gates to enter the Indian markets. The least we can do is to remove unnecessary barriers created by FDI policy. One of these is to put all foreign direct investment into India on the 100% automatic route (as manufacturing & much infrastructure already are). A fair and transparent safeguard would be to apply this unlimited automatic route only on a reciprocal basis. Thus a foreigner from a country that does not allow Indians' to own TV stations would have to go through the FIPB route for investment in Indian TV stations. In a few sectors in which national security conditions may be relevant, a security clearance can be prescribed for foreign nationals & companies from sensitive countries (for instance those harbouring terrorists). All laws that apply to Indians would assuredly continue to apply to foreigners (for instance land ceiling laws in agriculture). Rules and regulations applicable to professional practice by foreigners would have to be made more explicit (reciprocity rule would also be applicable here).

To retain and strengthen our equity ranking, foreign equity inflows should be freed from the remaining controls. Further liberalisation of equity inflows have to go hand in with domestic liberalisation of financial markets and strengthening of the regulatory system for these markets. Restrictions on foreign equity investment in the Indian capital market can be removed immediately by allowing 100% foreign equity in all listed companies.

V. CONCLUSION

The liberalisation of India's external sector during the past decade was extremely successful in meeting the BOP crisis of 1990 and putting the Balance of Payments on a sustainable path. These reforms improved the openness of the Indian economy vis-à-vis other emerging economies. Much, however, remains to be done. India's economy is, however, still relative closed compared to its "peer competitors." Further reduction of tariff protection and liberalisation of capital flows will enhance the efficiency of the Indian economy, and along with reform of domestic policies will stimulate investment and growth.

The main lesson of the nineties is that liberalisation of the current and capital account increases the flexibility and resilience of the Balance of payments. This applies to trade, invisibles, equity capital, medium-long term debt flows and the exchange market. A corollary lesson is that even though the balance of trade may not be the cause of BOP problems (excess demand for foreign currency) an exchange rate depreciation by improving the balance of trade and the invisibles account can help minimise the probability of a crisis. Our analysis confirmed that in India the exchange rate is a powerful instrument of adjustment in the current account deficit. It also confirms that equity outflows are very unlikely to be major cause of BOP problems (unlike short term debt). Fiscal profligacy, which was a fundamental cause of the BOP crisis of 1990-1 remains a source of weakness, but its impact on the external account has become indirect and circuitous with implementation of external sector reforms. It operates much more through the general expectations about economic (growth) prospects and the risk premium demanded by foreign (and domestic) investors and lenders. Thus its negative effects are likely to be focussed on the domestic rather than the external account. In other words, the negative long-term effects of fiscal profligacy are more likely to be felt in future on the growth rate of the economy and the (health of the) domestic financial sector.

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VII. END-NOTES

[1] Virmani (February 1989), Ahluwalia (1991).
[2] Economic reforms that stimulate private investment & increase manufactured exports also increase effective aggregate demand.
[3] The conventional wisdom (at that time) about the ineffectiveness of the devaluation is illustrated by J. Ghosh (1990).
[4] On pre-crisis analysis of the deteriorating external situation and the importance of imports in this process, see Economic Advisory Council (1989) & C. Wadhwa's (1990) analysis of this report, A. K. Bagchi (1990) & the references therein and A. Ghosh (1991).
[5] Economic Survey 1992-93.
[6] Appendix table 3B. Appendix tables, suffixed by A are not attached to the paper because of space limitations
[7] The domestic data on debt is very incomplete for the eighties.
[8] The GNP number is also taken from the same source so as to maintain comparability with the Latin American data given below.
[9] Appendix table 1A.
[10] This was shown in Virmani (April-June 1990), which analysed the pattern & quality of government expenditure.
[11] It is not statistically significant however.
[12] $0.466 - 0.316*0.301 = 0.371$
[13] Or as Tobin would say, on the composition of the government debt.
[14] About 2/3 rd of central deficit in the seventies and about $1/3^{rd}$ in the eighties.
[15] Supply curve that is flat at low outputs and vertical at full employment output, but has a rising slope in between. Demand curve downward sloping.
[16] A World Bank CEM has attributed the rise in the growth rate during the eighties to the rise in the fiscal deficit.
[17] Most conventional wisdom, in contrast focussed on the internal affects of the fiscal deficit such as government borrowing from the Central Bank and its impact on money supply and inflation, and on the so called "internal debt trap." See for instance the Economic Advisory Council report (1989) when Prof. Sukhamoy Chakravarty was at its head.
[18] The author was (regreatably in hind sight) in the latter camp. If memory serves right the Economic Advisor (Commerce) was in the former camp. Shri Monktek S Ahluwalia and Dr. Vijay Kelkar were the two other economists that one recalls discussing this issue with.
[19] See references mentioned in footnote 3. Prof Sukhamoy Chakravarty was head of the EAC to PM, Dr Arun Ghosh was the Member Planning Commission responsible for BOP/external sector.
[20] Appendix table 3A.
[21] See however, Virmani (April-June 1992). Non-customs imports are items such as weapons systems and items used in offshore oil exploration etc. that are not subject to normal customs checks and are therefore not included in the customs data.
[22] The ratio is 0.53% if World exports are adjusted for double counting. Both Indian and world data for this calculation is from WTO data set.
[23] The pre-1987-8 data for capital goods import are not strictly comparable with data after 1987-8 because of changes in definitions and categories.
[24] The debt data for the eighties are less comprehensive than that for subsequent periods. In the eighties only data on foreign aid and IMF borrowing was regularly published. Data on External Commercial Borrowing (though imperfect) is also available. However the data for 1980 is even less reliable.
[25] Source RBI Annual Report, various issues.
[26] This working group was as usual chaired by the CEA in MOF with Advisor (IE) Planning Commission as member secretary of the working group.
[27] The index calculated and published by RBI is available from 1975-76.
[28] Monetary & credit variables are found to be statistically insignificant when included in equation (1). The estimates are virtually unchanged if Primary deficit is substituted for the Fiscal deficit in (1).

[29] If private investment is crowded out (reduced) by government borrowing to finance the fiscal deficit the total (direct plus indirect) impact of the fiscal deficit is less than indicated by this co-efficient.
[30] Moody's upgraded the rating back to investment grade during the period December 1994 to May 1998. S&P's rating has remained at below investment (i.e. speculative) grade since 1991.
[31] Virmani (June 1990). The research paper was circulated to members of the Planning commission and economic advisors in key economic ministries. Unlike earlier research that focussed either on total exports or individual commodities this paper constructed three sub-aggregates to show that supply constraints were important only for primary exports and that the both the supply and demand for manufactured exports was highly elastic. Imports were also shown to be very responsive to devaluation. Fuel imports and exports were not amenable to any rational analysis and could therefore have biased earlier aggregate estimates. The paper also showed that that the effect of the 1966 devaluation was spread over two years.
[32] The commerce secretary responsible for introducing "Exim Scrips" moved to the finance ministry soon afterwards as secretary(DEA).
[33] "Agenda for Tax Reform: 1996-97" 1996; Tax Reform Choices: Budget 1997-98, December 1996; "Tax reform for 1997-98," 1997 (updated version of 1996 paper); Future Tax Reform: From Outstanding Budget to Outstanding Tax System, April 1997.
[34] Reform of Protective Customs Duties: Metals Chain, Capital Goods & its Inputs, Petrochemicals-Fibre chain, 1993-94. Import Duty on Metals and Basic Plastic, 1994-5.
[35] As analysed in the report of the working group on BOP for the eighth plan, 1989.
[36] Cumulative dividends remitted out of the country could not exceed total foreign FDI in that company.
[37] "Trade Policy Reform: De-Licensing, Tariff Reform & Exchange Rates," Development Policy Research, Planning Commission, New Delhi, September 1991.
[38] The understanding and belief of the Secretary DEA and Finance Minister, as well as the political judgement and authority of the latter was critical to the actual decision. Without these, the paper would undoubtedly have met the same fate as so many other papers & suggestions did before June 1991.
[39] Set up by Ministry of Finance (DEA).
[40] Reform of Gold Import Scheme, January-February 1992.
[41] Formally a sales tax of 15% would have to be imposed on gold produced in India.
[42] India was well recognised in the nineteenth century as a sink for world precious metal production and remained so to some extent till independence. Though the spread of modern Banking has increased the ratio of financial instruments in India's stock of saving, virtually every household in India, even the poorest, own some gold or silver jewellery. These are often purchased for weddings.
[43] This restriction on free import ensured that smuggling would not be eliminated.
[44] In contrast to gold India was a net exporter of silver till recent times and was in near balance at the beginning of the nineties.
[45] Papers in section A of appendix under foreign exchange give an idea of the approach.
[46] See for instance Virmani(1998). I should add that the IMF's India Division/Asia department staff endorsed the strategy after it was implemented. They also helped us to collect the literature on the capital inflow experience of other countries that we needed urgently.
[47] This is also consistent with the elasticity measured in Virmani(1991). The paper is intended to be updated using nineties data to see the quantitative significance.
[48] Virmani (1991) showed that neither oil export nor oil import functions could be estimated because these were not market determined in the period of estimation.
[49] The average duration of stay at Agra is less than one day because there is no tourist oriented entertainment in Agra.
[50] (2) cad=0.001 + 0.685 fd –0.766 fd(92+) +0.072 Greer +0.247 (Ipvt-Ipvt(-1)). All slope coefficients remain highly significant while adjusted R square increases to 0.58.
[51] See for instance Virmani (May 1999).
[52] Virmani (February 1994)
[53] This was later presented at an ADB seminar in March 1998.
[54] December 1997 paper.
[55] External Commercial Borrowing has however declined because of demand factors. Total private demand for credit has fallen because of weak industrial demand, while demand for external credit has fallen even more because of the rise in world interest rates relative to domestic rates.
[56] Appendix table 7A.
[57] Appendix table 7A.

[58] China, S. Korea and Thailand, which have both higher FDI and Equity flows than India, had lower spreads than India during the nineties.
[59] Research Paper No. 4, February 1989, Planning Commission.
[60] Research Paper No. 5, June 1989, Planning Commission.
[61] Expanded version re-issued in December.