

# INTERNATIONAL MONETARY AND FINANCIAL ISSUES FOR THE 1990s

Volume II



UNITED NATIONS





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UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

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# INTERNATIONAL MONETARY AND FINANCIAL ISSUES FOR THE 1990s

Research papers for the  
Group of Twenty-Four

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VOLUME II

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## Introduction

The Intergovernmental Group of Twenty-Four on International Monetary Affairs (G-24) was established in November 1971 to increase the negotiating strength of the developing countries in discussions that were going on at that time in the International Monetary Fund on reform of the international monetary system. Developing countries felt that they should play a meaningful role in decisions about the system, and that the effectiveness of that role would be enhanced if they were to meet regularly as a group, as the developed countries had been doing for some time in the Group of Ten (G-10).

It soon became apparent that the G-24 was in need of technical support and analysis relating to the issues arising for discussion in the Fund and Bank, including the Interim and Development Committees. In response to representations by the Chairman of the G-24 to the Secretary-General of the United Nations Conference on Trade and Development (UNCTAD), and following discussions between UNCTAD and the United Nations Development Programme (UNDP), the latter agreed in 1975 to establish a project to provide the technical support that the G-24 had requested. This was to take the form, principally, of analytical papers prepared by competent experts on issues currently under consideration in the fields of international money and finance.

Mr. Sidney Dell, a former Director in UNCTAD's Money, Finance and Development Division and subsequently Assistant Administrator of UNDP headed the project from its establishment until 1990. During this period, some 60 research papers were prepared by the Group of Twenty-Four. The high quality of this work was recognized by the Deputies and Ministers of the Group and the reports were given wide currency, some being published in five volumes by North-Holland Press and others by the United Nations.

The project work was resumed in 1990 under the direction of Professor G.K. Helleiner, Professor of Economics, University of Toronto, Toronto, Canada. The UNCTAD secretariat continues to provide both substantive and administrative backstopping to the project. Funding is presently being provided by the G-24 countries themselves, the International Development Research Council of Canada and the Government of the Netherlands. As a result, it has been possible to continue to provide the Group of Twenty-Four timely and challenging analyses. These studies are being reissued periodically in compendia. This is the second volume to be published.



# PROSPECTS OF FINANCIAL FLOWS TO DEVELOPING COUNTRIES IN THE 1990S: THE GLOBAL MACROECONOMIC TRADE-OFFS

Rob Vos

## Executive Summary

*Recent developments in the world economy seem to indicate that access to international capital flows will remain difficult for most poor countries in the immediate future. The concern is about a presumed decline in the global savings availability associated in particular with declining savings rates in the major economies (G-7) where the bulk of global financial resources is generated. A reduced supply of global savings must meet an increased demand for investment resources in the 1990s. Capital demands are expected to remain high in the major economies themselves, while large new capital demands are being projected for the economic transformation in Eastern Europe and the Republics of the former Soviet Union, for the reconstruction in the Middle East after the Gulf war and for action programmes to save the global environment. The availability of funds for the developing countries may be 'crowded out' by these new demands for global savings. Alternatively, since ex-post global savings and investment should balance, attempts to satisfy all these demands (including demands for increased capital flows to developing countries) will trigger a global adjustment process which is likely to lead to higher world interest rates affecting economic growth and trade in both rich and poor countries.*

*Despite a recovery of savings rates in some industrial countries, concerns about reduced availability of global savings in the medium run seem justified. Demographic factors predict falling private savings rates in the major economies. Public savings in the large economies are being eroded by the accumulation of public liabilities. This has been undermining even further the responsiveness of national savings to adjustments in the global interest rate. The response of private savings to interest rates was assessed to be rather low, while rising interest rates will reduce government savings where public debt is large. The implication for the world economy is that each exogenous shift in the global demand for investment resources, for instance an increase in capital transfers to the developing countries, will require a large interest rate adjustment to restore global capital market equilibrium and will crowd out investment elsewhere.*

*Many estimates have been given of the capital requirements of developing countries in the 1990s. The methods used to derive these estimates are limited and only cover partial effects. Leaving these methodological limitations aside, the resulting LDC capital requirement estimates are large enough to have a major impact on the world economy. This implies that proposals to raise capital transfers to developing countries will have to take account of global repercussion effects. The direct effect of additional capital inflows may be higher investment and growth in the recipient countries, but at the same time they could lead to rising world interest rates which will enhance debt-service burdens and reduce investment demand and growth in the industrial countries. The latter effect will then spill over to commodity markets and reduce demand for developing country exports.*

*An assessment of these effects using global trade and macroeconomic models confirms the importance of these repercussions. If additional capital transfers take the form of official development assistance, the effect is like a fiscal expansion in the industrial countries. If this fiscal expansion is financed by increasing public debt the (short- to medium-run) global recessionary consequences may be severe, even to the extent that what is gained through higher capital inflows is (more than) offset by a loss of export earnings. The key to a more stable global adjustment process seems to lie in adequate fiscal adjustment in the North. Northern governments should thus trade off increased aid transfers against other government expenditures.*

*The workings of the global capital market do not provide developing countries with easy access. Additional transfers will have to come largely from official sources. For most developing countries, private capital markets are still (or always have been) cut off. The recent growth of foreign direct investment and portfolio investment flows has been restricted to a very small group of the larger and richer developing countries. There is scant reason to believe that this renewed access to private capital markets would be spread very widely. At the same time, however, private*



agents throughout the developing world have accumulated large foreign asset holdings. However, the mobilization of these funds for domestic development will not be easy. Experience in countries where debt conversion programmes worked to repatriate this 'flight capital' indicates that monies did return after a sustained period of successful adjustment. External finance required for the process of stabilization and adjustment will have to come from official sources. A major part of the developing world is still caught in this process and, in the light of the previous conclusions, will be dependent on budgetary decisions made by the Governments in the industrialized countries.

The existence of elaborate global model(s) thus seems essential to assist international policy analysis. A number of global macroeconomic models is available, but the modelling of the financial linkages between industrial and developing countries is still rather rudimentary with little detail and differentiation with regard to the LDCs. More research will have to be invested in this area.

## Introduction

Net resource flows to developing countries contracted sharply after 1982. At the start of the 1990s, prospects for financial flows to these countries still looked gloomy. Recent developments in the world economy seem to indicate that the access to international capital flows will remain difficult for most poor countries in the immediate future. The concern is about a presumed decline in global savings availability, associated in particular with declining savings rates in the major economies (G-7) where the bulk of global financial resources is generated. A reduced supply of global savings must meet increased demands for investment resources in the 1990s. Capital demands are expected to remain high in the major economies themselves, while large new capital demands are being projected for the economic transformation in Eastern Europe and the republics of the former Soviet Union, for the reconstruction in the Middle East after the Gulf war and for action programmes to save the global environment. Funds available for the developing countries may be 'crowded out' by these new demands for global savings. Alternatively, since *ex-post* global savings and investment should balance, attempts to satisfy all these demands (including demands for increased capital flows to developing countries) will trigger a global adjustment process which is likely to lead to higher world interest rates affecting economic growth and trade in both rich and poor countries.

The purpose of this paper is to analyse the determinants of a possible growing 'savings shortage', its implications for the availability of financial resources for developing countries in the 1990s and the global macroeconomic interaction effects of increases in capital transfers to these countries. **Section I** assesses the main trends and determinants of the supply of global savings. It is suggested that falling trends are less secular than suggested in some studies. Nevertheless, there is little reason to expect a strong recovery of global savings in the 1990s; rather, structural factors indicate a falling tendency over the medium run. **Section II** reviews the magnitude and relevance of recent projections of the so-called 'new' capital demands. Many of the existing projections that appear in policy documents of Governments and international organizations are little more than back-of-the-envelope calculations based on crude assumptions. More elaborate studies at best apply a partial-equilibrium approach to estimate capital requirements of a particular group of countries. Taken together the 'new capital demands' are quite large indeed in relation to global macroeconomic aggregates. This calls for a global general-equilibrium framework to assess the implications if such demands are to be satisfied. Before entering into that question, however, the structural conditions of developing country access to international financial resources are assessed in **section III**. Developing countries typically have restricted access to the global capital market. In the latter part of the 1980s some developing countries seem to have regained access to private capital markets, particularly larger flows of direct foreign investment and portfolio investment came their way. The analysis shows, however, that this development has been limited to a very small number of countries. The section also discusses the problem of the sizable foreign assets holdings of private agents from developing countries. It is suggested that a repatriation of this 'capital flight' money is likely to be heavily dependent on success in the adjustment effort leading to economic recovery and for which, in most countries, additional capital flows will be required first. Official finance is seen to remain the principle source of external funding on which most of the least developed countries (LDCs) will have to rely in the 1990s. Access to this source may become heavily constrained by fiscal problems in the donor countries and competing demands from Eastern Europe.

If funds from these sources would be forthcoming for developing countries, there will be important global repercussion effects, the cost of which may fall to a considerable extent on the LDCs. *Section IV* takes up the latter scenario and analyses the nature of the global adjustment effects. Since there is no single and broadly accepted global model framework, several existing world models are reviewed. First, trade effects are isolated using a simple linear world model and the outcomes are compared with those of other models emphasizing trade links. Next, several empirical global macroeconomic models and their respective simulation results of enhanced capital transfers to developing are compared. Although these models have some crucial differences in specification, they all hint at the critical role fiscal adjustment in the major economies is to play in the 1990s to ensure a more stable global economic environment for the developing countries. Otherwise, with inadequate fiscal adjustment, interest rate and financial instability are expected to produce worldwide recessionary effects, with the developing countries far worse off even with increased financial flows coming their way. *Section V* summarizes the main findings and policy conclusions, but also reiterates both the importance and the limitations of existing world models for policy use.

## I. Trends and determinants of global savings

Is the concern about a reduced global savings supply leading to a savings shortage justified? This section tries to provide insight in some detail. First, world-wide trends in *ex-post* savings and investment demands are analysed. Subsequently (section IV.B), an assessment is given of the observed determinants of private and public savings and the likely prospects for the decade ahead.

### A. Falling savings rates?

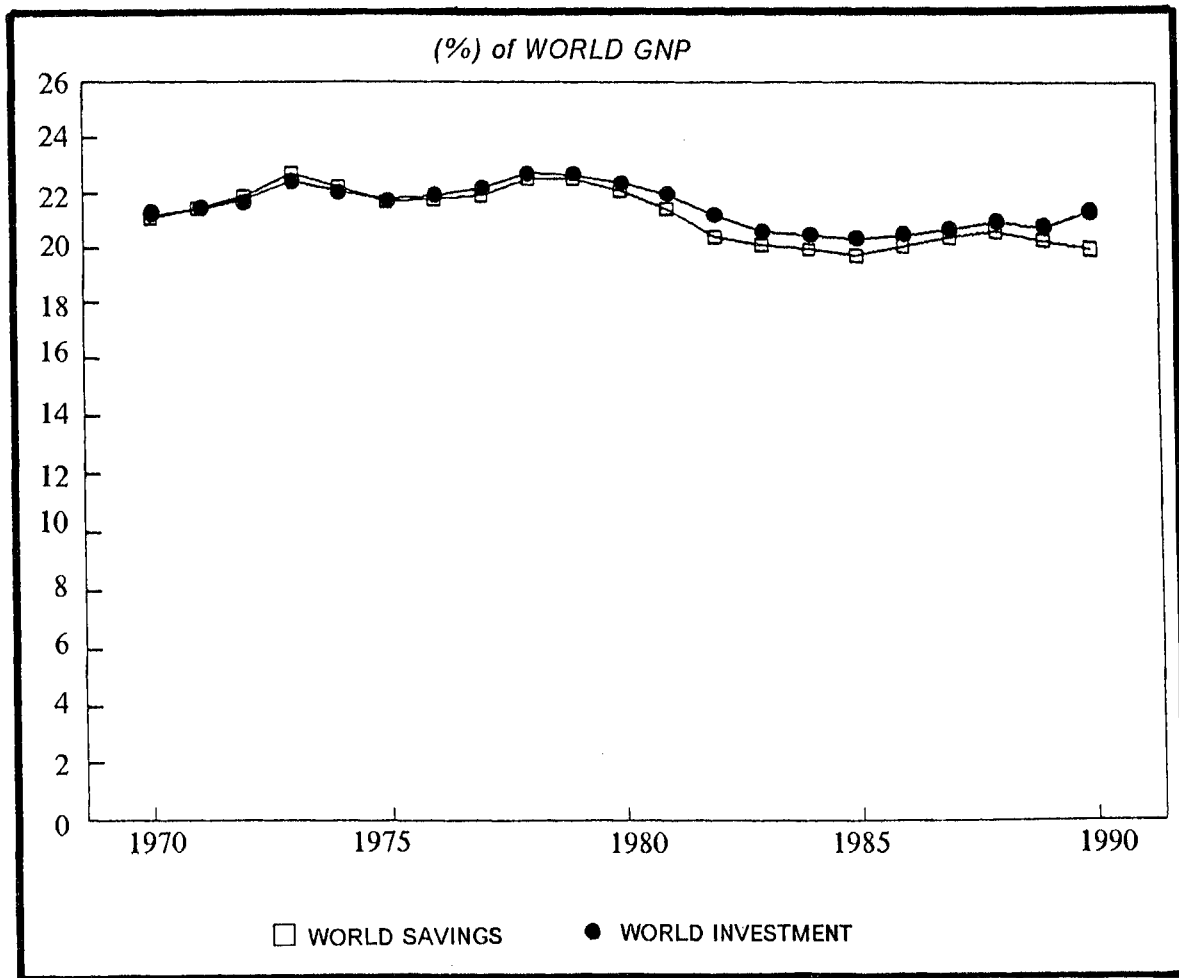
Is the decline in the global savings rate during the 1980s structural and likely to extend far into the 1990s? Figure 1, based on recent World Bank data,<sup>1</sup> shows that the world savings rate fell by about 2 percentage points between the early 1970s and the mid 1980s, i.e. from on average 21.8 per cent of world GNP in 1970-1973 to 19.9 per cent in 1983-1985 (see also table 1). However, in recent years there has been some recovery of world savings: 20.6 per cent of world GNP in 1986-1990. Thus, though it is well below the level of the 1960s and 1970s, the fall in the global savings rate may not be secular. Trends differ between the major countries and regions in the world and between economic agents. Figure 2 shows that, for the world economy as a whole, private savings have moved upwards, while government savings have fallen. This has led to a growing worldwide gap between, on the one hand, private savings surpluses and, on the other, public sector deficits. The observed trends relate to *ex-post* balances and as such they do not pose a problem in themselves. However, cumulative deficit and surplus savings positions sustained over long periods of time involve large shifts in liability and asset positions of governments and private sector agents, which in turn may affect their savings behaviour and financial market developments. These aspects will be discussed further below. First the diverging trends between countries and regions of the world economy will be described.

This analysis must start with some caveats about the data. Existing data contain substantial statistical discrepancies. This is most obvious in the global savings and investment estimates. Figures 1 and 4 show that the two global macroeconomic aggregates are not equal as they should be according to world accounting rules.<sup>2</sup> This discrepancy has been growing over the past two decades to a recorded global savings gap of about 0.4 - 0.5 per cent of world GNP. This compares,

<sup>1</sup> Estimates are derived from World Tables (diskettes, November 1991 update) and the DEC Analytical Data Base (DAD) of the Bank's International Economics Department, which probably gives the best country coverage and provides consistency checks for national accounts, balance of payments, government finance and debtor reporting system data.

<sup>2</sup> See Vos (1989, 1991) for an extensive treatment of a consistent accounting system for a multi-country world economy.

Figure 1  
GLOBAL SAVINGS AND INVESTMENT, 1970-1990



in definitional terms, to the world current account discrepancy.<sup>3</sup> Although the statistical error is small relative to global savings or global GNP, it is large compared to the numbers for the new capital demands and the numbers relevant for the global adjustment process discussed in this paper. During the 1980s the discrepancy was annually between US\$50 and 100 billion which is in the order of magnitude of the estimates of the additional annual capital requirements for developing countries in the 1990s. The global discrepancy equals about 0.7 per cent of GNP of the industrialized countries, which is at the level of the DAC target for development assistance to developing countries and is double the size of actual aid flows. Consequently, the data presented in this paper should be taken with the necessary caution.

<sup>3</sup> The following national and global accounting identities can be defined:

$$S_i - I_i = CAB_i$$

$$\sum_i^n CAB = \sum_i^n E_i - \sum_i^n M_i - \sum_i^n R_i = 0$$

$$\sum_i^n S_i - \sum_i^n I_i = 0$$

where it says that the savings-investment balance of country  $i$  ( $S_i - I_i$ ) equals the current account balance ( $CAB_i$ ), which is defined by exports less imports of goods and services ( $E_i - M_i$ ) less net factor payments and current transfers to abroad ( $R_i$ ). Exports of one country imply imports for another so that the sum of the CABs of all countries should add to zero. By implication also the *ex-post* world savings-investment balance should be equal to zero.

The data used in the graphs and the tables combine national accounts and balance of payments data. Gross domestic investment (private and public) and private gross national savings are based on national accounts data. The current account balance is based on balance of payments data. Gross national savings are derived as  $S = CAB + GDI$  and government savings as  $S_g = S - S_p$ .



Table 1

## GLOBAL SAVINGS AND INVESTMENT RATES, 1970-1990

(Percentage of GNP)

	1970-1973	1974-1977	1978-1982	1983-1985	1986-1990
<b>High income countries</b>					
GNS (S)	22.93	21.81	21.73	19.70	20.73
Private (S <sub>p</sub> )	19.39	20.29	20.95	20.39	19.62
Public (S <sub>g</sub> )	3.54	1.52	0.77	-0.68	1.11
GDI (I)	22.64	22.17	22.04	20.21	21.17
Private (I <sub>p</sub> )	18.78	18.35	18.45	17.17	18.05
Public (I <sub>g</sub> )	3.86	3.95	3.99	3.93	3.82
S-I	0.28	-0.37	-0.32	-0.51	-0.44
Private (S <sub>p</sub> -I <sub>p</sub> )	0.61	1.94	2.50	3.21	1.57
Public (S <sub>g</sub> -I <sub>g</sub> )	-0.32	-2.30	-2.82	-3.72	-2.01
<b>Eastern Europe and former Soviet Union</b>					
GNS (S)	20.15	19.75	19.07	20.26	17.04
Private (S <sub>p</sub> )	3.48	2.89	3.57	3.93	7.70
Public (S <sub>g</sub> )	16.68	16.86	15.50	16.33	9.33
GDI (I)	20.08	20.42	19.05	19.40	16.98
Private (I <sub>p</sub> )	1.07	1.24	1.10	1.13	0.79
Public (I <sub>g</sub> )	19.01	19.10	18.99	19.13	19.17
S-I	0.08	-0.67	0.02	0.86	0.06
Private (S <sub>p</sub> -I <sub>p</sub> )	2.41	1.64	2.47	2.80	6.92
Public (S <sub>g</sub> -I <sub>g</sub> )	-2.33	-2.31	-2.45	-1.94	-6.86
<b>Major oil exporters</b>					
GNS (S)	26.04	47.02	37.42	20.69	18.88
Private (S <sub>p</sub> )	12.85	18.20	10.65	6.65	7.41
Public (S <sub>g</sub> )	13.19	28.82	26.77	14.05	11.47
GDI (I)	17.80	22.14	25.02	22.65	17.99
Private (I <sub>p</sub> )	5.19	6.73	9.50	8.13	5.26
Public (I <sub>g</sub> )	12.61	12.12	12.96	14.24	15.41
S-I	8.24	24.88	12.40	-1.95	0.89
Private (S <sub>p</sub> -I <sub>p</sub> )	7.66	11.47	1.15	-1.48	2.15
Public (S <sub>g</sub> -I <sub>g</sub> )	0.58	13.41	11.25	-0.47	-1.27
<b>LDCs</b>					
GNS (S)	17.66	19.68	20.24	19.87	22.44
Private (S <sub>p</sub> )	10.28	11.56	11.20	12.77	17.55
Public (S <sub>g</sub> )	7.37	8.11	9.05	7.10	4.88
GDI (I)	18.95	21.84	23.49	21.12	23.04
Private (I <sub>p</sub> )	8.87	10.55	10.96	9.59	12.22
Public (I <sub>g</sub> )	10.08	10.08	10.45	10.86	11.29
S-I	-1.29	-2.16	-3.25	-1.25	-0.60
Private (S <sub>p</sub> -I <sub>p</sub> )	1.42	1.01	0.23	3.18	5.33
Public (S <sub>g</sub> -I <sub>g</sub> )	-2.71	-3.18	-3.48	-4.43	-5.93

For source and notes see end of table.

Table 1 (concluded)

GLOBAL SAVINGS AND INVESTMENT RATES, 1970-1990					
(Percentage of GNP)					
	1970-1973	1974-1977	1978-1982	1983-1985	1986-1990
<b>World</b>					
GNS (S)	21.77	21.86	21.70	19.91	20.60
Private (S <sub>p</sub> )	15.51	16.54	17.12	17.06	18.01
Public (S <sub>g</sub> )	6.26	5.27	4.57	2.81	2.65
GDI (I)	21.68	21.97	22.11	20.43	20.99
Private (I <sub>p</sub> )	14.45	14.68	14.69	14.66	14.59
Public (I <sub>g</sub> )	7.23	7.23	7.29	7.34	7.33
S-I <sup>a</sup>	0.09	-0.11	-0.41	-0.53	-0.39
Private (S <sub>p</sub> -I <sub>p</sub> )	1.06	1.95	2.04	2.99	2.56
Public (S <sub>g</sub> -I <sub>g</sub> )	-0.97	-2.06	-2.45	-3.52	-2.93

**Source:** World Bank data. Ratios derived from current US dollar values.

**Note:** GNS (S) = Gross National Savings (= Current Account Balance *plus* GDI). GDI (I) = Gross Domestic Investment. S-I = GNS - GDI = CAB. Subscripts p and g stand for private and public (general government) sectors respectively.

<sup>a</sup> The world savings-investment balance, and hence the world current account balance, should in principle be equal to zero. The non-zero entries thus represent the consolidated statistical global accounting discrepancy. See text and e.g. IMF (1987), Vos (1989), Luttik (1992), and De Jong, Vos and Jellema (1991) for further discussion.

The causes of the discrepancy have been discussed elsewhere and these will not be detailed here.<sup>4</sup> Within the present context it is relevant to have some idea how the discrepancy affects the savings-investment balances across countries. Given the complex structure of the discrepancy when observed transaction-by-transaction, no definite and clear-cut conclusions have been drawn so far. Probably the most complete study on this topic (Luttik 1992) suggests that, on balance, the current accounts of the major economies are only slightly affected and that a major part of the discrepancy should be allocated to major oil exporters in the Middle East. The latter implies that, particularly during the early 1980s, savings surpluses of this region were under-estimated. If so, there has been a corresponding under-recording of foreign assets of this region which could counterbalance the apparent overstatement of the external asset position of some of the main industrialized countries.

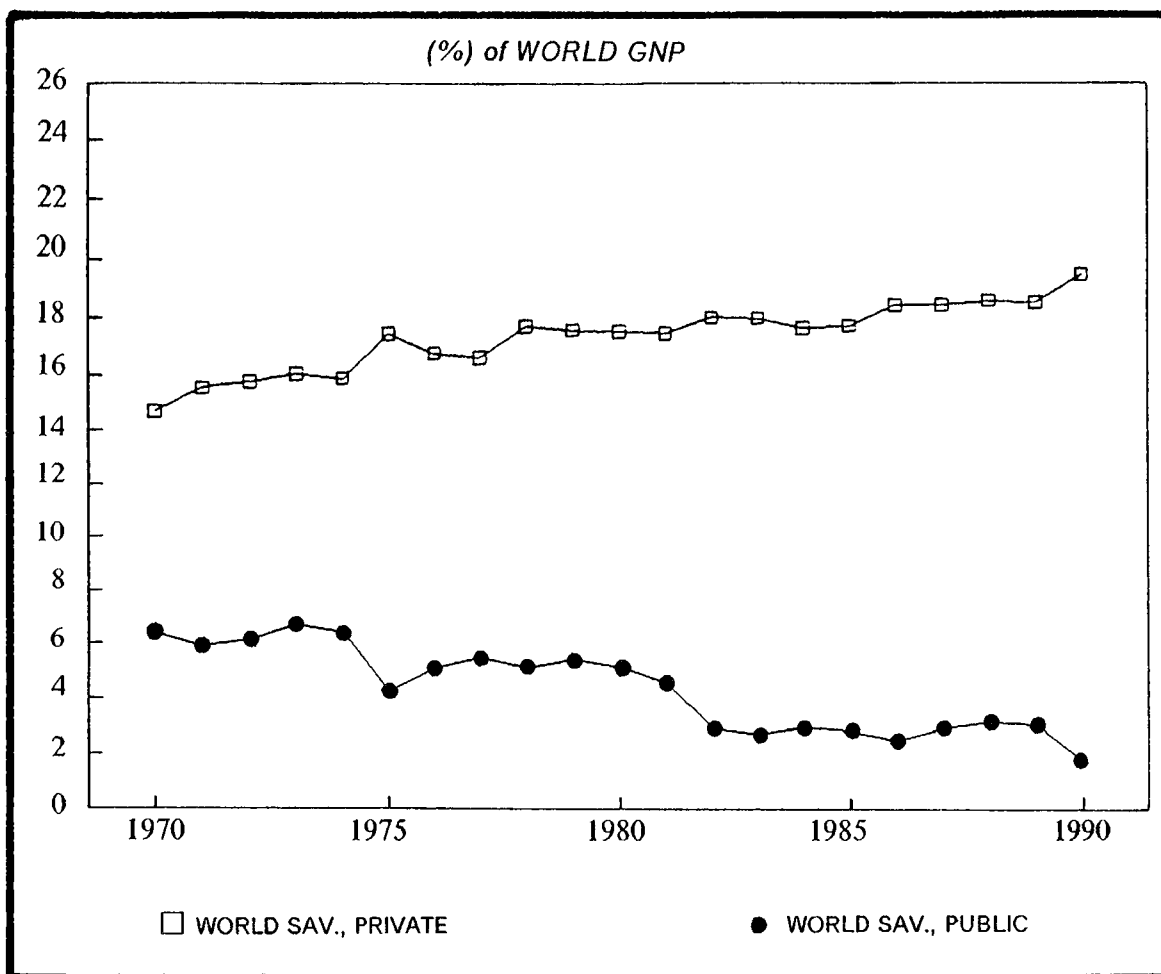
Having said this, let's now turn to the major trends in global savings and investment patterns over the past two decades. The main features can be summarized as follows:

- (a) About 80 per cent of global savings is generated in the industrialized countries and nearly two-thirds in the G-7 countries (figure 5). Economic growth and savings decisions in these countries thus have an overwhelming influence on the supply of world investment finance resources.
- (b) Global savings-investment balances have shown major shifts over the past two decades (see figure 4): (a) the major industrialized economies (G-7) traditionally have been net creditors to the rest of the world (LDCs and the rest of the OECD); (b) after the first oil price hike, G-7 surpluses dwindled and savings surpluses of major oil exporters (around 0.5 per cent of world GNP) became (directly or indirectly) the major source to finance deficits elsewhere, particularly in the LDCs; (c) oil-exporter surpluses vanished in the 1980s,<sup>5</sup> while the G-7 countries became net debtors in the

<sup>4</sup> See IMF (1987), Vos (1989), De Jong, Vos and Jellema (1991), Luttik (1992) and IMF (1992).

<sup>5</sup> This trend should be taken with a wide margin of error, given problems of coverage of some major oil exporters in the 1980s (e.g. Iran and Iraq after entering in a war in 1980 are no longer covered). See also the remarks made earlier about the widening global accounting discrepancy.

Figure 2  
GLOBAL SAVINGS, PRIVATE AND PUBLIC, 1970-1990



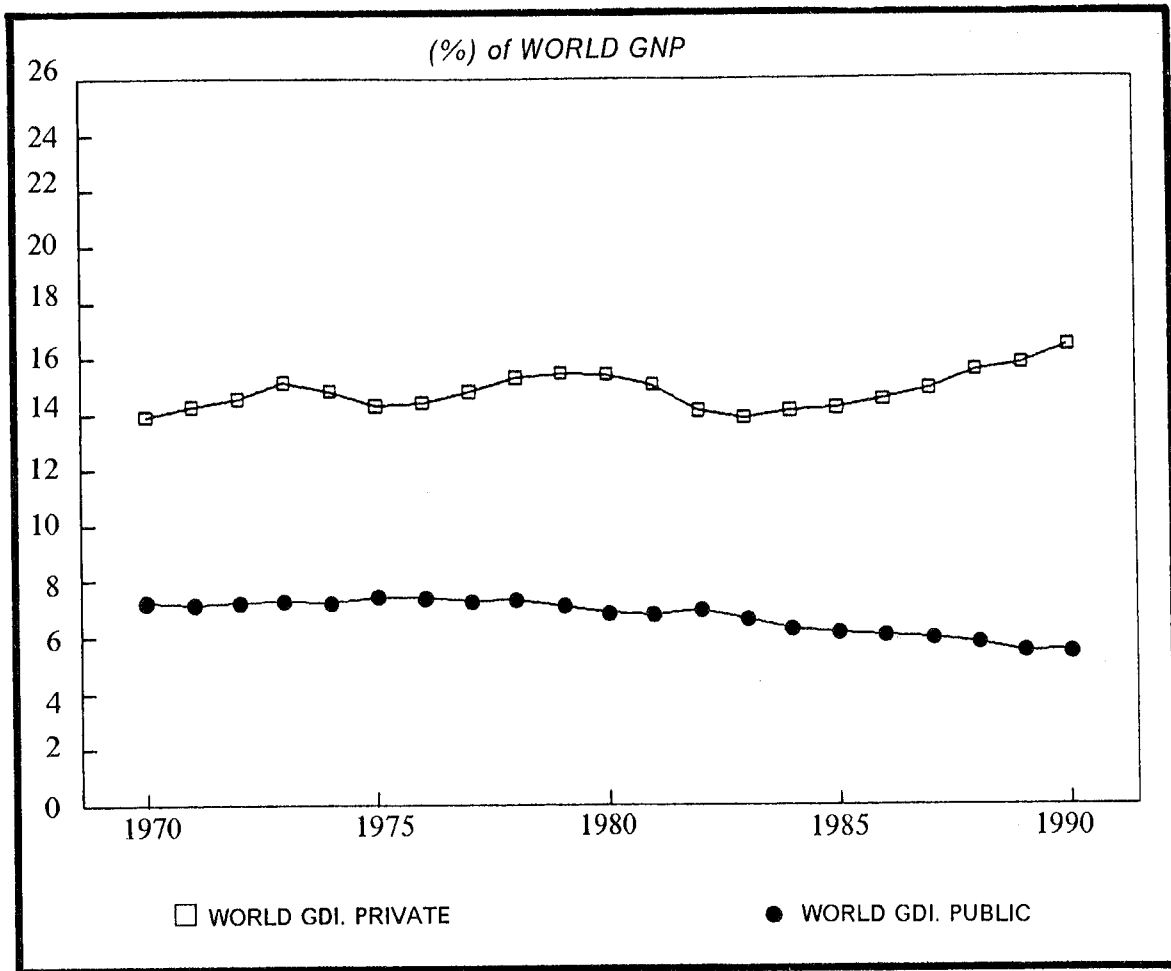
aggregate; as a consequence, reduced international finance availability forced LDCs to reduce their current account deficits; and (d) the former socialist economies in Eastern Europe (EE6+SU) have remained throughout the past two decades at nearly balanced savings-investment positions.

This picture is still far too aggregate, however. The savings-investment balance positions conceal much larger imbalances observed particularly in the G-3 countries (United States, Japan, Germany), but also conceal differences in the satisfied demands for global savings between groups of LDCs.

- (a) The global macroeconomic significance of the diverging pattern of savings-investment balances in the 1980s between the three major economies is pictured in figure 7. Germany and Japan produced joint savings surpluses of between 0.5 and 1.0 per cent of world GNP, which could largely, though not entirely, finance large United States deficits. Figure 8 indicates that for the G-3 as a group, large private savings surpluses were required of around 1.0 and 1.5 per cent of world GNP.
- (b) The *ex-post* claims of developing countries on global savings are relatively small, when expressed in terms of total savings or world GNP. Figures 9 and 10 suggest that the net use of global savings by LDCs averaged around 0.3 per cent of world GNP over the past two decades. It peaked at 0.7 per cent at the height of the private lending boom around 1980-1982 just before the outbreak of the debt crisis. Latin American and East Asian middle-income countries took the major share. The closure of private capital markets for LDCs after the debt crisis is clearly expressed in reduced savings-investment imbalances. Their use of external savings was less than



Figure 3  
GLOBAL INVESTMENT, PRIVATE AND PUBLIC, 1970-1990

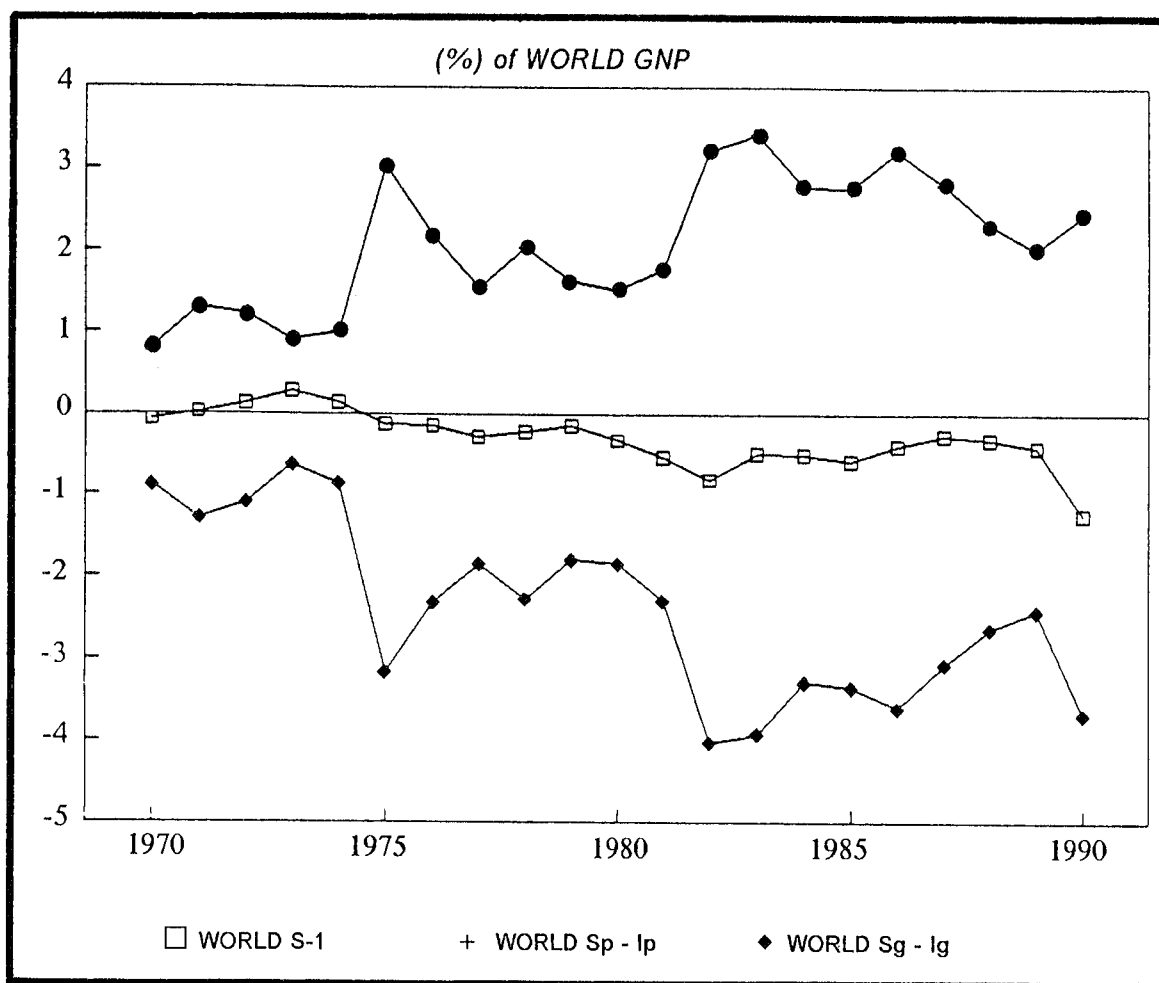


0.2 per cent of world GNP in 1986-1990. The East Asian countries even moved to a surplus position (figure 10). This Asian contribution to available global resources has not been very big in global economic terms, however; between 1986-1990 this surplus was less than 0.1 per cent of world GNP.

Underlying these widening global imbalances are falling private savings rates in some of the major economies, particularly the United States, and falling private investment rates, particularly in Japan and Germany. For LDCs, access to external finance seems to determine much of the shift in private and public savings-investment balances.

- (a) The concern over a global savings shortage stems to a large extent from a dramatic decline in the United States savings rate in the 1980s: it fell from 18.7 per cent of United States GNP in 1978-1982 to 14.1 per cent in 1986-90 (see annex tables A1.1a-c). This decline reflects a steep fall in both private and public savings rates. Savings rates have also tended to fall in Japan and Germany since 1970. Since the mid-1980s, however, savings rates improved in both countries. In Germany both private and public savings rates have tended to increase since 1983. In Japan private savings rates have continued to fall, but there was a recovery of the overall savings rate in 1986-1990 due to fiscal adjustment and subsequent increase in the public savings rate.
- (b) The steepest fall in national savings rates may be observed in the major oil exporting countries (MOEs), which - leaving statistical problems aside - is associated with rising private and government consumption, foreign workers' remittances to abroad

Figure 4  
GLOBAL SAVINGS-INVESTMENT BALANCES, PRIVATE AND PUBLIC 1970-1990

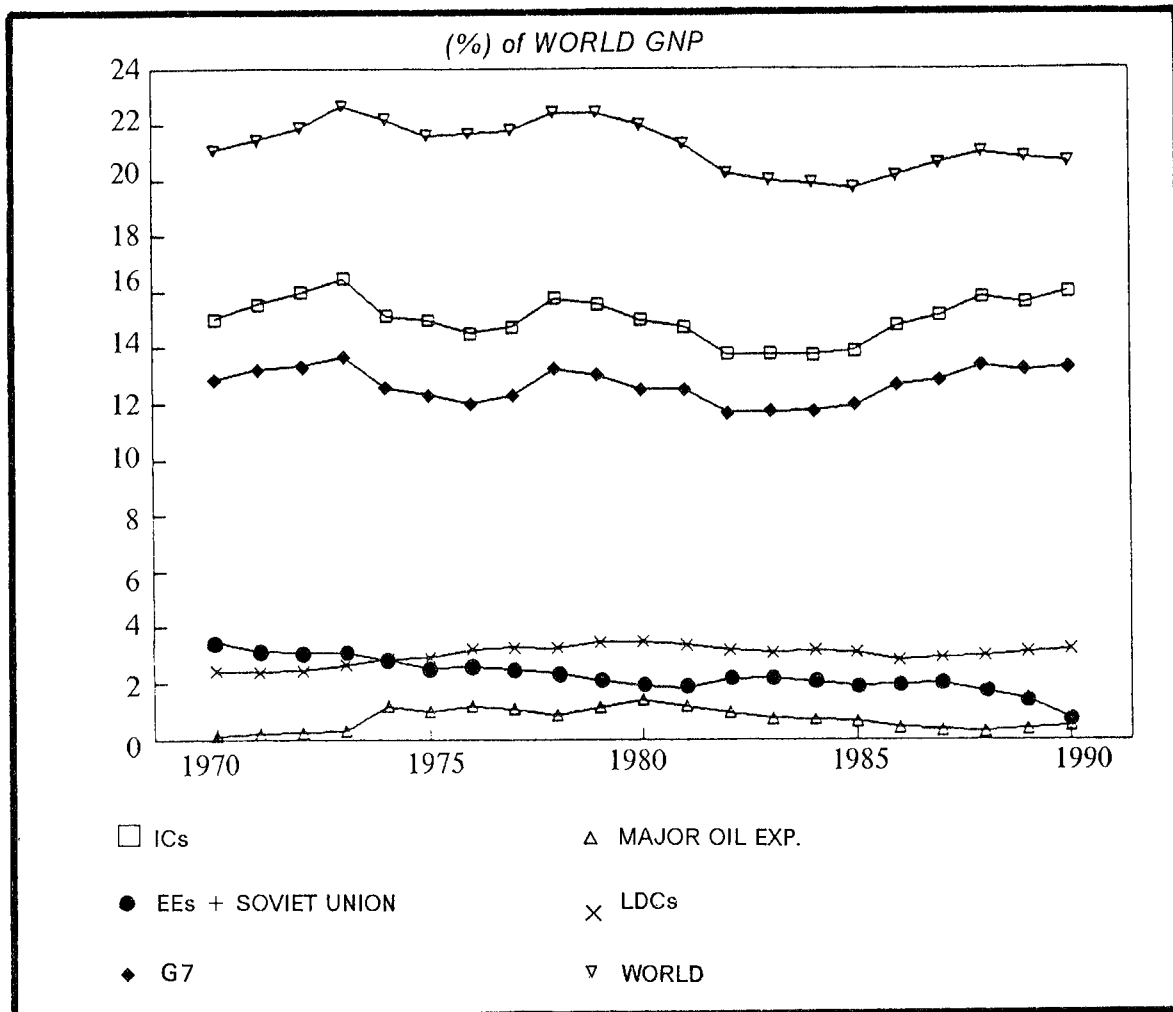


Source: World Bank data.

and armaments expenditures. These factors appear more important in explaining falling savings surpluses of MOEs than rising domestic investment. In fact, the investment rate of these countries fell in the 1980s.

- (c) Contrary to IMF data (Aghevli *et al.* 1990), no falling savings rate for developing countries has been observed. Aggregate LDC savings remained stable at around 3.5 per cent of world GNP throughout the 1970s and 1980s (figure 5). As a share of LDCs' own GNP, national savings increased during the 1970s, fell in the years of economic stabilization immediately following the debt crisis (1983-1985), but increased again in recent years (1986-1990) (see table 1 and annex table A1.1a-c). This may have to do with the fact that many LDCs went through a series of structural adjustment programmes. However, income growth remains the main determinant of private savings in developing countries (see Schmidt-Hebbel and Webb 1992), while the degree of success of structural adjustment programmes to raise growth rates has been, to put it mildly, rather diverse across countries (Mosley, Harrigan and Toye 1991). Thus the policy influence on the observed trends is not immediately clear. Countries in sub-Saharan Africa (SSA) and Latin America (LAC) have lower savings rates (respectively about 11 and 19 per cent of GNP) than in the early 1970s or even before, despite some recovery in 1986-1990 (annex tables A1.1a-c). In SSA, falling per capita incomes and steeply falling external terms of trade probably underlay the collapse of the private savings rate in 1978-1985. Some improvement in these indicators in 1986 to 1990 led to a recovery in the private savings rate. In contrast, in LAC, private savings appear to have increased even during the crisis years of the 1980s. Much of this relates to 'forced' savings induced

Figure 5  
GLOBAL SAVINGS RATES, 1970-1990

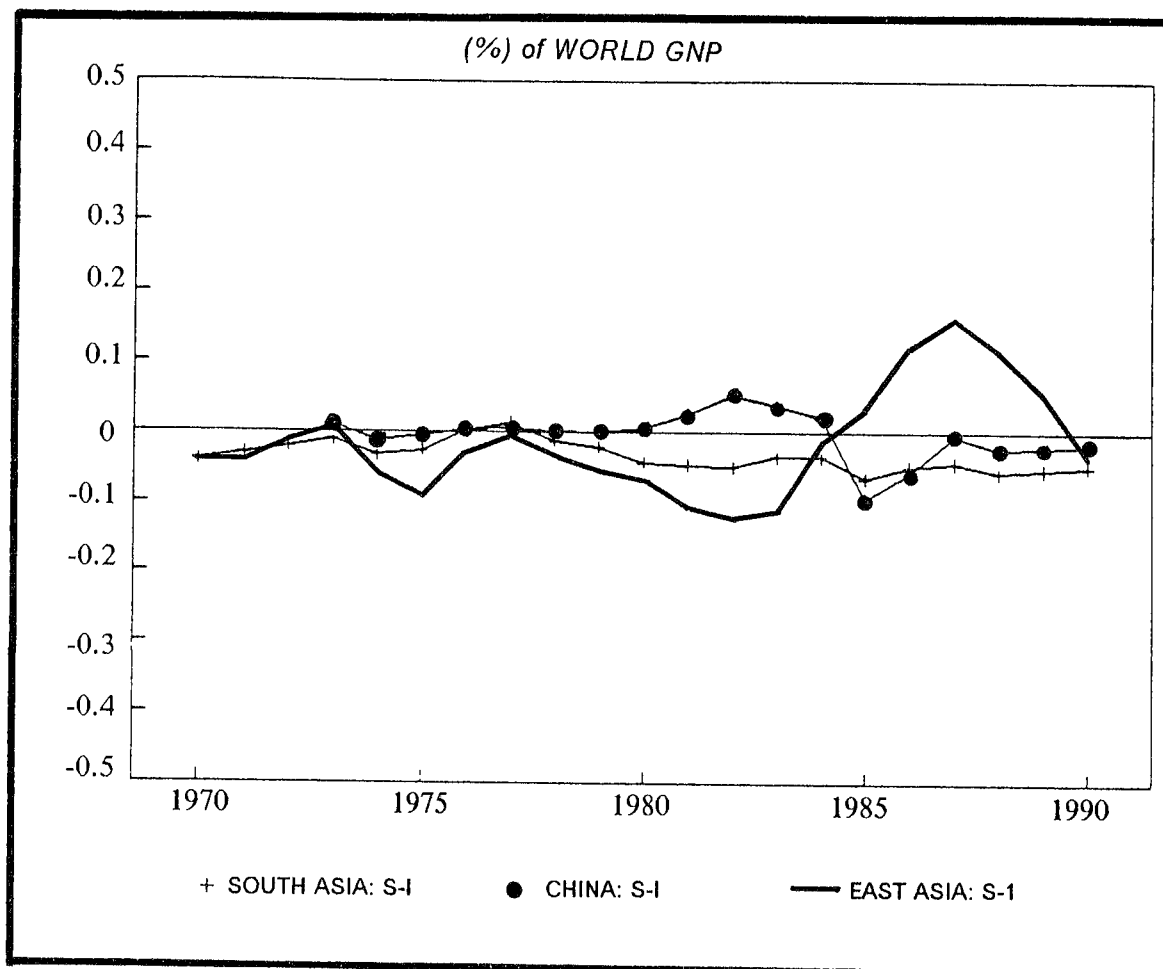


by the high inflation rates in most of these countries. High inflation has been associated with steeply falling public savings rates and rising fiscal deficits. Falling public savings figure in the rising external debt service burden of the public sector of these countries. With (much more) limited access to foreign finance than in the previous decade, falling savings rates led to falling gross investment rates in SSA and LAC in the 1980s. In SSA GDI fell to 12 per cent of GNP in 1983-1985 and recovered to 15 per cent in 1986-1990: still below the 1970 level and probably just about enough to replace the existing capital stock, but not enough to expand production capacity in any significant way. Also in LAC the investment rate fell steeply in 1983-1985: from 23 to 17 per cent on average (in some countries the drop was much steeper). The rate moved back to 20 per cent in 1986-1990, reflecting substantial recovery in some countries (Mexico, Brazil, Chile), while others still lagged behind.

- (d) More stable and upward savings trends can be observed in South and East Asia. Most countries in these regions followed more prudent fiscal policies, keeping public savings rates up. External indebtedness either did not take quite the dimensions it took in SSA and LAC (the Philippines being a noticeable exception) or could be coped with having dynamic export-oriented industries already in place. In many parts of Asia high growth rates could be sustained, stimulating higher private savings rates.

In sum, falling savings rates were not a universal trend. The central problem would appear to lie in the decline of private savings in the major economies (particularly the United States and Japan). Adequate fiscal adjustment could help to compensate for this through rising public savings and thereby ease pressures on capital markets. Particularly in the United

Figure 6  
LDC EX-POST DEMAND FOR GLOBAL SAVINGS, 1970-1990  
SOUTH ASIA, CHINA AND EAST ASIA & PACIFIC



States this has been insufficient and the national savings rates has continued to fall. Japan and Germany managed to increase their national savings rates towards the end of the 1980s. Should this provide a basis for optimism over the adequacy of global savings in the 1990s?

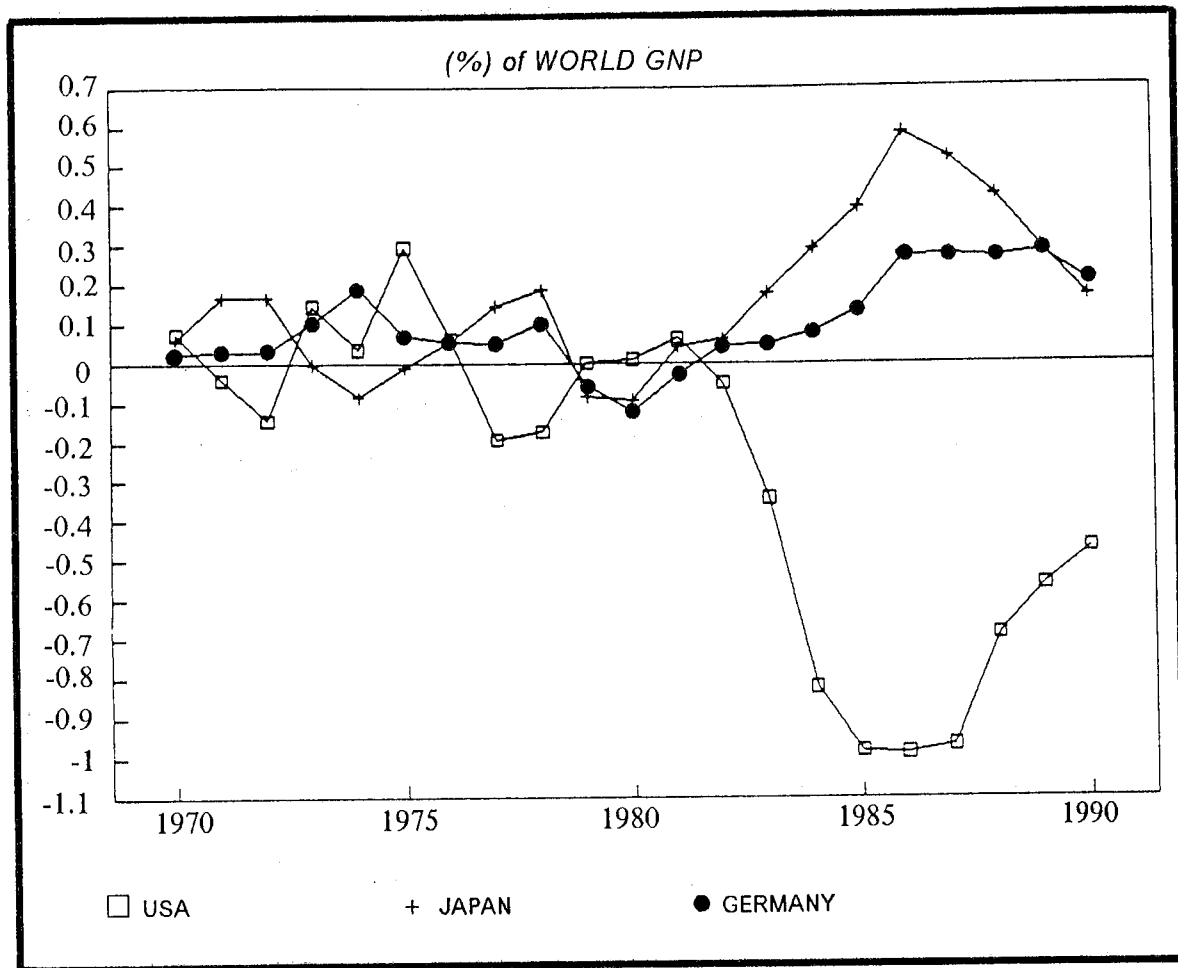
### B. Determinants of global savings supplies and prospects for the 1990s

The evidence available concerning the structural determinants of savings in the major economies does not give rise to a great deal of optimism. Private savings in these countries are expected to show further downward trends.<sup>6</sup>

- (a) Demographic factors, in particular an increased elderly-dependency ratio, are perceived as forming a key determinant behind falling private savings rates. Some studies have down-played the importance of demographic change as a major determinant of falling private savings in the United States, Japan and the European Community in the 1980s (Bosworth *et al.* 1991; *European Economy* 1990), but with regards to the long run there seems to be a broad consensus on potentially large declines in private savings owing to the expected significant rise in the 64age cohort in total population. This is expected to become an important factor in Japan and Europe in the 1990s and in North America by the turn of the century.

<sup>6</sup> See among others, Aghevli *et al.* (1990), Bovenberg and Evans (1991), *European Economy* (1990), Masson (1990).

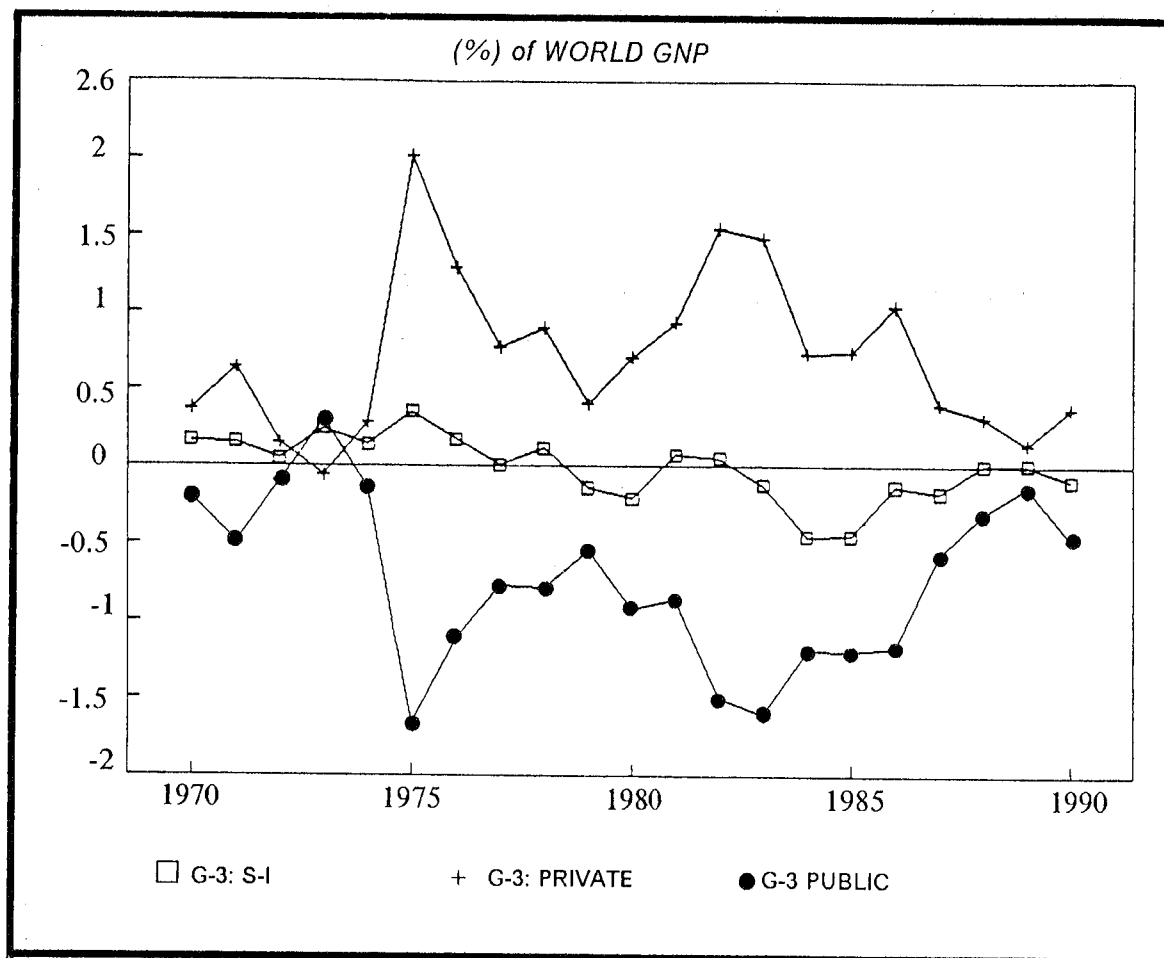
Figure 7  
G-3 SAVINGS-INVESTMENT BALANCES, 1970-1990  
USA, JAPAN, GERMANY



- (b) Rising private wealth is seen as another determinant of falling private savings rates in the 1980s. The value of equities and housing increased significantly and this would diminish the need for saving out of current income. One study suggests this might explain about three-quarters of the decline in the savings rate in Japan and a 2 percentage point decline in the savings rate in the United States (Aghevli *et al.* 1990). The role of the interest rate is theoretically ambiguous. A higher interest rate increases future private income and wealth, inducing an increase in current consumption. It may also encourage current savings as future consumption will be expected to increase. While the empirical evidence is not conclusive, it does seem that interest rate changes have had only a slight effect on savings in the major economies (Aghevli, *et al.* 1990). To the extent that household savings respond positively to a rise in interest rates, this may be (partly) offset by falling corporate savings.<sup>7</sup> Higher interest rates have a negative impact on corporate savings. Thus the effects of wealth holdings and interest rates on private savings in the major industrialized countries seem ambiguous. This suggests a rather low elasticity of private savings to the interest rate, so that an *ex-ante* global savings shortage will not allow for a quick capital market adjustment. Many empirical models of the world economy, in contrast, assume a fairly elastic response of private savings to interest rate changes and therefore, as discussed in section IV, such expectations may be too optimistic regarding the speed of the global adjustment process.

<sup>7</sup> Household savings and corporate savings tend to show opposite trends in OECD countries (see *European Economy* 1990), though not in a one-to-one relationship. As said higher interest rates may have some positive effect on household savings, but raise costs and thus reduce profits of companies. Also, higher corporate savings may have a positive effect on asset prices, which will raise household wealth and affect household savings negatively.

Figure 8  
G-3 SAVINGS-INVESTMENT BALANCES, 1970-1990  
-- PRIVATE AND PUBLIC --

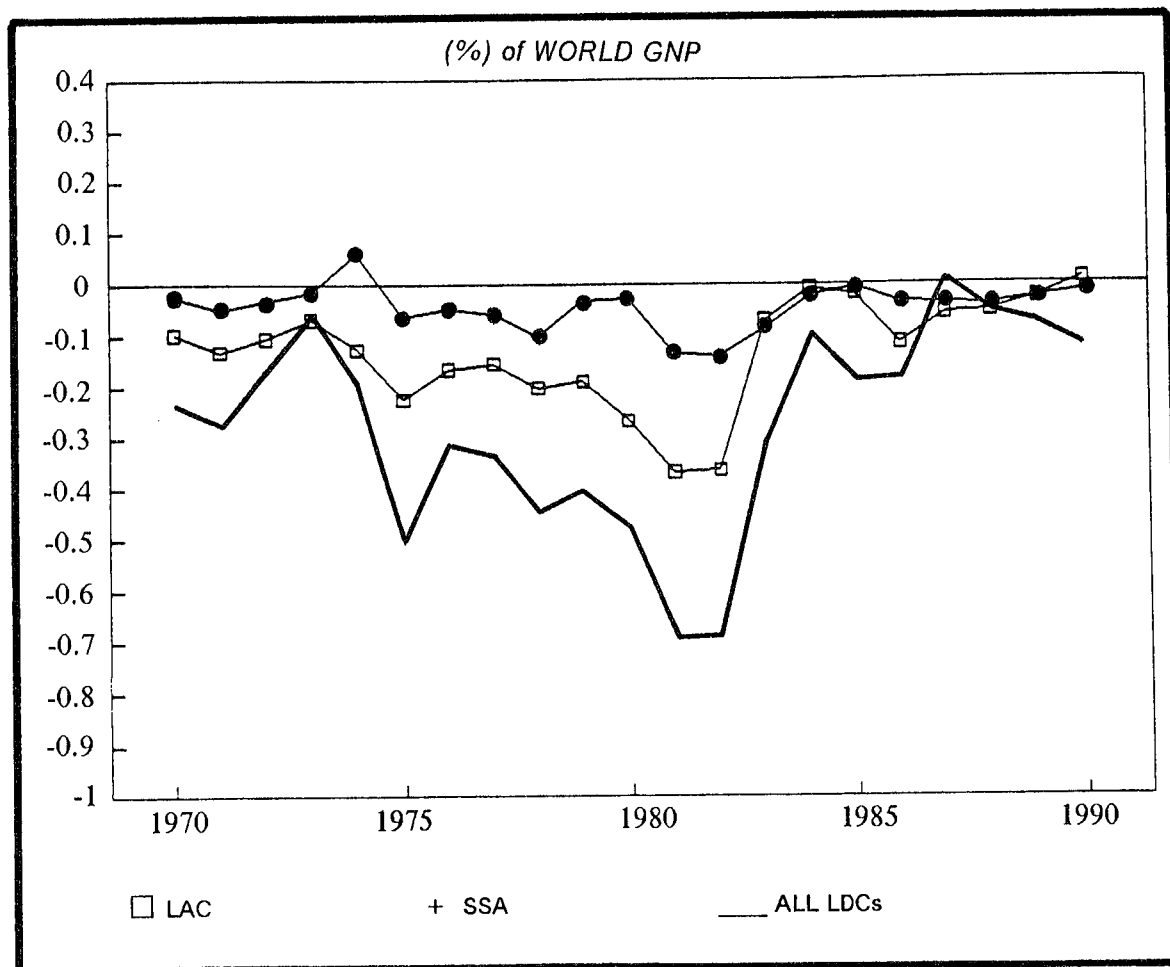


Source: World Bank data.

- (c) Fiscal deficits may have a positive impact on private savings, according to some theoretical notions. First, fiscal expansion may lead to higher income growth under unemployment and induce higher private savings. Secondly, a higher public debt may lead private agents to save more in order to compensate for an expected tax increase in the future.<sup>8</sup> Empirical evidence shows, however, a weak offsetting tendency between public deficits and private savings; the trends in the relevant ratios for the United States being the clearest example: the United States fiscal deficit widened from 1 per cent of GNP to 3.3 per cent between 1978-1982 and 1983-1985, while private savings fell from 18.2 to 17.2 per cent.
- (d) Widening fiscal imbalances and accumulation of public sector liabilities further undermine the responsiveness of national savings to global interest rate shifts. Interest rate increases in response to an *ex-ante* savings gap will push up public debt service obligations and so depress government savings. Table 2 shows some approximate figures of the shifts in the net (financial) asset positions of the three major economies. The G-3 shifted from a net creditor to a net debtor position vis-à-vis the rest of the world between 1980 and 1989 (the creditor positions of Japan and Germany do not compensate for United States net liabilities), but more salient is the growth of public liabilities in all three economies. These asset positions are

<sup>8</sup> This intertemporal private savings behaviour in response to fiscal deficits and public sector borrowing is known as the "debt-neutrality" or Ricardo-Barro equivalence hypothesis.

Figure 9  
LDC EX-POST DEMAND FOR GLOBAL SAVINGS, 1970-1990  
-- ALL LDCs, LATIN AMERICA AND SUB-SAHARA AFRICA --



likely to hamper a smooth adjustment process in the 1990s and, without major fiscal adjustment, will keep public savings down in the major economies and thereby weigh on global savings.

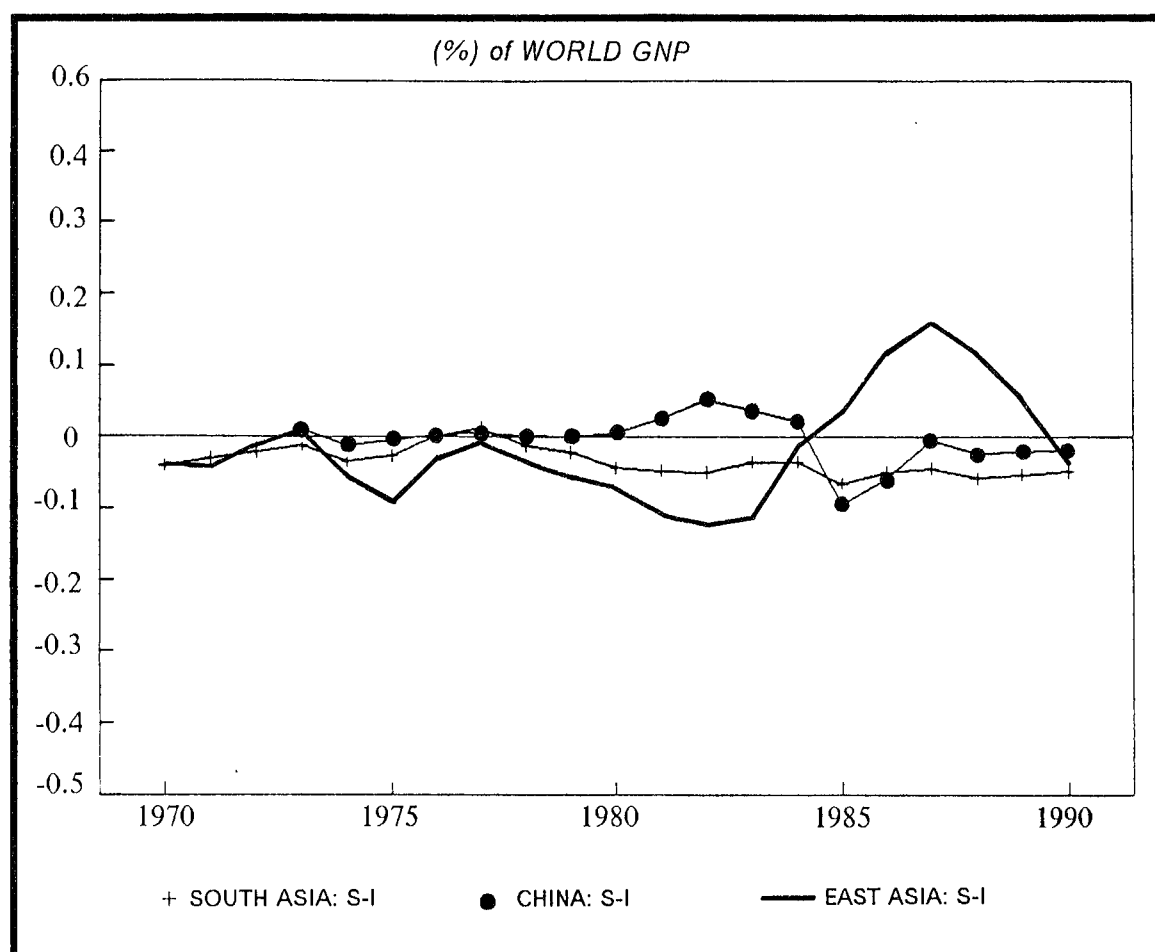
In sum, despite some recovery in the supply of global savings towards the end of the 1980s, the factors listed above suggest that there is not much reason for optimism in terms of the trend continuing during the 1990s. Private savings are expected to stagnate in the major economies as are public savings unless significant fiscal adjustment takes place. New capital demands from the East and the South may thus encounter a serious savings supply constraint in the North.

## II. Additional demands for global savings

Before entering into the discussion of the global effects of increased capital transfers to the East and, particularly, to the South under the world economic conditions sketched above, it may be useful to identify the orders of magnitude of the new capital demands as they have been put forward in various studies and policy documents. It is not the objective of this paper to improve on any of the existing estimates of new demands for global savings. The numbers produced all tend to have global macroeconomic significance; some would require, if satisfied, revolutionary changes in the existing global savings and investment pattern. It does seem



Figure 10  
LDC EX-POST DEMAND FOR GLOBAL SAVINGS, 1970-1990  
-- SOUTH ASIA, CHINA AND EAST ASIA & PACIFIC --



Source: World Bank data.

useful, however, to assess their meaning, before entering into the discussion of possible global economic repercussions. The numbers appear as follows:

- (a) Investment demand in the major industrialized countries should remain high according to some calculations (IMF 1991b) in order to achieve more satisfactory growth rates in the 1990s. The following sections show how growth rates in the North are also crucial for economic performance in the South and East. In order to maintain the growth rate of output at 2.75 per cent per annum, like the 1980s, the industrialized countries will have to raise their average investment rate by 1 percentage point during the period 1991-1996 (IMF 1991b: 45). With an expected fall in the private savings rate of 0.75 percentage points, savings may fall short. If Governments of the industrialized countries meet their intended budget targets, however, this is expected to lead to reduced absorption of savings by Governments of 2 percentage points of GNP. Full implementation of these targets thus seems a minimum requirement to provide the investment finance required to sustain growth in the North.
- (b) Wide-ranging estimates exist as to the external finance requirements for the transformation of the Eastern European countries, the Community of Independent States (CIS, i.e. the former Soviet Union) and for German unification. All are, however, sizeable and of global macroeconomic importance. Table 3 summarizes the range of estimates derived from a number of studies (see annex table A1.2 for details).<sup>9</sup>

<sup>9</sup> Collins and Rodrik (1991), IMF (1991b), Papadia *et al.* (1991), Masson and Meredith (1991).

Table 2

**G-3: SHIFTS IN NET FINANCIAL ASSETS POSITIONS, PRIVATE AND PUBLIC SECTOR, 1980 AND 1989**

*(Billions of US\$)*

	1980			1989		
	Assets	Liabilities	Net	Assets	Liabilities	Net
<b>United States</b>						
Domestic	1966	1966	0	4625	4625	0
Private	1966	1745	221	4625	3783	842
Public		221	-221		842	-842
Foreign	608	501	107	1412	2078	-666
Private	517	339	178	1253	1641	-388
Public	91	162	-71	159	437	-278
Total	2574	2467	107	6037	6703	-666
Private	2483	2084	399	5878	5424	454
Public	91	383	-292	159	1279	-1120
<b>Japan</b>						
Domestic	1169	1169	0	4040	4040	0
Private	1169	895	274	4040	3480	559
Public		274	-274		559	-559
Foreign	204	291	-87	1771	1477	294
Private	113	129	-16	1597	1410	187
Public	91	162	-71	174	67	107
Total	1373	1460	-87	5811	5516	294
Private	1282	1024	258	5636	4890	746
Public	91	436	-345	174	626	-452
<b>Germany</b>						
Domestic	744	744	0	1315	1315	0
Private	744	636	108	1315	1039	276
Public		108	-108		276	-276
Foreign	260	215	45	695	474	221
Private	190	185	5	581	349	232
Public	70	30	40	114	125	-11
Total	1004	959	45	2010	1789	221
Private	934	821	113	1896	1389	508
Public	70	138	-68	114	401	-287
<b>Total G-3</b>						
Domestic	3879	3879	0	9980	9980	0
Private	3879	3276	603	9980	8303	1677
Public	0	603	-603	0	1677	-1677
Foreign	1072	1007	65	3878	4029	-150
Private	820	653	167	3431	3400	31
Public	252	354	-102	447	629	-181
Total	4951	4886	65	13858	14008	-150
Private	4699	3929	770	13411	11703	1708
Public	252	957	-705	447	2306	-1858

**Source:** IMF, *Balance of Payments Statistics*, various issues (stock data). IMF, *International Financial Statistics*, various issues.

**Note:** Domestic asset positions refer to financial assets and liabilities only, net of inter-bank and intra-government positions.

Table 3

**ALTERNATIVE ESTIMATES OF EXTERNAL FINANCING REQUIREMENTS OF  
LDCs, EASTERN EUROPE AND CIS IN THE 1990s**

*(Annual flows in billions of US\$ of 1990)*

	<i>Net transfer<sup>a</sup> 1990</i>		<i>Net resource flow<sup>b</sup> 1990</i>	<i>Financial requirements 1990s</i>	
	<i>Total</i>	<i>(Excl. grants)</i>	<i>Total</i>	<i>Low</i>	<i>High</i>
<b>Developing countries</b>					
All LDCs	16	(-10)	83	77	180
Sub-Saharan Africa	12	(1)	17	15	28
Asia	12	(7)	34	18	23
South Asia	4	(1)	8		
East Asia and Pacific	8	(6)	26		
Europe, Middle East and North Africa	-2	(-10)	13	8	8
Latin America and Caribbean	-6	(-9)	19	36	61
<b>Eastern Europe and CIS</b>					
EE5, CIS, German unification				55	393
Eastern Europe (EE5)			3 <sup>c</sup>	10	124
CIS			2 <sup>c</sup>	15	189
German unification				30	80
Total LDCs and Eastern Europe, CIS and GU (As per cent of world GNP, 1990)				98 (0.7)	573 (2.7)

**Memorandum: Net transfers by source**

*Net transfers<sup>a</sup> 1990*

	<i>Official (excl. grants)</i>	<i>Grants</i>	<i>Private</i>
All LDCs	4	26	-15
Sub-Saharan Africa	2	11	-1
Asia	5	5	2
South Asia	3	3	-2
East Asia and Pacific	2	2	4
Europe, Middle East and North America	-4	8	-6
Latin America and Caribbean	1	2	-9

**Source:** World Bank, *World Debt Tables, 1991-92*, for net transfer and resource flow data to LDCs and annex table A1.2 for alternative estimates of financing requirements for the 1990s.

**a** Net disbursements of medium and long-term debt plus official grants plus net direct foreign investment less interest payments less profit remittances.

**b** Net disbursements of medium and long-term debt plus official grants plus net direct foreign investment.

**c** Data for EE5 and CIS refer to 1989 and new gross disbursements of medium and long-term publicized bank credits or bond issues taken from OECD (*Financial Market Trends, 1991*, table 12).

The upper bound estimates of required annual capital inflows shown are close to 2 per cent of world GNP but still quite modest compared to some other "needs" calculations.<sup>10</sup> The upper bound estimates take Collins and Rodrik's (1991) calculations of investment requirements based on a 7 per cent growth target of real GNP. The authors assume without explicit argument that all financial requirements (US\$915 billion per annum, see annex table A1.2) have to be satisfied by external resources. These estimates of Collins and Rodrik have been adjusted in table 3, deducting projected national savings in Eastern Europe and CIS, assuming (possibly optimistically) a constant 1990 savings rate. The lower bound estimates for the EE5 and republics of the former Soviet Union have little to do with an estimate of recipients "needs", as these are based on a Marshall Plan-like operation. The estimates represent real per capita aid flows for Eastern Europe equal to that received by the western European countries after World War II (Economic Commission for Europe, 1990; Collins and Rodrik 1991).

- (c) Capital-requirements estimates for developing countries are based on traditional methodologies originating from Rosenstein-Rodan's one-gap (savings gap) Harrod-Domar growth model (Rosenstein-Rodan 1961) and Chenery and Bruno's two-gap (savings and trade gap) model (Chenery and Bruno 1962). Despite the rigidity and obvious limitations of these model frameworks, they have remained influential to date. In essence, the approach is to set a desired level of GDP growth which, for a given capital-output ratio, determines the appropriate investment level. For a given savings rate and import coefficient, a domestic savings and a foreign exchange gap can be derived which will determine the financing requirements. Recent extensions of this framework (Bacha 1990; Taylor 1990) include a third gap, i.e. the fiscal gap, to take into account the "double transfer" problem that has plagued developing countries in the 1980s and 1990s: first, they have to send hard currency abroad to meet interest obligations, hence they need a trade surplus as net capital inflows are less than interest payments; and, second, the public sector is largely responsible for these payments, meaning it must run a non-interest budget surplus or find domestic finance. The three-gap model takes account of the fact that developing countries may face a binding 'financial' constraint as opposed to the 'real' external constraint emphasized by the two-gap model. Table 3 also summarizes a number of calculations of external financing requirements of developing countries based on two-gap (Fishlow 1987, Development Committee 1988), three-gap (WIDER, Taylor 1990) and current-account models<sup>11</sup> and applying modest growth targets. The range of estimates for annual external financial requirements for the 1990s lies between US\$77 and 120 billion, which is somewhere between 0.5 and 0.8 per cent of GNP of the industrialized countries, or roughly the DAC target for development assistance. Do these imply additional demands for global savings? Table 3 also gives for comparison the net transfer<sup>12</sup> and net resource flow<sup>13</sup> to developing countries in 1990. The lower bound financial requirements would be covered by the net financial resource flow (including direct foreign investment) in 1990 which amounted to US\$83 billion. However, it is more appropriate to look at the net transfer as the financing requirement estimates essentially refer to the trade gap (two-gap) or financing gap of required capital inflows less interest payments (three-gap).<sup>14</sup> Net transfers to developing countries were US\$16 billion in 1990 (up from an average *negative* annual net transfer of US\$5 billion in 1985-1989). Thus from the existing situation in 1990,

<sup>10</sup> Collins and Rodrik (1991) for instance also produce a capital requirements estimate of approximately US\$1.6 trillion per year, which would be about 8 per cent of global GNP and almost equal that of the recipient countries. This estimate is based on simple production function (Cobb-Douglas type) calculations with fixed coefficients targeting to reach the capital-labour ratio of the industrialized countries in a time frame of 10 years. The resulting numbers may have an illustrative meaning, but that is as far as it goes.

<sup>11</sup> The World Bank study on African financing needs (World Bank 1991) uses a simple current account projections model with assumptions about export growth, import elasticities, projected debt service obligations and debt relief.

<sup>12</sup> Net transfer = net disbursements of medium and long-term debt + official grants + net direct foreign investment - interest payments on external debt - profit remittances.

<sup>13</sup> Net resource flow = net disbursements of medium and long-term debt + official grants + net direct foreign investment.

<sup>14</sup> An exception is the World Bank estimate of financing requirements for sub-Saharan Africa which is based on current account projections: the annual financial resource requirement is estimated at US\$28 billion, while the capital inflow in 1990 amounted to US\$17 billion.

net transfers to developing countries would have to increase by about US\$60 to 100 billion during the 1990s to meet growth targets which are in the order of magnitude of 1.5 to 2.0 per cent per capita income growth. The gap is largest for the Latin American countries which, according to these estimates, would have to revert from a negative transfer of US\$6 billion to a positive one of between US\$36 and 60 billion. For sub-Saharan Africa there would be an additional demand of between US\$3 and 16 billion per year, while in Asia additional demands are likely to be small.

- (d) On top of the above-listed demands for global savings come demands for the reconstruction of the Middle East after the Gulf war and finance required to fund the global environmental action programme discussed at the United Nations Conference on Environment and Development (UNCED). The IMF has estimated additional external capital requirements for reconstruction in the Middle East at roughly US\$13 billion per year for 1991-1996. Financing requirements for environmental action have also yielded a wide range of estimates. Agenda 21 of UNCED comprises an international action programme for the environment and development (on top of domestic efforts) with an estimated cost of US\$125 billion per annum in the form of concessional assistance for the developing countries.<sup>15</sup> However, it is at the same time suggested that US\$15 billion would be a 'more realistic' amount, given the absorptive capacity of countries to implement environmental programmes and given likely available finance for such purposes.

The sum of all these demands amounts to very impressive numbers indeed. Combining all the lower bound estimates would yield additional capital demands equivalent of 1.4 per cent of world GNP (about US\$280 billion annually), while the upper bound estimates come to 3.8 per cent of world GNP (US\$800 billion).<sup>16</sup> These numbers seem far too large for comfort. The previous section already sketched a rather pessimistic outlook for the growth in global savings and showed the rather narrow margins within which savings-investment balances (as a share of global GNP) of the major economies moved and which were enough to provoke substantial global adjustment effects. To satisfy their own investment demands and those in the East and the South, the developed economies will have to reverse trends in private and public savings rates.

Of course, the estimates of financing 'needs' in the 1990s discussed above are crude and calculated using rather simple methods. Some of the estimates, like the lower bound numbers for Eastern Europe and UNCED, do not reflect a calculation of financing requirements, but rather reflect "guesstimates" of the authors of what would be a 'realistic' level of capital flows. The models used to estimate 'needs' are based on very crude assumptions about economic behaviour, such as assuming constant savings rates and capital-output ratios over long periods of projection. Further, the methods are static and partial in the sense that domestic and global general equilibrium effects are not accounted for, e.g. in terms of the effects of

<sup>15</sup> See UNCED (A/CONF.151/PC/100/Add.9) and the Tokyo declaration of the Eminent Person's Meeting on Financing Global Environment and Development (UNCED press release, 17 April 1992). It should be noted that Agenda 21 covers environmental *and* development programmes, such that there is likely to be some overlap with the estimates of financial requirements for developing countries discussed above. In fact, at UNCED (June 1992) it was agreed that the industrialized countries would try to raise aid flows to 0.7 per cent of GNP by the year 2005. This refreshed commitment to the old DAC target was, once again, non-binding.

The *World Development Report* (World Bank 1992) estimates a cost of US\$75 billion of a set of environmental projects for developing countries. It is suggested, however, that not all of these additional investment costs should be covered by external finance, but rather that most could be funded by the LDCs themselves, i.e. out of income growth resulting from better economic management.

<sup>16</sup> These magnitudes are derived as follows:

	Original specification (US\$ billion, 1990 prices)		As a percent of world GNP	
	High	Low	High	Low
Industrialized countries investment demand (+1 per cent)	145	145	0.7	0.7
Eastern Europe and CIS	393	47	1.9	0.2
LDCs (gap = requirements - 1990 transfers)	114	61	0.5	0.3
Middle East	17	17	0.1	0.2
UNCED	125	15	0.6	0.1
Total	794	285	3.8	1.4

Source: Table 3 and annex table A1.2.

capital-inflow induced income increases on savings rates and the effects of additional flows on world interest rates, growth in the creditor countries, trade, commodity prices, and so on.

It thus seems easy to dismiss proposals for mobilizing funds for the purposes listed above. Nevertheless, it cannot be denied that the listed numbers play a role of some influence in the international policy debate and that it is therefore useful to think through the implications for the world economy as a whole. Further, it remains useful to try and estimate the financing requirements to achieve particular policy targets (like a target GNP growth rate). In practice, growth objectives have been the residual of available finance. With the dismal growth performance of many developing countries in the 1980s, it seems reasonable that their policy makers would put forward claims on external financial resources which are derived from their growth and development targets. Probably, more research should be devoted to the improvement of the existing methodologies to estimate financial resource requirements. Given the likely magnitude of the estimates, a new method should comprise a global framework to take account of the direct and indirect international economic repercussions of *ex-ante* shifts in the distribution of global savings.

### III. LDC financial market access, 'capital flight' and 'crowding out' of aid budgets

The central question is not, of course, whether or not there is a tendency towards an *ex-ante* global savings shortage, but what type of adjustment mechanism is set in motion and who gains and who loses in the process. Main-stream economic theory assumes savings and investment are a function of the real interest rate.<sup>17</sup> Under perfect market conditions savings, investment and the world interest rate would be determined simultaneously. An increase in the real interest rate would be associated with increased global savings and decreased global investment. In the absence of restrictions on international capital flows and the functioning of the global capital market, capital should flow to capital-scarce economies where the expected rate of return per unit of investment is highest. If these conditions hold, global savings would be allocated at the margin towards LDCs and Eastern Europe where capital-labour ratios are considerably lower than in the industrialized countries. This process would continue until expected real returns on investment are equated across countries.

New capital demands (or increased perceived investment opportunities) will, within this framework, push up real interest rates, but subsequently raise global savings, reallocate these to developing countries and Eastern Europe, and reduce investment demand in the industrialized countries. The more responsive global savings are to interest-rate changes, the quicker the adjustment and the smaller interest-rate movements are for a given shift in the investment demand function. Alternatively, if the supply of savings is relatively insensitive to the interest rate, as argued on empirical grounds in section I above, a relatively large increase in the cost of capital will be required with a relatively large diversion of investment resources away from the industrialized countries in order to satisfy capital demands in Eastern Europe and in the South. The interest-rate sensitivity of world savings and investment behaviour thus plays a critical role in determining the end-result. This determinant is also crucial in global macroeconomic models used for policy analysis. The implications are discussed in section IV.B.

Another critical assumption of the above-mentioned framework is that all capital is allocated internationally through an efficient global capital market leading to an equation of the (expected) rate of return (interest rate) across countries and regions. Nobody will disagree that this is too simplistic to fit stylized facts. Access of developing countries and Eastern European countries to private capital markets is limited. Developing countries face a segmented capital market. Four dimensions are briefly assessed below: (1) official flows; (2) commercial bank lending; (3) direct foreign investment; and (4) 'capital flight' from the developing countries.

<sup>17</sup> The argument is set out also in recent studies such as Collins and Rodrik (1991) and Pauly *Transfers, Real Interest Rates and Regional Development: International Economic Implications of Financial Support for the Economies in Transition*, Studies for the Group of Twenty-Four (1992).

### 1. *Official capital flows*

A large share of capital flows to LDCs is provided by official sources, i.e. by Governments of the industrialized countries and multilateral organizations: most of which (about three-quarters) at concessional terms. These flows can be seen as a reflection of the limited access to LDCs to private sources of external finance and are largely motivated by (geo-)political and humanitarian considerations rather than by rate-of-return differentials.

### 2. *Commercial bank lending*

The experience with commercial bank lending to developing countries over the past two decades has taught that banks ration borrowers from poor countries. Credit availability from this source for developing countries has been shown to be insensitive to interest rates. Imperfect information impedes banks from properly assessing (current and future) creditworthiness of borrowers and from differentiating with precision between risk groups of borrowers. Instead of applying a risk premium on interest rates, credit ceilings are applied to minimize the risk of default of borrowers.<sup>18</sup> Fairly uniform and broad categories of borrowers are usually distinguished in the oligopolistically structured bank loan market, with the lowest ratings for borrowers having the highest risk. Some borrowers, including most low-income LDCs, are entirely excluded from this market. However, the experience of the 1970s and 1980s has shown that this was not a static market. Flooded with liquidity (in part from the deposit investments accruing from savings surpluses of major oil exporters), banks raised credit ceilings for groups of LDCs and, encouraged by high commissions to be earned, engaged in an oligopolistic competition for market shares.<sup>19</sup> Mainly middle-income countries benefited from the easing of market access. The fear of a widespread debt crisis following Mexico's payment problems in 1982 changed bankers' market perceptions rather abruptly, leading to a lowering of credit ceilings to practically zero for most LDCs. Thus, a rise in world interest rates, even if it led to an increased supply of global savings, would do little to enlarge the flow of bank loans to developing countries. The climate of extreme political and economic uncertainty, the lack of institutions and legal arrangements protecting property rights and other factors, will probably render very limited the access of the economies in transition in Eastern Europe and the republics of the former Soviet Union to the bank loan market.

### 3. *Direct foreign investment*

Direct foreign investment (DFI) in developing countries has also been limited and behaviour of multinationals is guided by more factors than simple straightforward calculations of rate-of-return differentials at the margin.<sup>20</sup> Political and economic uncertainties impede flows towards capital scarce economies. The share of DFI in total capital transfers to developing countries increased during the 1980s (from around 10 to 30 per cent), but this was, besides an increase in absolute terms, to a large extent due to the decline and stagnation in other sources of finance. Recent growth of DFI (and portfolio investment) has given rise to some optimism about the return of developing countries to private capital markets (e.g. IMF 1991c). A closer look at the data tempers this enthusiasm. Table 4 shows that DFI to LDCs increased quite consistently in real terms over the past two decades, but nevertheless they lost share in global DFI (from 22 per cent in the late 1970s to 15 per cent in the late 1980s). The average growth rate of DFI to LDCs in the second half of the 1980s was below that of the first half. It should be noted, however, that much of the recent growth took place after 1988, so that the figures for the most recent trends could be somewhat under-estimated in table 4. Growth has been highly concentrated, however. Seven countries (China, Thailand, Malaysia, Republic of Korea, Brazil, Mexico and Argentina) received two-thirds of the total flow of DFI to LDCs between 1986 and 1990. Asia has been the most successful region in attracting DFI

<sup>18</sup> There now exists a wide body of theoretical literature on the rationing behaviour of banks in domestic and international credit markets. See e.g. Stiglitz and Weiss (1981), Eaton, Gersovitz and Stiglitz (1986), and Vos (1991).

<sup>19</sup> See Darity and Horn (1988), Devlin (1989) and Vos (1991) on the 'loan pushing' and oligopolistic bank firm competition that characterized the lending behaviour towards LDCs in the 1970s.

<sup>20</sup> Cf. e.g. Dunning (1981) for an authoritative view.



flows (see table 5), which has been attributed to the comparative success of the economies in East Asia in terms of growth and macroeconomic stability, the maintenance of labour-cost competitiveness and liberalization of investment regimes (particularly in China).

Much of this also relates to shifts in the international distribution of labour in export industries competing with Japan, but also is a result of firms and investors in the Republic of Korea and Taiwan Province of China moving capital to the 'newer NICs' in the region (Thailand, Malaysia, China, Indonesia). DFI flows to Latin America had declined during the first half of the 1980s as a consequence of the economic crisis and instability related to the debt crisis. Flows later recovered, particularly towards Brazil, Mexico, Argentina and Chile. Only Mexico and Chile have shown significant economic recovery and stability in recent years, which may have been a factor in attracting DFI. In these countries the privatization of public enterprises and debt-equity conversion programmes seem more important. A return of 'flight capital' of their residents (see also below) has been an important source of finance behind the recent growth of DFI to these countries. Some observers doubt whether much 'additional' DFI has been attracted, if any at all.<sup>21</sup> DFI flows to sub-Saharan Africa have been very small (except to Nigeria) and have tended to decline. DFI to Eastern Europe has been modest so far; this is not surprising given the political and economic uncertainties. In sum, LDCs have not been able to benefit proportionally from the recent worldwide growth of DFI. DFI has tended to concentrate in countries where foreign exchange constraints are the least likely. With the possible exception of some Latin American countries, DFI is not likely to become a major source of finance for the regions with high capital requirements in the 1990s.

#### 4. *Private capital outflows from LDCs*

A final point regarding the functioning of the global capital market relates to the large private capital outflows from developing countries over the past two decades. This phenomenon popularly became known as 'capital flight'. Standard theory would expect that under efficiently working markets there would be a capital flow towards capital-scarce economies; not two-way flows. Obviously then, imperfections exist. The rationing of official capital flows and commercial bank credits has been alluded to above. Moreover, these flows have concentrated in the public sector of developing countries.<sup>22</sup> It has been argued that the growth of the public sector debt overhang has been a determinant of private sector capital outflows (e.g. Eaton 1987). The high capital inflows of the 1970s would have been a source of exchange rate overvaluation and public external debt would be perceived by investors as a senior type of asset over domestic assets. Fears for a major devaluation and the risk of taxation or expropriation of domestic asset holdings would be driving forces of capital flight. Empirical investigation of the issue is seriously hampered by measurement problems. This is not the place to discuss these concerns, but clearly estimates of the magnitude and trends in private capital outflows from developing countries tend to differ significantly depending on the method applied.<sup>23</sup> Table 6 gives some plausible aggregate estimates for 1975-1985. It suggests capital flight has been most serious in the indebted Latin American countries with average annual outflows of US\$10 to 15 billion between 1978 and 1985. The cumulative outflow for the region has been, according to the figures in table 6, almost equivalent to 40 per cent of the increase in outstanding long-term external debt between 1975-1985. Although much smaller in absolute terms, the ratio of the stock of private foreign assets to outstanding debt appears even higher for Africa (43.6 per cent). Capital flight from Asia is reported to be much less significant, the highly-indebted Philippines being a notorious exception (Vos 1992a). Even if the margin of error is considerable, these estimates suggest many developing countries may be much less foreign-exchange constrained than is often assumed, if they can find ways to repatriate these private asset holdings.

Insight into the actual driving forces behind private capital outflows could assist in identifying ways to stimulate such repatriation. Empirical evidence about the determinants is

<sup>21</sup> See Lagos (1992) on the case of Chile, who argues that net new DFI may have been less with the debt-conversion programme than it might have been without.

<sup>22</sup> Some 80 per cent of the external debt of developing countries is held by the public sector (see Vos (1991) for a more detailed analysis).

<sup>23</sup> See Anthony and Hughes Hallet (1992) and Vos (1992a) for recent discussions and comparison of measures using different methods.

Table 4

<b>FLOWS OF DIRECT FOREIGN INVESTMENT</b>				
<i>(Annual averages, US\$ billion, 1989 prices) <sup>a</sup></i>				
	1970-1974	1975-1979	1980-1984	1985-1989
<b>Inward flows</b>				
To high-income countries	35.8	37.5	56.6	102.3
To LDCs	8.6	10.9	14.4	18.3
<b>Outward flows</b>				
From high-income countries	54.7	63.6	58.4	135.7
From LDCs	0.5	1.0	1.7	1.9
Discrepancy inward-outward	-10.8	-16.2	10.9	-17.0
<b>Shares (per cent) of inward DFI</b>				
To high-income countries	80	78	80	85
To LDCs	20	22	20	15
<b>Average annual growth rates (per cent) inward DFI</b>				
To high-income countries		1.0	8.6	12.6
To LDCs		4.3	5.8	4.9

**Source:** IMF, *Balance of Payments Statistics Yearbooks*; Bachman (1991).

<sup>a</sup> Current US dollars deflated by G-7 MUV index.

not univocal, but depends on country cases and the applied method of measurement. Four major determinants stand out:<sup>24</sup> (a) the real exchange rate (or the expectation of a major devaluation); (b) the (exchange-rate adjusted) real rate-of-return differential between foreign short-term assets and domestic financial assets (this determinant was not found significant for private capital outflows from Africa); (c) the availability of external finance (rather than the debt overhang itself, as was hypothesized above), which has been explained as a factor 'fuelling' capital flight; and (d) a target stock of foreign assets which has been associated with simultaneous consumption and portfolio decision-making by private agents, international lifestyles and consumption patterns of the rich in developing countries requiring substantial foreign exchange holdings.<sup>25</sup>

This set of determinants does not provide a clear guide for policy advice, even apart from the fact that the situation should be assessed for each individual country. Exchange rate adjustment and a rise in domestic real rates of return could be achieved through a package of adjustment policies. What does matter is stable and sustained positive returns on domestic assets over time. The latter condition clearly has prevailed in large parts of East Asia with low levels of capital flight. Chile and Mexico only achieved a return of flight capital after at least half a decade of stabilization and structural adjustment policies and implementation of an attractive debt-conversion programme. Repatriation of foreign assets in the Philippines is also associated with debt-equity swaps. Large debt conversion programmes may have undesirable macroeconomic effects (monetary expansion, inflationary tendencies, and possible negative balance of payments effects)<sup>26</sup> when the economy is still going through a process of adjustment towards stability and economic recovery. The positive correlation between capital flight and foreign capital inflows may imply new capital transfers should be discouraged. In the

<sup>24</sup> Econometric studies can be found in, among others, Cuddington (1986), mainly referring to Latin American countries; Pastor (1990) also on Latin America; Hermes and Lensink (1990) on Africa; Anthony and Hughes Hallet (1992) on four major Latin American countries and the Philippines; and Boyce (1990) and Vos (1992a) on the Philippines. See also Vos (1991) for a further comparison.

<sup>25</sup> This point is made in Cuddington (1986) and Vos (1991, 1992a).

<sup>26</sup> See e.g. Lagos (1992) and Corden and Dooley (1989) for discussion of such issues.

Table 5

**FLOWS OF DIRECT FOREIGN INVESTMENT TO LDCs, BY REGIONS**

(Percentage shares)

	1970-1974	1975-1979	1980-1984	1985-1989
Africa	16.6	15.1	6.7	6.6
Asia	23.3	24.0	35.9	48.5
Europe, Middle East, North Africa	5.4	3.7	6.7	11.6
Latin America and Caribbean	54.7	57.2	50.7	33.3
Total	100.0	100.0	100.0	100.0

Source: See table 4.

past, overborrowing as much as outright corruption of government officials diverting foreign loans to private ventures<sup>27</sup> have been vehicles for capital flight. Probably this should be seen in the broader context of the economic environment. Where new moneys assist economic stability and recovery, they may be supportive of a repatriation of foreign assets in the medium run (as in the case of Mexico).

The characterization of the four capital market segments leads one to conclude that, for most developing countries, prospects for new capital transfers in the 1990s do not look very bright.

- (a) A resumption of voluntary commercial bank lending is not a realistic prospect for most LDCs. Net resource flows from this source are still negative for most countries.<sup>28</sup> Positive net flows have been restricted to some Asian countries, but a major contribution is not to be expected for the 1990s. At best the larger middle-income countries may regain some access depending on their success with adjustment efforts and the reduction of their debt overhang.
- (b) DFI and renewed LDC access to international bond and portfolio markets<sup>29</sup> have concentrated in a very small number of the larger and richer developing countries. Again success in the adjustment effort may assist in attracting additional finance in the medium term. Smaller and poorer countries, even if they stabilized successfully (like Bolivia), simply lack resource endowments or basic economic and social infrastructure to attract such funds.
- (c) Similarly, repatriation of foreign assets held by private agents is probably in most cases not an important source of finance during periods of stabilization and adjustment, but more likely it could be a source of finance for the expansion that follows successful adjustment.
- (d) Official flows will be for most countries the residual, but most important source of external finance in the 1990s. A major constraint on these flows will be formed by the budget constraints of the Governments in the industrialized countries, as discussed above. The Governments in the major economies may not give high political priorities to the developing countries. Negotiations at UNCED in Rio de Janeiro (June 1992) once more confirmed the difficulties of getting firm commitments of the donor countries for additional finance. A weak restatement of the old DAC target

<sup>27</sup> Obviously, not much hard documented evidence is available on this subject. Boyce (1990) gives a well-informed account for the Philippines.

<sup>28</sup> See table 3 and World Debt Tables 1991-1992 and IMF (1991c) for details.

<sup>29</sup> See IMF (1991c).

Table 6

PRIVATE FOREIGN ASSET ACQUISITION ('CAPITAL FLIGHT')<sup>a</sup> BY LDCs, 1975-1985

(Billions of current US\$, average annual flows)

	I	II	III	IV	V
	1975-1978	1979-1982	1983-1985	Increase in stock since end-1974	Increase in stock (col. IV) as a percentage of growth of debt outstanding
All LDCs <sup>b</sup>	5.9	27.8	16.3	183.6	28.1
Africa	1.7	4.1	1.8	28.5	43.6
Asia	-0.8	7.0	-2.2	18.3	12.6
EMENA <sup>c</sup>	1.3	2.0	5.7	30.2	17.9
Latin America	3.7	14.7	11.0	106.6	38.9

Source: IMF, *Balance of Payments Statistics*; Deppler and Williamson (1987); World Bank, *World Debt Tables*.

<sup>a</sup> Private foreign asset acquisition defined as net change in private external claims and measured on the basis of balance of payments statistics as net change in external liabilities (short and long-term) plus net direct foreign investment less current account deficit and less the change in official reserves and foreign assets acquired by the official banking sector.

<sup>b</sup> Excluding offshore banking centres.

<sup>c</sup> Europe, Middle East and North Africa (excluding major oil exporters).

of 0.7 per cent of GNP was agreed on without any solid commitment of the donors to meet that target before the end of the decade. Rather, existing aid budgets have been under serious strain to redirect funds towards Eastern Europe. Italy, which expanded its aid budget significantly during the 1980s, has already made a large re-allocation in this sense. The aid budget of the Netherlands, generally considered one of the more generous donors favouring low-income recipients, has become subject to a similar political debate, although no major diversions have taken place so far.

The prospects for satisfying from international financial resources the new capital demands of both Eastern Europe and the South are thus not very bright. A 'crowding out' of demands from either region (or parts thereof) is a plausible scenario. However, even if aid flows from the rich countries were more forthcoming, it may be questioned whether this would have a favourable impact on the world economy as a whole and the developing countries, in particular, given the global capital market conditions discussed in section I above. This issue is treated in the next section.

#### IV. Global interactions

The global economic balances have shifted markedly over the past quarter of a century, as noted in section I. Throughout the 1990s and into the twenty-first century further major shifts seem to lie ahead. As also noted in section I, savings rates in the Northern economies are likely to decline in the medium to long run. This will put pressure on major fiscal adjustments in the Northern economies; otherwise higher and more unstable interest rates, lower private investment demand and growth are likely to dominate the global adjustment process. New capital demands for Eastern Europe, developing countries and the global environment

will create pressure for further major shifts in global macroeconomic balances, even if the most modest estimates are taken (section II). Despite the return of some developing countries to private international capital markets, the role of private flows in satisfying the new demands is expected to be small and restricted to a limited number of countries. Demands for official and concessionary finance will thus put further pressure on the government budgets of the industrialized countries. A first plausible scenario is that budgetary problems in the rich countries will crowd out the finance needed for the global environment, development of the poor countries and capitalist reform in the former socialist countries. A second scenario could be that some new public money is made available, but accompanied by larger fiscal deficits and a crowding out of private investment demand in the industrialized countries. The aid-receiving countries in the developing world could eventually lose if financial instability and recessionary tendencies subsequently hit the world economy.

Why such pessimism? Would not new capital transfers stimulate trade and growth in the finance and foreign-exchange constrained economies with positive feedbacks on growth and savings elsewhere? Could the global adjustment process not be eased by looser monetary policies in the major economies, i.e. offsetting the upward pressures on real interest rates and recessionary tendencies? To answer these questions a global model is required. There is no consensus on the appropriate structure of such a model. Instead of presenting one particular model, outcomes of different types of existing models are compared. Section A below isolates the effects of an exogenous increase in capital transfers on international trade eastward and southward. Section B assesses the outcomes of several global macroeconomic models that focus on savings-investment and financial market linkages between the major economic regions of the world and the developing countries.

### *A. Aid transfers and trade linkages*

The debt problem has brought the financial interdependence between industrialized and developing countries to the fore, but trade remains of course an important element in North-South relations. In 1987, industrialized countries exported about 2.7 per cent of their output to developing countries, while imports from them were about 3.1 per cent of industrialized country GDP. In 1980 ratios for both exports and imports were 3.9 per cent. The decline was mainly due to the fall in fuel and commodity prices in the 1980s (table 7). The traditional paradigm is that of developing countries as exporters of primary commodities and importers of manufactures. The share of manufactured exports in total exports of developing countries has increased significantly over the past two decades. Table 7 shows that manufactured imports from LDCs as a share of the GNP of industrialized countries increased four-fold since 1970, while total import coefficient increased by 50 per cent. Manufactured exports from industrialized countries to developed countries almost doubled as a proportion of industrialized country GDP between 1970 and 1980 (from 2.2 to 3.9 per cent), but fell during the 1980s. The latter trend is clearly linked to the debt crisis and the drying up of net financial transfers to developing countries and the import compression that formed part of the adjustment process many developing countries were forced to follow.

This raises the classic question of the relationship between trade and capital transfers and the extent to which trade and growth are stimulated world-wide by capital movements. The optimistic view, voiced some time ago (for instance in the Brandt Commission Report (Brandt 1980)), is that aid and capital transfers to developing countries would lead to higher global welfare as they would increase import capacity of these countries, enhance their growth potential and thus have a positive feedback on other countries through trade expansion. The underlying reasoning is based on extreme (Keynesian) assumptions, that is, a fully demand-driven global adjustment process and no endogenous price or interest rate effects.<sup>30</sup> There is a vast international economics literature showing welfare outcomes may be ambiguous once price and factor payment effects are accounted for.<sup>31</sup> The empirical relevance of the terms-of-trade, interest rate and financial market dynamic effects will be assessed through a number

<sup>30</sup> See also Jayarwardena (1983) on this type of global Keynesianism which had many advocates at least until the early 1980s.

<sup>31</sup> See e.g. Eaton (1989) and Vos (1991) for surveys of this literature starting with the classic transfer debate.

Table 7

## TRADE FLOWS BETWEEN INDUSTRIALIZED AND DEVELOPING COUNTRIES

	1970	1980	1987
<i>In billions of US\$</i>			
Exports of ICs to LDCs	48.1	304.1	334.7
Manufactures	39.2	243.1	277.5
Non-oil primary commodities	8.1	53.6	49.9
Oil	0.7	7.4	7.4
Imports of ICs from LDCs	42.5	313.4	390.0
Manufactures	8.6	91.1	217.9
Non-oil primary commodities	26.0	93.1	97.2
Oil	7.9	129.2	75.0
<i>In per cent of ICs GNP</i>			
Exports of ICs to LDCs	2.2	3.9	2.7
Manufactures	1.8	3.1	2.2
Non-oil primary commodities	0.4	0.7	0.4
Oil	0.0	0.1	0.1
Imports of ICs from LDCs	2.0	3.9	3.1
Manufactures	0.4	1.2	1.7
Non-oil primary commodities	1.2	1.2	0.8
Oil	0.4	1.6	0.6

**Source:** Masson and Helliwell (1990) based on United Nations trade matrices.

of global macroeconomic models discussed in section B below. This section isolates the demand effects resulting from alternative allocations of increased net financial transfers from North to South and from North to East. It assesses the effects on world trade and the distribution of welfare effects over different country groups under varying assumptions about the way in which resources are mobilized in the industrialized countries in order to effectuate the increased transfers.

The analysis uses a simple linear world model based on a World Accounting Matrix (WAM). The WAM is a global accounting and data system which connects the external transactions (trade, finance and factor payments) of each economy with the internal balance (as reflected in the savings-investment balance) and identifies the interactions through commodity and financial markets between economies.<sup>32</sup> By presenting the accounting relations in matrix form the origin and destination of each international transaction can be identified. This of course requires a systematic cross-check of the consistency of data on commodity trade, balance of payments and national accounts across countries. The end result is a WAM which provides fully reconciled data for the world economy and includes mostly well-founded adjustments for the large world current account discrepancy which was pointed out earlier in section I.

A reconciled WAM for 1985 is included in annex table A1.3.<sup>33</sup> The WAM is based on a ten-region classification: four groups of industrialized countries (United States, Japan,

<sup>32</sup> The structure and basic accounting principles of the WAM are explained in Vos (1992b) and in a special Appendix to this paper which is available from the author upon request.

<sup>33</sup> The WAM was constructed as part of a larger project on world accounting undertaken by the Finance and Development Research project of the Institute of Social Studies. WAMs with the same country group classification as annex table A1.3 have been constructed for 1970, 1975 and 1980 as well. See Luttk (1992) for all details. Currently, a series

European Community and Other OECD); one region for Eastern Europe and the former Soviet Union (former CMEA); one region of major oil exporters (MOE); three developing country regions classified by the nature of their external financial dependence (LDC-OB, DB and PB); and one region for the remaining countries of the rest of the world. A separate account for multilateral organizations (United Nations, IMF, World Bank, etc.) has been included as well. The classification for the developing countries was derived from the hypothesis that developing countries face a segmented world capital market, with some (mainly low-income) countries being heavily dependent on finance from official sources (i.e. 'official borrowers', LDC-OB) and others (mainly middle-income) with potential access to private sources of external finance ('private borrowers', LDC-PB). Countries with a more mixed external financing structure were labelled as diversified borrowers. WAMs with a country classification closer to those applied for the data presentations in the previous sections are still in the process of being constructed.<sup>33</sup> Roughly speaking, however, LDC-OB mainly consists of the low-income countries in sub-Saharan Africa and South Asia, while LDC-PB features most Latin American countries, most of East Asia and Nigeria and Zimbabwe in Africa.

Accounts 1-11 (annex table A1.3) represent consolidated current account transactions (merchandise trade, services, factor payments, current transfers) reading exports and factor incomes on the rows and imports and factor payments in the columns. Accounts 13-22 identify for each country group national savings and net increase in external liabilities (capital inflows) on the rows and domestic investment and acquisition of foreign assets (capital outflows) in the columns. Accounts for private and public consumption (23, 24) and change in reserves complete the system. (See Vos 1992b for further details and accounting identities.)

The WAM can be used as a basis for a linear model after separating endogenous and exogenous accounts. The method resembles the fixed-price multiplier model applied to Social Accounting Matrices (cf. Pyatt and Round 1979). For the present purposes, the regional current accounts (1-10) and private consumption (23) have been defined as endogenous (to changes in regional incomes). Multipliers were derived after estimating volume marginal import propensities and marginal consumption propensities.<sup>34</sup> Income changes as a result of exogenous demand injections (e.g. resulting from aid and capital transfers) can be estimated as:

$$dy = C dy + dx = (I - C)^{-1} dx$$

where C is the matrix of marginal propensities and dy and dx are changes in the endogenous and exogenous incomes respectively. The WAM model thus seems to be a quite appropriate tool to assess the global impact of increased aid transfers from North to South along the lines sketched by the Brandt Commission report. The model reproduces the extreme Keynesian assumptions of the report.

Twelve policy experiments are reported below. All simulations refer to the same aggregate transfer increase: development assistance flows to LDCs are increased to the level of the DAC target of 0.7 per cent of the GNP of the donor countries (i.e. doubled from the current level of 0.35 per cent). This 'injection' into the world economy compares to the lower bound estimate of financial requirements for developing countries in the 1990s discussed in section II (equivalent to about 0.4 per cent of industrialized countries' GNP). Of interest here, however, is the sensitivity of income changes to the allocation of these aid transfers among developing countries and to the type of budget-sharing in the industrialized countries.

At 1985 prices and exchange rates, the simulated additional financial transfer amounts to US\$32 billion. Given their actual aid performance in 1985, this transfer will have to be generated among the OECD countries with the following distribution (in billions of US\$):

United States	18.7
Japan	5.5
EC	6.1
Other OECD	1.7
Total	32.0

of WAMs for 1985-1990 is being constructed using a 23-country group classification based on geographic criteria (G-7 countries are separate). See De Jong, Vos and Jellema (1991) for preliminary results.

<sup>34</sup> The marginal import propensities were estimated based on United Nations trade matrices series for 1968-1987. Detailed results are reported in Izurieta and Vos (1992). See also annex table A.2.



The twelve policy simulations differ by allocation among the LDC groups, the degree of diversion of aid flows to Eastern Europe and the way of financing in the OECD countries:

- Ia:** All aid is allocated to the low-income countries (LDC-OB) and no demand deflation (i.e. no budget constraint) in the OECD countries;
- Ib:** As Ia, but there is demand deflation (i.e. an imposed budget constraint) in the OECD countries;
- IIa:** Aid is more or less evenly distributed among the LDC country groups and no demand deflation (i.e. no budget constraint) in the OECD countries;
- IIb:** As IIa, but there is demand deflation (i.e. an imposed budget constraint) in the OECD countries.
- IIIa:** The entire increase in aid budgets is diverted to Eastern Europe and the former Soviet Union (CMEA) and no demand deflation (i.e. no budget constraint) in the OECD countries;
- IIIb:** As IIIa, but there is demand deflation (i.e. an imposed budget constraint) in the OECD countries;
- IVa:** Half of the increase in aid budgets is diverted to Eastern Europe and the former Soviet Union (CMEA) and the other half is entirely allocated to LDC-OB and no demand deflation (i.e. no budget constraint) in the OECD countries;
- IVb:** As IVa, but there is demand deflation (i.e. an imposed budget constraint) in the OECD countries;
- Va:** One-third of the increase in aid budgets is diverted to Eastern Europe and the former Soviet Union (CMEA) and the rest is entirely allocated to LDC-OB and no demand deflation (i.e. no budget constraint) in the OECD countries;
- Vb:** As Va, but there is demand deflation (i.e. an imposed budget constraint) in the OECD countries;
- VIa:** One-third of the increase in aid budgets is diverted to Eastern Europe and the former Soviet Union (CMEA) and the rest is distributed among the different LDC groups and no demand deflation (i.e. no budget constraint) in the OECD countries;
- VIb:** As VIa, but there is demand deflation (i.e. an imposed budget constraint) in the OECD countries.

In the case of the developing countries the optimistic assumption is applied that indeed the entire transfer will lead to an increase in expenditures. Some would even argue that aid tends to be even more expansionary, leading to complacency in the tax effort and more than proportionally increases government expenditures (Cf. e.g. Griffin 1970, 1986). A more pessimistic assumption from the perspective of global demand effects would be that developing countries apply balance-of-payments targets, e.g. as part of an adjustment programme agreed with the IMF or World Bank, and try to avoid a further widening of the external balance and thus cut domestic (government) spending to meet the external balance target. This case is not considered here.

With regard to the budget constraints of industrialized country Governments, two assumptions are applied. In one there are no financial constraints and in another the donor Governments pursue deflationary policies to effectuate the additional aid transfer. The first case is probably more in line with 'true' global Keynesianism in that the aid transfer is effectuated through (non-inflationary) deficit financing and demand effects. The crucial issue is that the international aid transfer not only has implications on the expenditure side of the government budget, but also requires a current account surplus (i.e. a savings surplus) in order to be effectuated. The simulations try to isolate this 'transfer problem' by assuming that in the case of no financial constraints (cases A) the transfer has no implications for aggregate government expenditures (i.e. the higher aid budget is funded from a budget reallocation), so that

the exogenous demand effects in the OECD countries are zero. The implication is that the required savings and current account surplus will have to be generated through Keynesian income adjustment originating from the demand effects created in the aid-receiving countries. Obviously, these effects are immediate in the case of fully tied aid.

In the case with financial constraints (cases b), it is assumed that the donor Governments pursue deflationary policies to effectuate the aid transfer *ex ante* and negative exogenous demand injections are imposed on the four OECD economies of the size equal to the additional aid transfer that each is required to make to meet the DAC target. The simulation results are shown in table 8. The results are highly suggestive.

- (a) Clearly a 'true' Brandtian global Keynesianism of mutually reinforcing aid, growth and trade seems possible in the cases in which the neglect of financial constraints can go unpunished (cases a). The highest endogenous world income growth is achieved, surprisingly enough, in the case in which the entire aid transfer is allocated to the low-income, aid-reliant countries (LDC-OB). Global income growth is about 1.1 per cent, which is three times the size of the exogenous demand injection. This might suggest that a potential 'virtuous circle' exists between world income redistribution towards the poorest nations and global economic growth. The result is surprising, given the rather low marginal import propensities of these countries.<sup>35</sup> However, a higher marginal consumption propensity than elsewhere and high indirect spending effects on the United States economy, which also has a lower marginal savings rate than the other major economies,<sup>36</sup> lead to the observed strong trade and income multipliers of this group of countries.
- (b) Further, the aid transfer generates strong redistributive effects in favour of the aid recipient countries. Among the donor countries, the EC tends to be the largest beneficiary in the case with no financial constraints and all aid flowing to LDC-OB (Ia). This is remarkable in the light of the earlier observation that the United States showed higher multiplier linkages with the developing countries than any of the other industrialized country groups. The final result may be explained by larger overall international linkages of the EC. However, the outcome is somewhat different if the aid transfer is more evenly distributed among the LDCs (case IIa), as this seems to lead to slightly lower income effects in the United States and the EC, making Japan the main beneficiary among the donor countries.
- (c) If the donor countries pursue deflationary policies to effectuate the aid transfer, world income growth is strongly depressed. The donor countries plunge into a recession, and the income effects in the rest of the world are severely dampened. For the world as a whole, this way of financing the aid transfer is almost a zero-sum game as world income growth is negligible (i.e. near zero) and smaller than the size of the transfer. The trends and distributive effects are similar to the case without financial constraints.
- (d) Diversion of aid transfers to Eastern Europe generates lower income effects (simulations IIIa versus I-IIa). Global income effects improve the more aid is allocated to low-income LDCs (IV-VIa). If there is diversion towards Eastern Europe and the additional aid transfers are financed out of demand deflation in the industrialized countries, non-recipient countries may even suffer welfare losses (IVb, VIb). These effects are of course based on the historical spending behaviour of the former CMEA countries showing relatively low domestic demand multipliers and less integration into the global trading system. These conditions are now subject to change. Likely the transformation process will be slow, so that estimated multipliers may remain of some relevance in the medium run.

As indicated, the linear WAM model isolates demand effects, but ignores endogenous price effects and endogenous global financial interactions. It would be hazardous to draw strong policy conclusions from such a model system, even though the model conclusions may

<sup>35</sup> Bilateral marginal import propensities (out of real income) are not significantly different from zero for most trading partners, suggesting import demand is foreign exchange constrained for this group of countries rather than that income growth feeds back into trade.

<sup>36</sup> See Izurieta and Vos (1992, forthcoming) and a special appendix to this paper which is available from the author upon request.

WAM-MODEL 1985: POLICY SIMULATIONS INCREASE IN AID TRANSFERS  
TO REACH DAC TARGET OF 0.7 PER CENT OF GNP

		<i>Exogenous demand injections (US\$ billion)</i>												
		<i>Original income</i>	<i>Ia</i>	<i>IIa</i>	<i>Ib</i>	<i>IIb</i>	<i>IIIa</i>	<i>IVa</i>	<i>IIIb</i>	<i>IVb</i>	<i>Va</i>	<i>VIa</i>	<i>Vb</i>	<i>VIIb</i>
United States	1	4463	0.0	-18.7	0.0	-18.7	0.0	-18.7	0.0	-18.7	0.0	-18.7	0.0	-18.7
Japan	2	1506	0.0	-5.5	0.0	-5.5	0.0	-5.5	0.0	-5.5	0.0	-5.5	0.0	-5.5
EC	3	3518	0.0	-6.1	0.0	-6.1	0.0	-6.1	0.0	-6.1	0.0	-6.1	0.0	-6.1
OOECD	4	1215	0.0	-1.7	0.0	-1.7	0.0	-1.7	0.0	-1.7	0.0	-1.7	0.0	-1.7
CMEA	5	951	0.0	0.0	0.0	0.0	32.0	32.0	16.0	16.0	10.0	10.0	10.0	10.0
MOE	6	545	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OB	7	539	32.0	32.0	11.0	11.0	0.0	0.0	16.0	16.0	22.0	22.0	10.0	10.0
DB	8	682	0.0	0.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0
PB	9	1103	0.0	0.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0
ROW	10	281	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C <sub>p</sub>	23	7418	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		22221	32.0	0.0	32.0	0.0	32.0	0.0	32.0	0.0	32.0	0.0	32.0	0.0
		<i>Simulation results (per cent change in endogenous income)</i>												
		<i>Ia</i>	<i>IIa</i>	<i>Ib</i>	<i>IIb</i>	<i>IIIa</i>	<i>IVa</i>	<i>IIIb</i>	<i>IVb</i>	<i>Va</i>	<i>VIa</i>	<i>Vb</i>	<i>VIIb</i>	
United States	1	0.80	-0.25	0.65	-0.40	0.42	-0.62	0.61	-0.43	0.68	-0.36	0.60	-0.45	
Japan	2	1.30	-0.10	1.07	-0.33	0.69	-0.72	0.99	-0.41	1.11	-0.30	0.98	-0.43	
EC	3	0.47	-0.11	0.38	-0.20	0.25	-0.33	0.36	-0.22	0.40	-0.18	0.35	-0.23	
OOECD	4	1.14	0.07	0.92	-0.15	0.60	-0.47	0.87	-0.20	0.97	-0.10	0.85	-0.22	
CMEA	5	0.88	0.19	0.71	0.02	3.83	3.14	2.35	1.67	1.80	1.11	1.70	1.02	
MOE	6	0.90	0.20	0.73	0.03	0.49	-0.20	0.69	0.00	0.77	0.07	0.68	-0.02	
OB	7	6.26	6.02	2.29	2.05	0.17	-0.07	3.21	2.98	4.36	4.12	2.08	1.85	
DB	8	0.64	0.12	2.13	1.60	0.34	-0.19	0.49	-0.04	0.55	0.02	1.36	0.83	
PB	9	0.26	0.04	1.13	0.91	0.14	-0.08	0.20	-0.02	0.22	0.00	0.75	0.53	
ROW	10	-0.14	-0.06	-0.14	-0.06	-0.12	-0.04	-0.13	-0.05	-0.13	-0.05	-0.13	-0.05	
C <sub>p</sub>	23	1.32	0.29	1.06	0.04	0.70	-0.33	1.01	-0.02	1.12	0.10	0.98	-0.05	
Total		1.07	0.19	0.89	0.02	0.63	-0.24	0.85	-0.03	0.93	0.05	0.83	-0.05	

**Note:** See text for description of simulations and annex table A1.3 for description of account names.

be helpful as partial answers. Looking at the global demand effects of additional aid transfers, the above simulations suggest that the highest positive gains, both in terms of global income effects and in terms of income redistribution towards the poorest nations, may be expected if additional aid transfers are directly allocated towards these countries. Diversion towards Eastern Europe would imply lower global income effects. This is only part of the story, however. In the next section a more complete picture is drawn, taking account not only of trade-income multipliers but also of endogenous price effects and endogenous financial linkages.

## ***B. Trade, aid and finance in global macroeconomic models***

### *1. Models emphasizing trade linkages*

Considerable empirical macroeconomic research has been done on the current account and fiscal linkages among the industrialized countries (Bryant *et al.* 1988), but much less empirical analysis using multi-country general equilibrium models of the linkages between industrialized and developing countries. Much of the traditional literature on interactions between North and South has been concerned with trade and with growth and development of the South.<sup>37</sup> Empirical models of the world economy including the developing countries have emphasized trade linkages.<sup>38</sup> The better known model systems include Leontief's regional world model, the World Bank's SIMLINK, OECD's INTERLINK, Project LINK and the FUGI model.<sup>39</sup> These models have in common the fact that international linkages are determined through trade matrices. The Leontief regional input-output system assumes fixed prices, but the other systems specify market-clearing price adjustment for various commodities. Linkages between North and South thus not only depend on income growth and demand functions for each other's exports, but also on terms of trade effects. Another noteworthy common feature of these models is that they assume developing countries are foreign-exchange-constrained economies. That is, developing country growth and demand for industrialized countries' exports are constrained by import capacity, i.e. export earnings plus capital inflows.

Capital flows and global financial interactions are not explicitly modelled in these systems.<sup>40</sup> Usually capital flows from industrialized to developing countries are set exogenously thus determining their import capacity. Net capital movements between other countries and regions are equated with their respective net trade or current account balances that result from general equilibrium income and price effects.

These models have been used among other things to project trends in world economic growth, trade and commodity prices under different policy assumptions. They have also been used to estimate capital requirements for developing countries for specified growth targets, i.e. providing a global framework for the type of two-gap model estimations discussed in section II above. They can also be used to assess the effects of increased aid flows and alternative allocations as done above using the WAM-multiplier model. Some simulation exercises using the Project LINK model system are discussed below. Gregory (1992) reports on some recent simulations of the global effects of a doubling of Japanese aid using the FUGI model. These simulations confirm the sensitivity of the size and distribution of global welfare effects fol-

<sup>37</sup> See Findlay (1984) and Ocampo (1986) for reviews of that literature.

<sup>38</sup> See Hickman (1987) for a good review.

<sup>39</sup> See Leontief *et al.* (1977) on the Leontief regional world model; Hicks *et al.* (1976) and Waelbroeck and Tims (1982) on SIMLINK; OECD (1982) and Richardson (1987) on INTERLINK; Filator, Hickman and Klein (1983) and Hickman (1987) on the country models and global linkage system coordinated through the project LINK; and Onishi (1981) on the FUGI model.

<sup>40</sup> The FUGI model does model private direct investment abroad, which is a function of the level of GDP, the share of profits, wage costs (adjusted for labour productivity) relative to the world level, and exchange rate movements, all variables of the debtor country. Also portfolio investment is modelled explicitly as a function of interest rate differentials between capital-importing and exporting countries, exchange rates, and profit shares. The level of ODA flows is given as a fixed proportion of donor country GDP, while also the allocation across LDCs is set exogenously. The overall trade and current account adjustment is eventually no different from that explained in the text, i.e. the remaining other capital flows accommodate trade and current account imbalances.

lowing increased aid transfers to the way these are financed in the donor countries and how these are allocated among developing countries.

Table 9 summarizes the results. It shows that:

- (a) A 'budgetary neutral' aid increase (financed through cut-backs on other government expenditures, defence in particular) yields a small, but positive global welfare effect: global GDP would increase by 0.023 per cent, less than the original injection. The initial injection is about US\$10 billion (doubling of existing Japanese ODA) or about 0.04 per cent of world GNP. The implicit trade-income multipliers assumed by the FUGI model thus appear smaller than those calculated by the WAM-multiplier model, which may have to do with the inclusion of endogenous price effects.
- (b) Much of the positive world growth effect disappears if the Japanese aid increase is financed through demand deflation (via a tax increase). The model suggests GDP growth in the OECD countries would fall and thus reduce income growth effects for the developing countries.
- (c) Global growth remains positive if the existing East-Asian concentration in the allocation pattern of Japanese aid is maintained (with Indonesia, China, Philippines and Thailand receiving almost half). Contrary to the findings of the WAM model trade multipliers, a bias in the allocation towards the low-income countries (China, India and Africa receiving about two-thirds) yields a global welfare loss if financed by increased taxation. This outcome has to do with (i) the model's parameter assumptions showing lower growth responses to increased capital inflows in India and China than Indonesia, Philippines and Thailand; (ii) the new geographical distribution of aid which is applied to the entire Japanese budget, meaning that, compared to the baseline, aid flows towards the dynamic East-Asian economies are actually reduced; and, likely, (iii) unfavourable terms of trade effects (not included in the WAM model) following demand deflation in the OECD countries appear stronger for (primary-exporting) low-income countries.<sup>41</sup>

The differences in results between the FUGI and the WAM model underline the importance of carefully checking the structure of the model before using simulation results as a guide for policy-making. They also show that there is still considerable scope for debate about the empirical validity of the precise multipliers determining size and direction of the key international economic linkages.

## 2. Global macroeconomic models emphasizing financial linkages

Over the past decade, much more empirical work has been done on the analysis of global macroeconomic interactions. The growth of international financial markets has emphasized the important international repercussions of fiscal and monetary policies. Private capital flows (bank credits) to developing countries also grew, but at the same time the crisis in their ability to service their debts in the 1980s affected their access to these flows and hence their import capacity. This makes clear that capital flows have their own determinants and that finance may be driving trade balance adjustment rather than vice versa.

Very few empirical global general equilibrium models capture capital flows and macroeconomic linkages between industrialized and developing countries. Much of the research has been confined to linkages between the industrialized countries (see e.g. Bryant *et al.* 1988). Discussion of recent work on rather aggregate models of North-South macroeconomic interactions can be found in Currie and Vines (1988), Vines and Muscatelli (1989) and Vos (1991). Only a few models will be discussed here. They could be seen as representative of the state-of-the-art. The main focus will be on the IMF's MULTIMOD (Masson, *et al.* 1988; Masson, Symansky and Meredith 1990; IMF 1991d) and the MSG2 model developed by McKibbin and Sachs (1991). MULTIMOD is an important tool for the policy analyses underlying the IMF's world economic outlook. MSG2 was sponsored by the Brookings Institution. To highlight the relevance of certain theoretical assumptions, further reference is

<sup>41</sup> The price effects are not explicitly discussed in Gregory's assessment.

Table 9

**FUGI MODEL: GLOBAL IMPACT OF DOUBLING JAPANESE AID FLOWS**

*(Change in GDP growth rates vis-à-vis baseline, in percentages)*

	Baseline GDP growth rate	Existing aid allocation		Aid biased to LICs
		Budget neutral	Tax increase	Tax increase
		I	II	III
<b>World</b>	3.0	0.023	0.010	-0.003
OECD	2.7	0.003	-0.009	0.000
Japan	4.0	0.006	-0.064	0.000
Asia	5.7	0.253	0.241	-0.043
East Asia	6.0	0.025	0.013	-0.004
Indonesia	5.1	1.820	1.775	-0.561
China	4.8	0.021	-0.014	-0.003
India	4.8	0.020	0.019	0.082
Africa	n.a.	n.a.	n.a.	n.a.
Egypt	2.5	0.002	-0.001	0.002
Nigeria	5.5	0.002	0.002	0.004
Other Africa	3.3	0.000	0.000	0.000
Latin America	n.a.	n.a.	n.a.	n.a.
Brazil	4.6	0.004	0.000	0.000
Mexico	3.9	0.002	-0.003	0.000
Other Latin America	3.7	0.000	0.000	0.000

**Source:** Gregory (1992), preliminary results.

**Note:** Doubling Japanese aid is equivalent to exogenous injection of about US\$10 billion (1990) or about 0.04 per cent of world GNP and 0.06 per cent of OECD GNP.

**Scenarios:**

I: Aid increase financed through budget cuts (defence expenditures); allocation according to 1989 Japanese aid allocation.

II: Aid increase financed through tax increase; allocation according to 1989 Japanese aid allocation.

III: Aid increase financed through tax increase; allocation biased towards low-income countries on the basis of income gap with respect to "low income threshold" of US\$1380 in 1988; reallocation confined to current aid recipients.

made to a small North-South model (STAC) which, in the tradition of the theoretical literature, assumes rather strong structural behavioural differences in trade and financial adjustment between the two regions. Further, some reference will be made to the large LINK project model system which connects about 80 country models. Rather than being comprehensive, the main purpose of this comparative analysis is to undo empirical global models from the 'black box' vignette these have in the minds of many policy-makers.

Both MULTIMOD and MSG2 differentiate the major industrialized countries. They have a simple aggregate country model for high-income oil producers and have grouped all net debtor developing countries into one region. Trade of developing countries is disaggregated into three types of commodities: oil, other primary commodities and manufactures. This way the importance of terms of trade changes is captured, as well as the reality that developing countries not only export primary products but also manufactures. The STAC model has only one aggregate industrialized country model, but also distinguishes a major oil-exporters region and one aggregate developing country region. In contrast to the other two models, it assumes complete trade specialization between the regions in the tradition of the theoretical North-South literature: the North producing and exporting manufactures; the South primary products.

The key assumptions determining the global linkages captured by these models may be summarized as follows:

- **Prices and terms of trade:** Prices are fully flexible on all markets in the MSG2 model. In both MULTIMOD and STAC the price of oil is fixed, primary commodity prices are flexible and market-clearing, while producers of manufactures are assumed to exercise a considerable degree of market power. The price of manufactures is thus determined by a mark-up pricing rule over production costs. In MULTIMOD each country (region) can price its manufactured good differently. In STAC, given complete specialization, these assumptions make the North a fixed-price, demand-driven economy and the South a supply-constrained economy vulnerable to commodity price fluctuations. Although less straightforward, this asymmetry is also apparent in MULTIMOD as developing countries turn out to be, on balance, net primary exporters.
- **Private savings and investment:** The modelling of the industrialized economies in MSG2 and MULTIMOD follows the basic outline of a dynamic version of the Mundell-Fleming model for open economies, but allows for rational expectations in determining portfolio behaviour in financial markets. Private savings are determined through household-consumption demand, which is a function of current income growth, net wealth and (in MULTIMOD only) also demographic change. This savings behaviour relates to the discussion in section I.B. The real interest rate affects expected future consumption, the discounted value of wealth and the propensity to consume out of wealth. Higher interest rates are expected to reduce current consumption and thus enhance private savings. STAC in contrast assumes a post-Keynesian savings function, making private savings insensitive to interest rate changes and rather a function of income distribution and firms' self-financing decisions. Equally in STAC, Southern private savings are a function of income distribution (with profits driven by the terms of trade). In MULTIMOD, developing country savings depend on disposable income. MSG2 does not specify a Southern savings function. The determination of investment demand in the industrialized countries runs down in all three models being a positive function of firm profitability and depending negatively on the real interest rate (through Tobin's q framework). Southern investment and output are also treated similarly in all three models as being finance-constrained (by domestic and foreign savings).
- **Capital flows:** MULTIMOD, MSG2 and STAC all assume that the global capital market is segmented. This is very much in line with the argument in section III, although it is noted that MULTIMOD and MSG2 only model one aggregate type of capital transfer to the South (with specific reference to commercial bank lending), while STAC models aid transfers, bank credits and 'capital flight'. In all three models, Northern investors have unconstrained access to finance, but Southern Governments and private investors are constrained by credit rationing rules. McKibbin and Sachs simply set the scale of borrowing by LDCs exogenously under the assumption that the amount of loans available to these countries is rationed by considerations of country risk. In MULTIMOD, financial flows between industrialized and developing countries are assumed to depend on LDC ability to service debt. The measure of payment ability is the interest payments-to-export ratio evaluated at expected real interest rates and exports in the future. Because of forward-looking elements, this ratio is seen as a measure of solvency rather than of liquidity. No demand function for loans is specified, but it is implicitly assumed that borrowers apply exactly the same solvency criterion to manage their external debt. They are further implicitly assumed to honour faithfully debt contracts and allow a negative transfer if new lending falls short of payment obligations. The possibility of default is not considered. In STAC a debt crisis may occur because lenders and borrowers behave differently. Lenders apply a solvency criterion to assess creditworthiness (based on LDCs' debt/export ratio), as in MULTIMOD, but are also assumed to raise credit ceilings for LDC borrowers if the international banking systems tends towards excess liquidity.<sup>42</sup> Creditors cannot be expected to be able to predict with any precision future interest rates and LDC export earnings, so that their creditworthiness assessment is imperfect. LDC borrowers (mainly governments) are seen to manage debt rather as a form of foreign reserve management (liquidity needs) than with an eye on solvency. If

<sup>42</sup> This way of modelling lenders' behaviour rests on a theory of oligopolistic competition between bank firms which try to maximize market shares under restrictions of (imperfect) creditworthiness assessment. See also the discussion in section III.

debt servicing surpasses a critical percentage of foreign exchange earnings, they will consider (partial) default. In STAC an actual debt crisis may result; an option not considered by the other models. The STAC model also considers 'capital flight', i.e. acquisition by private agents of assets in industrialized countries. This capital flow from South to North is assumed to be determined by exchange rate adjusted rate-of-return differentials between domestic and foreign assets and asset targets, thus partly reflecting the type of determinants discussed in section III.

What global adjustment effects do these models predict in response to an increase in capital flows to developing countries? The short answer is that these will depend on the macroeconomic policies in the industrialized countries accompanying the additional transfer. The direct effect of enhanced capital flows on income growth is positive, as these models assume developing country investment and growth is foreign-exchange constrained. However, this positive effect may be fully offset as soon as global general equilibrium effects are taken into account. The key linkages are summarized in table 10. Given the structure of these models, the key variables determining the outcome for growth in the developing countries are:

- (a) GNP growth in the industrialized countries ( $Y_{\text{OECD}}$ ), which is the main determinant of demand for LDC exports (and import capacity).
- (b) World interest rate ( $r$ ), which affects the savings-investment process as well as the growth rate in the major economies and affects the debt service burden of the indebted developing countries and so their import capacity, growth, access to new lending (MULTIMOD) and probability of default (STAC).
- (c) The terms of trade ( $\text{tot}$ ) of the developing countries which is an important determinant of their export earnings and domestic savings (MULTIMOD, STAC).
- (d) GNP growth rate of developing countries ( $Y_{\text{LDC}}$ ) which has a feedback on the terms of trade (supply effect) and LDC savings.

Table 10 summarizes the signs of the adjustment of these key variables for a few relevant and comparable simulations executed with these models. The effects are shown for the short-run (1-year simulation) and medium-run (5-year simulation). The outcomes are broadly similar:

- (a) *OECD fiscal expansion*<sup>43</sup> (*bond-financed, i.e. with unchanged monetary policies*)

In the short-run, MSG2 and MULTIMOD predict aggregate demand expansion in the North and an increase in real interest rates. In MULTIMOD, the spill-over effect on LDCs is initially positive: Northern expansion increases demand for LDC exports, leading to a terms-of-trade improvement and higher growth. However, in the medium run these positive effects disappear as higher interest rates have a negative impact on aggregate demand in the North, eventually leading to a fall in the terms of trade and lower growth in both North and South. McKibbin and Sachs do not report welfare effects for the South, but OECD growth and the terms of trade should be indicative. In year-5, similar results are obtained as with MULTIMOD; in year-1 a terms of trade deterioration is reported<sup>44</sup> suggesting an ambiguous effect on the Southern growth rate. In the STAC model, the negative repercussions on global demand and Northern investment are immediate, suggesting the fiscal impulse resulting from increased aid budgets may even lead to welfare losses in the South in the short run.

- (b) *Alternative ways of financing the aid increase*

*(1) Bond-financed*

This way of financing the aid increase shows global adjustment effects similar to

<sup>43</sup> The table refers to the effects of United States fiscal expansion, but a combined fiscal expansion in the major OECD countries yields similar overall outcomes.

<sup>44</sup> This is probably explained by the cost-push effect of rising intermediate import costs in the OECD resulting from rising LDC export prices. McKibbin and Sachs do not provide an explanation.



Table 10

**GLOBAL MACROECONOMICS: COMPARISON OF GLOBAL MODEL RESULTS SENSITIVITY  
OF KEY AGGREGATES TO UNITED STATES FISCAL EXPANSION, OECD MONETARY  
EXPANSION, BOND-FINANCED AND BUDGET-CUT FINANCED AID TRANSFERS TO LDCs**

*(Indicated effects as deviation from baseline case of respective models)*

	Year-1				Year-5			
	$Y_{oecd}$	$r$	$tot$	$Y_{ldc}$	$Y_{oecd}$	$r$	$tot$	$Y_{ldc}$
<b>Effects of United States fiscal expansion</b>								
MSG2	+	++	-	(+/-) <sup>a</sup>	0	++	-	(-) <sup>a</sup>
MULTIMOD	+	+	+	+	-	+	-	-
STAC	-	+	-	-	--	+	--	--
<b>Effects of increase in aid to LDCs</b>								
I. Bond-financed								
MULTIMOD	+	+	+	0	-	+/-	-	0
STAC	-	+	+	-	--	+	-	--
II. Monetary expansion OECD								
MSG2	+	-	+	(+) <sup>a</sup>	0	0	-	(-) <sup>a</sup>
MULTIMOD	+	-	+	+	-	+	0	-
III. Budget cuts								
STAC	+	0	+	+	+	0	-	+

**Source:** MSG2: McKibbin and Sachs (1991); MULTIMOD: Masson *et al.* (1988), Masson, Symanski and Meredith (1990) and Masson and Helliwell (1990); STAC: Vos (1991, 1992).

**Note:**  $Y_{oecd}$  = OECD growth rate;  $Y_{ldc}$  = LDC growth rate;  $r$  = international interest rates;  $tot$  = terms of trade of developing countries.

++ = strong positive effect

+ = positive effect

-- = strong negative effect

- = negative effect

0 = neutral (or near zero) effect

+/- = ambiguous effect, positive and negative, in major economies within the group (OECD or LDC)

<sup>a</sup> Expected outcome. Effect not reported by source.

bond-financed fiscal expansion in the North, as explained above. Global macroeconomic repercussions of higher real interest rates would tend to offset the direct positive income effects for the recipient countries of an increase in aid transfers.

### *(II) Monetary expansion*

The option of financing additional concessional flows to developing countries by relaxing monetary targets in the industrialized creditor countries might look appealing from the perspective of developing countries. Likely, real interest rates would drop, thus stimulating aggregate demand expansion in the North and exports from the South and reducing the debt service burden of developing countries. An offsetting effect could be a terms-of-trade deterioration as a consequence of an acceleration of Northern inflation. As indicated in table 10, simulations with MSG2 and MULTIMOD<sup>45</sup> confirm these expected global adjustment effects for year-1. In the medium run, however, these effects tend to reverse and the positive impact on the

<sup>45</sup> The present version of the STAC model does not specify a monetary base.

developing country disappears. In the medium run inflation hampers an acceleration of Northern growth in these models. In particular, besides affecting international competitiveness, the decline in real interest rates affects private savings while investment demand goes up. Upward pressure on the long-term real interest rate eventually leads to a stagnation of growth in the North.

### *(III) Budget cuts*

Simulations with the STAC model suggest that the most advantageous option for developing countries would be to finance the aid increase out of a reduction of other budget items. This would avoid upward pressures on real interest rates and consequent global demand deflation. No comparable simulations with MSG2 and MULTIMOD were available, but from the previous analysis one might expect these models to yield a similar outcome. One of the obvious candidates for achieving additional fiscal adjustment would be defence expenditures. The simulation experiments with global models (see also the simulations with the FUGI model above) suggest that cashing the 'peace dividend' for the developing countries will benefit both North and South.<sup>46</sup>

The simulation results of the models reviewed here are thus broadly the same. Recent experiments with the LINK global model system on the global repercussions of enhanced capital transfers to Eastern Europe and the CIS have yielded largely similar types of results (Pauly 1992). Increased capital transfers for Eastern Europe under conditions of restrictive monetary policies (that is maintaining baseline monetary targets) would raise nominal interest rates, but substantial trade stimulus from there would lead to a small GNP gain in the OECD as a whole in the short run. In the medium run, aggregate demand deflation because of higher interest rates would offset the trade stimulus (particularly due to recessionary tendencies in the United States which is expected to benefit less from trade expansion with Eastern Europe). Developing countries are expected to gain slightly from the trade expansion. But the gains are distributed unevenly: the Asian NICs take most of the gain, while the indebted countries in Latin America and Africa are the losers over the medium term as a consequence of a higher debt service burden. The LINK simulations suggest benign outcomes may be expected from a relaxation of monetary targets in the OECD countries. Capital transfers to Eastern Europe accompanied by monetary policies that would (successfully) target stable interest rates would have a stimulating impact on world economic growth, including LDC growth.

Compared to the simulations with the WAM-model, the LINK projections are optimistic about trade stimulus following capital transfers to the East. The WAM-model was based on historical patterns which are likely to be too pessimistic. However, until "the dust has settled" in Eastern Europe, it is difficult to estimate how optimistic one may be about trade expansion from these countries in the 1990s. Simulations with monetary expansion do not immediately compare to the corresponding simulations with MSG2 and MULTIMOD, as the latter do not specify a specific target with regard to interest rates. Nevertheless, the resulting acceleration of OECD inflation would in these models likely produce a less optimistic world economic outlook (similar to that reported in table 10) than that projected by LINK.

An advantage of the LINK system is that it provides more country detail than any of the other models discussed. At the same time, however, the system links about 80 rather heterogeneous country models, which makes the model's workings difficult to track. As indicated, economic interdependence between the countries is modelled through trade. Financial linkages are not explicitly modelled. National monetary and fiscal policies spill over to other countries through the effects on import demand and commodity prices. Changes in external financial asset positions like in MSG2, MULTIMOD and STAC play no role. Despite the similarities in the results of these latter three model systems, there are important differences. One important feature is stressed which has to do with potential international financial instability that might be an undesired consequence of world-wide shifts in capital transfers.

<sup>46</sup> The option of a tax-financed aid increase is not discussed here. Only experiments with the STAC model are available. These suggest Northern demand deflation following a tax increase is significantly less than that resulting from a higher world interest rate. As a consequence, the South gains from an increased aid transfer, albeit suffering some terms of trade losses. See Vos (1991, 1992b) for a further discussion.

The responsiveness of global savings and investment plays a crucial role in the equilibrium adjustment of the models discussed here. Two related points of debate should be mentioned. First, the models show significant differences in empirical estimates of the elasticities of the savings and investment response to interest rate changes. Secondly, existing empirical global models underscore the potential danger of global financial instability owing to interest instability and shifts in net asset position between major economic regions.

### 3. Interest rate instability?

With regard to the responsiveness of macroeconomic balances to interest rate changes, the first versions of MULTIMOD show for the industrialized countries a very high responsiveness of savings and investment to the rate of interest. Particularly, the responsiveness of private savings is very high (e.g. for the United States the positive elasticity is about 6.0). Private investment also strongly responds to interest rate changes (between -3.0 and -4.0). This implies that an *ex-ante* savings-investment gap in the major economies only requires a relatively small change in the rate of interest. MULTIMOD MARK-II simulates that a bond-financed United States fiscal expansion of 1 per cent of GNP (equivalent to an annual exogenous injection for the global economy of about US\$50 to 60 billion) would require a real interest rate increase of 0.3 percentage points to restore global macroeconomic equilibrium (see annex table A1.4). High interest-rate elasticities assumed in other empirical models for industrialized countries yield a similar result.<sup>47</sup> MSG2, LINK and STAC, in contrast, suggest much lower elasticities. MSG2 shows an elasticity for private savings of around 1.0 and of private investment of around -0.8. These elasticities suggest much flatter supply and demand curves for global savings and an imbalance requires much larger interest rate adjustment. In MSG2, the same United States fiscal expansion yields a real interest rate increase of 1.3 percentage points (annex table A1.4).<sup>48</sup> A similar 'global injection' yields in LINK a nominal interest rate increase of about 100 basis points (and about 50 in real terms) (Pauly 1992). The most recent version of MULTIMOD (IMF 1991d) includes substantial adjustment of the coefficients determining the elasticities of savings and investment to real interest rate changes. These are now much closer to the values used in MSG2 (around 1.0 and -1.0 respectively), suggesting significant interest rate increases may result from increases in concessional capital transfers to East and South if financed in the industrialized countries out of their government budgets without compensatory macroeconomic policy adjustment.

In sum, there appears to remain some scope for debate on the empirical values of critical parameters of global models. Differences in trade multiplier estimates were also discussed above. These matters may be resolved through further empirical work, but for the time being more or less optimistic outcomes with regard to interest rate instability, trade adjustment, etc. will be critical to policy guidance. How important this can be is shown by the early projections of the world economic outlook in the immediate aftermath of the debt crisis. Optimistic forecasts of the IMF (e.g. IMF 1984) and Cline (1983, 1984) strongly influenced the perception among international policy-makers that the crisis was temporary and purely a problem of liquidity. The international debt management strategy was designed in the first crucial years in this vein.<sup>49</sup> The author's own perception is that with regard to the interest-rate elasticity, a pessimistic inclination seems justified, i.e. the savings responsiveness to interest rates is rather small and that, all other things being equal, large capital transfer injections on the scale referred to in this paper are likely to provoke large interest rate adjustments and instability. This point of view is strengthened, of course, with the recent modification of the relevant parameters of IMF's MULTIMOD.

<sup>47</sup> In table 12 the column 'other' refers to mean estimates for seven other multi-country empirical macroeconomic models. These focus on linkages between industrialized countries only. The models included are DRI, EEC, INTERMOD, MCM, MINIMOD, OECD and TAYLOR. See Bryant, *et al.* (1988) for a further discussion.

<sup>48</sup> In the STAC model, the Northern savings rate is little sensitive to the interest rate, though it will rise with the share of net interest income on assets and liabilities in total private income. The investment response has an elasticity of -1. However, since STAC assumes a more instantaneous adjustment of Northern GNP and investment demand to interest rate changes, the *ex-post* interest rate change is smaller than in MSG2, but analysis of the iteration steps suggest the real interest rate initially tends to move upward by about 1 percentage point following a bond-financed injection of 0.5 per cent of Northern GNP. Northern investment demand and GNP fall within the first simulation period, establishing an equilibrium interest rate which is about 0.4 percentage points above the baseline.

<sup>49</sup> See among others Sachs (1988), Dornbusch (1989) and Vos (1991) for critical reference to this 'model-driven' policy optimism.

#### 4. *Global financial instability?*

If large interest rate movements are required to adjust the global macroeconomic balance, capital movements provoking such adjustment may also be a cause of greater financial instability. In terms of the present discussion, the additional demands for concessional finance may enhance the adjustment problem in the North. If not accompanied by adequate fiscal adjustment, the transfers will produce widening fiscal gaps and a further accumulation of public debt. Since private savings do not tend to compensate (fully) for this (see section I), it may become increasingly difficult to reach global macroeconomic equilibrium. Higher interest rates will have a growing impact on fiscal balances, and private sector willingness to hold public liabilities and to invest may be gradually undermined. A Northern financial crisis scenario is not contemplated by the global model systems, but the evidence seems to indicate the world economy may not be far from the edge of one.

Large interest rate adjustments and instability naturally also have a large direct impact on the indebted developing countries. If at the same time, they impact negatively on investment and growth in the North, export markets of the Southern economies will be affected and their ability to service debts and their creditworthiness will be reduced. This could imply for many developing countries a persistence of their debt problems.

In sum, global macroeconomic models suggest that a policy-driven reallocation of global savings towards the developing countries may have undesirable general equilibrium effects for the world economy as a whole. Developing countries may be doubly hit by higher interest rates and falling terms of trade and export earnings. An aid increase accompanied by more expansionary monetary policies does not seem particularly helpful as inflationary pressures yield global recessionary tendencies in the medium run. The key to a more stable global adjustment process seems to lie in adequate fiscal adjustment in the North. Northern Governments should thus trade off increased aid transfers against other government expenditures. Current political debates suggest this is a choice which will not easily be decided in favour of the poor countries. Rather, at the moment, existing aid budgets are already being eroded by reallocations of funds towards Eastern Europe. This is by no means an argument against increased aid transfers to the South. Rather, it is argued that the developing countries are better aided if the full (global) implications of these transfers are being considered as part of the policy choices to be made in the North.

These conclusions stand despite the significant differences in the structures and presumed empirical contents of the global models surveyed. Much more work on global model frameworks seems required. Besides the need to deal with global data discrepancies (see section I), some crucial 'elasticity problems' need to be cleared up, particularly regarding the responsiveness of savings and investment to interest rates and, still, the trade multipliers. Specification of global macroeconomic models should improve, including more developing country and Eastern European country detail. It is also necessary to reassess critically the modelling of the institutional behaviour underlying international capital movements.

### V. **Concluding remarks**

The prospects for an expansion of financial flows to developing countries during the 1990s seem far from good. The outlook for some individual countries may be better than for others, but this has not been the main concern here. This paper has emphasized the global economic dimensions of the issue. Looked at it from this angle the following conclusions may be derived from the issues reviewed in this paper:

- Despite a recovery of savings rates in some industrialized countries, concerns about reduced availability of global savings in the medium run seem justified. Demographic factors predict falling private savings rates in the major economies where also the bulk of world savings is generated. Public savings in the large economies are being eroded by the accumulation of public liabilities. This is also undermining even further the responsive-

ness of the national savings to adjustments in the global interest rate. The response of private savings to interest rates was assessed to be rather low, while rising interest rates will reduce government savings where public debt is large. The implication for the world economy is that each exogenous shift in the global demand for investment resources, for instance an increase in capital transfers to the developing countries, will require a large interest rate adjustment to restore global capital market equilibrium and will crowd out investment elsewhere.

- Many estimates have been given of the capital requirements of developing countries for the 1990s. The methods used to derive these estimates are limited and look only at partial effects, i.e. the external financing needs required to reach a target growth rate given fixed national savings and capital-output ratios. Leaving these methodological limitations aside, the resulting LDC capital requirement estimates are large enough to have a major impact on the world economy. This implies that proposals to raise capital transfers to developing countries will have to take account of the global repercussion effects. The direct effect of additional capital inflows may be higher investment and growth in the recipient countries, but at the same time these could lead to rising world interest rates which will enhance debt-service burdens and reduce investment demand and growth in the industrialized countries. The latter effect will then spill over to commodity markets and reduce demand for developing country exports.
- An assessment of these effects using global trade and macroeconomic models confirms the importance of these repercussions. If additional capital transfers take the form of official development assistance, the effect is like a fiscal expansion in the industrialized countries. If this fiscal expansion is financed by increasing public debt, the consequences may be severe, even to the extent that what is gained through higher capital inflows, is (more than) offset by a loss of export earnings. The key to a more stable global adjustment process seems to lie in adequate fiscal adjustment in the North. Northern Governments should thus trade off increased aid transfers against other government expenditures.
- The workings of the global capital market do not provide developing countries with easy access. Additional transfers will have to come to a large extent from official sources. For most countries private capital markets are still (or have always been) cut off. The recent growth of foreign direct investment and portfolio investment flows has been restricted to a very small group of the larger and richer developing countries. There are no clear signs that this renewed access to private capital markets will be spread out over a wide group of developing countries in the coming years. At the same time, however, private agents throughout the developing world have accumulated large foreign asset holdings. The mobilization of these funds for domestic development will not be easy. Experience in countries where debt conversion programmes worked to repatriate this 'flight capital' indicates that monies returned only after a sustained period of successful adjustment. External finance required for the process of stabilization and adjustment will have to come from official sources. A major part of the developing world is still caught in this process and, in the light of the previous conclusions, will be dependent on budgetary decisions made by the governments in the industrialized countries.
- A number of global macroeconomic models can be used to assess the direct and indirect effects of enhanced capital transfers to developing countries and to analyse who gains and who loses in this game. Still, developing countries are generally poorly modelled and with little detail about structural differences within the group of LDCs. In the light of the previous conclusions, more elaborate global model(s) seems essential to assist international policy analysis. Much more research will have to be invested in this area to deal with the global data discrepancies (see section I), to clear some crucial 'elasticity issues' (particularly regarding the responsiveness of savings and investment to interest rates and trade multipliers), to provide more developing country and Eastern European country detail and critically to reassess the modelling of the institutional behaviour underlying international capital movements.

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# Annex

**Table A1.1a**  
Global Savings and Investment Rates, 1970-90  
(percent of GNP)

GNS/GNP (%)	1970-73	1974-77	1978-82	1983-85	1986-90
DEVELOPED	22.93	21.81	21.73	19.70	20.73
G-7	22.58	21.71	21.84	19.47	20.52
USA	18.36	18.01	18.74	15.37	14.12
Japan	36.52	32.47	30.92	30.38	32.58
Germany, F.R.	26.02	21.99	21.35	21.81	24.14
REST OECD	25.17	22.21	20.78	20.92	21.94
OTHER HICs	22.80	23.26	26.10	24.32	22.26
EE6+SU	20.15	19.75	19.07	20.26	17.04
MAJOR OIL EXP.	26.04	47.02	37.42	20.69	18.88
LDCs	17.66	19.68	20.24	19.87	22.44
EMENA	21.85	22.86	24.79	23.76	27.24
SSA	13.44	17.76	13.32	9.81	11.38
LAC	17.60	19.67	18.61	17.10	19.01
SOUTH ASIA	13.22	15.39	17.02	17.18	16.54
CHINA	20.46	20.94	24.12	26.37	26.98
EAST ASIA	19.03	21.15	24.15	24.57	29.27
OFF SHORE BK CTR	21.69	26.53	28.33	30.49	31.23
OTHER, N.E.C.	17.16	13.88	13.32	15.08	12.21
WORLD	21.77	21.86	21.70	19.91	20.60
<b>GDI/GNP (%)</b>	<b>1970-73</b>	<b>1974-77</b>	<b>1978-82</b>	<b>1983-85</b>	<b>1986-90</b>
DEVELOPED	22.64	22.17	22.04	20.21	21.17
G-7	22.21	21.72	21.88	20.01	20.94
USA	18.32	17.81	18.86	17.67	16.87
Japan	35.11	32.20	30.74	27.66	29.81
Germany, F.R.	25.30	20.63	21.51	20.10	20.06
REST OECD	25.08	24.16	22.60	21.25	22.69
OTHER HICs	27.04	28.12	26.61	24.30	19.59
EE6+SU	20.08	20.42	19.05	19.40	16.98
MAJOR OIL EXP.	17.80	22.14	25.02	22.65	17.99
LDCs	18.95	21.84	23.49	21.12	23.04
EMENA	22.22	27.50	29.06	26.20	27.99
SSA	15.70	19.26	18.43	12.21	15.26
LAC	19.64	22.53	23.10	17.70	20.15
SOUTH ASIA	14.34	15.91	18.79	19.26	19.28
CHINA	20.45	21.01	23.40	26.93	28.25
EAST ASIA	20.67	23.68	27.25	25.71	25.91
OFF SHORE BK CTRS	26.73	27.32	32.90	29.07	26.41
OTHER, N.E.C.	19.66	16.38	16.67	14.61	13.75
WORLD	21.68	21.97	22.11	20.43	20.99

(Table A1.1a, continued...)

(S-I)/GNP (%)	1970-73	1974-77	1978-82	1983-85	1986-90
DEVELOPED	0.28	-0.37	-0.32	-0.51	-0.44
G-7	0.36	0.00	-0.04	-0.53	-0.42
USA	0.04	0.19	-0.12	-2.30	-2.75
Japan	1.41	0.27	0.17	2.72	2.77
Germany, F.R.	0.72	1.36	-0.16	1.70	4.08
REST OECD	0.09	-1.95	-1.82	-0.33	-0.75
OTHER HICs	-4.23	-4.86	-0.51	0.02	2.67
EE6+SU	0.08	-0.67	0.02	0.86	0.06
MAJOR OIL EXP.	8.24	24.88	12.40	-1.95	0.89
LDCs	-1.29	-2.16	-3.25	-1.25	-0.60
EMENA	-0.37	-4.65	-4.27	-2.44	-0.75
SSA	-2.26	-1.50	-5.11	-2.39	-3.89
LAC	-2.04	-2.86	-4.50	-0.60	-1.14
SOUTH ASIA	-1.12	-0.53	-1.77	-2.08	-2.74
CHINA	0.01	-0.06	0.71	-0.56	-1.27
EAST ASIA	-1.65	-2.54	-3.10	-1.14	3.35
OFF SHORE BK CTRS	-5.04	-0.79	-4.57	1.41	4.82
OTHER, N.E.C.	-2.50	-2.50	-3.35	0.47	-1.54
WORLD	0.09	-0.11	-0.41	-0.53	-0.39

Source: World Bank data. Ratios derived from current US dollar values.

Notes: GNS (S) = Gross National Savings (= Current Account Balance plus GDI)

GDI (I) = Gross Domestic Investment.

S-I = GNS - GDI = CAB.

Other HICs = Other High-Income Countries (includes Israel, South Africa).

Major Oil Exp. = Major oil exporters of Middle East and North Africa.

EE6 & SU = Eastern Europe (Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania) and former Soviet Union.

EMENA = LDCs in Europe, Middle East (excl. MOE) and North Africa.

SSA = Sub-Saharan Africa.

LAC = Latin America and Caribbean.

Off-shore bk. = Off-shore banking centres (includes Hong Kong, Bahamas, Bahrain, Bermuda, Cayman Islands, Lebanon, Liberia, Netherlands Antilles, Panama, Singapore, Vanuatu, West Indies).

Table A1.1b  
Private Savings and Investment Rates, 1970-90.  
(percent of GNP)

GNSp/GNP	1970-73	1974-77	1978-82	1983-85	1986-90
DEVELOPED	19.39	20.29	20.95	20.39	19.62
G-7	19.32	20.56	21.04	20.14	19.38
USA	16.72	17.92	18.20	17.20	14.95
Japan	26.45	25.99	25.79	24.97	24.58
Germany, F.R.	21.57	21.49	21.06	21.24	23.52
REST OECD	19.74	19.05	20.63	21.95	21.05
OTHER HIC	20.19	17.89	19.65	22.06	20.74
EE6+SU	3.48	2.89	3.57	3.93	7.70
MAJOR OIL EXP.	12.85	18.20	10.65	6.65	7.41
LDCs	10.28	11.56	11.20	12.77	17.55
EMENA	11.35	11.46	12.86	13.57	17.64
SSA	8.44	13.17	4.10	7.44	11.24
LAC	13.78	13.80	12.73	16.49	23.07
SOUTH ASIA	10.37	12.98	14.34	14.82	16.21
CHINA	2.08	0.82	2.35	-0.18	-0.64
EAST ASIA	15.47	15.37	17.49	18.02	24.44
OFF SHORE BK CTRS	17.71	19.87	20.14	22.62	24.54
OTHER, N.E.C.	11.79	10.06	8.93	12.95	10.19
WORLD	15.51	16.54	17.12	17.06	18.01
<b>GDip/GNP</b>	<b>1970-73</b>	<b>1974-77</b>	<b>1978-82</b>	<b>1983-85</b>	<b>1986-90</b>
DEVELOPED	18.78	18.35	18.45	17.17	18.05
G-7	18.54	18.06	18.38	17.08	17.87
USA	16.06	15.86	17.25	16.20	15.32
Japan	26.04	23.21	21.22	20.08	23.14
Germany, F.R.	21.03	16.95	18.22	17.70	18.05
REST OECD	20.64	20.08	19.05	17.93	19.51
OTHER HIC	15.30	15.78	15.58	15.33	13.13
EE6+SU	1.07	1.24	1.10	1.13	0.79
MAJOR OIL EXP.	5.19	6.73	9.50	8.13	5.26
LDCs	8.87	10.55	10.96	9.59	12.22
EMENA	10.30	12.71	13.89	13.00	16.58
SSA	7.34	9.52	8.57	5.54	7.39
LAC	12.82	13.44	12.95	10.54	13.63
SOUTH ASIA	8.15	8.62	9.49	9.16	9.58
CHINA	0.00	0.00	0.00	0.00	0.00
EAST ASIA	14.45	15.87	17.67	16.81	19.37
OFF SHORE BK CTRS	21.99	20.51	25.42	20.96	21.40
OTHER, N.E.C.	11.79	11.62	10.95	10.38	10.06
WORLD	14.45	14.68	14.69	14.66	14.59

(Table A1.1b, continued ....)

(S, -I, )/GNP	1970-73	1974-77	1978-82	1983-85	1986-90
DEVELOPED	0.61	1.94	2.50	3.21	1.57
G-7 (1-7)	0.78	2.50	2.65	3.05	1.51
USA	0.66	2.06	0.95	1.00	-0.37
Japan	0.41	2.77	4.57	4.88	1.44
Germany, F.R.	0.54	4.54	2.85	3.53	5.47
REST OECD	-0.90	-1.03	1.57	4.02	1.55
OTHER HICs	4.88	2.11	4.07	6.73	7.61
EE6+SU	2.41	1.64	2.47	2.80	6.92
MAJOR OIL EXP.	7.66	11.47	1.15	-1.48	2.15
LDCs	1.42	1.01	0.23	3.18	5.33
EMENA	1.05	-1.25	-1.03	0.57	1.06
SSA	1.10	3.64	-4.48	1.90	3.85
LAC	0.96	0.37	-0.22	5.95	9.45
SOUTH ASIA	2.23	4.37	4.85	5.65	6.63
CHINA	2.08	0.82	2.35	-0.18	-0.64
EAST ASIA	1.02	-0.51	-0.19	1.22	5.07
OFF SHORE BK CTRS.	-4.28	-0.65	-5.28	1.66	3.14
OTHER, N.E.C.	0.00	0.00	-0.84	3.01	0.96
WORLD	1.06	1.95	2.04	2.99	2.56

Source and Notes:

See Table A1.1a.

Table A1.1c  
Public Savings and Investment Rates, 1970-90.  
(percent of GNP)

GNS <sub>t</sub> /GNP	1970-73	1974-77	1978-82	1983-85	1986-90
DEVELOPED	3.54	1.52	0.77	-0.68	1.11
G-7 (1-7)	3.26	1.15	0.81	-0.67	1.14
USA	1.63	0.08	0.54	-1.83	-0.83
Japan	10.08	6.48	5.12	5.41	7.99
Germany, F.R.	4.45	0.50	0.28	0.57	0.61
REST OECD	5.43	3.16	0.15	-1.03	0.89
OTHER HICs	2.62	5.37	6.45	2.25	1.51
EE6+SU	16.68	16.86	15.50	16.33	9.33
MAJOR OIL EXP.	13.19	28.82	26.77	14.05	11.47
LDCs	7.37	8.11	9.05	7.10	4.88
EMENA	10.50	11.40	11.94	10.20	9.59
SSA	5.00	4.59	9.23	2.37	0.14
LAC	3.82	5.86	5.88	0.61	-4.06
SOUTH ASIA	2.85	2.40	2.68	2.37	0.33
CHINA	18.38	20.12	21.77	26.55	27.62
EAST ASIA	3.56	5.78	6.66	6.54	4.82
OFF SHORE BK CTRS.	3.98	6.66	8.19	7.86	6.69
OTHER, N.E.C.	5.37	3.81	4.39	2.13	2.03
WORLD	6.26	5.27	4.57	2.81	2.65
<b>GDI<sub>t</sub>/GNP</b>	<b>1970-73</b>	<b>1974-77</b>	<b>1978-82</b>	<b>1983-85</b>	<b>1986-90</b>
DEVELOPED	3.86	3.95	3.99	3.93	3.82
G-7 (1-7)	3.68	3.78	3.84	3.78	3.66
USA	2.26	1.95	1.61	1.46	1.55
Japan	9.08	8.98	9.52	7.57	6.66
Germany, F.R.	4.27	3.68	3.29	2.40	2.01
REST OECD	4.44	4.36	4.27	4.13	4.09
OTHER HICs	11.73	11.85	12.17	12.24	12.34
EE6+SU	19.01	19.10	18.99	19.13	19.17
MAJOR OIL EXP.	12.61	12.12	12.96	14.24	15.41
LDCs	10.08	10.08	10.45	10.86	11.29
EMENA	11.92	11.80	12.17	13.40	14.80
SSA	8.37	8.67	9.25	9.57	9.74
LAC	6.82	7.06	7.71	8.34	9.09
SOUTH ASIA	6.19	6.18	6.37	6.78	7.30
CHINA	20.45	20.53	20.77	21.01	21.01
EAST ASIA	6.22	6.20	6.66	7.20	7.81
OFF SHORE BK CTRS.	4.74	5.20	5.86	6.23	6.81
OTHER, N.E.C.	7.87	7.70	7.13	6.62	6.31
WORLD	7.23	7.23	7.29	7.34	7.33

(Table A1.1c, continued ....)

$(S_e - I_e)/GNP$	1970-73	1974-77	1978-82	1983-85	1986-90
DEVELOPED	-0.32	-2.30	-2.82	-3.72	-2.01
G-7	-0.42	-2.50	-2.69	-3.59	-1.93
USA	-0.63	-1.87	-1.06	-3.30	-2.38
Japan	1.00	-2.50	-4.40	-2.16	1.33
Germany, F.R.	0.18	-3.18	-3.00	-1.83	-1.40
REST OECD	0.99	-0.92	-3.40	-4.35	-2.30
OTHER HICs	-9.12	-6.97	-4.58	-6.72	-4.94
EE6+SU	-2.33	-2.31	-2.45	-1.94	-6.86
MAJOR OIL EXP.	0.58	13.41	11.25	-0.47	-1.27
LDCs	-2.71	-3.18	-3.48	-4.43	-5.93
EMENA	-1.42	-3.40	-3.24	-3.00	-1.81
SSA	-3.36	-5.15	-0.63	-4.29	-7.73
LAC	-3.00	-3.23	-4.28	-6.55	-10.58
SOUTH ASIA	-3.34	-4.89	-6.62	-7.73	-9.37
CHINA	-2.07	-0.89	-1.64	-0.39	-0.62
EAST ASIA	-2.66	-2.03	-2.92	-2.35	-1.72
OFF SHORE	-0.76	-0.15	0.71	-0.25	1.68
OTHER, N.E.C.	-2.50	-2.50	-2.51	-2.54	-2.50
WORLD	-0.97	-2.06	-2.45	-3.52	-2.93

Source and Notes:

See Table A1.1a.



Table A1.2  
Alternative estimates of additional financial resource requirements in the 1990s.

	annual requirements (bln US\$, 1990)	GDP growth target (%)	Projection period
<b>Capital requirements LDCs</b>			
<b>All LDCs</b>			
Fishlow (1987)	180	5.3	1995
Development Committee (1988)			
WIDER (Taylor 1990)	43	1.0	
<b>Sub-Saharan Africa</b>			
Fishlow (1987)	15	3.9	1995
Development Committee (1988)	12	3.4	1992
WIDER (Taylor 1990)	28	4.0	
World Bank (1991)	28	5.0	1991-2000
<b>Asia</b>			
Fishlow (1987)	23	6.2	1995
Development Committee (1988)	19	5.4	1992
WIDER (Taylor 1990)	18	1.0	
<b>Europe, Middle East and North Africa</b>			
Fishlow (1987)			
Development Committee (1988)			
WIDER (Taylor 1990)	8	1.0	
<b>Latin America and Caribbean</b>			
Fishlow (1987)	61	5.4	1995
Development Committee (1988)			
WIDER (Taylor 1990)	36	4.0	
<b>Capital requirements Eastern Europe and CIS</b>			
Collins and Rodrik I (1991)	915	7.0	1991-2001
Collins and Rodrik II (1991)	17		1991-2001
Papadia et al. (1991)	340		1991-2011
IMF (1991b)	90		
<b>Eastern Europe (EE5)</b>			
Collins and Rodrik I (1991)	344	7.0	1991-2001
Collins and Rodrik II (1991)	5		1991-2001
Papadia et al. (1991)	100		1991-2011
<b>CIS</b>			
Collins and Rodrik I (1991)	571	7.0	1991-2001
Collins and Rodrik II (1991)	12		1991-2001
Papadia et al. (1991)	160		1991-1996
<b>German Unification</b>			
Papadia et al. (1991)	80		1991-2011
IMF (1991b)	60		1991-1996

Sources: See bibliography.

Explanatory notes:

Capital requirements of LDCs:

- Fishlow (1987) estimations: Based on two-gap model for estimating capital inflow requirements at fixed national savings rates and capital-output coefficients and for pre-set growth targets as indicated in second column.
- Development Committee estimations: Similar methodology as Fishlow (1987).
- WIDER-Taylor estimates: based on three-gap model and extrapolated country group data from 18 individual country models. Base projections simulate capital requirements for 1 percent production capacity increase. data for Sub-Saharan Africa and Latin America presented in the table are a multiple of the estimates presented in Taylor (1990) on the assumption that a 'needs' scenario for these regions would require an expansion of growth capacity of about 4 percent to yield per capita income growth rates of about 1.5 percent.
- World Bank (1991): Based on current account projections with assumption for export growth, import elasticities, projected debt service burden and debt relief.

(Table A1.2, continued ...)

Capital requirements for Eastern Europe and CIS:

- Collins and Rodrik I (1991): Estimations based on real GNP growth of 7.0 percent per year. Assumptions: fixed capital-output ratio of 2.5. Collins and Rodrik assume rather unrealistically that all annual accumulation is to be financed through external capital inflows. In Table 2 of the text these estimates of Collins and Rodrik were corrected for a projected national savings availability in the EE6 and CIS based (possibly optimistically) on constant 1990 savings rates.
- Collins and Rodrik II (1991): Estimations based on Marshall Plan type aid programme for EE6 and CIS. Marshall plan aid flows were scaled to present day values using various alternatives. The one presented here follows a procedure also applied by a study of the Economic Commission for Europe, by which the real per capita transfer is kept the same as that received by the western European countries after World War II. This leads to Collins-Rodrik's lower bound estimate of capital requirements for Eastern Europe.
- Papadia et al. (1991): Estimations over 20 year adjustment period targetting that ex-GDR reaches per capita income level close to that of the western part of Germany, while the EE5 (Bulgaria, Czechoslovakia, Hungary, Poland, Romania) and the CIS reach per capita income levels at level of average of low- to middle-income countries of the European Community. Method is based on existing labour productivity, capital-output ratios, Cobb-Douglas production function characteristics, and constant national savings rates.
- IMF (1991b): Estimation for German Unification based on Masson and Meredith (1990) using similar approach as in Papadia et al., but assuming rising labour productivity to about 80 percent of its level in west Germany. Estimates for CIS not based on any particular method, but taken to be a meaningful number "for illustrative purposes".

**Table A1.3**  
**WORLD ACCOUNTING MATRIX (WAM), 1985**

*(Current prices, values in billions of US\$)*

	US 1	Japan 2	EC 3	OECD 4	CMEA 5	MOE 6	OB 7	DB 8	PB 9	ROW 10	MULTI 11	US 12	Japan 13	EC 14	OECD 15	CMEA 16	MOE 17	OB 18	DB 19	PB 20	ROW 21	MULTI 22	CP 23	CG 24	RESERV 25	Total		
US	1	0.0	43.0	90.2	93.3	4.3	11.4	16.9	19.0	61.7	24.1	1.0	652.4															
Japan	2	84.0	0.0	30.4	17.3	4.0	13.0	25.5	24.5	14.4	0.6		376.1										2629.7	816.0		4462.9		
EC	3	102.6	16.7	555.3	129.4	31.0	51.9	33.0	26.8	54.8	19.6			479.6									774.2	128.9		1506.1		
OECD	4	118.3	18.7	87.1	25.9	11.3	6.6	9.2	7.5	13.7	6.3				207.5								1531.3	483.5		3518.1		
CMEA	5	2.4	2.0	35.7	12.9	119.1	3.4	14.5	5.5	3.2	2.2					195.6							523.4	178.8		1215.3		
MOE	6	7.4	26.6	43.2	3.0	2.1	6.4	13.1	7.5	20.1	5.1						102.4						480.2	74.6		951.5		
OB	7	21.9	7.4	31.8	6.0	13.0	13.1	8.1	2.3	6.0	2.5							89.3					186.7	121.5		545.2		
DB	8	13.5	23.3	15.5	3.8	4.1	7.1	6.5	2.2	9.8	9.8								177.7				276.3	54.7		538.6		
PB	9	77.9	21.1	53.1	10.6	4.6	7.6	16.5	9.7	26.3	7.6									170.4			346.8	60.1		682.1		
ROW	10	35.0	8.0	17.4	6.2	6.5	2.4	3.8	7.0	4.6	4.1										50.9		597.6	98.5		1102.7		
MULTI	11	2.9	1.0	6.0	3.0	0.0	0.0	1.0	1.6	2.2	0.0												104.2	27.0		280.7		
US	12	551.3										0.0	40.7	55.1	12.3	0.0	9.5	-2.2	2.1	12.2	0.0	0.0	0.0				17.7	
Japan	13		435.1									2.1	0.0	50.2	1.4	0.0	0.0	0.0	0.0	0.1	0.4	-0.0					681.0	
EC	14			537.5								7.9	41.8	96.9	27.8	1.3	-0.4	0.0	0.0	0.2	0.5	-0.0					489.4	
OECD	15				201.7							3.7	18.0	23.5	1.5	-0.0	2.4	0.0	0.6	0.1	0.4	-0.0					713.5	
CMEA	16					196.6						-1.4	0.6	1.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0					251.9	
MOE	17						113.9					-0.3	2.2	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					198.1	
OB	18							72.0				1.9	2.6	4.6	0.2	0.8	0.5	0.0	0.0	0.0	0.0	0.0					115.9	
DB	19								160.4			2.3	5.7	2.4	-0.9	-0.0	0.3	0.0	0.1	0.0	0.0	0.0					87.0	
PB	20									179.8		7.9	-0.1	-2.9	-2.4	-0.2	-0.5	0.0	0.0	0.0	0.0	2.9					174.4	
ROW	21										53.6	0.2	0.1	-1.4	-0.2	-0.2	0.0	0.0	0.0	0.0	0.0	0.0					184.7	
MULTI	22											2.5	1.5	5.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0					52.0	
Priv.Cons.	23	2629.7	774.2	1531.3	523.4	480.2	186.7	276.3	346.8	597.6	104.2																	11.5
Govt.Cons.	24	816.0	128.9	483.5	178.8	74.6	121.5	54.7	60.1	98.5	27.0																	7450.5
Reserves	25																											2043.5
Total		4462.9	1506.1	3518.0	1215.3	951.5	545.2	538.6	682.1	1102.7	280.7	17.7	681.0	489.4	713.5	251.9	198.1	115.9	87.0	174.4	184.7	52.0	11.5	7450.5	2043.5	0.0	27274.3	

**Note:** EC = European Community  
 OECD = Other OECD  
 CMEA = Formerly centrally planned countries of Eastern Europe and USSR  
 MOE = Major oil exporters (in North Africa and Middle-East)  
 OB = LDC-OB, 'Official borrowers'  
 DB = LDC-DB, 'Diversified borrowers'  
 PB = LDC-PB, 'Private borrowers'  
 ROW = Other countries, n.o.c.  
 MULTI = Multilateral institutions

**Other accounts:**

RESERV = Change in reserves

Table A1.4

## GLOBAL MACROECONOMIC MODELS: MULTIPLIERS US FISCAL POLICY

	Year 1				Year 5			
	MSG2	MULTIMOD	OTHER		MSG2	MULTIMOD	OTHER	
			Mean	S.D.			Mean	S.D.
<u>United States</u>								
GNP	0.56	0.80	1.40	0.31	0.06	-0.40	0.64	0.35
Private investment	-0.09	-0.11			-0.23	-0.16		
Private savings	0.40	0.29			0.38	0.12		
Budget deficit	0.79	0.60			0.94	0.30		
Current account	-0.39	-0.10	-0.24	0.10	-0.33	-0.26	-0.44	0.21
Inflation (%)	-0.11	0.30	0.15	0.14	0.15	0.80	0.64	n.a.
Real interest rate (%)	1.16	0.30	0.53	0.22	1.36	0.30	0.84	0.48
<u>Japan</u>								
GNP	0.18	0.10	0.39	0.15	-0.05	0.10	0.69	0.61
Private investment	-0.18	-0.05			-0.31	-0.07		
Private savings	0.22	0.05			0.00	0.13		
Budget deficit	-0.03	0.0			0.05	0.0		
Current account	0.43	0.10			0.26	0.20		
Inflation (%)	0.27	0.10	0.11	0.14	0.07	0.30	0.34	n.a.
Real interest rate (%)	1.02	0.20	0.15	0.28	1.31	0.10	0.20	0.22
<u>Germany</u>								
GNP	0.21	0.10	0.22	0.11	-0.14	0.20	0.36	0.29
Private investment	-0.16	-0.05			-0.31	-0.07		
Private savings	0.15	0.05			0.05	0.23		
Budget deficit	-0.05	0.0			0.07	0.0		
Current account	0.37	0.10			0.19	0.30		
Inflation (%)	0.26	0.10	0.16	0.13	0.12	0.30	0.34	n.a.
Real interest rate (%)	0.96	0.10	0.09	0.10	1.25	0.10	0.26	0.26
<u>ROECD</u>								
GNP	0.17	0.10	0.24	0.09	-0.15	-0.0	0.44	0.26
Private investment	-0.16	-0.06			-0.30	-0.07		
Private savings	0.20	0.04			0.03	0.03		
Budget deficit	-0.04	0.0			0.08	-0.0		
Current account	0.40	0.10			0.22	0.10		
Inflation (%)	0.24	0.10	0.14	0.12	0.10	0.30	0.37	n.a.
Real interest rate (%)	0.97	0.10	0.02	0.02	1.28	0.10	0.22	0.27
<u>LDCs</u>								
GDP	n.a.	0.2			n.a.	-0.0		
Current account	0.10 <sup>1</sup>	0.4			0.20 <sup>1</sup>	-0.0		
Terms of trade (%)	-2.83	0.3			-2.06	-0.2		

Source: McKibbin and Sachs (1991); Masson, Symanski and Tyron (1989) and Masson and Helliwell (1990).

Notes: All values represent deviations from baseline as a percent of GNP, unless stated otherwise. 1. Percent of US GNP.

# THE WORLD BANK AND THE ENVIRONMENT: THE WORLD DEVELOPMENT REPORT 1992

Lance Taylor

## Introduction

"Think globally, act locally" is an environmentalists' maxim that the World Bank has unexpectedly taken to heart. Although not green, the ideas underlying the *World Development Report 1992: Development and the Environment* at least tend toward earth colors; the Bank may be seriously beginning to reflect upon the economic and physical milieu of its borrowing constituency. Moreover, like the 1990 edition on poverty, the latest *World Development Report 1992* (here after called *WDR*) represents a step away from neoliberalism and back toward the Bank's attitude of the 1960s: that the continuing existence of the poor in poor nations is the development problem. Indeed, the *WDR's* insistence on remedying water and air pollution resembles nothing more strongly than 20-year-old strategies aimed at satisfying developing countries' basic needs.

Despite these favourable signs, there is tension in the document between concern over poor people's water, air, and quality of life, on the one hand, and advocacy of a "market friendly" policy line, on the other. Market-friendliness dominated the 1991 *WDR*, which stressed the virtues of price reform and criticized most market interventions by the State.<sup>1</sup> With regard to environmental concerns, this approach mimics the economics mainstream. In the words of a recent, comprehensive review, "As we move into the 1990s the general political and policy setting is one that is genuinely receptive to market approaches to solving our social problems ... the prevailing atmosphere is a conservative one with a strong disposition toward the use of market incentives ..." (Cropper and Oates, 1992). Whether the market alone is capable of dealing with the two major problems of the post-cold war world - the abysmal standards of living of (by the Bank's estimates) one-fifth of humankind and the rapidly deteriorating global environment with its non-negligible possibility of collapse - is a question that the *WDR* cannot quite bring itself to confront.

The discussion that follows, departs somewhat from the *WDR's* order of presentation by first taking up questions regarding the robustness of market-based environmental policies (which, to be fair, the *WDR* does not fully endorse) and their institutional and political complications (*WDR*, chapters 1, 3, and 4). Next poverty and population growth are treated (chapter 1), then local and national environmental concerns (chapters 2, 5, 6, and 7). Global environmental and economic issues (chapters 8 and 9) are the final topics, addressed from the viewpoint of (possibly) sustainable growth.

## I. The environment, the market and the state

The *WDR's* treatment of the bases for environmental action is its weakest point. Imprecision on the part of its authors is not surprising; after all, no single person or institution is truly equipped to deal with the huge range of ill-understood problems that nature and culture present. But the *WDR* lacks breadth; despite 500-odd references, the range of opinion it canvasses is slight. One looks in vain for citations to persons such as John Sununu, Julian Simon, Jean Dreze and Amartya Sen, Lester Brown, Gretchen Daily, Paul Erlich, David

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<sup>1</sup> For a summary and critique of the 1991 *World Development Report (WDR)*, see Fanelli, Frenkel, and Taylor (1992). It views public interventions apart from provision of education, some infrastructure, macroeconomic stability, and the "rules of the game" quite dimly.

Pimentel and George Washington Hayduke.<sup>2</sup> Like any document written by a committee seeking a middle ground that will please its superiors, *WDR* leaves out interesting, controversial points.

As each succeeding *World Development Report* documents, the World Bank's management is ideologically committed to the market; this fact no doubt induced the authors to follow economic lines. They invoke ecologists and anthropologists, but in the final analysis seem not to take seriously their insistence on the need to preserve and sustain diverse natural and human systems as being both sufficient unto themselves and irreplaceable components of an unfolding global dynamics. Nor does the *WDR* fully recognize that change is constrained by history; in natural terms, by existing ecosystems and gene pools, and in human ones, by the institutions that societies maintain. Despite deploring poverty and recognizing factors such as the "deeper spiritual importance" (p. 57) and "amenity values" of forests and other natural phenomena, the *WDR*'s main thrust is that policy should be decided on the basis of environmental benefits and costs.

Even within this market sphere, the *WDR* could probe deeper into the practical efficacy of different policy lines. According to standard theory dating back to Pigou (1918), pollution taxes are an effective means to control environmental costs. The optimal levy on a polluter's activity is equal to its marginal social damage, at a general equilibrium in which all microeconomic "marginal this = marginal that" conditions are in force. Cropper and Oates (1992) give the details along with the observation that if a pollutee can undertake "defensive activities" against a polluter's incursions, then s/he can be counted upon to do so at an "optimal" level without any help from the State.

But can individuals really "defend" themselves against environmental degradation? Cropper and Oates' conclusion recalls Bertrand Russell's (1945) description of utilitarian economics: "'Free competition,' in orthodox economics, is a very artificial conception, hedged in by legal restrictions. You may undersell a competitor, but you must not murder him ... Those who have not the good fortune to possess capital must not seek to improve their lot by revolution".

Ineffective defensive activities were all that the existing legal system could allow the poor families which used to fish the coral reefs around Palawan Island in the Philippines before they were killed by an influx of eroded soil after the forest cover was denuded by land developers and large, profitable logging companies with close ties to the national government (Broad and Cavanaugh, 1989; *WDR*, p. 49). Alternatively, the villagers may have brought their problems upon themselves by non-optimal overfishing as traditional regulation of the coral "commons" broke down owing to pressures from the market and population growth.

Either way, this example of dying "fish homes" (the Filipino word for coral reefs) suggests that optimal tax rules may not be so easy to apply: especially for the poor, the shapes of the relevant response curves are at best known in highly uncertain fashion; moreover, the State may not be politically free to act (timber barons were pretty good at holding putative regulators in check in the post-Marcos Philippines). Unstable prices as planners fine-tune pollution levies, can be economically disruptive - the market will be unhappy if regulators keep adjusting and readjusting taxes on polluters until either environmental standards or "optimal" equilibrium conditions are met.

Weitzman (1974) tried to cut through this veil of ignorance two decades ago, in response to theoretical suggestions that decentralized planning via price signals might well converge to a social optimum but only after many confusing revisions. As is often the case with good neoclassical economics, Weitzman's theorem embodies common sense: quantity regulation is appropriate when its marginal benefits in reducing damages rise sharply but its marginal costs do not. Inability to control adequately toxic substances via charges on their emission can create high social costs; hence, one should opt for quantitative regulation. Contrariwise, excessive burdens may be imposed on both polluters and society as a whole if marginal benefits from excessively stringent controls are constant but their marginal costs rise at a rapid rate - price-based instruments make more sense under such conditions.

<sup>2</sup> When he was Presidential advisor, John Sununu's views on the foolishness of attacking environment problems were well covered in the international press, and the following seven scholars will be cited in due course. "Hayduke lives" is the rallying cry of the (sometimes) eco-terrorist Earth First movement. G.W. Hayduke led the original monkey wrench gang in their attacks on environmentally unfriendly capitalists and machines (Abbey, 1975).

Besides adopting Weitzman's distinction between policies which act "... by stipulating standards and regulations (command-and-control policies) or by pricing additional pollution or additional resource use ..." (page 73), the *WDR* adds a few other classifications. First, it separates direct and indirect approaches. The former "... target proxies for environmental damage, such as industrial emissions or timber extraction ..." while the latter "... influence actions only indirectly related to environmental damage, such as the use of leaded gasoline or land" (p. 78). Secondly, the State may act directly to influence choice of technology (with all instruments at its disposal, including public investment). Thirdly, it can try to revise property rights such as land tenure laws and customs to influence environmental outcomes and, finally, it should recognize that interventions such as trade quotas and energy subsidies have repercussions on nature and society via the market.

## II. Environmental policies in practice

Chapters 3 and 4 of the *WDR* set out these policy characteristics, and present examples - their general thrust is in favour of market-based incentives but caveats are provided as well. Without going through the lists in detail, a few observations can be made:

- (a) One fundamental issue has to do with the environmental implications of new investments; after all, the World Bank is in the business of project lending. The *WDR* recognizes that "... numerous public investments - often supported by development agencies, including the World Bank - have caused damage by failing to take environmental considerations into account or to judge the magnitude of the impacts. Indonesia's transmigration program, Sri Lanka's Mahaweli scheme, and Brazil's Polonoreste projects are examples of large programs that caused unanticipated damage in earlier years" (pp. 13-14). More recently, the Bank used independent evaluators to reassess its Narmada River Basin project in India, and agreed to finance resettlement and rehabilitation of the people adversely affected (*World Bank News*, 25 June, 1992).

The *WDR* argues that sharing information with local residents and applying appropriate cost-benefit analysis procedures can avoid such difficulties. It also recognizes that "... equally important are design issues relating to individual project components - road alignments, the design of water systems, and provision of access to forests and wetlands" (p. 14). Social and environmental awareness is required to address such questions; beyond setting general cost and pricing limits, it is not obvious that market forces have much of a role to play.

- (b) There are also complications with the cost-benefit calculus itself. As discussed below (section 4), economists like to think macroeconomically in terms of steadily growing supplies of all commodities. But suppose a good such as "the environment" either will be in increasingly scarce supply or will be a "luxury" with steadily rising demand as income grows (details in section 7) - either way its market and/or socially relevant "shadow" price will go up in comparison to prices of other commodities.

Under such circumstances, with environmental goods becoming relatively more valuable, the theory of externalities discussed above suggests that pollution levies should rise over time. Conversely, investments which create environmental amenities in the future should be favoured now. The World Bank and similar agencies should evaluate environmental projects with low (and perhaps declining) discount rates since their future values as seen from today will fall less rapidly than those of other goods; in the jargon, their "own" rates of interest in terms of non-environmental goods will be low.<sup>3</sup> The *WDR* (p. 34) argues that environmental projects should not

<sup>3</sup> A commodity's "own" rate of interest measures how rapidly its value will fall in the future, as seen from today; when trends in prices diverge, then so will own-interest rates. The argument in the text follows Keynes (1936, Chap. 17) and Kaldor (1960), who emphasized how trending relative prices make economic evaluations based on a single, constant "real" interest rate meaningless. Weitzman (1992) brings out this point in terms of investment project evaluation when there are externalities, and presents an elasticity-based formula for computing an "environmental" interest

be evaluated with low discount rates. Despite decades of professional awareness of the implications of differing own-rates of interest, the *WDR* does not recognize the force of steady trend in relative prices.

- (c) Scarcity values of environmental amenities may well rise, but the effects on resource allocation are likely to be weak. In order to address most practical problems, mixes of new investment and price, quantity, and technology policies will be applied. For example, the *WDR's* box 3.4 gives a useful description of how technical shifts (engine retrofits, vapour recovery, the use of low-lead gasoline, etc.), vehicle emission standards and inspection, and higher fuel taxes may be able to make a dent on Mexico City's air pollution. The cost curve for cutting emissions is shifted downward by the gasoline tax, but not by very much. Indeed, in several examples highlighted in the *WDR*, price reform appears to be substantially less effective than technical change in improving environmental conditions.<sup>4</sup>
- (d) *WDR's* repeated injunctions to developing countries to cut subsidies on energy and fertilizer and water use (many low price/cost ratios are illustrated in *WDR*, figure 3.2) may therefore not lead to much environmental response. The fiscal improvements that subsidy reductions could bring may be far more important in that they would permit more environment-friendly public investment, as will be discussed shortly (c.f. section 6).
- (e) The relatively weak response to price reform implies that "marginal abatement cost" curves for polluting activities are low and fairly flat, which conforms to economic intuition. Environmental protection is in its early days in the developing world. In terms of Weitzman's (1974) model, relatively blunt quantitative controls may be more cost-effective than sophisticated market manipulation, at least until decreasing returns to command-and-control (CAC) efforts begin to kick in. Moreover, the performance record of market-based policies is not extensive. The entire worldwide corps of interventions such as effluent charges, emissions permits, and performance bonds is marshalled in *WDR's* table 3.1 - its numbers can be counted on two hands. As Cropper and Oates (1992) take pains to point out, several programmes are essentially trial runs and others boil down to stimulating "transactions" about polluting activities within plants or firms.
- (f) There is also a behavioural reason for opting for CAC regulation, which *WDR* does not bring out. It may be effective in changing how people think and not just act (in economists' terms, CAC can influence preferences and technology, not just choice). Both buyers and sellers of cars are now far more concerned with the dangers of emissions in the United States than they were a generation ago - bureaucratically onerous standards played a role in this particular act of consciousness-raising.
- (g) CAC interventions can also help keep environment-friendly social structures in place. The *WDR's* box 4.4, for example, beautifully describes the reverence for nature that permeates many traditional cultures; as the authors fully recognize, one of its attributes is the maintenance of common property resources. The literature is full of examples of how opening local societies to the full rigors of the price system can lead to both economic misery and environmental loss; in many cases, it appears that traditional activities would have been better served by protective barriers than attempts at stimulating markets.<sup>5</sup> Even apart from traditional cultures, the *WDR* rightly emphasizes the importance of community action and local decision-making

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rate as a fraction (perhaps falling over time) of the market rate. Both the *WDR* and the World Bank's chief economist Lawrence Summers (1992) fail to consider own-interest and Weitzman-style corrections.

<sup>4</sup> See box 3 in the "Overview" on air pollution, box 3.4 on Mexico City's smog, figure 5.6 on water supply and sanitation, figure 6.5 on air pollution from electric power generation, and figure 6.9 on motor vehicle emissions. Table 8.1 is a partial exception in projecting large reductions in carbon dioxide emissions due to cutting subsidies to commercial energy use in Eastern Europe and the former USSR (by 29 per cent as opposed to 11 per cent in developing countries). But it should be recognized that a massive extrapolation from the existing situation is involved.

<sup>5</sup> Just two examples are given. Early on, Feder (1977) described how tax concessions and infrastructure investment led to disenfranchisement of small scale farmers by cattle ranching in the Brazilian Amazon; traditional forest dwellers were made destitute and in some cases simply wiped out. Jodha (1986) documents how common property resources in the Indian state of Rajasthan have been reduced by privatization associated with land reform programmes unaccompanied by public support for required capital formation and social safety nets.



about environmental issues. Such healthy institutions cannot just be fostered by the market, which at its worst will generate ample side payments to ensure that polluting activities take place NIMBY or "not in my backyard."

- (h) Observations along similar lines apply in the area of foreign trade. The *WDR* follows the World Bank line in stressing the market-friendly nature of external trade: "Liberalized trade fosters greater efficiency and higher productivity and may ... encour[age] the growth of less-polluting industries and the adoption and diffusion of cleaner technologies" (box 3.1). Although the Bank never admits it, the assertions about efficiency and productivity are controversial; how more free trade will lead to cleaner technologies is not documented fully in the *WDR*.<sup>6</sup>

Indeed, some economic logic points the other way. An internal World Bank memo attributed to chief economist Lawrence Summers and leaked to Greenpeace and the *Economist* (14 February, 1992) even asserted that it is cost-effective to site pollution-intensive industries in low-wage economies where the loss of earnings due to increased mortality and morbidity is small. Moreover, "only the lamentable facts that so much pollution is generated by non-traded industries ... and that the unit transport costs of solid waste are so high prevent world welfare-enhancing trade in air pollution and waste." Prudently, the *WDR*'s box 3.1 takes the opposite tack, asserting that "... developing countries do not compete for foreign investment in 'dirty' industries by lowering their environmental standards."

The problem, of course, is that there are potentially severe conflicts between liberalized trade and environmental standards. Trade restrictions are visible, easy to apply, and can be effective; that is why they have played a big role in the Montreal Protocol, aimed at reducing atmospheric ozone depletion by limiting chlorofluorocarbon (CFC) gas emissions, and in the Convention on International Trade in Endangered Species (CITES) embargo on the ivory trade. They also can give rise to political conflicts in which environmental activists are on strong ground.<sup>7</sup> The basic disagreement is that advocates of liberal trade want maximum limits on the stringency of regulatory standards that individual countries can impose, while the environmental community wants minimums. The Bank can't have it both ways.

- (i) Although non-price interventions can be justified in many circumstances, they bring their own problems. One is that they inevitably involve spending, either mandated to the private sector (e.g. motor vehicle emission standards in the United States) or undertaken by the public authorities. There are obvious limits to such actions. The private sector can only be pushed so far while government outlays in much of the developing world are restrained by the international conjuncture that developed during the 1980s. Downward trends in primary commodity terms-of-trade,<sup>8</sup> the debt crisis, and the stagnation of overseas development assistance all made foreign resources extremely scarce, especially in Latin American and sub-Saharan Africa.

<sup>6</sup> The strengths and weaknesses of liberal versus interventionist trade and industrial policies in promoting growth are discussed by Fanelli, Frenkel, and Taylor (1992). They conclude that "... there is room for debate about such questions, unacknowledged by the 1991 *WDR*." The current *WDR*'s example of how free trade helps cut pollution is thermochemical pulping in the paper industry, originally developed in response to United States and European environmental regulation. Adoption elsewhere is said to have been "... quicker in developing countries with fewer trade restrictions. As late as 1989, not a single pulp producer in Eastern Europe had adopted this technology" (p. 68). In the socialist Europe of the late 1980s, how many factors besides trade regulation were impinging on this investment choice?

<sup>7</sup> Two more examples: A Danish regulation mandating that beer and soft drinks be sold in reusable containers was challenged by the European Community (EC) as an impediment to free trade under the Treaty of Rome. The European Court first ruled against Denmark but then reversed itself and ruled against the EC. A United States ban on imports of tuna caught by the encircling net method (which kills many dolphins) was challenged by Mexico under the GATT code; a panel ruled that the United States law was contrary to GATT's equal treatment provisions. The United States and Mexico have yet to put the case before the full GATT council, partly owing to their ongoing negotiations on free trade but also because (as one American Congressman put it) "dolphins have lots of votes."

<sup>8</sup> In its box 1.4, the 1992 *WDR* recognizes declines in real metals and energy prices (both since the 1970s and over this century), and argues that they signal that natural resources are not imminently in short supply. Box 5.5 in the 1991 *WDR* minimized these price movements and argued that their adverse effects on exporters were small. The two boxes do not directly contradict one another, but they do reveal a temptation of the Bank to read statistics in more than one way.

Fiscal receipts were similarly affected, putting severe restrictions on public outlays including those for the environment. The linked macroeconomic and environmental implications of this "fiscal gap" are taken up quantitatively in section 6.

- (j) More generally, there is no consensus on how macroeconomic factors and policy choices interact in determining developing country growth (let alone the effects of growth on the environment). Fanelli, Frenkel, and Taylor (1992) and the authors of country studies collected in Taylor (1993) argue that foreign exchange restrictions on imports and public capital formation held down third world economic performance in the 1980s. By contrast, the 1992 *WDR* insists on the absence of sufficiently market friendly policy as the explanation for poor performance. It draws on the previous year's version in asserting that "... countries with good economic policies had average growth rates fully 2.5 percentage points higher than those with middling and poor policies and nearly 1 percent higher than the average projected growth rate for the 1990s" (p. 174).<sup>9</sup>

Questions about the self-assurance of World Bank economists inevitably arise: Can we really determine the relative extents to which unfavourable circumstances and market unfriendly policies were responsible for slow growth? Which will more strongly block creation of new resources for environmental or anti-poverty programmes? With its penchant for self-citation, the World Bank has a hard time admitting that opinions differ about the answers to these queries.

- (k) A final set of uncertainties surrounds the role of the State. The *WDR* continually takes little swipes at public enterprises, which allegedly will not respond to market-oriented environmental policies because of congenitally soft budget constraints. (The accusation is overstated, but even when it does apply, why not employ targeted, direct policies instead?) Inept bureaucrats also come in for the authors' wrath. But the *WDR* also recognizes that no agency besides the State is likely to try to establish local citizen participation in environmental choices, protect the poor, or "close the skills gap" (p. 91). In a field as rife with economic externalities and political conflicts as the environment, there is an obvious need for a public presence, even if it consists of nothing more than market-cum-environment friendly interventions. How the State can be established as a beneficial environmental actor is an issue that the *WDR* does not address.<sup>10</sup>

### III. Poverty

The *WDR*'s discussion of poverty underscores sensible points, but tends to be narrow and brief. Macroeconomically, it is far more straightforward than the 1991 *WDR*. There was a negligible reduction in the population share and an 80 million increase in the number of people falling below a poverty line of US\$370 annual income per person (1985 purchasing power parity) between 1985 and 1990. The total of poor people in the latter year was over 1.1 billion from a developing country population of 3.8 billion. These depressing recent developments are attributed to slow output growth (due to bad policy or bad luck?); mention is also made of the worsened position of the poorest in China as it embraced market liberalization in the second part of the 1980s (*WDR*, p. 29).

<sup>9</sup> The word "had" in the quotation is misleading. The numbers come from table 8.1 of the 1991 *WDR* and are based on model simulations by Bank country economists, who arguably have a vested interest in projecting favourable outcomes during the 1990s to the policies that they recommended. The 1991 *WDR*'s table 1.5 (apparently put together by central Bank staff) postulates growth rate increments of a few tenths of percent in response to market friendliness. On a similar point, the 1992 *WDR*'s assertion that "Experience has shown that, on average, the effect of domestic policies on long-run growth is about twice as large as the effects attributable to changes in external conditions..." (p. 32) is based on 1991 econometrics subject to considerable doubt (Frenkel, Fanelli, and Taylor, 1992).

<sup>10</sup> In particular, box 4.5 mentions Japan's "... stringent government regulations and negotiations between industry and communities ..." but fails to acknowledge the all-encompassing economic role of that nation's State.

At the local level, one can scarcely quarrel with the *WDR*'s (and Bertrand Russell's) contention that the poor are not in a position to buy their way out of ecological trouble even if they are furiously optimizing "defensive activities" within their feasible decision space, and would be less likely to run down natural resource endowments to survive in times of crisis if there were adequate social safety nets in place. Their weakness precisely creates room for the State to intervene. But just what is it supposed to do?

Dreze and Sen (1989) provide some guidance with regard to hunger. They agree with the *WDR* in pointing out that the poor lack "entitlements" or claims to the social product. In acute famine situations their purchasing power can be severely squeezed by spiraling prices which act to reduce aggregate demand; a friendly solution to this market failure is to give stricken people cash (say as wages in public works programmes) and let the private sector handle food distribution. Chronic hunger has been attacked best by directly supporting the spending power of the poor, or else by making sure that they participate in the fruit of growth.<sup>11</sup>

Similar logic applies in other spheres as well. As seen above, the *WDR* correctly emphasizes the importance of protecting traditional societies with their (typically) conservationist practices; the *WDR* further argues that the property rights of the poor should be supported in general. But why the market alone (or even supplemented by the State) can be counted upon to ratify such institutional changes is not made clear. Bertrand Russell's pessimism continues to apply: entitlements always flow easily into the hands of those with power in the first place.

#### IV. Population growth

Population growth is an even more contentious area, around which the *WDR* simply (but perhaps unavoidably) waffles. There are several topics now under intense debate; the Bank's authors do their best not to choose sides.

One set of doubts concerns the apparently straightforward task of making population growth projections. The *WDR* looks at three cases: a base, and variants with slow and rapid fertility declines. In the base run, the steady state population is about 12.5 billion in the middle of the twenty-second century. A rapid fertility decline over the next few decades would lower this figure to 10.1 billion and a slow decline would make it 23 billion. As in any exponential growth process, small shifts in rates of expansion cumulate into big differences in levels. Economic implications of this twist of mathematics will be taken up below.

The differences in fertility reductions between the low and high projections correspond to observations in countries where birth rates have dropped off rapidly (Costa Rica, Thailand) or slowly (Paraguay, Turkey). Which experiences are better predictors of the future is an open question. Perhaps the high fertility scenario will be more relevant if per capita income growth remains slow, postponing a demographic transition to lower birth rates. Such a vicious circle could be underway in sub-Saharan Africa, for example (*WDR*'s box 1.1).

The World Bank's assumptions about mortality are not spelled out in the *WDR*. However the *WDR* population projections may be far too high. The *WDR* tiptoes around the implications of AIDS, although recent, controversial growth forecasts which factor in mortality due to the pandemic suggest that populations may begin to decline in central Africa as early as the year 2002 (*New York Times*, 22 June, 1992). This scenario differs sharply from the *WDR*'s, in which "... the AIDS virus could reduce African population growth rates by as much as 0.5-1.0 percentage points in the early decades of the next century" (*WDR*, p. 26). If high mortality from AIDS spreads beyond Africa (say to Thailand and parts of India), this latest twentieth century tragedy will make all population projections moot. Its implications for destitution and social breakdown are somber at best.

<sup>11</sup> Of the 10 countries which performed best in reducing under-5 mortality between 1960 and 1985, Chile, Costa Rica, Cuba, China, and Jamaica followed the first "support-led" strategy and Hong Kong, United Arab Emirates, Kuwait, Singapore, and the Republic of Korea the second "growth-mediated" approach. Lacking targeted intervention, some rapid growers such as Oman and Brazil pursued "unaimed opulence" which did not alleviate hunger and deprivation.

Suppose, perhaps optimistically, that population increases proceed more or less as the World Bank foresees. What are the implications for the environment? Here, there is wide divergence in views among experts and professions. To summarize them briefly, the general issues will be dealt with before the specifics.

As noted above (section 2), economists like to think in terms of growth equilibria. That is, a set of parameters can be used to describe macroeconomic balance when the economy is expanding exponentially. "Small" changes in one parameter (say, the population growth rate) can be compensated by little movements in others (say, the saving rate or capital-output ratio) to sustain equilibrium.<sup>12</sup> If the invisible hand works its magic through prices which vary to mediate these adjustments, then so much the better.<sup>13</sup>

The *WDR* adheres to the economists' model, especially in emphasizing the equilibrating role of prices. For example, the reader is informed that the "... reason why some resources - water, forests, and clean air - are under siege while others - metals, minerals, and energy - are not is that scarcity of the latter is reflected in market prices and so the forces of substitution, technical progress, and structural change are strong." (*WDR*, page 9) Other scholars, typically from different disciplines, stress that there are environmental ceilings which ultimately can limit global economic growth. Such neo-Malthusian views have swung in and out of favour since the *Essay on Population* was published 196 years ago. They are at the moment quite influential; moreover, Malthus may at long last be proved right. Four sorts of potential barriers to continued output growth are worth flagging:

- (a) According to the *WDR*, "... apart from small islands and city-states, only Bangladesh, the Republic of Korea, the Netherlands, and the island of Java ... have [population] densities exceeding 400 per square kilometer. By the middle of the next century, however, one-third of the world's population will probably live in countries with these ... densities" (*WDR*, p. 7). The stress on ecosystems in countries which are not amply endowed with water and/or industry could be intense; already severe degradation is taking place in arid and semi-arid areas, e.g. in sub-Saharan Africa. Solutions will require action by both public and private sectors. Even the *WDR* admits that "Markets are ... inadequate for spreading risks in drought-prone regions because so many people are affected at once" (*WDR*, box 1.2).
- (b) Besides the problems posed by high population densities *per se*, there are other local and national environmental constraints which are discussed in the following sections. If they begin to bind, then the trade-off between growth in output per head and population increases could become acute. Some problems such as deforestation and associated losses in biodiversity owing to species extinction spill over into the global arena.
- (c) Global warming owing to emissions of the "greenhouse gases" (GHGs) - carbon dioxide, methane, CFCs, and nitrous oxide - could severely destabilize ecosystems worldwide as soon as the middle of the next century. Broadly speaking, GHG emissions rise with total GDP, i.e. increases in both income per capita and population. The *WDR* does not mention it, but limiting GHG emissions could set up a political confrontation between poor countries with expanding populations which want to raise their per capita outputs (say, in India and China, by exploiting large national coal reserves with correspondingly high particulate and carbon dioxide emissions) and rich countries with slow population growth but high (though stable)

<sup>12</sup> The arithmetic of adjustments around growth equilibrium at constant per capita income can be illustrated with a Harrod-Domar equation between output growth to the left of the equal sign and population growth to the right:  $(s/k) - \delta = n$ , where  $s$  is the national saving rate,  $k$  is the capital-output ratio,  $\delta$  is the rate at which the capital stock depreciates, and  $n$  is the population growth rate. Suppose initially the numbers take the values  $(0.15/3) - 0.02 = 0.03$ . Then an increase in  $n$  from 0.03 to 0.035 (a big change) can be compensated by an increase in  $s$  from 0.15 to 0.165 or a fall in  $k$  from 3 to 2.73, both of which are moderate adjustments.

<sup>13</sup> Faith in the ability of the market and society overall to adjust to changing population growth rates characterizes optimists like Simon (1981), who argues that faster increases improve the human condition. In the 1984 *WDR* devoted to population issues, the World Bank took the middling to pessimistic view of the effects of population expansion on output growth which was characteristic of pre-Reaganite Washington orthodoxy; since then, its statements prior to the 1992 *WDR* have tended to move in the optimistic direction.

emissions per head. Of course, the rich countries have been responsible for the bulk of GHG (not to mention CFC) production since their industrialization began 200 to 300 years ago.

- (d) As Malthus feared long ago, food supply could become scarce. The *WDR* rightly points out (*WDR*, figure 7.1) that world cereal production almost doubled from 1.0 billion to 1.9 billion tons between 1965 and 1990, owing to an increase of a few per cent in cropped area and a big expansion in yields per hectare. Can output rise further to 3.6 billion tons by 2030 to meet the Bank's baseline population growth projection?

Even ignoring the (largely unknown) implications of global warming, the answer will depend on limiting factors affecting agriculture in different parts of the developing world, e.g. (i) the absence of unused land in South and East Asia and the Middle East; (ii) an increasing scarcity everywhere of suitable sites for new irrigation projects along with rising investment costs; (iii) non-agricultural demands for land and water; (iv) competition of non-staple crops, animals, and export crops for resources which could be used to produce basic foods; (v) no real research breakthroughs in raising yields for coarse grains and roots and tubers like the "green revolution" for rice and wheat; and (vi) observed yield decreases for "green revolution" crops in the 1980s owing to new diseases, increasingly pesticide-resistant insects, depletion of soil micronutrients, and waterlogging and salinization associated with irrigation.

Some specialists find the yield trends and other factors just mentioned extremely disquieting.<sup>14</sup> However, the *WDR* believes that "... long-term observation will make possible understanding and management of these problems" (*WDR*, box 7.3). If the *WDR* is correct about sustainable yields for high-intensity agriculture and prospects for conservationist farming and integrated low-intensity operations involving staple foods, forage, forestry, and ruminants (*WDR*, table 7.2 and box 7.1), then doubling food supplies between 1990 and 2030 may well be feasible. But it will certainly be no mean task.

To summarize, if the world's population doubles (with most of the increase occurring in developing countries) over the next 40 years, this factor could be a source of substantial pressure on the environment - especially if output per capita grows steadily as well. The *WDR* follows the majority of economists in working with projection models which preclude strict environmental limits to growth. A question which any serious report should entertain is whether exponential output expansion will cease to be feasible in the decades to come. The implicit view of the World Bank is that this risk is slight. It would be reassuring to know the reasons why.

## V. Water, industry, energy, motor vehicles and agriculture

When the *WDR* stops trying to think globally and discusses policy actions locally, it is on firmer ground. Chapter 2 of the *WDR* gives a sympathetic assessment of the environmental problems that poor people in developing countries face - unsafe water, inadequate sanitation, soil depletion, indoor smoke from cooking and heating fires, and outdoor smoke from coal burning - while chapters 5-7 suggest policy solutions. Some are sensible; others suffer from the deficiencies noted in sections 1 and 2 above.

If clean water and sanitation are not adequately provided, the poor (especially children suffering from diarrheal diseases and women who spend immense amounts of time carrying water) bear the brunt of the social costs. The *WDR* presents both urban and rural examples to suggest that families might be willing to pay for improved water supply. At the retail level - with adequate regulation - private companies may be able to hold down delivery costs.

These pieces of evidence, which "... draw heavily on the cumulative experience of the World Bank water sector staff" (*WDR*, p. 180), lead the *WDR* to recommend that water

<sup>14</sup> See Daily and Ehrlich (1990) and Pimentel (1991). These authors are known for producing pessimistic scenarios. But does that mean the World Bank can rule them irrelevant to the debate?

supply should be privatized to the extent possible, despite the fact that "private involvement in the sector is not a panacea and is never simple. In the United Kingdom water privatization is generally considered to be the most complex of all privatizations undertaken" (*WDR*, p. 111). Even if private water delivery (with associated public regulation) was put in place, the Bank has estimated that sustained investment in facilities would still have to rise by about 0.1 per cent of GDP to help "... bring about dramatic increases in access to sanitation and clean water within the next generation" (*WDR*, p. 113).<sup>15</sup>

The corresponding extra investment in sanitation would be of the same magnitude, but privatization of service delivery (especially for treatment and disposal of sewage and solid wastes) may prove less attractive. Successful programmes from Recife and the Orangi squatter settlement outside Karachi are put forward to suggest that community-organized sewage collection schemes can be effectively implemented. This observation is no doubt true, but it also bears noting that Recife's "condominial" collection system has not taken hold elsewhere in Brazil and the Orangi programme is one of several improvements in that settlement organized by Akhter Hameed Khan, a politically well-connected, charismatic leader. In the absence of such a powerhouse, the task of organizing sewerage projects may have to fall back on local cadres of the State.

With regard to air pollution, residents and visitors in such places as Beijing and New Delhi can attest that levels of "suspended particulate matter" (good old soot and dust, or SPM) in their air can be appalling; on bad days, the atmosphere in Mexico City and Bangkok is poisonous with motor vehicle smog.<sup>16</sup> In total, 1.35 billion urban dwellers in developing countries lived in cities with SPM levels exceeding (relatively stringent) World Health Organization norms in the mid-1980s (*WDR*, figure 2.4). About 500,000 premature deaths per year could be averted if SPM concentrations were brought down to levels deemed safer by WHO guidelines. Respiratory ill health, especially among women and children, is also provoked by indoor pollution from cooking and heating with biomass (wood, straw, and dung) and coal - perhaps 400 to 700 million people are exposed to such risks.

The *WDR's* chapter 6 recommendations about how to deal with these problems are a mixed bag. Urban pollution comes from electricity generation, industry, and motor vehicles. Each source has to be dealt with on its own terms. Price reform is emphasized in all cases, but as observed in note 3, the chapter's diagrams suggest that its efficacy in reducing emissions is considerably less than abatement measures - all of which cost real money. The annual investments required for cutting emissions from coal-fired power stations, controlling motor vehicle emissions and switching to unleaded fuels, and reducing emissions, effluents, and wastes from industry would all amount to 0.1 per cent to 0.3 per cent of developing country GDP on a sustained basis.

The *WDR* also points out that new technologies (not just imports of existing industrial country techniques) can play a role in mitigating these pollution problems. It is relatively sanguine about prospects for solar power (*WDR*, pp. 122-123) and recognizes that nuclear power generation is not cheap. Mass production of improved biomass stoves is proposed. The *WDR* stresses that subsidies on some technologies and taxes on others (e.g. on carbon use), as well as substantially increased spending on research and development will be required if these innovations are to fulfil their promise.

Research and development will also be crucial to agriculture, for example, in finding ways to reverse the trend toward lower yields mentioned above as well as to attack soil losses, salinization, and other problems. However, such expenditures stagnated in the 1980s and still concentrate more on commodity programmes than on integrated approaches to the sociocultural riddles that the sector presents. Maintaining common property ownership systems that help assure sustainable resource management by communities (*WDR*, pp. 142-144) is a case in point. Research is needed to generate concrete proposals about how this goal can be assured. Political action may also be required. The *WDR* points out that security of land tenure (either familial or communal) can be essential to reduce poverty and defend the environment, but somehow fails to mention land reform.

<sup>15</sup> This goal presupposes that overall water supplies will be "adequate." Economics is necessarily involved in defining the term, but with rapidly growing populations absolute water supply limits may begin to bind in arid regions of the Middle East and elsewhere.

<sup>16</sup> Besides damaging respiratory systems, vehicle smog also can lead to high blood levels of lead, contributing to IQ loss in children and hypertension in adults. The problem is endemic in Bangkok, Mexico City, and elsewhere.

Other agriculture-related questions singled out for discussion include management of forests and preservation of diverse habitats and species. Along with global warming, both topics were subject to intense debate at the United Nations Conference on the Environment and Development (UNCED) held in Rio de Janeiro in June 1992.

One major issue in forestry is overcutting in humid, tropical areas. During the past decade or so, Thailand and the Philippines have been logged out, and the State of Sabah in Malaysia will soon follow suit. Economists such as Repetto and Gillis (1988) attribute such boom-and-bust exploitation to two factors - concessions granted to private sector logging companies are valid for only a few years so that they have no incentive to engage in sustainable yield forestry, and log export restrictions imposed in the hope of promoting domestic industry tend to hold down current "stumpage value" (the difference between log prices and logging costs) and thereby the discounted net worth of the standing forest.

To the extent that this analysis is correct, it raises questions about who should capture stumpage value - long-term concessionaires or the State through appropriate regulation of short-term contracts? Either approach could help lead toward sustainable yield forestry, but practical difficulties often arise, e.g. State Governments in Malaysia have awarded profitable short-term concessions with low stumpage fees because they are under-financed from the centre.

More fundamentally, there is a question as to whether "correct" economic incentives will be sufficient to prevent buccaneers from making fast profits - recall that discount rates are supposed to be high in poor economies. If rapid exploitation is the rule - as suggested by several centuries of raw materials' booms under capitalism in both now developed and developing countries - then to the extent possible public control may be required to protect tropical forests.

One reason why the world market may opt for preservation of forests and other endangered ecosystems is biodiversity - there can be substantial pay-offs to development of new pharmaceuticals and other biological products on the basis of chemicals found in nature. The classic example is the isolation in 1954 of two cancer-fighting alkaloids from the rosy periwinkle of Madagascar by Eli Lilly and Co. By the time the patents had run out, Eli Lilly had made hundreds of millions of dollars from these drugs, and Madagascar not one penny (*Science*, 19 June 1992).

This potential conflict between tropical country suppliers and industrial country users of their products underlay the debate about the biodiversity treaty at the United Nations Conference on Environment and Development (UNCED) meeting, which, at the prompting of its biotechnology industry, the United States refused to sign. While the treaty was being discussed, Merck and Co. (another United States drug firm) agreed to pay Costa Rica US\$1 million for the right to analyse hundreds of indigenous plant and animal extracts for possible commercial uses, plus an undisclosed royalty on any marketable product. Whether this deal will be market and environment-friendly in Costa Rica remains to be determined. As is often the case when a transnational corporation deals with a developing host country, the price that Merck paid for access may not have been excessively high.

## VI. International resource transfers

The environment presents challenges to developing countries and the world in many dimensions - natural, cultural, political, and economic. All aspects were debated at the UNCED Rio meeting, some without sharp resolution (e.g. weak wording in the convention on means to address global warming) and others in conflict (the biodiversity treaty). The volume of resources needed by developing countries to attack their environmental problems was also discussed. The macroeconomic implications are taken up in this section.

The table below gives two sets of estimates of the yearly spending required to reach plausible environmental targets in the reference year 2000 (at which point GDP in the developing world might be a bit more than US\$5 trillion in 1990 prices). The first comes from the *WDR's* figures, as discussed above, and the second from the World Institute for Development

## ESTIMATES OF ENVIRONMENTAL RESTORATION COSTS IN THE YEAR 2000

(Billions of 1990 dollars per year)

	World Bank	WIDER
Investment in water and sanitation	10	
Reducing emissions from coal-fired power stations	7	
Reducing motor vehicle pollution	10	
Reducing industrial pollution	10-15	
Raising energy efficiency		11
Developing renewable energy		15
Agriculture and forestry programmes	20-25	23
Family planning (including more education for girls, financial incentives, etc.)	8	33
Total	65-75	82

Source: : *World Development Report 1992*, Development and the Environment, table 9.2; Jayawardena (1991).

Economics Research (WIDER) as summarized by Jayawardena (1991).<sup>17</sup> Substantial outlays are obviously involved - an initial difficulty is that their proposed destinations as specified by the *WDR* and WIDER differ in ways that illustrate conflicting priorities in the environmental debate.

The *WDR* targets US\$37 to 42 billion to the local and national problems that it emphasizes - water and air pollution, sanitation, and cleaning up industrial emissions, effluents, and wastes. In contrast, WIDER proposes US\$11 billion for raising energy efficiency (which partly overlaps with the *WDR*'s industrial recommendations) and US\$15 billion for putting renewable energy generation in place. Along with family planning and related activities (for which WIDER allocates US\$33 billion), renewable energy production is a first world environmentalists' concern. As seen from the North, both population control and renewable energy reduce the risks of global warming in a politically palatable way. Arguably, poor people in the South are more concerned with quality of life as highlighted in the World Bank's spending recommendations (and might not even mind using more energy, regardless of how it is manufactured). Finally, both sources suggest that over US\$20 billion per year will be needed to assure agricultural sustainability and output growth.

Without trying to judge the conflicting motivations behind the table, its bottom line is that if both developed and developing countries' environmental priorities for the third world are addressed, then well over US\$100 billion in annual outlays might be required in the year 2000 - roughly 2 per cent of developing countries' total GDP and 0.35 per cent of the world's.

This is not a trivial sum, even on the world scale. It bears recollection that the first and second oil shocks, the Volcker interest rate shock around 1980, and the famous American twin deficits five years later all amounted to around 1 per cent of world GDP and made the system ring like a bell. The adverse external shock that poor economies received from falling terms

<sup>17</sup> The WIDER cost estimates are based on in-house research coordinated by Partha Dasgupta and Karl-Göran Mäler and on Lester Brown, *et al.* (1988), with the latter source providing the cost figures for population control (World Institute for Development Economics Research (WIDER)).



of trade and the debt crisis in the 1980s was about 3 per cent of their GDP, and authors such as Fanelli, Frenkel, and Taylor (1992) (*op. cit.*) argue that it was directly responsible for a "lost decade" of growth in Latin America and sub-Saharan Africa. The renewed capital inflows required to support "socially necessary" output growth rates (Taylor, 1992), plus environmental outlays as advocated by both the World Bank and WIDER in the table above might sum to over 4 per cent of developing country GDP and almost 1 per cent of the global total. Even if such flows did not strongly perturb the system, where could the money come from?

A rise in internal third world savings rates by several points of GDP is not likely; nor would the "Keynesian" problem of converting the extra saving into physically and environmentally productive investment be easy to solve. Fiscal questions arise as well, since a substantial environmental effort would be required by a public sector which was almost obliterated in some countries by austerity programmes during the 1980s. Indeed, as emphasized by a new generation of "three gap" models (Taylor, 1993), fiscal, saving, and external restrictions on growth (and by extension, environmental improvement) are indissolubly linked. The private sector certainly has a role to play in ecological and cultural renewal, but as we have observed, it cannot carry the burden alone.

Resources from developed economies are also likely to be in short supply. During the late 1980s, South to North transfers were on the order of US\$100 billion per year. These flows slackened somewhat in the early 1990s (and even reversed for some countries owing to direct foreign investment and repatriation of previous capital flight), but any net flow southward still falls well short of the magnitudes required to break the foreign exchange and fiscal bottlenecks to satisfying growth and environmental needs. The industrial countries have pressing internal demands and will try to fill a huge financial gulf in the former socialist economies. Unless their priorities change, they are not likely to open their purses wide for environmental concerns in the third world.

The question of priorities, however, remains unresolved. Historically, "if a single lesson can be drawn from the early history of conservation, it is that States will act to prevent environmental degradation only when their economic interests are shown to be directly threatened" (Grove, 1992). Between developed countries' fear of global warming and the quest for profits from biodiversity - (a potentially handsome economic gain) - it may be that an annual US\$100 billion southward flow by the end of the decade will be in place. But the poor economies should keep their fingers crossed.

## VII. Conclusions

One interesting exercise in the *WDR* follows Kuznets and Chenery in tying environmental indicators to per capita GDP (figure 4 in the *WDR* Overview). In cross-country statistical averages, the shares of the population without safe water and (urban) sanitation fall steadily to around 20 per cent when national per capita income is about US\$2000 (in the World Bank's "upper middle income" range) and continue more slowly downward at higher income levels. In the urban air, SPM declines from a peak of 1200 micrograms per cubic metre to an "acceptable" level of 100 micrograms above an income level of US\$10,000. These indicators all suggest that improving the environment is a "luxury" along the lines discussed in section 2.

Other measures, however, seem to point the other way. For example, carbon dioxide emissions per capita are low in poor countries, and commence to rise steeply at upper middle income levels toward the rich country figure of 15 tons per year. This tendency again underlines developing and developed countries' asymmetrical contributions to global warming. If emissions as a function of per capita income stabilize at some level in the future (which apparently will be required to avoid catastrophic warming in the long run), we will have another example of an income-elastic environmental response.

These relationships suggest that countries have different "tastes" and deploy different technologies to deal with environmental problems at diverse income levels. According to the

*WDR*, the curves have moved downward somewhat over time, "... providing an opportunity for countries to develop in a less damaging manner than was possible earlier" (*WDR*, p. 10). This thought is hopeful, but does not get the environment very far. Given the cost estimates discussed in section 6, major gains will be unlikely in the short to medium run unless public preferences shift in their favour and/or new abatement technologies come onto the scene. The market can support such developments, but they have to be initiated by enlightened public opinion and the State. As an important actor, both economically and in terms of shaping international points of view, the World Bank can play a big role in helping these processes along. Its obsession with market-friendliness notwithstanding, the latest *World Development Report* represents an excellent start.

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# ON GRADUALISM, SHOCK TREATMENT AND SEQUENCING

José M. Fanelli and Roberto Frenkel\*

## Executive Summary

*The paper presents a critical assessment of some relevant issues regarding the discussion on shock as opposed to gradualism in the implementation of economic adjustment. Since the discussion of these issues has emerged and developed in the literature on liberalization reforms under the heading of "the problem of sequencing", much of the paper is devoted to analysing such a problem.*

*The initial proposals of liberalization reforms were based on static arguments regarding the welfare advantages of free markets, and lacked an analysis of the dynamic path of the economy when it moves from a "repressed" setting to a complete elimination of non-market constraints. The lack of a systematic analysis was apparent when it was necessary to account for some failed liberalization attempts in the early 1980s, particularly with regard to the dramatic collapse of the so-called Southern Cone experiments.*

*The lessons on the sequencing of liberalization which appear in the market-friendly approach literature may be synthesized as follows:*

*(1) The transitional period is very long and difficult to manage. During this period the role of the State is crucial in designing the speed and attributes of each stage of liberalization, especially regarding trade, the decontrolling of the capital account and the financial system.*

*(2) The transitional period can be very painful and the Government has to take political constraints into account.*

*(3) During the transitional period, there will be a reduced availability of credit.*

*(4) The State has a crucial role to play with regard to the regulation of the economy. The analysis of financial crisis in the Southern Cone of Latin America, the Philippines and Turkey shows that the financial system must be tightly supervised by the authorities including, eventually, credit rationing and the control of interest rates.*

*This set of lessons was extracted from the analysis of processes of liberalization reform which were implemented in the past. The reforms that are now under way will give rise to several lessons as well. Many LDCs are now taking decisive steps in the direction of market liberalization. Beyond the "optimality" of the market-friendly approach strategy, the hypothesis that the adoption of such a strategy is a consequence of the weaknesses of the State cannot be discarded. The strategy promises to solve simultaneously two fundamental problems of the State: lack of financing; and lack of a clear definition of the State's role in development. The two fundamental problems are not solved but rather by-passed by the Washington Consensus approach. The lengthy transitional period of the liberalization strategy requires an efficient intervention by the State while the launching of the reform per se is unlikely to fulfil the financing needs of the economy.*

*Is it best to approach the study of the reforms which many countries are de facto implementing by considering them a problem of "sequencing"? This may not be the best strategy from either an economic policy or a theoretical point of view. Instead of beginning from a rather abstract notion of a fully-liberalized economic setting, and examining the supposedly correct sequence of steps needed to reach it without difficulties, it would be more fruitful to examine concrete steps of reform then to analyse the specific dynamics they generate. Room should be made to consider the potential role that government and market failures could play in determining the effects of specific measures.*

*In addition, the possibility that the dynamic path generated by the reform might be explosive should not be discounted. In the evaluation of the reform experiences, in terms of "correct" or "in-*

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\* Comments on a previous draft by Gerry Helleinter are gratefully acknowledged.

*correct" sequencing, many authors make a strong a priori assumption: correctly ordered liberalizing reforms always set the economy on a stable path with a significant rate of growth. This assumption has no foundation other than beliefs derived from simplistic models and there are no reasons to exclude a priori the possibility of explosive paths or stagnant equilibria. This is true independently of the order in which reforms are implemented. Such assumptions do not help in understanding the characteristics of real reform processes. It is a fact that many liberalization attempts gave rise to explosive paths which must be accounted for. Obviously, the relevance of this issue is not only analytical.*

## Introduction

*"Liberalizing a highly repressed economy has been likened to walking through a minefield: your next step might be your last."*

McKinnon, 1991, page X.

The purpose of this paper is to present a critical assessment of some relevant issues regarding the discussion on shock as opposed to gradualism in the implementation of economic adjustment. Since the discussion of these issues has emerged and developed in the literature on liberalization reforms under the heading of "the problem of sequencing", it is worthwhile making an effort to analyse such a problem.

The initial proposals of liberalization reforms were based on static arguments regarding the welfare advantages of free markets, and lacked an analysis of the dynamic path of the economy when it moves from a "repressed" setting to complete elimination of non-market constraints. The lack of a systematic analysis of the dynamic properties of the model was clearly noted when it was necessary to account for some failed liberalization attempts in the early 1980s. This was particularly so with regard to the dramatic collapse of the so-called Southern Cone experiments. Since the failures were attributed to the order in which the liberalization measures were implemented, the search for a "correct" order of implementation gave rise to the emergence of the issue of sequencing as a more or less delimited area of research inside the liberalization framework. Interest in the issue increased during the 1980s as many LDCs and former socialist countries embarked on structural reform and it was necessary to evaluate the cost and benefits of a gradual versus a shock approach to liberalization.

In this way, the discussion of the dynamic properties of the liberalization framework was motivated by "real world" phenomena rather than by theoretical considerations and, consequently, from the very beginning, the analysis of the "problem of sequencing" was inextricably related to economic policy questions. Hence, account is taken not only of theoretical issues but also of concrete experiences of liberalization in the discussion which follows the dynamic questions posed by structural reform.

The paper is organized in four sections. The first section intends to place the sequencing problem in the literature on liberalization reforms and to identify different aspects of the problem. The second and third sections comprise a critical survey of the sequencing issue organized around the different aspects defined in the first section. Whereas the first three sections mainly focus on a critical assessment of the consistency of the liberalization framework, the fourth section presents an analysis of two experiences of liberalization reforms: Argentina and Chile in the late 1970s. Because these two cases played an important role in the gestation of the issue, reviewing the experiences and contrasting the present analysis with the sequencing approach offers a complementary, applied perspective to the previous sections. The last section includes some conclusions and a suggestion to redefine sequencing as a research issue outside of the liberalization framework.

## I. Liberalization and sequencing

The authors who adopt the liberalization approach to development do not doubt that developing countries should rely more on the market mechanism.<sup>1</sup> Edwards (1986) put it in a nutshell when he said that an "impressive body" of empirical evidence indicates that liberalized and export-oriented economies outperform - in terms of both growth and equitable income distribution - repressed and closed economies. Along the same lines, Krueger (1986) wrote "the enormous success of Europe and Japan in expanding output and raising living standards was clearly related to the sustained liberalization of trade and capital flows" (page 15). The long-run steady-state benefits of liberalization stem from the fact that free trade and the absence of disturbances of the market mechanism lead to a maximum degree of allocation efficiency and to the specialization of the economy along the lines of comparative advantage (Michaely, 1986). Other beneficial consequences are that technical efficiency increases via competition while rent-seeking (Krueger, 1974) and directly unproductive profit-seeking activities (Bhagwati, 1982) are eliminated as long as the freeing of markets impedes the creation of artificial scarcities. Balassa (1986) emphasizes that it is necessary to take into account the effects not only on inter-industry specialization but also on intra-industry specialization; improvements in x-efficiency and unused capacity.

The basic diagnosis of the liberalization literature is, then, that instability and stagnation in less developed countries are rooted in the malfunctioning of markets. Although the neoclassical approach recognizes that markets may not work well because of the existence of market failures, on "empirical"<sup>2</sup> grounds this literature tends to assume that this is not generally the case. If market failures exist, the effects are supposed to be negligible. Therefore, liberalization is always welfare-improving.

The assumption is that it is excessive government intervention which explains the failures in the functioning of market structure. Government failure is much more relevant than market failure. According to Lal (1990) policy-induced distortions "have done more damage to Third World prospects than the so-called endogenous distortions in these economies that the policies were meant to cure" (page 268). It follows then that what is needed to overcome macroeconomic instability and to restore the growth process is to eliminate the non-market disturbances induced by Government. Once removed, resources will be optimally allocated according to market signals.

Krueger (1986) provides the following definition of liberalization: "A market is liberalized if there are no quantitative restrictions attempting to control either buyers or sellers, from which it would follow that liberalization is the act of removing quantitative controls" (page 17). However, as Krueger recognizes, given the complexities of the real world, more often than not this definition is too narrow. This is particularly so in the realm of economic policy making, where it would be better to work with a broader definition. Taking this into account, Krueger says that liberalization can be defined "as any policy action which reduces the restrictiveness of controls - either their complete removal or the replacement of a more restrictive set of controls with a less restrictive one. Under this definition, an action such as devaluation, given an import-licensing regime, liberalizes that regime" (page 16).

With these definitions in mind, one could expect the research agenda of the liberalization approach to give a prominent role to the analysis of the dynamic path of the economy when it is moving from a situation of repression of the market forces to the complete elimination of all non-market constraints. One could also expect a no less prominent role for the question of the correct sequencing of liberalization policies. However, this was not the case during the first stages of the theoretical development of this paradigm. Specifically, before the 1980s, much more effort was devoted to examining the "comparative static" properties of the model and to describing the

<sup>1</sup> Fischer (1987) analyzes the main issues raised by the liberalization literature. See also the bibliography cited there. Fischer (1990) affirms that there are no longer two major competing economic development paradigms because the only paradigm is the market oriented one. This contention, however, has been recently challenged even by neoclassically-oriented writers. Krugman (1992) calls for a counter-counter-revolution in development economics: it "may serve as a caution against carrying a free-market orthodoxy too far" (page 21). Krugman ends the paper saying that "it is probably time once again to focus on market as well as government failures" (page 22).

<sup>2</sup> The quotation marks are due to the fact that there is some contradictory treatment of the issue of the empirical relevance of market failures in this literature. For example, they say that government intervention based on the existence of externalities should be avoided on the grounds that they are very difficult to identify and to quantify. If this is so, how can we be sure of the empirical irrelevance of such externalities?

benefits of the post-liberalization situation than to characterizing the properties of the disequilibrium path of the economy between repression and free market.

The relevance given to the discussion of the dynamics of the model had greatly changed during the last decade or so. Specifically, the problem of the correct sequencing of the reforms received considerable attention. However, this new interest was motivated in a rather negative way: it was necessary to find an explanation for the failure of the liberalization attempts in the Southern Cone of Latin America and in countries in other regions as well (for example, the Philippines). One consequence was that the issues related to sequencing were introduced into the liberalization framework in a rather *ad hoc* way. They addressed this question not because of logical necessity for the theory but rather to explain *ex post facto* the economic facts that the theory in great measure had been unable to predict *ex ante*.

In principle, the optimal sequence for implementing a liberalization policy can be defined as that which maximizes the present value of the net addition to the economy (Michaely, 1986). Even though this definition of the optimal sequence seems to be clear, the implementation of such a concept gives rise to many complex theoretical and empirical questions. The first concerns the range of markets that should be taken into account in the analysis. Normally, the authors focus on a narrow set of markets: foreign exchange (including both current and capital transactions), financial, labour, and key domestic goods markets such as agriculture and energy (Krueger, 1983; World Bank, 1987; 1991). The second has to do with the order of the liberalization of each of the markets included in the above-mentioned set. Should all the markets be liberalized simultaneously? Is it better to liberalize in successive steps? If the latter is the optimal decision, what markets should be liberalized first? The third question that arises is that of the speed of the liberalization: How fast should each market be liberalized? Should the liberalization of a single market be made in one stage or is it better to attempt to implement it by means of a multi-stage policy? Closely related to the latter question is the problem of defining the attributes of the stages of the implementation of the reform in individual markets.

So far, the question of sequencing has been presented as one related to the dynamic problems attached to the comparative static theorems of the liberalization approach. However, during the 1980s, there was an enlargement of the set of issues addressed under the heading of "sequencing". The discussion of the questions posed by macroeconomic constraints and by the institutional setting of the reforms has steadily gained relevance.

The introduction of these new topics was mainly due to the fact that during the 1980s, the main policy recommendations of the liberalization literature were adopted as the official policy package by the World Bank and the IMF.<sup>3</sup> The most important potential candidates for the reform were the Latin-American and Sub-Saharan region suffering from the consequences of the debt crisis and the former socialist countries. Consequently, given the extreme macro-instability of these countries and the depth of the needed institutional reforms - which entailed not only the elimination of government intervention but also the restructuring of the State in itself - it was only natural that the liberalization approach should address both the problem of stabilization and that of the reorganization of the public sector. The adaptation of the liberalization approach to the new context of the 1980s gave rise to the so-called Washington Consensus (Williamson, 1990) or "market-friendly approach" to policy reform (World Bank, 1991).

In the most recent work of the Washington Consensus, the stabilization problem was completely integrated into the analysis of the reform (Williamson, 1990; World Bank, 1991). Therefore, it is now implicitly understood how necessary it is to define the order of the sequencing in which the *structural reforms* aimed at freeing domestic markets and the *stabilization policies* should be implemented. In analysing this issue, the liberalization literature has been amended to include the IMF adjustment approach.

The integration of the problems posed by the dynamic interaction between the reform of the public sector (especially privatization) and market liberalization, however, was much more difficult, particularly because there has been a tendency in this literature to by-pass the institutional and historical specificities of the countries under study.<sup>4</sup> In the 1991 *World Development Report*, for

<sup>3</sup> *Strictu sensu*, the question of the order of stabilization vis-à-vis liberalization reforms began to be closely examined after the failure of the stabilization attempts of the early 1980s.

<sup>4</sup> Brutton (1989) stresses the importance of initial conditions, history and the general social environment. According



example, the economic problems of Bolivia and Poland have been analysed as if they were basically manifestations of the same phenomenon of "repression" of market forces.

Indeed, as a consequence of the crisis of the former socialist countries, the production of literature on transition and reform in those countries is flourishing and there is a profuse flow of studies related directly or indirectly to the order in which economic reforms should be implemented.<sup>5</sup> In this literature, the discussion of the order in which markets should be *created* or the ways and velocity in which privatizations should take place overlaps with the issues traditionally treated by the literature on sequencing in developing market economies, which had mainly focused on trade and financial reform.

Although some of the lessons learned from the reforms attempted by less developed countries can undoubtedly be useful in the analysis of transition in former socialist countries, it is far from evident that analogies can be easily traced. This is so, among other reasons, because of the diversity of the institutional settings. It follows that, on an abstract level, the study of the optimal path of the economy and the sequencing of policies from repression to liberalization implies the analysis of the range, order, speed and attributes of each stage of the market-oriented reform, and of the macroeconomic and institutional settings in which such reforms will be implemented as well. These issues will be examined in greater detail below.

## II. The problem of sequencing: reforms, short-run rigidities and political constraints

Should all the markets be liberalized at the same time? Which is more likely to succeed: shock treatment or gradual implementation of the reform? On strictly economic or analytical grounds, it seems that there is a consensus on the convenience of adopting a gradual treatment (i.e. sequential) rather than a sudden one. This consensus is not absolute, however. It seems to diverge especially on the analysis of the "political economy" aspects of the reform. Indeed, in this literature, there is a certain tension in the integration of economic policy recommendations based on economic analysis with those stemming from the consideration of political economy factors.

The ambiguities generated by this tension is patent in the treatment of gradualism versus the shock issue in the 1991 *World Development Report (WDR)*, which constitutes one of the most recent and influential policy-oriented works produced by the Washington Consensus. The standard recommendations on the correct order of reforms are clearly mentioned in the context of macroeconomic considerations, but at the same time the *WDR* seems to encourage a simultaneous approach. Indeed, the *WDR* introduces the concept of "shock therapy", exemplified by the mention of Bolivia, Ghana, Mexico and Poland. Most of the arguments in favour of this approach - defined as a quick and concentrated adjustment programme to be developed in a two-year period - rest on political economy considerations. A set of quick simultaneous reforms has the ability, we are told, to prevent the organization of resistant coalitions of interest groups. It should be underlined, on the other hand, that the set of reforms alluded to in the *WDR* is sometimes much broader than the standard trade-finance set, including, among others, labour market institutions, government administration and privatization.

Certainly, this tension between economic analysis and political-economy factors reflects the existence of a deeper tension between the state-of-the-art research on liberalization and sequencing, on the one hand, and the necessities of "practical men", on the other. Specifically, there is a wide knowledge gap between what can be said based on sound theoretical foundations and the amplitude and complexity of the questions posed by the ongoing liberalization efforts. But, while most researchers following the liberalization tradition believe that "more research is needed" especially with regard to the sequencing issue, policy-oriented writers argue in favour of the reform as if political conviction were much more important than the "details" regarding the dynamic behaviour of an economy after the implementation of liberalizing reform. The following section, will review these issues from both an analytical and a "political economy" point of view.

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to Brutton, "the policy-maker is never looking at a blank sheet on which he can put down what an objective, highly competent, but extremely narrow analysis tells him is the right policy. This is especially the case when it comes down to designing a specific policy in a specific country at a specific time" (page 1261).

<sup>5</sup> See Fischer (1992) and the bibliography there cited.

### *A. The rationale for gradualism and sequencing*

Deepak Lal (1990) argues that in order to reap the benefits of liberalization, it is better to induce a complete and simultaneous lifting of all the non-market constraints. The only "if" allowed for in Lal's approach to structural reform is the need to eliminate macroeconomic imbalances first.

It can be said, nonetheless, that beyond particular disagreements -similar to that of Lal's- the vast majority of the economists subscribing to the Washington Consensus therapy are opposed to a simultaneous lifting of all the constraints. Such a majority would presumably agree with Krueger (1986) when she writes that "there is not sufficient experience with the "cold shower" approach to liberalization to provide confidence that its short-term costs can be contained within reasonable bounds ... the experience of Argentina, Chile and Uruguay have further provided support for the skeptics" (page 20).

In more general terms, it is argued that if markets performed their task in a world without imperfections, the best policy would be a simultaneous and complete liberalization of all markets. But the real world is much more complex than is assumed in theory (Edwards and Wijnbergen, 1989).

Even though the authors toiling in the liberalization tradition tend to discard the kind of failures that would call for discriminatory treatment and that could preclude liberalization from being the optimal tool for reaching the maximum degree of welfare (i.e. terms-of-trade effects, economies-of-scales or large externalities), most of them are aware that there are other imperfections in the real world. There are frictions in the functioning of markets and short-run rigidities, asymmetrical income distribution effects, macroeconomic-specific disequilibria and political factors that could have a bearing on the final results of alternative policies.

If, for example, the degree of protection removal from an activity is great, the production is likely to decline because capital goods and labour skills are to some extent specific. Therefore, unemployment may result from policy reform. The more the resources are called to move among widely different activities, the greater the significance of the frictional elements. It is then clear how necessary it is to graduate the liberalization effort (Michaely, 1986). Likewise, regardless of the pressures on unemployment rates, in a specific-factor setting, the larger and the more rapid the changes, the greater the consequences on income distribution will be. Because of unemployment and/or distributional consequences, political feasibility seems to call for an analysis of the cost-and-benefits of sequencing versus shock.

It is because of the existence of the above-mentioned imperfections that the "comparative static" statements of the liberalization approach yields no detailed guidance for the design of policy implementation (Michaely, 1986; Michalopoulos, 1987). Likewise, one could add, when "real world" complexities are taken into account, the statement avering that "from all the dynamic paths available one must be optimal" seems to lose much of its appeal, at least from an empirical point of view. To be of any practical relevance, the dynamic properties of economic policy recommendations need to be carefully evaluated in the light of the existing "real world" constraints.

Many of the economists identified with the "market-friendly approach" recognize that the study of these questions is just in its initial stages. In his analysis of the problem of sequencing, Michaely (1986) concluded that the problems of phasing and sequencing have not yet been addressed even though comprehensive studies of liberalization as a whole are available. Edwards (1986) closes his paper on these issues listing many unsolved questions. Indeed, once the "cold shower" alternative is discarded as not feasible, a whole set of new problems must be faced, problems that are both empirical and theoretical. That is, the question becomes how to analyse the effects of the reform on welfare, on macroeconomic balance, and on income distribution in a disequilibrium context (i.e. during the transition period) when using the analytical tools of the liberalization approach which had been developed to examine the properties of market equilibrium.

## B. *The welfare effects of liberalization in a disequilibrium context*

If a single-step liberalization reform is operative, it follows that over a substantial time span, some markets will be working without restrictions while others will still be constrained by non-market factors. The existence of a transitional period of disequilibrium entails severe complications for standard welfare calculations.

The most important of these complications is that the main welfare economics theorems which show that the resource allocation yielded by the market mechanism constitutes a Pareto optimum are no longer valid when non-market constraints impede the simultaneous clearing of all the markets. The existence of distortions in the markets that remain unaffected by the reform implies that the elimination of distortions in another does not necessarily increase welfare. As the generalized theory of the second best states, if relevant links between markets exist and there is a reduction in the magnitude of a distortion in a single market, it is not possible to determine the direction in which welfare will change. In other words, we cannot be sure that the implementation of a specific stage of the liberalization policy will improve society's welfare. For example, starting from a situation characterized by distorted markets, there are no firm bases on which to ascertain that import liberalization will always be beneficial if, say, labour or capital markets are still repressed.

With regard to these issues, theory is blind. "All that can be said is that no general preference for the order of policies may be established on *a priori* grounds. Empirical observations may provide some lessons about the association of such sequencing with the likelihood of success of a policy package" (Michaely, 1986, page 54).

The question of the effects of liberalization is stated on empirical terms precisely because it cannot be proved on theoretical grounds that a hands-off policy is desirable when some markets are not working properly. In this context, the practical question is: when can a market be freed in reasonable confidence that the net effect will be welfare-improving?

Krueger (1986) formulates this question and answers that it is always welfare improving to liberalize the markets, with the exception of the capital account transactions of the balance of payments. But Krueger's arguments with regard to this are based on a rather casual empiricism. In fact, the issue of the welfare effects of deregulation in a disequilibrium context is treated neither rigorously nor systematically in the liberalization literature.

## C. *Welfare and income distribution effects*

A second problem regarding the welfare effects of freeing the markets has to do with income distribution. Even if it were assumed that liberalization would result in an overall national welfare gain, there would be sectors that gain and sectors that lose. That is, there would be asymmetries in the distribution of the increases in welfare.

It is rather intriguing in this literature that while the idea that liberalization improves national welfare is supposed to be a matter of course, there is not much effort devoted to analyse how such gains could be managed or distributed. Indeed, with regard to income distribution, most of the analytical effort is directed at analysing how the existing pattern of distribution constitutes an obstacle for market deregulation.

It is argued, typically, that the government tends to behave on the basis of a conservative social welfare function which makes it reluctant to allow big changes in income distribution regardless of who gains and who loses. Likewise, government interventions are conceived of as tending to be dominated by the political process. An endless series of examples are given in order to show how interventionist policies in trade, the financial market, etc, are manipulated in practice by special-interest politics rather than being based on sound national cost-and-benefits calculations. According to many authors, these facts explain why it is so difficult to dismantle the ISI-type policies which were put into practice during the post-war period in many LDCs, particularly in Latin America.<sup>6</sup>

<sup>6</sup> See, for example, Balassa *et al.*, 1986. The surveys by Krueger (1984) and Balassa (1989) are also particularly relevant to this issue.

Given that the complex structure of the protectionist and interventionist policies has created strong vested interests, it has sometimes been suggested that compensation measures should be used as a kind of bribe to get the losers to agree. In other words, compensation may induce them to accept the changes. But beyond this, regardless of the particular specification of the government's social welfare function, the only universally valid generalization provided by this literature for treating the allocation of welfare gains is methodological: efficiency and income distribution issues should be treated separately. A golden rule of economic policy-making according to the Washington Consensus is that policy-makers should use appropriate non-distortive tools to cope with income distribution matters. For efficiency gains to be attained, it is crucial to avoid inducing additional market distortions by resorting to second best alternatives when there are (usually?) first best policy measures available which are functional in achieving the same objective.

For example, when arguing that even in a disequilibrium context, deregulation of agricultural markets is likely to be welfare-improving, Krueger (1986) said: "I ignore the short-run welfare losses of low-income persons paying higher prices for food on the grounds that superior measures can be found to yield the same real income transfer" (page 24). However, it is very difficult to find in this literature a systematic treatment of such "superior measures" based on sound and informed "empirical observations". And when one does find analytical treatments of these matters, the conclusions are rather disappointing. Examining the issue within the neoclassical framework, Rottenberg (1986) observed that, when a policy change making the use of resources more efficient was implemented, it was practically impossible to compensate the losers without inducing additional disturbances which would run against the increase in efficiency. This is so whether the compensation was implemented via money payments or via complementary policy changes. Rottenberg's conclusion is not encouraging: he compares compensation payments to the opening of a Pandora's box of income and wealth transfers. Sometimes one feels that references to income-distribution-offsetting policies are no more than rhetorical arguments.

#### *D. The ordering of the liberalization attempt*

Concern with the order of implementation of market-oriented policies has gained momentum after the failure of many of the liberalization attempts in Latin America and elsewhere. Some ideas about the order of liberalization may be found in McKinnon's (1973) original work, but the concept of sequencing, related to a specific pattern of time phases of structural reforms, has emerged mainly as a reaction to the dramatic failures in the Southern Cone of Latin America. Edwards (1986), who devoted a significant effort to analysing the subject, has called attention to the fact that although the countries followed contrary orders - Argentina and Uruguay opened the capital account first, while Chile opened the current account first - all of them had a common fate: deep economic recession and (partial) reversal of the liberalization attempt. Edwards concludes, "at the present time there are no definite answers regarding these experiences and more research on the subject should be encouraged" (page 208). Likewise, Krueger (1986) considers that "further analysis of the liberalization efforts of the 1970s, especially in cases where domestic and international capital markets were important is called for" (page 30).

The liberalization efforts of the 1970s alluded to by Krueger collapsed in the early 1980s. Between 1980 and 1982 Argentina, Chile, and Uruguay underwent simultaneous external and domestic financial crises after a period of expansion financed by intensive international borrowing. The expansionist period followed liberalizing reforms in the trade regime and the deregulation of domestic and external financial flows. These reforms, combined with the active use of the exchange rate as an anti-inflationary device, apparently caused a boom in demand for real (mainly real estate) and financial assets, but a rise in consumption as well. There was also an increase in the number of financial intermediaries and the volume of deposits grew significantly. The negative side of this financial "deepening" was a growing fragility of the system, which ultimately ended up in generalized bankruptcy.

The Argentine experiment failed first: bankruptcies of financial institutions started in March 1980 and continued into the following years while a balance-of-payments crisis burst in March 1981. During the period in which the Argentine experience had collapsed while the Chilean had not, the earliest analyses of the Southern Cone experience in terms of sequencing appeared. The first cautions and recommendations on the order of liberalization were based on the comparison between Argentina and the (still at that time) thriving Chilean experience (McKinnon, 1982).

Taking Chile as a standard of "correct" sequencing of policy reform, the Argentine failure was attributed to a "premature" attempt at domestic financial liberalization coupled with the elimination of foreign exchange controls. The attempt was deemed to be premature because it was carried out before the completion of the trade reform and before a sustainable control over the government budget had been attained.

However, in 1982 the Chilean experience also collapsed. This occurred despite the fact that, unlike the Argentine case, the budget of the Government had been showing a substantial and continuous surplus and the trade account had been completely liberalized (McKinnon, 1982). The Chilean case could have been considered as a neat example of an endogenously generated financial cycle, experienced by a private and "liberalized" financial system. However, in the liberalization literature, the research strategy adopted was to examine the process in terms of an erroneous sequencing of reforms. In this way, the analysis developed for Argentina was also, *a posteriori*, taken as valid for Chile. Based on the empirical findings corresponding to the Chilean experience, the role of the destabilizing effects of external capital flows resulting from an untimely or abrupt lifting of controls of the capital account gained ground. Although in the case of Chile, the trade account had been completely liberalized, the standard recommendation became: liberalize external trade first and only then the capital account.

Beyond specific recommendations, an important consequence of the Southern Cone failures was that significant caveats were added to the liberalization optimism of the 1970s. Among the changes in the approach to liberalization in the research literature of the 1980s are three which are very important. First, there is now a much more cautious attitude toward capital flows, to the point that many well-known researchers working on the liberalization research agenda recommend the maintenance of a practically *sine die* control of external capital flows. Secondly, there is a much less naive emphasis on the virtues of domestic financial liberalization. McKinnon, one of the founding fathers of the theory of financial deregulation, in his latest work (McKinnon, 1991) even suggests the need for controlled interest rates during the transition process which is conceived of as taking years. Thirdly, there is a greater concern for the problems posed by stabilization vis-à-vis structural reform: it is now taken for granted that successful liberalization is not possible in a destabilizing macroeconomic environment.

In addition to the Southern Cone failures, another fundamental source of "empirical observations" on sequencing in the liberalization literature is the experience of the Asian NICs, particularly the Republic of Korea. It is normally interpreted that the highly successful far-eastern exporters had performed well because they had relatively free labour markets, a competitive domestic environment and liberalized trade regimes, while regulation of financial markets and interest rates persisted. The stable macroeconomic environment of these countries is likewise emphasized (Krueger, 1983; McKinnon, 1991).<sup>7</sup>

In brief, the most elaborated analyses of the order of implementation of the reform available today are based on a complicated mix of the liberalization-approach theoretical framework (amended to make room for the existence of frictions and short-run rigidities) and "empirical observations" (mainly regarding the experience of the Asian NICs and some Latin American countries) of the kind briefly mentioned above. On these bases, Krueger (1986) concludes that "A plausible argument can be made that optimal dismantling of controls might start with current account transactions, agricultural pricing, and the domestic labor and capital markets, leaving capital account transactions initially subject to controls. These controls would be removed (gradually? suddenly?) in a second stage of liberalization, once domestic resources had responded to altered policy signals" (page 30). These conclusions on the correct order of liberalization may be said to reflect closely what could be considered the market-friendly approach researchers' consensus on the issue.

<sup>7</sup> In fact, the Republic of Korea had neither a "competitive domestic environment" neither nor "Liberalized trade regime" for the bulk of its growth period. See Amsdem (1989), Westphal (1990).

### *E. Political constraints on the liberalization process*

The most important question addressed in the literature on the political-economy aspects of the transition period of the reform is: how can policies best be selected, phased and sequenced to gain the benefits of reform as quickly as possible while minimizing political resistance? (World Bank, 1987; 1991)

Given that, in the real world, compensation arrangements between winners and losers are deemed to be very difficult or even impossible, it is taken for granted that there will be sectors which will resist the implementation of the reform. Moreover, it is considered that such resistance is likely to take non-economic forms: those whose interests are threatened will use political means to obstruct reform. In this way, political factors enter the analysis of the market-friendly approach as relevant binding constraints on the dynamic path of economic liberalization.

As already noted, there are some problems in attempting to integrate into the analysis the political factors which have a bearing on the reform. In effect, on the one hand, it is recognized that the existence of short-run rigidities and macroeconomic imbalances calls for a sequential implementation of reform but, on the other hand, the need to act decisively is taken for granted: when the policy is hesitant and gradual, liberalization is much more likely to lose momentum as time elapses. In other words, it is considered that the faster and more profound the policy changes, the greater the benefits, but also, the greater the likelihood that transitional costs will be higher.

Credibility is one of the reasons most often alluded to for favouring dramatic changes, the object being to assure greater political sustainability for the liberalization process. It is necessary to enact decisive policy changes because credibility is an essential component of political sustainability. Credibility would be significantly strengthened by a dramatic shift in policy: if the policy change was sharp enough, economic agents would not expect the reform to be quickly or easily reversed.

Another important reason advanced is that a rapid and deep disarticulation of the old regime would not only severely weaken the resistance of "old" vested interests but would also generate "new" ones supporting the liberalized regime (World Bank, 1987). This could be a consistent strategy since the market friendly approach considers it extremely difficult to compensate losers. Equity considerations are obviously left aside.

However, the concern about the disarticulation of "old" vested interests occurring via rapid and decisive measures tends to weaken the Washington Consensus's analysis of the role of the "new" vested interests created by the reform. What would happen to efficiency if a monopoly were privatized and it were not possible to ensure an appropriate regulatory framework either because the State was weak or because the reform was implemented too quickly to be well planned? Even leaving equity aside, do the newly created vested interests better assure market competition than the old ones?

The liberalization literature has taught us much about the possible distortive consequences of protectionism and other interventionist policies, but there is nothing comparable in terms of research effort devoted to analysing what has happened in concrete situations of deregulation. For example, is the privatization process prone to domination by interest groups as was the case with ISI-like policies? Would not such a process open big opportunities for rent seeking and directly unproductive profit-seeking activities?

Indeed, the "market-friendly approach" treatment of the political factors is not always consistent. In order to deduce the theorems that support liberalization policies it is assumed that economic agents are fully rational. It is canonical in this literature to assert that if some opportunity were to be exploited, the private sector would take advantage of it. On the basis of this argument, infant-industry rationales for interventionist policies are discounted (Dixit, 1986). But when treating political factors, the rationality assumption is often weakened. For instance, it is adduced that "the informed public can readily infer those interests which are likely to be damaged in the short run by any liberalization effort; they cannot so readily see the economic activities that were harmed, and hence did not prosper, because of regulations" (Krueger, 1983, page 30). But if not even the "informed public" can envisage the benefits of the reform, who will - in a democratic context - turn public opinion in favour of the reform? This question seems relevant also because there is a generalized impression that the government is not capable of correctly evaluating such benefits, either. According to Edwards (1986), more liberalization attempts are not observed be-

cause, among other reasons, the time horizon relevant to a government may be different (shorter) from the time horizon relevant to an economy as a whole. In brief, while the liberalization literature clearly identifies the interest groups and the government goals that sustain interventionism, this is not at all the case with regard to the market-oriented reform.

Given that a good part of this literature is being produced by such institutions as the World Bank and the IMF, one sometimes feels that, in pushing for reform, an important role is implicitly assigned to external advisors. It should be taken into account, however, that in any of the "real world" institutional settings which characterize LDCs or former socialist countries, the State normally has a very reduced capacity not only for regulating the markets - as this literature correctly highlights - but also for properly programming and launching any policy package. If external support is used as the carrot, a government which is highly constrained by its financing needs is very likely to agree on a liberalization package. But if a quick and poorly designed reform is launched, many irreversible policy-induced distortions can result. Their costs could be high and the consequences, even in terms of generating new market distortions, could be long-lasting, as would be the case if an undue concentration of property or a monopoly situation resulted from the reform.

### III. The stages of liberalization: individual markets and stabilization policies

According to Michael (1986), the length and amplitude of the transitional disequilibrium period will be shorter when there are few rigidities in the labour market, less specific physical and human capital, flexible responses by entrepreneurs and a short life-span of physical capital in the contracting activities. Since these characteristics usually differ among sectors, an analysis of the speed with which each stage of the liberalization should be implemented in individual markets is necessary. Because of their importance to the determination of both macroeconomic stability and resource allocation, the study of the speed and attributes of each stage of the liberalization process has focused on an analysis of external trade and the domestic financial market. The role of external capital flows was mainly analysed in relation to trade liberalization and macroeconomic stability, while much less importance was given to the study of the problems posed by the deregulation of labour and other domestic markets. A review follows of the most important features of the sequencing of liberalization in each of these individual markets and the problems posed by stabilization vis-à-vis structural reform.

#### A. Trade liberalization

The problem of the speed and stages of liberalization of external trade has been very well analysed and empirically documented in the literature. Among the lessons concerning the transitional period which are usually stressed, two have special relevance to the present analysis of the dynamics of the market-oriented reform. First, after extensively reviewing the post-war trade liberalization experiences, the 1987 *World Development Report* states that "there is no single optimal path to reform" (World Bank, 1987). Although a sensible lesson, given the multiplicity of cases reviewed, it is in flagrant contradiction with the search for the optimal path alluded to elsewhere in the literature. Secondly, there is a wide consensus on the fact that trade liberalization is a long-lasting and difficult process. According to McKinnon (1991), a precipitate move towards free trade could provoke the collapse of manufacturing. In support of this assertion, he mentions the cases of the eastern part of Germany and of Poland, but he could also have mentioned many Latin American countries that implemented trade liberalizations in the 1970s and 1980s. In the same vein, the 1987 *World Development Report* affirmed that successful liberalizations were very lengthy. Countries such as the Republic of Korea or those in southern Europe had still not completed the trade reform even after *two decades*. This seems to be at variance with the shorter time span assigned to the reform in the 1991 *WDR* and with that which is implicit in the Washington Consensus recommendations.

In the pre-Southern-Cone-failure literature, trade liberalization was essentially conceived of as the process of replacing quantitative restrictions with moderate import tariffs or export subsidies. The fundamental objective of the reform was deemed to correct the existing protectionist bias in favour of domestic markets. Consequently, the reform of the tariff structure proposed was aimed at ensuring the neutrality of incentives regarding production for exports and for import substitution.

In practice, the process of the restructuring of the tariff structure has proved to be very complex. Writing a few years later, in 1983, Krueger said that experience suggested three important points:

- (a) Reduction in protection implemented through quantitative restrictions is feasible - conversely, efforts to replace quantitative restrictions with tariffs provide ample time for political pressure;
- (b) Protection of inputs must be removed before protection of output;<sup>8</sup>
- (c) For successful trade liberalization it is fundamental that nominal devaluation be consistent with inflation.

On a more abstract level, it can be said that there are two problems which play a central role in designing the stages of trade liberalization. On the one hand, the existence of differential responses of various industries gives rise to complicated questions regarding the timing of the lifting of sectoral trade barriers. On the other, it is crucial to ensure consistency between trade liberalization and current account equilibrium (Michaely, 1986; World Bank, 1987). None of these two questions have been easy to manage in concrete liberalization experiences.

The existence of distinct speeds of adjustment of individual industries generates a policy dilemma (especially in cases such as that of Argentina in the late 1970s, when there was an attempt to shorten dramatically the duration of the trade reform period). The dilemma stems from the fact that while differential responses of industries calls for a discriminatory treatment that precludes uniform treatment of all the activities, discriminatory treatment contradicts a much praised objective of the reform which is to reduce the variance of protection rates so as to induce an increasing and rapid convergence of such rates.

It is often argued that protectionist policies should not be tried on the grounds that Governments do not usually have the knowledge or information needed to pick correctly the winners (Fischer, 1990). This may be true. But the dismantling of protectionism seems to require a lot of information, too. Viable activities could be spoiled if the speed and attributes of the stages of trade reform were poorly designed and/or implemented. Perhaps it is precisely because of this factor that successful liberalizations have taken so long a period. The Southern Cone experience seems to suggest that there are no solid grounds for assuming that the costs of protectionism are greater than those of the failures of the liberalization attempt.

According to the 1987 *WDR*, the more ambitious and long-lasting liberalizations (Spain, Greece, Israel, Chile) all began with macroeconomic stabilization while the countries that tried to liberalize trade in the midst of macroeconomic crises failed. There is absolute agreement with this statement by the authors taking the line of the market-friendly approach. In the context of trade deregulation, macroeconomic policy must assure a balance of payment equilibrium and the stability of a competitive exchange rate prior to the reform. These points will be discussed in more detail below.

## ***B. Domestic financial market deregulation***

The problem of speed and attributes of the stages of domestic financial market liberalization is one of the most obscure in the literature. The 1989 *World Development Report* was devoted to analysing experiences of domestic financial liberalization; indeed, the horrors of

<sup>8</sup> The much praised (before collapsing) Argentine attempt at liberalizing trade incurs this error.



financial liberalization described there are at least as discouraging as those which have been documented on the failures of protectionism.<sup>9</sup> Yet, the 1989 *WDR* concludes that despite the mistakes made in reforming the financial system, there was likely to be less waste of resources than if interventionism were maintained. No empirical estimation of such a contention is given. Instead, some lessons are extracted from the study of several reform-induced financial crises (mainly in Latin America, the Philippines, Turkey and even the Republic of Korea) that should be taken into account in designing the stages of financial decontrol:

- (a) If the reform is implemented in an unstable macroeconomic environment, the reform *per se* can induce more instability, basically because both the real interest rate and the spread between the lending and the borrowing rates are likely to increase.
- (b) If market prices are distorted owing to the existence of controls or a protectionist policy, the liberalization will not help to improve resource allocation: the system would respond with more flexibility to erroneous signals. Correction of the exchange rate, trade liberalization, and privatization should precede financial liberalization.
- (c) A clear set of laws and regulations should be substituted for direct intervention in the financial system.
- (d) The authorities should anticipate how relative prices will be affected by the reform because some transitory compensation measures may be necessary.

According to the 1989 *WDR*, the non-feasibility of one-step financial liberalization gives rise to complicated questions of timing: if the reform process is too rapid, firms could face heavy losses; if there is an excessive delay, the cost of perpetuating financial inefficiency will be higher.

This seems sensible for the transition period, but many unsettled questions remain on both empirical and theoretical levels. On empirical grounds, the most important problem is what excessive delay means in terms of real time. For example, upon analysing the "optimal" path of financial deregulation for a typical former socialist country, McKinnon (1991) felt that "the authorities should move cautiously, perhaps waiting for *some years* before establishing independent commercial banks that are only indirectly regulated or controlled by the central bank" (page 7). He also says that Japan after 1949 exemplified a poor country embarking on rapid growth while keeping suitable financial constraints in place. But Japan began to liberalize its financial system only recently. This seems to be a long if not excessive delay.

From a theoretical viewpoint, the problem is: if the transitional period is conceived of as taking, say, a decade, and financial deregulation is so vulnerable to policy failures, what are the benefits of financial liberalization? This seems to be a valid question for two reasons. First, if the financial system can only be deregulated after the economy is as mature as Japan's, financial liberalization should surely be considered a indicator rather than an engine for development. Secondly, given the extension of the repressed period before liberalization, how to manage a repressed financial system in order to propel development may be fruitful problem to analyse in terms of the research agenda.

Indeed, the research agenda regarding the problems of transition between repression and liberalization seems to be moving in this direction. McKinnon (1991), for example, has made an effort to analyse better the stages of liberalization. As a result of this analysis, very little of his previous approach to financial liberalization stands. In the seminal works of McKinnon (1973) and Shaw (1973), financial liberalization was conceived of as a means to induce financial deepening and thus increase the availability of credit in the formal financial system. The freeing of interest rates, on the other hand, would not only expand the demand for domestic financial assets but also help to mobilize savings and to improve the allocation of funds available for investment. In this way, financial deepening became a powerful engine for growth by increasing the rate of savings and improving investment productivity.

If the lessons of concrete experiences of liberalizations are taken into account, however, financial liberalization could be an extremely expensive luxury good for unstable countries. For example, according to McKinnon (1991): "Failure to recognize the need for official action to limit bank lending rates was, in part, responsible for the financial collapses in the Southern

<sup>9</sup> See chapters five and nine of the 1989 *WDR*.

Cone... To achieve high real financial growth, successful developing economies have combined domestic price stability with substantial, even if regulated, nominal rates of interest on both deposits and loans" (page 91). Likewise, "without price-level stability, unpredictable volatility in real interest rates or exchange rates makes unrestricted domestic borrowing and lending by deposit-taking banks - which must always be regulated to ensure the safety of the payments mechanism - simply too risky" (page 6). Consequently, it is better that "newly liberalized enterprises do *without* credit from the organized banking system. Until financial conditions are stabilized, decentralized firms in industry and agriculture best rely mainly on *self-finance*, on borrowing from nonmonetary financial sources, and by broadening equity participation in the enterprise itself" (page 7). One wonders, however, how equities could be a source of finance in economies where "open markets for common stocks, bonds, mortgages, or even commercial bills are typically insignificant" (page 84).

A direct consequence of these characteristics of the transition period is, then, that "some degree of financial repression" coupled with credit rationing may be warranted. Indeed, in the 1950's, when Taiwan had high and variable inflation that was more or less successfully offset by high and variable nominal interest rates, the commercial banks were state-owned and did not compete much among themselves" (page 41).

In brief, the conclusion on this point is that the research agenda on the role of the financial system in development is open. There are many crucial questions but very few answers beyond those based on casual empiricism.

### *C. Deregulation of the capital account*

As has been shown, the literature emphasizes that controls on capital flows should be maintained until trade liberalization is finished.<sup>10</sup> But there is no detailed analysis of the stages or the speed with which the capital account should be opened up. Indeed, regarding the capital account, there is not much mentioned beyond the warning that, during the transition to a free-market economy, allowing free international capital mobility could lead to unwarranted capital flight or the build-up of foreign indebtedness (McKinnon, 1991). In a certain sense, the literature seems to lag behind the ongoing attempts at liberalization. For example, in the present Latin American context, while decisive steps toward deregulation are being taken, the capacity of the governments to regulate the flow of external capital is practically nil. And, indeed, the present reversal of the capital flight process of the 1980s is generating severe disturbances. Specifically, Argentina, Chile, Colombia, and Mexico are experiencing significant problems in trying to coordinate capital inflows with both the timing of reforms and macroeconomic equilibrium. In such a context, the advice on controlling external flows has no empirical relevance given the *de facto* openness to capital flows in these countries.

### *D. Deregulation of labour and other domestic goods markets*

"Whereas there are questions about the speed of response of the trade sector, the response of the banking sector to deregulation, and so on, there are fewer questions regarding economic behaviour when sectoral markets are concerned. Instead, the difficulties become increasingly political, as income- distributional questions come to the fore. Resistance to reforms of pricing of food, urban transport, energy, and other publicly provided goods and services is encountered largely because of consumer, rather than producer, interest" (Krueger, 1986, page 29). That is, as has been seen before, it is considered that the deregulation of these markets is always welfare improving with the only problem being the resistance of agents whose interests are affected.

<sup>10</sup> Harberger (1986) gives a somewhat different rationale for intervening in the capital market based on the existence of externalities. See also the comments of Dornbusch (1986) on this.

There are good reasons, however, to think that the effects of decontrolling domestic markets should be more carefully analyzed. Three questions should be emphasized in this regard. First, from the demonstration of the second-best theorems, it follows that when there are non-market constraints, the deregulation of an individual market can be expected to be welfare-improving only if the production and utility functions are more or less separable, that is, when the market under analysis has no important linkages with others. But it does not seem to be the case of "some publicly provided goods and services", which in the typical LDC includes, for example, the provision of energy in its various forms. This means that price decontrols can affect not only consumers but also producers.

Secondly, a sharp shift in the cost of energy or a strong change in income distribution (for example, because of fuel or food price decontrolling), will trigger non-negligible *spillover effects* on other markets. As the disequilibrium approach to macroeconomics has shown,<sup>11</sup> spillover effects are of great importance in determining the macroeconomic disequilibrium regime. For example, during the 1980s, some hyperinflationary episodes in Latin America were triggered by attempts at correcting lagging public prices and exchange rates. Likewise, the elimination of food subsidies greatly contributed to further reducing effective demand in the midst of a macroeconomic crisis in such countries as Venezuela or even the former Soviet Union. Is it wise to induce an effect like this on effective demand while domestic industry is going through a restructuring process because of protection reduction? This seems to be a very important problem regarding the sequencing of liberalization, especially in the former socialist countries. Again, it does not seem to be a problem only for consumers.

The last point has to do with privatization. Tariffs are very likely to be raised by a government before selling a public enterprise in order to augment profitability and thus the private and foreign investors' willingness to bid for public enterprises. This happened in Argentina. As a consequence, the prices of some services now provided by the private sector are well beyond international prices. Given that some of the privatized enterprises now enjoy both a monopoly position and natural protection, the level of domestic prices vis-à-vis international prices is not likely to change. It follows that badly implemented privatization could heavily impinge on the competitiveness in industry and other tradable sectors in the economy. This runs against the goals of trade reform. Its effects on international competitiveness are similar to those of reducing protection for final goods while leaving protection for intermediate products unchanged. Neither is this a consumer-only problem.

### *E. The relationship between liberalization and stabilization*

In the discussion of the problems of sequencing, macroeconomic issues are brought into the picture for two basic reasons:

- (a) As we have seen, if there are short-run rigidities, there could be short-run output losses;
- (b) If the transition is mismanaged - as is supposed was the case of the Southern Cone liberalization efforts - there will be additional costs and disturbances that could cause the reform to break down (Edwards, 1986). Furthermore, according to Edwards, there are strictly political reasons for discouraging a simultaneous attempt at stabilizing and liberalizing: the costs of stabilization and liberalization could be confused.

McKinnon (1991) stresses that "how fiscal, monetary, and foreign exchange policies are sequenced is of crucial importance. Governments cannot, and perhaps should not, undertake all liberalizing measures simultaneously. Instead, there is an "optimal" order of economic liberalization" (page 4). The "optimal" order defined in the literature distinguishes two stages which an economy should go through from stabilization to growth (Selowsky, 1990; Fischer and Husain, 1990).

<sup>11</sup> See, for example, Benassy (1982).

During stage I, economic policy should almost completely focus on establishing a sound macroeconomic setting. Achieving a primary fiscal surplus is a priority at this stage. Accordingly, fiscal reform following the Washington Consensus guidelines should be implemented.<sup>12</sup>

In addition to fiscal imbalance, the typical macroeconomic setting of a repressed economy is deemed to include inflation and a misalignment of relative prices (mainly a lagging exchange rate). Consequently, the fiscal reform to be implemented during stage I is appended to the standard IMF stabilization package so as to cope with inflation and incorrect relative prices.

In order to induce a correction in relative prices, devaluation and domestic prices, decontrol is recommended. With regard to inflation, a key role is assigned to keeping the level and the rate of growth of aggregate demand in a sound relationship with the level and growth prospects of the economy's aggregate supply. This means controlling not only the fiscal deficit but also keeping domestic credit expansion in an appropriate balance with the prospective path of desired money holdings (Guitian, 1987; Kahn, *et al.*, 1986).

Stage II comprises the implementation of the set of policies aimed at bringing private incentives more in line with true economic scarcities, that is, the launching of the liberalization package.

The sequencing of stabilization and structural reform in terms of stages I and II is the "official" economic policy recommendation of the Washington Consensus.<sup>13</sup> But, what are the theoretical foundations for this? In analysing the relationship between liberalization and stabilization, Krueger (1986) asks herself: should total decontrol precede macroeconomic stabilization? Her answer is: "I have nowhere seen an analysis of this circumstance" (page 29). In other words, as in the case of the "optimal" sequencing of individual markets decontrol, "more research is needed" with regard to the dynamic properties that characterize the micro/macro interactions during the transitional process.

There is a wide consensus on the fact that liberalization without stability is not likely to succeed, particularly because it is necessary to eliminate uncertainty about future key relative prices. Indeed, McKinnon (1991) considers that the most important task of stabilization in preparing the scenario for successful liberalization is that of eliminating the uncertainties referring to future price level, future interest rates and exchange rates. But beyond the desirability of these objectives, there are no clear indications on ways to manage the transition between stages I and II.

Two problems should be emphasized regarding the sequencing of the two stages. The first concerns fiscal adjustment and the second refers to exchange rate policy. Fiscal adjustment affects the "optimal" sequence. A large fiscal deficit requires time to reduce government spending and to raise taxes (Krueger, 1983), and the period of time required does not seem to be short. After ten years of adjustment efforts in Latin America, McKinnon (1991) noted that the economies suffering from the debt crisis "have not been able to put sufficient internal fiscal and monetary controls in place to support a dismantling of their interventionist policies" (page 3). In the former socialist countries, on the other hand, the time period necessary to complete fiscal adjustment will likely be longer since "before direct central government controls are fully dismantled the monetary- financial-fiscal system has to be converted from the *passive* mode that has simply accommodated the planning mechanism into an active constraining influence on the ability of decentralized enterprises, households, and even local governments to bid for scarce resources" (page 3). That is, in such countries, it is not just a matter of tightening the government budget constraint, the adjustment process may include the whole society.

Concern over exchange rate policy may be attributable to the fact that more efforts at liberalizing the trade regime have foundered because a nominal exchange rate was pegged and inflation did not abate, than for all other reasons combined (Krueger, 1983). That is, a lagging exchange rate can cause the whole liberalization effort to collapse.

<sup>12</sup> See Williamson (1990) for the details. The 1988 *World Development Report*, which is devoted to fiscal issues, provides an ample view of the Washington Consensus approach to fiscal policies.

<sup>13</sup> See the 1991 *World Development Report*. For a critical evaluation of the *Report* and the Washington Consensus recommendations, see Fanelli, *et al.* (1990 and 1992).

As is well known, there are relevant trade-offs between the objectives to be pursued in defining the exchange rate policy. There are at least three possible criteria for evaluating the suitability of exchange rate regimes: external balance, internal balance, and efficiency (Joshi, 1990). The problems posed by these criteria constitute the core of the difficulties in managing stabilization and structural reform. According to the weight given to each objective, the positions about the "optimal" exchange rate policy will differ. This seems to be the case in regard to the liberalization literature: there is no uniform position on which exchange rate regime would be optimal for the transition period.

According to Krueger (1986), a crawling peg can assure some degree of independence of the two reform efforts. But this position far from represents a consensus. Many authors believe that it is better to keep to a fixed exchange rate as an anchor for nominal prices (Dornbusch, 1990) although Lal (1986) considers that "the adoption of a floating exchange rate could ease the transitional pains of a trade liberalization program" (page 217).

In the light of these contradictions, it seems that the issue of the relationship between stabilization and structural reform is far from settled, as it appears to be in the Washington Consensus policy recommendations.

#### IV. The Southern Cone experience revisited

As has already been mentioned the so-called Southern Cone experiments in liberalization played an important role in the gestation of the sequencing issue. However, the cases look relevant in themselves simply because there are not very many episodes of drastic liberalizing reforms capable of providing empirical material for evaluation. (Another relevant case for that matter is the Bolivian economy after 1985). The reforms that many countries have implemented recently, or are now implementing, tend to generate institutional and regulatory settings similar to those created by the Southern Cone experiments. Were the crises in which they concluded a matter of sequence, or were there other elements to blame? If these elements could be identified, another source of criteria would be available for policy guidance (other than that of sequencing).

With regard to the evaluation of these past experiences, it is worth stressing that their diagnosis in terms of "correct" or "incorrect" sequencing of reforms has an implicit and strong *a priori* assumption. The implicit assumption is that the attempted reforms, correctly ordered, would have necessarily set the economy on a stable path with a significant rate of growth. This assumption rests on no other foundation than beliefs derived from simplistic models. Moreover, there are no reasons to exclude *a priori* the possibility of explosive paths (i.e. financial crises of the kind experienced by Chile and Argentina) or stagnant equilibria (i.e. the process experienced by Bolivia after the reforms implemented in 1985) independently of the order in which reforms are implemented. Specifically, it is suggested that the instability of the Southern Cone experiments can be analysed focusing on some characteristics of the financial markets which have not been highlighted by the sequencing literature, such as the relative size of national markets vis-à-vis the size of capital flows.

There seems to be a consensus that in both the Argentine and Chilean cases the destabilizing effects of capital flows were the *prima facie* cause of the financial and balance-of-payment crises. The stylised facts of both experiences can be seen in tables 1 and 2.<sup>14</sup>

An injection of external funds financed an initial expansionist phase while the amount of funds intermediated by the financial system and the number of intermediaries grew swiftly. Together with the expansion of consumption and, to a less degree, investment, external funds also financed speculation in domestic real and financial assets. Following the lifting of controls, capital inflows adjusted quickly, much faster than the rise in imports. Hence, in both Argentina and Chile, the central banks accumulated reserves in the first phase. Because the

<sup>14</sup> The presentation of the cases is based on Frenkel (1983 a) and Frenkel (1983 b) for Argentina and French-Davis y Arellano (1983). Arellano (1983), Díaz Alejandro (1985) and Corbo (1985) for Chile.

Table 1

ARGENTINA: SELECTED MACROECONOMIC VARIABLES 1977-1983							
	1977	1978	1979	1980	1981	1982	1983
GDP growth rate (per cent)	6.3	-3.3	6.5	1.0	-6.4	-5.2	3.3
Inflation rate (CPI)	160.0	169.3	140.1	87.5	131.2	209.7	433.6
Trade account <sup>a</sup>	1490.0	2566.0	1110.0	-2519.0	-287.0	2288.0	3332.0
Current account <sup>a</sup>	1290.0	1834.0	-550.0	-4768.0	-4714.0	-2538.0	-2437.0
Real exchange rate <sup>b</sup>	100.0	79.9	57.4	44.7	57.3	101.6	117.7
M1/GDP	6.6	6.4	6.2	7.6	6.3	4.9	3.8
M2/GDP	13.2	17.6	19.0	24.9	23.6	16.9	11.6
Real borrowing interest rates	-7.2	-15.7	-9.0	-4.4	9.8	-29.8	-29.1
Real lending interest rates	23.1	9.4	3.5	26.7	7.1	-36.1	-19.5
Difference between lending interest rates and preannounced exchange rate variation <sup>c</sup>							
Monthly rate			3.1	4.0	5.8 <sup>d</sup>		
Annual rate			43.9	60.7	95.9 <sup>d</sup>		
National savings rate	26.0	22.9	19.7	17.4	12.0	12.4	10.8
Gross fixed investment rate	27.2	24.4	22.7	22.2	18.7	15.5	17.3
Reserve increment <sup>a</sup>	2227.0	1998.0	4443.0	-2796.0	-3807.0	-651.0	244.0
Gross debt increment <sup>a</sup>	1399.0	2818.0	6538.0	8128.0	8509.0	5032.0	4384.0
Net debt increment <sup>a</sup>	-828.0	820.0	2095.0	10924.0	12316.0	5683.0	4140.0

**Source:** Central Bank of Argentina, National Institute of Statistics and Fundación de Investigaciones Económicas Latinoamericanas.

<sup>a</sup> In billions of dollars.

<sup>b</sup> Nominal exchange rate (peso/dollar) deflated by domestic consumer price index.

<sup>c</sup> From January 1979 to March 1981.

<sup>d</sup> Annualized rate for the first three months of the year.

preannounced rate of devaluation (the *tablita*) was lower than the actual rate of inflation, and because this rate of exchange rule initially enjoyed a high level of credibility, arbitrage between external and domestic assets and external and domestic credit reduced the nominal rates of interest and the expected cost of external credit vis-à-vis the rate of inflation. This price effect operated together with the quantity effect to drive the expansion in the first phase. The flow of imports rose gradually but steadily and the burden of interest earned by the accrued external debt also grew, producing a rising deficit in the current account. At a certain point, the inflow of capital was less than the current account deficit and the level of reserves stopped growing and began to decline, triggering a second phase of the process.

The fragility of the financial system rose *pari passu* with the expansion of assets and liabilities of the financial system in the first phase, because a significant part of credit had financed consumption and speculation with existing assets during the boom. In both the Argentine and Chilean cases, the real rates of interest began to grow at a certain point. In the second phase, the rise in the rates of interest and the roll-over of the pre-existing debt contributed additionally to increase the fragility of the system.

The high real rate of interest which characterized the second phase of the process deserves attention. Microeconomic arguments such as the adverse selection of risk and moral hazard in the banks have been used to explain statically why banks were able to charge such high rates. A less often mentioned point is that real rates of interest fell in the first phase and then showed an upward tendency.

Table 2

## CHILE: SELECTED MACROECONOMIC VARIABLES 1977-1983

	1977	1978	1979	1980	1981	1982	1983
GDP growth rate (per cent)	9.9	8.2	8.3	7.8	5.5	-14.1	-0.7
Inflation rate (CPI)	63.5	30.3	38.9	31.2	9.5	20.7	23.1
Trade account <sup>a</sup>	34.0	-486.0	-355.0	-764.0	-2677.0	63.0	986.0
Current account <sup>a</sup>	-551.0	-1088.0	-1189.0	-1971.0	-4733.0	-2304.0	-1117.0
Real exchange rate <sup>b</sup>	100.0	108.9	95.6	83.0	83.4	105.1	125.6
M1/GDP	6.4	6.2	6.2	7.3	5.9	6.5	6.6
M2/GDP	13.0	16.0	17.4	19.3	23.4	24.7	20.0
Real borrowing interest rates	18.7	25.0	4.7	5.0	28.7	24.3	4.0
Real lending interest rates	57.1	42.3	16.9	12.2	38.9	35.1	15.9
Difference between lending interest rates and preannounced exchange rate variation <sup>c</sup>							
Monthly rate		3.4	2.9	3.3	3.5	3.5 <sup>d</sup>	
Annual rate		49.6	40.5	46.9	51.9	51.7 <sup>d</sup>	
National savings rate	10.7	12.6	12.4	13.9	8.2	2.1	4.4
Gross fixed investment rate	13.3	14.5	15.6	17.6	19.5	15.0	12.9
Reserve increment <sup>a</sup>	165.0	785.0	1256.0	1760.0	-299.0	-1197.0	-555.0
Gross debt increment <sup>a</sup>	236.0	1413.0	1584.0	1906.0	3140.0	1262.0	1017.0
Net debt increment <sup>a</sup>	71.0	628.0	328.0	146.0	3439.0	2459.0	1572.0

Source: Central Bank of Chile.

<sup>a</sup> In billions of dollars.

<sup>b</sup> Nominal exchange rate (peso/dollar) deflated by domestic consumer price index.

<sup>c</sup> From February 1978 to May 1982.

<sup>d</sup> Annualized rate for the first five months of the year.

Three factors seem to explain the rising rates of interest in the second phase. First, an exogenous shock: the increase in the international rates which began at the end of 1979. The jump in the international rates contributed to elevating the domestic rates, but of course it cannot fully explain the increment. A disaggregation of the actual domestic rate in that period, as the sum of the international rate, the rate of announced devaluation, and a residual accounting for exchange risk, shows the latter to be the main factor explaining the increase in the domestic rate. Secondly, there was an endogenous effect of the expansion of the system while it evolved to finance riskier operations. Thirdly, the lack of credibility of the announced exchange rule in the face of the results in the external accounts was a factor. Information about the rising current account deficit or the declining level of reserves made prospects for the sustainability of the exchange rule less certain. So, a higher exchange risk premium was needed to equilibrate the demand for domestic and external assets.

By influencing exchange-rate expectations, the deterioration of the current account in the second phase imposed higher rates of interest to sustain the demand for domestic financial assets. However the rise in interest rates made the system more prone to a generalized crisis. This constituted an explosive process. At the end of the process there was no rate of interest high enough to sustain the demand for domestic assets, and both the Argentine and the Chilean experiences ended up in a run against the Central Bank reserves and a generalized bankruptcy.

It has not been stressed, but it is worth mentioning that the effect of the perceived increasing fragility of the domestic financial system also contributed in itself to weakening the

demand for domestic assets, adding to the effect of the information on the external accounts. This is so even in the case of Argentina, where an explicit deposit insurance was in force. The relative weights of the negative prospects of the external accounts and the perceived fragility of the financial system are impossible to unravel. However, the bad news about the domestic system - localized bankruptcies of financial institutions - had been announced well before difficulties in the external accounts became apparent.

The rates of inflation were high when the policies were launched (much higher in Argentina than in Chile) and the programmes were intended not only to deepen and integrate the financial system, with the expected effects on efficiency, savings and investment, but also to perform a stabilizing function. Specifically, policy on the rate of exchange was aimed at reducing the rate of inflation and did not belong to the reform package by internal logical necessity. As the policies actually executed were a specific mix: there is a need to disentangle cause and effect using the best analytical capabilities and common sense. In any case, this is a characteristic feature of any evaluation of concrete historical episodes. These cases are particularly demanding because they involve several drastic policies enacted simultaneously.

It is apparent that the real appreciation explains a significant part of the observed results in both cases. It has worked in two different ways. First, the appreciation had a real effect on relative prices and on the tendency of the trade account. Secondly, the dynamics of gradual appreciation had a financial effect: by lowering the real domestic interest rate and the cost of international finance measured in domestic prices in the first phase, stimulating then consumption and speculation with domestic assets.

Conversely, it seems evident that the high rates of inflation, or rather, its unexpected stubbornness, were the cause of the observed appreciation, giving the rates of devaluation established by the *tablitas*. As a consequence, it should also be evident that the unexpected stickiness of the rates of inflation played an important role and that any explanation of the observed results must account for it.

Before going ahead with the evaluation, it is worth mentioning that some conclusions and policy recommendations can be, and have been, reached at this level of the analysis. The dramatic results observed in the Southern Cone experiences called attention to the risks involved in liberalizing the flows of capital under conditions of high inflation. Particular caution calls for combining free capital flows with the active utilization of the rate of devaluation as a gradual tool for disinflation. Under high rates of inflation, a crawling-peg exchange rate policy and controls intended to inhibit capital flows are recommended. With regard to the working of the domestic financial system, one conclusion is that reforms of the kind attempted in Chile and Argentina can increase its volatility. Elimination of gross distortions are then recommended, but combined with a regulatory setting intended to reduce volatility of real interest rates. It could be said that under conditions of high inflation, stabilization policies should have priority over structural reform attempts. These seem to be sensible recommendations, but can sometimes be rather unrealistic. In many cases of accentuated instability, exemplified by some Latin American economies in the 1980s, the same acceleration of inflation gave place to "parallel" markets which actually curtailed the regulating capability of the State. In such cases, the financial domestic markets and the capital flows adjust more or less "freely", even if regulations are in force.

As has been stressed here, it should be evident that the stickiness of inflation explains a significant part of the results observed in the Southern Cone experiments. The point gives rise to two different questions. First, was the dynamics of appreciation, if not the sole factor, then the main factor explaining the results or do other plausible factors have similar relevance? Secondly, what are the main causes of the stickiness of inflation and, consequently, of the distortion of relative prices produced by the exchange policy? The analysis continues with a discussion of the latter question, leaving the former to be commented on later.

The stickiness of inflation was in no way a new issue, but the impressive result of the drastic experiments with exchange policy called renewed attention to this complex problem. Although several researchers inspired by events focused on the issue to find analytical explanations,<sup>15</sup> this was not the case of the first evaluations of the Southern Cone experiments made by some friendly partners. The first evaluations of the Argentine experience, made while

<sup>15</sup> See for example the research results presented in Figueiredo *et al.* (1985).



Chile was still considered to be a sound case, bypassed the explicit consideration of the stickiness of inflation and focused directly on the significant deficit of the public sector, treating it implicitly as the main explanation for the prevalence of high rates of inflation. It has to be said that this was an *a posteriori* remark, because the "monetary approach to the balance of payment" which originally inspired the implemented policies denied the relevance of any sectoral deficit and put all the burden of the stability of the balance of payments on monetary policy. On the other hand, at that time there was a firm belief in the policy relevance of the "law of one price". Thus, the lack of sufficient external trade was thought to be the condition which allowed a persistent difference between the rate of inflation and the rate of devaluation. On the basis of this argument, the lack of enough trade liberalization completed the diagnosis of the Argentine case vis-à-vis the still "well-behaved" Chilean case.

Elimination of fiscal deficit and complete trade liberalization were posed as logical necessary conditions for the success of the financial reform and the freeing of capital flows. Were they sufficient conditions? At the time, the still successful Chilean case was there to give an empirical affirmative answer. The sequencing view of the problem followed from this line of reasoning. In the Argentine case, the necessary conditions had not been fulfilled, and so the financial reform and the liberalization of capital flows were premature measures vis-à-vis the correct order exemplified by Chile.

The Chilean crises (the simultaneous balance-of-payments and financial crises) should have made the whole argument on sequencing unlikely, constructed, as mentioned, on the comparison between Argentina and Chile. Indeed, as was emphasized by McKinnon in 1981, before the crises started, the Chilean reforms looked quite complete at that time. When the *tablita* exchange policy was initiated, the public accounts were in surplus and the trade liberalization was almost complete. The last reduction of tariffs to a uniform 10 per cent level was part of a schedule preannounced well before, and was synchronized in June 1979 with the announcement of a fixed nominal exchange rate. However, instead of suggesting a reconsideration of the sequencing explanation of the Argentine crisis and a reformulation of the whole problem, the Chilean experience also came to be considered an example of mistaken sequencing on the basis of new arguments. Differences in adjustment velocities between goods and financial markets were focused on in criticizing the simultaneous opening of the trade and capital accounts (Edwards (1985)). Conversely, indexation of nominal wages was highlighted as an important factor behind real appreciation (Corbo (1985)) and so, a significant factor of the failure.

The mention of backward-looking indexation of nominal wages (as inconsistent with the forward-looking fixation of the nominal exchange rate) provided an *ad hoc* explanation for the stickiness of inflation in the Chilean conditions of fiscal surplus. Indexation of wages and other nominal contracts had been indicated in the Argentine case as explaining inflation inertia (Frenkel (1983 c, 1984)), but these arguments were disregarded in the above-quoted friendly evaluation, probably because fiscal deficit was considered to be a sufficient explanation. More or less formalized indexation rules were indeed in force in both Argentina and Chile. This was not amazing, after an extended period of high inflation, even if fiscal adjustment had been fulfilled.

The argument about different velocities of adjustment of goods and financial markets was aimed at simultaneously explaining the real appreciation and the overborrowing feature. Financial markets are supposed to adjust faster than goods markets. The argument goes as follows. Starting from an economy repressed in both trade and capital flows, the simultaneous opening of goods and capital markets determines a rising tendency of imports and capital inflows. Because capital inflows adjust quickly, there is an excess supply of currency which causes a tendency of the exchange rate to appreciate. The real appreciation gives an additional impetus to imports and trade deficit. The appreciation process continues while capital inflows exceed the current account deficit. The final result is an "overborrowing" situation.

Although the model seems to describe realistically some relevant features of both the Argentine and Chilean experiences, it is weak as a complete explanation of the cases considered. First, the model lacks a transmission mechanism to explain real appreciation. Under fixed exchange rate regimes, it implies that the above-mentioned stickiness of inflation is mainly explained by pressures exerted by the capital inflows. This argument is not very plausible. One, there was inflation before the inflow of capital and it did not accelerate with its entry. On the contrary, rates of inflation slowed down, even though they remained higher

than the rates of devaluation. Two, as stated already, both cases showed strong evidence of indexation of wages and other contracts as the principal factor behind inflation inertia. This raises the question of the causality of the process. If real appreciation is mainly produced by the nominal exchange rate policies lagging behind inertial rates of inflation, causality runs from real appreciation to capital inflows and not in the opposite direction. Then, rephrasing the argument concerning different velocities of adjustment, it could be said that capital inflows adjusting faster than trade made it possible to sustain a lasting process of real appreciation.

Secondly, the model does not account for the simultaneous reserves and domestic financial crises. The atemporal symmetry of neoclassical models suggests a second phase in which the external deficit exerts a pressure for devaluation, reversing the initial appreciation and leading the exchange rate to an equilibrium level. In a fixed exchange rate regime, this would imply nominal deflation of wages and prices, which does not seem plausible.

This explanation dismisses the liquidity difficulties facing by financial intermediaries and agents indebted in domestic and external credit. In fact, the downturn of the initial boom was not a smooth process but rather a combination of bankruptcies and a run against the central bank reserves. The actual processes have been described better by the Minsky model of a financial cycle, in which an initial bubble is followed by financial distress and a final crash.

Beyond its inability to explain fully the Southern Cone episodes, the different-velocities-of-adjustment model stresses an important feature: capital flows can have significant macroeconomic effects. The potential effects of capital flows depend on their relative size vis-à-vis the size of real and financial assets of the domestic economy. The cases under discussion are small economies which opened their capital accounts from a relatively low level of financial intermediation. But this is usually the case of "financially repressed", less-developed economies attempting to reform. Hence, the macroeconomic importance of capital flows seems to be an intrinsic element.

In analysing the Southern Cone experiences, the real appreciation that played a crucial role in these cases has already been emphasized. Keeping in mind the macroeconomic importance of capital flows, appreciation can be put on a secondary plane, while attention is turned to the rapid rise of domestic financial assets and international financial exposure which characterized both the Argentine and Chilean experiences. As can be seen in the tables 1 and 2, M2 as a proportion of nominal GDP in Argentina almost doubled between 1977 and 1980, while at the same time gross external debt rose by about 19 billion dollars. This flow is twice the stock of M2 at the end of 1977. In the Chilean case, M2 as a proportion of GDP was multiplied by two between 1977 and 1981. During this period, the rise in gross external debt was 8 billion dollars, which was about six times the stock of M2 at the end of 1977.

From the point of view of the reformers, this "financial deepening" should be considered (and, in fact, was considered) a successful result of the liberalization. On the other side of the balance sheet, however, the counterpart of the "deepening" was the piling up of consumption credit and speculative assets that did not generate the income flows capable of keeping the system rolling. The willful belief in the beneficial effects of "financial deepening" and the efficiency of free financial markets blinded the reformers to the point of completely ignoring the elements of a speculative bubble pushed by international finance in the expansionist phase. One must not be naive but rather take into account the strong vested interests associated with the rapid expansion of financial intermediation. Nevertheless, the expressed faith in the self-equilibrating character of the process looks striking.

A rising fragility was the counterpart of the rapid expansion of financial assets and international exposure. Was this fragility inherent to the process or could it have been avoided? The long-term sustainability depended on the proportion of real investment capable of producing income and currency which the expansion was financing. A real productivity boom would have been the only way to avoid rising fragility in a context of swift expansion of credit. This was not the case in the Southern Cone experiences.

Initial smallness vis-à-vis international financial markets played a crucial role in the development of the observed financial cycles. But, as has been mentioned above, smallness seems to be an intrinsic characteristic of a less developed economy trying to open up of its financial sector. So, the size and volatility of capital flows will always involve the risk of destabilizing effects of the kind observed in Argentina and Chile.

In what sense can this be interpreted as a matter of sequencing? The policy recommendation from this point of view would say postpone the opening and deregulation until a big, mature and robust domestic financial market had developed. Indeed, this is the position adopted by the founding father of the sequencing issue. Comparing Japan and Taiwan [Province of China] versus Chile and other countries with failed liberalizing experiences, Ronald McKinnon (1991, ch. 3) stresses as exemplary that these Asian countries long maintained controls on capital flows and regulations on interest rates and other aspects of their financial systems, while they were growing and modernizing their economies. McKinnon emphasizes that the M3/GDP relation of Taiwan Province of China amounted to 126 per cent in the early 1980s, when the country implemented some liberalizing measures, and contrasts this degree of maturity with the smallness of Latin American financial markets. The Japanese experience is subject to the same kind of reflection. McKinnon praises the lasting closure of Japan's financial market and observes that the authorities began to think about loosening restrictions on commercial banks only after a substantial deepening had taken place in the nonbank part of the capital market. At that time, the M3/GDP relation of Japan amounted to more than 100 per cent.

"Delaying" the opening and deregulation of the domestic financial market until it has reached complete maturity, as McKinnon proposes on the basis of his analysis of the two cases, seems to be a sensible recommendation. But the maturation process in these cases required about 25 years. To think of this time span as one step in the sequence towards liberalization seems to stretch the sequencing issue too much.

## V. Concluding remarks

Many LDCs are now taking decisive steps in the direction of market liberalization. Most of them are former socialist countries or countries which had previously embarked on an import-substitution strategy of development (especially those in Latin American region). *Prima facie*, it may be assumed that these countries have adopted a new strategy of development because they believed that the market-friendly approach was the "optimal" strategy, given the constraints.

Care must be taken when defining the constraints. Particularly, two facts should be kept in mind. First, the States in most of the regions mentioned had been discredited, disarticulated, and were experiencing severe financial problems. Liberalization implied that both the range of activities and the size of the State must be reduced. *A priori*, such a strategy appears to be better fitted to a weak State than a pick-the-winners strategy which implies more state intervention and, consequently, a financially sounder public sector. Secondly, official lenders and other participants of the Washington Consensus are much more inclined to give political and financial support to countries eager to adopt the market-friendly approach. In such a context, the hypothesis cannot be discarded that the adoption of the market-friendly approach in these countries is much more a consequence of the weaknesses of the State than the fruit of strong conviction in free markets. The strategy chosen promises to solve simultaneously two fundamental needs of the State: lack of financing and lack of a clear definition of its role in development.

However, the present authors maintain that these two fundamental problems are not solved, but rather by-passed by the Washington Consensus approach. This is so, among other reasons, because of the problems posed by the sequencing of reforms during the transitional period, regardless of the benefits that could be attained if a free-market situation were reached. In contrast to what may seem obvious at first glance, the long-lasting transitional period of the liberalization strategy of development requires a significant and efficient intervention of the State while the launching of the reform *per se* is unlikely to fulfill the financing needs of the economy. The restructuring experiences of developed economies (Spain, Germany) were both state-intensive and credit-intensive. This was also true for successful LDCs like Chile (after the failure of the liberalization attempt) or the Republic of Korea. Indeed, the lessons on the sequencing of liberalization which appear in the market-friendly approach literature confirm that the problem of sources of funds needed for financing the restructuring and the question of the role of the State in the process are not clear.

From the present analysis of the literature, it follows that:

- (a) The transitional period is very long and difficult to manage. Liberalizing trade, the domestic goods markets, the financial system and the capital account will take many years, perhaps more than a decade. During this period, the role of the State is crucial in designing the correct speed and attributes of each stage of liberalization, especially regarding trade, the decontrolling of the capital account, and the financial system.
- (b) The transitional period can be very painful and the government must take into account political constraints. Because of the existence of rigidities and frictions, the effects of liberalization coupled with those of stabilization could generate a high unemployment rate and strong income distribution effects. Although, it is assumed that it is better not to implement compensatory policies to offset the effects on income distribution, in fact, the State will have to implement some compensatory policies to make the programme politically feasible.
- (c) During the transition period, there will be a reduced availability of credit. Domestically generated credit will be scarce since credit rationing and "some degree" of financial repression are necessary to avoid financial distress. External funds will be rationed because the capital account must be strictly controlled while external support is not likely to be abundant, at least until the completion of stage I (stabilization) when the country will regain credit-worthiness.
- (d) The State has a crucial role to play with regard to the regulation of the economy. The analysis of financial crises in the Southern Cone of Latin America, Turkey, the Philippines, *et al.*, shows that the financial system must be tightly supervised by the authorities, including, eventually, credit-rationing and the control of interest rates. The privatization process has not been closely examined with regard to regulation in the typical institutional setting of an LDC; however it follows from the neoclassical framework that the State has a role when non-competitive situations arise from privatization.

This set of important lessons has been extracted from the analysis of numerous processes of liberalization reform which were implemented in the past; the reforms that are now being implemented will surely give rise to several lessons as well. Two examples show the kind of dynamic problems that should be taken into account in analysing the ongoing economic reforms.

First, privatization is typically recommended as a means to improve efficiency. The normally alleged reasons favouring this reform of the State are "microeconomic" and have to do with efficiency and competitiveness. However, most of the countries are privatizing because of "macroeconomic" reasons. Market-friendly reform is perceived as a necessary condition for "eligibility" and thus for restoring creditworthiness. However, the reform package itself has initial costs that cannot be financed until creditworthiness is restored. Consequently, the funds stemming from privatization are being used to finance the sunken costs of the reform. In many cases, this is being done regardless of efficiency (or equity) considerations and in ways that significantly distort market signals. For example, the privatization of public enterprises which produce non-tradable goods exerts a kind of crowding-out effect on investment in tradeable sectors. Moreover, the financing of the fiscal deficit by means of privatization crowds out investment in physical assets, in general. As is well known, privatization as a means of financing the deficit is no different from governments issuing bonds.

Secondly, the literature advises not to lift controls on capital flows. The "real world" situation is that many LDCs cannot exert such controls. The consequence is that the strong destabilizing effects of capital flows cannot be avoided, particularly with regard to exchange-rate volatility and the financial system. For example, in Latin America, the sharp reduction of interest rates abroad (especially in the United States) has determined a reversal of the capital flight phenomenon. As a consequence, after reaching a peak in the 1980s, the real exchange rate began to lag while there was a kind of "financial deepening" based on the increment of short-run deposits. Severe problems in managing monetary policy also arose. Many of the reforms now being implemented are making the situation even less controllable. The funds stemming from abroad which originate in privatizations are inducing an additional downward pressure on the exchange rate. The liberalization of trade has determined a huge

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increase in imports; in many countries the trade surplus of the 1980s disappeared; the external debt to GDP ratio is still too high. Because of the lagging exchange rate, a part of the funds that are being repatriated are being channeled towards financing investment in non-tradable goods. In many cases, this problem is aggravated owing to the high return offered by former-public firms which produce services.<sup>16</sup>

Is it best to approach the study of these reforms which many countries are *de facto* implementing by considering them a problem of "sequencing"? The authors believe that this is not the best strategy neither from the view of economic policy nor theory. Instead of beginning from a rather abstract notion of a fully liberalized economic setting, and examining the supposedly correct sequence of steps needed to reach it without difficulties, it would be fruitful to examine the concrete steps of reform and to analyse the specific dynamics they generate. Room should be made for the potential role that government *and* market failures could play in determining the effects of specific measures. As Krugman (1992) put it, "we should keep at least in the back of our minds the thought that is not true that economic theory "proves" that free markets are always best" (page 21).

In addition, the possibility that the dynamic path generated by the reform could be explosive should not be disregarded. The evaluation of the reform experiences in terms of "correct" or "incorrect" sequencing, rests on a strong *a priori* assumption: correctly ordered liberalizing reforms always set the economy on a stable path with a significant rate of growth. This assumption has no foundation other than in beliefs derived from simplistic models. There is no reason to exclude *a priori* the possibility of explosive paths or stagnant equilibria. This is true independently of the order in which reforms are implemented. Such assumptions do not help in understanding the characteristics of real reform processes. It is a fact that many liberalization attempts gave rise to explosive paths which must be accounted for. Obviously, the relevance of this issue is not only analytical.

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<sup>16</sup> Sourrouille (1992) stresses this effect of privatizations in the Argentine case. On the effects of privatization on capital flows in the case of Mexico see Ross (1992).

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# IMF SURVEILLANCE AND THE G-24

C. David Finch

## Introduction

The Group of Twenty-Four has long expressed concern that IMF surveillance over industrialized countries is weak. In the last two communiqués it has called for a report from the IMF on that aspect of surveillance.<sup>1</sup> In the absence of a response, this paper has been commissioned. In no sense can it substitute for an IMF report as, with no access to IMF documents, it is not possible to survey recent developments in the surveillance process. Instead the paper sets out the issues raised in the question of the Group of 24, then analyses the prospects as frankly as possible in an attempt to help focus future discussion more practically.

The first section examines the development of the concept of surveillance through the IMF, concentrating on the basic distinction between reviews designed to ensure observance of agreed rules and those intended to facilitate the achievement of shared objectives. The second section attempts to analyse realistically the present prospects for a strengthening of the IMF surveillance process, both for industrialized countries and, more generally, for the entire membership. There is reason to believe that, with time, there would eventually be a strengthening of rules under the IMF. It is suggested parenthetically that the first steps towards greater use of rules might be taken in relation to debt. The discussion then turns to the procedural response, under current rules, which appears inherently the most promising, in the light of present political trends.

This approach leads inevitably to a discussion of a broader range of issues than usual with regard to IMF surveillance. However, trade issues are not discussed here. Wisely the developing countries have undertaken a much more active role in the current round of GATT negotiations. With the outcome still very uncertain, substantive discussion of the remaining issues is not yet possible. Suffice it to say, there are many signs that the leading industrialized countries, unfortunately, lack the political will to act courageously on trade issues in the ways called for if they are to promote the concept of an open global economy underlying the creation of the Bretton Woods institutions.

## I. The concept of surveillance

At Bretton Woods the founding fathers of the IMF negotiated a set of rules for the operation of the exchange systems of members. They believed that these rules would provide the basis for averting the economic disasters of the interwar period. The rules featured exchange-rate stability and freedom from exchange restrictions. So as to aid the observance of these rules, they provided, on one side, for financial resources to be made available to ease the economic cost of compliance when conditions turned adverse, and on the other side, for surveillance to be exercised to ensure that there were penalties for any departure, particularly departures from the rules on restrictions.

These provisions were the basis on which IMF surveillance developed. After a tentative first step relying on reports based on discussions in Washington and narrowly focused on ex-

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<sup>1</sup> "Ministers urged the Fund to prepare a report for presentation to the next meeting of the Group of 24 in 1992 to appraise the surveillance over the macroeconomic policies of the major industrial countries." Bangkok, October 1991. "Ministers...reaffirmed the urgent need to increase the effectiveness of Fund surveillance over macroeconomic and trade policies of the major industrial countries, and urged the Fund to prepare the study requested by the G-24 Ministers...." Washington, April 1992.

change restrictions, it was quickly recognized that visits to capitals were needed and that macroeconomic policies had to be discussed if there was to be an effective role for the IMF in guiding economic policy decisions towards creating the conditions that would permit progress to be made in eliminating restrictions.

These developments transformed IMF surveillance from an exercise in discipline for transgressing countries into an exercise helpful to domestic monetary authorities. In many countries, discussions with IMF staff, who early had become familiar with the experiences of other countries, were found to assist countries in improving their statistics and in focusing the arguments they needed to promote fiscal responsibility and monetary stability. Occasionally the staff statements made at the end of the visits were featured even to the extent of circulation to the cabinet. However, it was the Executive Board discussion, and the consequent decision or summing up sent to the authorities, that provided the central focus. These messages nearly always stressed the issues that the domestic monetary authorities wished to have featured and gave broad support for the actions they deemed needed. Such encouragement, particularly from major industrialized countries, boosted the morale of officials and added weight to Treasury positions in cabinet decisions. The value of this service was openly confirmed when, in the major move to convertibility in 1961, the group of countries dropping their right to temporary restrictions volunteered to continue consultations.<sup>2</sup>

Thus surveillance had a two-fold purpose. One was the original concept of oversight to ensure that policy measures delivered results which conformed to negotiated rules. In addition, a quite distinct concept had evolved of using the consultation process to promote good (meaning "monetary authority-desired") policies. This included, in a broad sense, an intention to encourage coordinated responses to economic problems based on the common values and priorities of monetary authorities. It must be understood that crucial to the political acceptability of this aspect of the consultation process was a conviction that it promoted policies necessary from the viewpoint of direct national self interest. It should also be recorded that considerable support for the consultation process was generated by the value to other countries of the information made available through the staff reports.

When the par value system fell apart and revisions were made to the Articles, this new element sustained continuation of the consultation process. The idea that moral authority could be usefully exercised, even when there were no precise agreed rules, was now applied to exchange rate regimes. The addition of a direct obligation to use the consultation procedures to promote orderly and stable exchange rates gave only a vague legal authority, although it strengthened the already existing moral commitment to pay attention to peer views.

Nevertheless, it must be stressed that the basis for this surveillance was now consent - not obligation to observe rules.<sup>3</sup> The first element of surveillance, the oversight of precise rules, continued only on exchange restrictions, including multiple exchange rates. While their use dwindled, until they survived only in countries in chronic payments problems, in practice the IMF responsibility to encourage the removal of exchange restrictions was exercised through the conditions attached to the use of IMF resources. Consequently, the surveillance process, as implemented by the consultation procedures, became essentially one based on admonition, hopefully bolstered by shared values.

What are these shared values? The core values are rooted in a basic belief in fiscal responsibility and monetary stability in an open market world. They are derived from the universal and unremitting struggles of monetary authorities in all countries against political pressures to spend more than is economically responsible; these pressures stem from the constant struggle to induce special interests to be sufficiently supportive to keep the ruling coalition in power. To this must be added the understanding, strengthened steadily since the creation of the IMF, that an open economy helps in this battle.

<sup>2</sup> In the first volume of the official history of the IMF the process is described in detail with somewhat less emphasis on the staff role. (The International Monetary Fund 1945-1965, Washington, 1969, vol. 1 pp. 472-473 and 477-482.)

<sup>3</sup> Jacques J. Polak in his contribution to the Overseas Development Council study "The International Monetary Fund in a Multipolar World: Pulling Together" New Brunswick, Transaction Books, 1989, has given one of the best short descriptions of the developments stressing the value of the consultation reports to other countries (pp. 52-56). While he featured (pp. 59-60) the decentralized (i.e. self interest) nature of the consultation process, obviously affected by his long experience of cooperation to meet evolving problems particularly in the SDR creation, he was then much more optimistic than I was about future IMF influence through peer pressure on policy coordination among the major countries.

There have nevertheless always been additional policies, beyond those based on the core values, which are encouraged during surveillance. On examination, these may be seen to derive principally from changing political conditions. Currently, the collapse of communism has made it possible to target military expenditures as the focus of spending cuts and to expect much broader support for this than was possible previously when security alliances mattered more. Equally, privatization has become a broadly featured element in plans for reform. Other additions to the prescriptions are related more to immediately preceding economic conditions. The destructive deflationary conditions of the 1930s had created a consensus against persistent surplus countries. This led to IMF Articles providing penalties for countries in persistent surplus. Antagonism towards surpluses was not derived from any basic belief or core value of monetary authorities. Throughout the different conditions of the subsequent decades there was in fact no monetary authority rationale for this attitude. In a world where most monetary authorities faced inflationary pressures and were struggling to achieve an adequate supply of resources for the investments necessary to promote economic growth, a steady external source of finance was always welcome. Such resources could only be provided by other countries showing a persistent current account surplus.

The strength of support for common values was also affected by political realities. Financial agencies needed constant access to more resources, which made them dependent on support from surplus countries.<sup>4</sup> The penalties provided in the Articles for surplus countries, in practice, were dead from the beginning. Yet these provisions undoubtedly had some effect on the principal surplus country - the United States - making it more sensitive to the time necessary for adjustment to succeed in deficit countries.

Of course the concern about surplus countries had also other aspects. In particular, it was rightly considered essential that participation in the IMF meant that any exchange rate depreciation by deficit countries had to be accepted by countries in surplus, as involving appreciation of their currencies. It was also understood that it would be unacceptable for surplus countries to engage in restrictive exchange or trade measures to resist the consequent changes in trade and payments.<sup>5</sup>

This code has been implemented virtually unchallenged. The principal struggle came with the depreciation of the United States dollar in 1971 and in the years immediately following when the distribution of the consequent appreciation was negotiated, at times bitterly, although no one ever raised a direct objection to the code.<sup>6</sup> This achievement is critically important and must not be forgotten when complaints are made about the weakness of IMF surveillance on broader macroeconomic policies where the issues can never be as clear-cut.

What are the consequences of this experience for the concept of IMF surveillance? It must be recognized that the effectiveness of its surveillance over the macroeconomic policies of OECD countries is at present inherently weak. With the lessening of the power of rules on the abandonment of the par value system, it works almost exclusively through the weight it can bring to bear on debates in cabinet. Thus, to be effective, surveillance needs whole-hearted allies on the domestic scene. In turn, this reliance is the less secure the further the issues raised in debates move from the core values described above. In addition, its effectiveness depends on policies implemented by the major countries. The inability of the United States administration to deliver the fiscal improvements universally urged by Executive Directors for years in their annual discussion of the IMF consultation report on the United

<sup>4</sup> The apparent endorsement in the UNDP "Human Development Report 1992" of a proposal for a 1 per cent penalty - presumably a tax - on the surpluses of surplus countries is a recent example of a proposal that ignores this political reality. Of course an appeal for greater grant assistance by richer countries which carries an implication of higher taxes in these countries is also nearly as unrealistic at present but is socially just and logically inevitable if the world is to progress towards integration.

<sup>5</sup> Manuel Guitian in "The Unique Nature of the Responsibilities of the International Monetary Fund" IMF pamphlet series No.46, p. 21, makes this point and stresses that symmetry is not an appropriate description of the objective when the deficit country needs to initiate the action. Guitian in a related study "Rules and Discretion in International Economic Policy" IMF Occasional Paper No. 97, describes surveillance in a broader setting and argues (pp. 10-11) that even when the issue of global adequacy of demand is raised in relation to deficit countries' measures to restrict demand, normally the self-interest of surplus countries can be relied on to give an adequate countervailing expansion.

<sup>6</sup> Paul Volcker and Tooyoo Gyohten, in their recent book "Changing Fortunes", New York, Times Books, 1992, give a graphic account of the negotiations on the exchange rates of the major countries from 1971 to the present. It features the shift of Japan as the principal surplus country from stubborn resistance to relatively relaxed acceptance of the appreciation of the yen consequent on the depreciation of the US dollar. They also document the declining effectiveness of peer pressure on G-7 macroeconomic policies.

States economy has weakened the force of similar advice given to others. This weakness in peer pressure not only affects the IMF but is also reflected in the steadily declining capacity of the United States authorities themselves to influence the fiscal and monetary policies of their colleagues in the Group of 7.

Consequently, as the Group of 24 has long argued, the most effective vehicle for the support of IMF objectives is the conditionality attached to borrowing from the IMF.<sup>7</sup> Its effectiveness has been strengthened greatly over time by the association of other resources providing IMF financial support. To the extent that the policies promoted are directly related to ensuring the ability of the borrower to repay, this use of conditionality has a firm base. There is all too much evidence of the harm done to borrowers when IMF debt is accumulated without sufficient adjustment, and then must be serviced with priority, not only over other external claims, but even over domestic requirements. To the extent that objectives other than balance-of-payments recovery upset policies promoted by conditionality, the implementation of the values underlying the additional objectives is asymmetrically focused on borrowers.

More importantly, the association by the Paris Club of IMF conditionality with renegotiation of debt terms, combined with a very limited readiness on the part of official creditors ever to reduce the debt adequately to allow a path out from the debt overhang, has forced many countries in Africa with debt problems to submit to perpetual negotiation with the IMF over their economic policies. This exercise in external control is very damaging to the concept of promoting peer values by consent - that is, for other IMF members - now at the centre of surveillance. Effectively, for these debtor countries, it promotes a relationship with the IMF somewhat akin to that of colonial power and colony. Fortunately, there are now some signs of the readiness of creditors to recognize the long-term destructiveness of this approach to the development of independent financial strength in debtor countries. They are beginning to see the need to enable major reductions of the level of debt if debtors are to escape from this system of servitude. Yet, all too often, the creditors ready to act have not been joined by the others; to date there is scant, if any, implementation of official debt reduction on the scale necessary to ensure success.

## II. Surveillance prospects

It is of course an impossible task to predict the future of international cooperation, a future so dependent on political events which, as the recent past has shown conclusively, are essentially unpredictable, certainly by an economist. So much will depend on the readiness of the leadership of the major powers to accept and promote the value of an international framework. In 1945, that leadership was forthcoming but current signs are not encouraging. Domestic problems are now overwhelming the political mechanisms of the key major powers to such a degree that the concept of far-sighted cooperation lacks the capacity to attract the attention needed for determined action.

In the longer run, the prospects for IMF surveillance itself depend to an important extent on agreement on new rules. Without some progress towards new rules, the drift towards ever-weakening peer pressure founded on shared values seems inevitable. However, that does not mean that attempts to make improvements should await the negotiation of new rules. Any new rules will certainly stem from a desire to codify practices that have already been widely applied. Any signs of a trend towards a wider application of the practices which the IMF recommends would also give some early strength to IMF surveillance strictures on economic policies.

Realistically this would not seem to be the time to raise questions about new rules. The end of the political division of the world between two deeply antagonistic camps is having

<sup>7</sup> From virtually the beginning of their organization, the G-24 have expressed a concern that conditions on lending to deficit countries have produced an asymmetry in the adjustment process. To my taste this was too closely associated with criticism of surpluses. But it was quite correct in its diagnosis that countries borrowing from the IMF were under much more effective pressure to accept IMF values even if the delivery of the desired results was not at all that well assured.

consequences that create overwhelming barriers to initiating new negotiations in the immediate future and this lessens interest of the major country in securing Group of 24 support. The glue binding the old groupings together has loosened, giving way to growing political uncertainties that naturally would inhibit any attempt to reach agreements on new subjects. Even successful completion of the GATT negotiations - crucial for any hope of progress towards sensible world economic arrangements - is in serious doubt.

The new situation of looser world alliances seems to have strengthened a drift towards greater reliance on regional arrangements. European integration leads the way with its intention to move to virtually complete economic integration of a broadening number of countries. Now the United States has begun to develop its own regional grouping, first involving trade with Canada, then involving the Americas more broadly. The negotiations with Mexico on trade have moved ahead and the intention has been expressed to tackle trade negotiations with other countries in the Western Hemisphere as well as doing more to facilitate bilateral debt relief.

Quite apart from the dangers of division based on regionalism replacing global cooperation, the integration of Europe has profound immediate consequences for the IMF. Already it has lessened reliance on the IMF for assistance in the resolution of the payments problems of individual member countries of the European Economic Community (EC). That will become absolute if the Maastricht accords develop as planned and if the consequent integration reduces their original sovereign independence in economic policies to something resembling that of a state in the United States of America. This is already leading to a search by the IMF for new arrangements for formal discussions with the EC in Brussels. It is to be hoped that a system of reports based on direct consultations with the EC will be developed. Their value will of course take time to become established. Meanwhile the role of surveillance in Western Europe can only be expected to be slight.

However, it would be completely wrong to accept the present trends towards more national and regional independence as irreversible. There are fundamental factors operating towards a world system which will eventually dominate. In particular the interdependence of the world is inexorably growing. This concept has been featured in recent meetings on the global environment - a relative newcomer to world negotiations. Such issues, together with the continuing basic political necessity created by nuclear weapons for some world framework for settlement of disputes, can be relied on to help sensitize the public to the need for international rules. On the economic front, while the pervasive need for agreed trade rules will remain the dominant issue, a new element is the increasing evidence that the internationalization of capital markets and corporations has reached the point where stronger international agreements are urgently needed on their supervision, regulation and taxation.

The collapse of communism has specifically strengthened the IMF as an institution with the recognition by the Group of 7 that it should lead their response to the overwhelming need of the new Governments for economic assistance. Following on the lead role given to the IMF in meeting the debt crisis in 1982, this choice underlines the value of an agency that articulates the core values of the major treasuries of the world. When financial resources are needed, the Group of 7 will inevitably press for the support to be given through the IMF because they know it is an agency under their control. This surely causes some qualms among the monetary authorities of the Group of 24 because it opens the possibility that Group of 7 political objectives will intrude into IMF financing decisions, but there is undoubtedly an understanding that this choice provides them with an opportunity to have their views heard on the major world financing actions, in a forum where the core moral values which they share have important weight.

Of course it is not risk-free to the IMF to take on such politically charged roles. In particular, the Soviet collapse, with the dangers of disorder compounded by possession of nuclear arms, surely calls for political support through grants or loans on highly concessional - Marshall Plan type - terms, and not primarily the short- to medium-term funds available through the IMF. The condition for release of financial support is clearly not necessarily the IMF standard of the adoption of policies ensuring early balance-of-payments recovery. In other words, there is an evident danger that the fiscal problems of the leading powers will be allowed to distort the lending decisions of the IMF and undermine its moral integrity by making it obvious that political not economic objectives control IMF actions.

Ultimately, revival of IMF surveillance with any real strength will depend on the IMF regaining a role within the major OECD countries. In the author's view, the circumstances in which that could happen are virtually certain to arise, but the timing is not predictable and it could still be a long way off. Nor is it possible to predict the cause of the tension which would lead to a need for an international response: past crises have had widely varied origins. One sign of weakness which could lead to a useful IMF role is apparent, however. In a growing number of OECD countries, fiscal weakness is leading to a rate of increase in government debt that is clearly unsustainable. In the past, when par values had to be defended, such situations usually led to a balance-of-payments crisis which gave the public a clear signal of a need for action. Now for OECD countries with access to capital markets which are so open and lacking in attention to fiscal discipline - these imbalances seem capable of continuing almost indefinitely. However, as developing countries such as Brazil can testify, delay without remedial action does not mean that reality will not eventually catch up with you - even for countries considered too big to fail.

The United States budget deficit is one of those problems that seemingly is becoming so intractable that only a crisis will produce the political conditions needed for taking definitive action. If this is so, then when the crisis occurs, an evidently strongly supported IMF would be invaluable to the world - and to the other Group of 7 countries - as the most effective, perhaps even the only, way of limiting the cumulation of crisis damage. That would be particularly clear if the triggering event was the emergence of a dollar overhang caused by developments such as those foreseen in the Maastricht accords. The creation of a common currency and central bank for most of the EEC region would sharply reduce the need for dollar reserves as trade within the area would no longer involve foreign exchange. Negotiations on the disposal of the balances released could well be protracted. Any signs of discord could quickly provoke serious market reactions.

The United States is of course not the only candidate for dangerous contingencies. If instead of smooth progress towards integration in Europe, the process were checked decisively by the political forces set in motion by the Danish rejection of Maastricht, tensions could develop quickly. In particular, Italy would be vulnerable. While Italy has proved that fiscal weakness does not inevitably lead to an early crisis - it is much further along the unsustainable path of fiscal weakness than the United States is - there are growing signs that the end cannot be delayed much longer. That end is still felt to be manageable within an emerging integrated Europe. Should that hope disappear, however, markets could quickly create a crisis. In the predicated disarray within the EEC, it is quite likely that the major developed countries would decide that an IMF role would be again as helpful as in 1976.

These views are not widely held now, in part because the passage of time without a problem has nurtured a belief that open capital markets combined with exchange rate flexibility have superseded the role of official support in major foreign exchange markets. Unfortunately, that belief is not well-founded, as was shown very early in the new system when, in 1976, the United Kingdom was forced by market reactions to seek official help.<sup>8</sup> In crisis situations, markets need to be reassured about the direction of policies. Only official agencies can provide that reassurance by promoting adequate policy actions secured through effective prior negotiation. Not even the IMF could calm markets if its reputation were weakened too decisively by a history of failures, demonstrating a too clear political use of its resources. At present, it could easily fulfil the task for which it was created, namely to help establish order among the major industrialized countries.

Of course a definitive IMF role with the major industrialized countries could be achieved by a change in the rules on exchange rates. There are now clear signs that eventually some return to a reformed par value system will be sought. The growth of adherence to the EMS system shows recognition of the value of such rules to ensure discipline on macroeconomic policies made politically effective by public commitments. Such commitments have been directly rewarded in the market by lower long-term interest rates. There is growing acceptance of the evidence that the rate of growth of the world economy has suffered with the ending of

<sup>8</sup> The recently published book about this period in the UK by Kathleen Burk and Sir Alec Cairncross "Goodbye, Great Britain: the 1976 IMF crisis" New Haven: Yale University Press 1992, features the problem faced by the UK Government in convincing the market of the adequacy of the actions until the IMF support was sought. As a participant in those events I differ somewhat from the authors faith that the Cabinet would have acted adequately without IMF involvement.

the par value system.<sup>9</sup> The Group of 5 countries themselves recognized the problem of the lack of a system when in 1985 the Plaza Accords announced limited coordination of exchange rate policies.

However effective exchange rate coordination has been outside the EMS it is still very limited and will remain so within the major industrialized countries until the United States' public has been converted to a different attitude regarding dollar stability. Until a public commitment with clear political consequences can be envisioned in the United States, official views in the major industrialized countries in favour of coherence will not carry conviction that the fiscal and monetary actions necessary for exchange rate stability will, in fact, be given political priority. Consequently, it is premature to raise this issue of new exchange rate rules. Nevertheless, it is right to record that this step is the one which would do the most to achieve the objective of the Group of 24 to create the most favourable world environment for their growth. It now seems likely that eventually this will happen.

While the recovery of surveillance in the sense desired by the Group of 24 countries is crucially dependent on the IMF retaining a role of dealing with its crises in the major industrialized countries, such a role is not the only possible use of IMF surveillance. A more modest but still very important role for surveillance could be created, relating primarily to capital movements to developing countries. The debt crisis of the 1980s has severely limited some capital flows to many of these countries and left new costs through changed bank regulation rules in creditor countries. The flow rate could recover faster, and the costs be reduced, if the framework for future lend was clear. In fact, *ad hoc* debt negotiations have already gone some way towards determining certain elements of a new framework. In particular, short-term commercial debt is almost never subject to loss. However, this assurance is not sufficiently felt for weaker countries to find such credits readily available to them on normal terms.

At some stage, with the help of IMF surveillance, it should be possible to reverse this unfortunate situation. Many developing countries pay a risk premium for short-term trade finance despite the fact that most of them always repay promptly. If developing countries agreed to accept a formal commitment to meet all payments on such debt and to have the IMF monitor compliance in the annual consultations, capital markets would have to respond by lowered charges just as formal EMS commitments have lowered interest rates for the countries just joining. Over time, as the effectiveness of the IMF surveillance became established and bank regulators were induced to change the rules on provisioning, the terms for most Group of 24 countries for such capital from lenders including the commercial banks, would follow a trend back towards normal levels.

This evolution would undoubtedly be resisted by some creditors fearing that it could weaken their bargaining position in disputes over the terms on renegotiated medium-term debt. Their power to coerce the debtor by withholding short-term credit could become ineffective if replacements were available from new lenders who felt secure on account of the new rules. Hopefully the interest of all lenders in order would allow the change to occur. The process might be hastened by the fact that it would be virtually an implementation of the original and unamended intention of the IMF Articles. Payments on "normal short term banking and credit facilities" were defined as current transactions precisely to achieve this outcome. The consultation process, the forerunner of surveillance, focused heavily on any evidence of payments' arrears creating departures from observance of this obligation.

In view of subsequent developments since the last amendment to the Articles, when some debt of sovereign countries was reduced, it must also be understood that such action would be the first step towards creating an IMF-controlled bankruptcy regime for sovereign countries. Now that the objective of preventing all sovereign losses has been so decisively lost, it is time to give thought to codifying the practices that have evolved over the past 10 years. This is necessary if world capital markets are to be allowed to move towards a system in which risks are more specifically identified, permitting the increased costs through higher charges to be limited to those capital flows which it is agreed may be subject to renegotiation,

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<sup>9</sup> Paul Volcker's question in "Changing Fortunes" (*op. cit.*, p. 291) as to whether "the distinctly poor economic performance of the world generally since the early 1970s - slower growth, deeper imbalances, and greater inflation - is related to the breakdown of the Bretton Woods system" has sparked a renewed interest in the issue. It may well mark an important turning point towards official reexamination of the need for political commitment to exchange rate stability although little will come of it until the voting public has much more striking evidence of crisis.



while charges for other flows - protected from default by IMF rules that have proven their effectiveness - trend towards standard rates.

Readiness to raise this topic would also give the Group of 24 additional strength in pressing for arrangements which could put an end to perpetual debt negotiations and the associated forced IMF negotiations. The moral basis of an international system of peer pressure through IMF surveillance will always be severely compromised in any system which forces a major group of treasuries into protracted and therefore ultimately antagonistic negotiations. There must be a realistic way found for those countries that are still over-indebted through past weakness to recover their autonomy, as private debtors do through bankruptcy laws.

### III. Procedures

Clearly the picture painted here of surveillance does not suggest any early breakthroughs. Meanwhile, what changes in IMF surveillance procedures should the Group of 24 be encouraging? In the author's view, the influence of the Group of 24 through the IMF can grow only if it successfully recognizes the need of treasuries everywhere for support. Of course the Group of 24 must be free to urge IMF policy changes, even those which are distasteful to Group of 7 treasuries. Nevertheless, in pressing the IMF to adopt new policies on surveillance, it must be borne in mind that, in practice, the recommendations on macroeconomic policies, in consultations with individual OECD countries, will be limited to those which their treasuries regard as being in the best interest of their countries. This has long been understood by most Group of 24 officials, as the Group was created to produce more monetary-authority-oriented recommendations than had come from the preceding Group of 77.

Of course IMF surveillance, as broadly understood, is not exercised exclusively through annual consultations. For the major industrialized countries, IMF views on their policies are expressed in the *World Economic Outlook*. And in the outlook discussions, Group of 24 spokesmen are most likely to express views divergent from those of the Group of 7. Borrowing countries, like a borrowing sector of a national economy such as farming, are systematically likely to press for weaker monetary policy than the creditors will support. Inevitably this will continue. The equally inevitable general ineffectiveness of this pressure must not lead to despair over IMF surveillance, however. The high moral ground that policies affecting all countries should be subject to review by an authority with universal representation must be guarded. That will help the IMF to retain effectiveness for the time when evolving conditions create a need in industrialized countries for the moral support for internationally appropriate policies which only the IMF can give.

To preserve the greatest opportunity for the IMF - and hence the Group of 24 - to have influence, it is important first that the regularity of consultations be featured and nurtured. Without routine annual discussions, contacts lessen and the scope for influence narrows. Secondly, it is essential, for the spirit of cooperation to prevail, that this process be kept confidential, with any limited exceptions being strictly under local monetary authority control. Fostering public debate against the desires of the Government pushes the IMF dangerously and inappropriately into a political process. Thirdly, the discussions of the IMF Executive Board must remain the focus; discussion should be guided by its possible value at the national level. In this connection, it is most unfortunate if political alliances are allowed to colour significantly the comments made within the Executive Board. Hence, concern about the sustainability of the fiscal position of an ally should not be suppressed in the Board discussions, as seems to have happened on recent occasions with European Community members, and may even have influenced some Group of 24 directors in discussions of the policies of their close associates. The focus must be clearly technical and never guided by political alliance considerations if the Board is to be consistently persuasive.

In principle, paying attention to the level at which consultations take place could be constructive. Expectations that there will always be a meeting of the staff mission with the Ministers of Finance, or that, for certain major countries, the Managing Director will talk to the Minister about the outcome of the Executive Board meeting on the consultation report,



are useful proposals to that end. They can of course only be actively pressed in situations where they are likely to be welcomed, not pushed on unwilling partners.

It would also be appropriate to urge more effective discussions of the macroeconomic policies of the industrialized countries at Interim Committee meetings, where IMF policies are set. However, in substance, the real need in the six monthly set of meetings is to integrate the deliberations of the G-7 more effectively into the IMF as an institution. In principle, the IMF needs a closer association with the G-7 such as was achieved with the G-10. It is regrettable that, in the G-7 meetings, the IMF's role seems to be effectively limited, under present procedures, to a briefing on the *World Economic Outlook*, with the Managing Director in routine attendance only during the background factual discussions. These G-7 meetings have all too often appeared to determine the essence of decisions on IMF policies formally adopted immediately after by the IMF Interim Committee. This openly reduces other ministers of finance to the role of a rubber stamp.

It would seem doubtful if at present effective remedies can be found. This is a time of flux. Efforts for closer ties would surely prove ineffective. If European integration proceeds as planned, a G-3 might replace the present grouping and offer a new chance for reform, perhaps in connection with a consequent renegotiation of the present General Arrangements to Borrow and the associated G-10 role. Whatever the changes, it will be critical, particularly for the G-24 countries, to preserve the role of the Executive Board or, better, strengthen it. It is in Board deliberations, rather than ministerial meetings, that the vital interests of countries can best be defended because there is time to examine the logical and indeed moral basis of any actions and thus blunt the use of naked political power.

#### IV. Conclusions

The Group of 24 posed a very important question when it asked in effect how does the IMF influence major country macroeconomic policies? The answer is quite unfortunately clear and has been for some time. The IMF presently has a very limited impact and little is achieved by pretending otherwise. That is not the end of the issue, however. Although the immediate future is not promising, and may even involve some further decline owing to growing nationalism, the time will come when the major countries once again come to recognize their need for an IMF-type mechanism. The task is, therefore, to preserve the foothold now existing. That will not be done by premature pressure, particularly any pressure which allies the Group of 24 with attitudes antagonistic to traditional treasury beliefs. That seems to be understood. In the last communiqué, the expression of support for greater fiscal discipline in the OECD countries, to increase the supply of savings from the present desperately low levels, was particularly wise.

In addition, the Group of 24 would be wise to consider the advisability of supporting the establishment of new rules on some types of debt. These would increase the formal role of IMF surveillance to the benefit of borrowing countries, albeit at the expense of their accepting greater formal discipline, a discipline scarcely greater than that which is presently exercised through other procedures. The effect might well be to speed the evolution of more effective debt-reduction plans that could put an end to the indefinite continuation of IMF tutelage of the weaker debtors.

Improved debt arrangements are no substitute for a greater IMF role with major industrialized countries. Nevertheless, such arrangements could help to ensure that when time runs out on a major country, there will be no doubt about the agency used to assist in resolving the ensuring problems. And that will mark the successful achievement of the basic objective of universality raised repeatedly by the Group of 24.

# ON FINANCIAL OPENNESS IN DEVELOPING COUNTRIES

Yilmaz Akyüz

## Introduction

Recent years have witnessed the increased integration of developing countries into the international financial system. A number of factors have played a major role. Finance has become increasingly internationalized almost everywhere, helped also greatly by rapid advances in communication technology. Moreover, the debt crisis has made the financial markets of many debtor developing countries a major focus of attention by creating new profit opportunities through swaps and other mechanisms. Above all, a major shift occurred towards liberal policies in many developing countries in response to their deep and prolonged crisis. Most of these countries have also liberalized imports, and increasingly relied on exports for growth. However, the degree of internationalization of finance has gone much further than trade; indeed in many countries in Latin America and elsewhere the share of foreign exchange assets and transactions in the financial system is far greater than the share of trade in GDP.

The consequences of financial openness in developing countries have not been adequately treated in the literature on finance and development primarily because this is a very recent phenomenon. The mainstream thinking is largely an extrapolation of "open economy macroeconomics" to developing countries, and treats the issue of external financial liberalization in the context of "sequencing of economic reforms". This literature emerged in large part from an *ex post* attempt to explain why the Southern Cone liberalization experiment failed (Corbo, de Melo and Tybout 1986; Corbo and de Melo 1987; Diaz-Alejandro 1985; Dornbusch 1983; Frenkel 1983; McKinnon 1982). Its implicit assumption is that external financial liberalization is desirable on efficiency grounds; it has positive effects on the level and allocation of investment, and these efficiency gains more than compensate for the loss of macroeconomic policy autonomy.

According to this view, external financial liberalization may give rise to perverse results only if there are distortions and imbalances elsewhere in the economy- e.g. budget deficits, monetary instability, impediments to the proper operation of the pricing mechanism in the markets for goods (such as trade barriers or price controls) or for labour (such as minimum wage legislation or other legal and institutional impediments to hiring and firing). On the other hand, it is argued that since it is not possible to correct all imbalances and remove all distortions at once, external financial liberalization would need to be properly sequenced. Although it is sometimes argued (e.g. Krueger 1984) that it may be difficult to control inflation without liberalizing the economy, the majority view is that domestic financial markets and the current account should be liberalized before the capital account in order to avoid the adverse effects of capital flows on trade and macroeconomic stability, and that fiscal balance and monetary stability should be attained before any liberalization (Dornbusch 1983; Edwards 1984, 1987, 1989; Fischer and Reisen 1992; Frenkel 1983; McKinnon 1982).

There can be little doubt that considerable insight has been gained from the sequencing literature on the macroeconomics of external financial liberalization in developing countries. However, in our view, this approach suffers from major shortcomings stemming from its underlying assumptions regarding the nature of finance and financial markets; namely, finance is primarily about savings and investment, and financial markets are efficient.

These assumptions are not valid. In modern financial markets, finance tends to have a life of its own independent of investment, production and consumption, and there are widespread market failures. This has two consequences which the orthodox thinking overlooks. First, financial openness tends to create *systemic* problems at the macroeconomic level regardless of the order in which various markets are liberalized and distortions removed. Second, financial openness can undermine growth and competitiveness of a developing country by increasing instability, risk and the cost of capital, and by narrowing the scope for

using finance as part of industrial policy. Loss of autonomy in using finance for industrialization is as serious as loss of autonomy in macroeconomic policy, and, again, regardless of the order of liberalization.

This paper aims at discussing these two issues. The next two sections briefly examine the concept and degree of financial openness in developing countries and the nature of international capital flows. The paper then goes on to examine the causes and effects of capital flows, drawing on the recent experience of a number of Latin American countries which received large inflows of capital. This is followed by a discussion of the effects of financial openness on investment and competitiveness, and on the scope for using finance for industrial policy.

## I. The extent of financial openness in developing countries

By external financial liberalization we mean policy actions that increase the degree of financial openness, i.e. the ease with which residents can acquire assets and liabilities denominated in foreign currencies and non-residents can operate in national financial markets (including the enjoyment of market access by foreign banks). This definition is wider than liberalization of capital-account transactions between residents and non-residents, since it includes financial transactions among residents denominated in foreign currencies. Such transactions are an important part of finance and banking, and have international characteristics that affect the national economy in ways similar to conventional cross-border financial transactions (Bryant 1987, chapter 3).

In developing countries, the real degree of financial openness does not always correspond to the restrictiveness of regulations ostensibly in force. For one thing, these are not always fully implemented. For another, because financial institutions are underdeveloped, many financial transactions take place in informal, curb markets, which makes it relatively easy to circumvent regulations. Furthermore, a number of specific factors (such as high earnings from tourism and workers' remittances, the presence of transnational corporations, and physical proximity to hard-currency areas) can facilitate the access to foreign currency and financial transfers abroad through informal channels. Liberal treatment of financial inflows abroad, particularly in neighbouring countries, can also impede a country from limiting its degree of financial openness. For instance, in the late 1980s in Uruguay, where banks were free to accept forex deposits and banking secrecy prevailed, about one-half of such deposits were estimated to have belonged to Argentine nationals. Similarly, during the same years tax exemption of foreign depositors in the United States (together with the tax deductibility of interest payments in Mexico) gave Mexican enterprises an incentive to shift their funds to the United States and recycle them back as loans to themselves, thereby avoiding taxes on interest income received while deducting interest payments from their taxable income.

Nevertheless, official policies and a resolve and capacity to implement rules and regulations play the most important role in determining the degree of financial openness. It is therefore not surprising to find a close inverse correlation between capital flight and the degree of restriction on external capital transactions. For instance, in 1988 the total liabilities of banks in the United States to non-bank foreigners amounted to about \$90 million (roughly equal to some estimates of capital flight from Latin America during 1977-1983), with the residents of countries such as Argentina, and especially Mexico, holding greater amounts than the residents of countries where capital controls were much tighter (e.g. Brazil). Similarly, the experience of the Southern Cone countries amply demonstrates how liberal treatment of capital inflows and private external borrowing can result in a massive build up of debt abroad.

Three broad types of external financial liberalization may be distinguished. First, allowing residents, especially firms, to borrow freely in international financial markets (and non-residents to invest and lend freely in domestic markets). Second, allowing residents to transfer capital and to hold financial assets abroad (and non-residents to issue liabilities and to borrow in domestic financial markets). Third, allowing debtor-creditor transactions among residents to be made in foreign currencies such as bank deposits and lending in foreign currencies (which often accompanies freedom to buy and sell foreign currency).

These three types of liberalization have not been undertaken in the same sequence. The first wave of external liberalization in developing countries generally took the form of allowing the private sector to borrow abroad. The Southern Cone experience is the best known, and was set in a broad programme of liberalization. However, external borrowing by residents was liberalized also in a number of countries where domestic financial markets continued to be highly regulated (e.g. Turkey in the 1970s, Yugoslavia, and the Philippines). Resident banks were often involved as intermediaries between international capital markets and domestic borrowers. In countries with a sizeable flow of workers' remittances, a particular form of such borrowing took place on a large scale, namely foreign currency deposits offering attractive terms and carrying government guarantees. In almost all these episodes there was a massive build-up of foreign exchange liabilities by private corporations which contributed significantly to the subsequent debt crisis and payments difficulties (Diaz-Alejandro 1985; Rodrik 1986; UNCTAD 1991, Part Two, chapter III).

Although a number of developing countries have adopted capital account convertibility - some to an extent not found in most industrialized countries - most still maintain many restrictions on transferring capital and holding financial assets abroad. However, there has been a tendency to permit and encourage residents to hold foreign exchange deposits with banks at home, both in countries where such deposits were originally permitted for migrant workers and in others with an acute foreign exchange shortage. Many countries have also permitted exporters to retain part of their export receipts and deposit them in special accounts, using them for imports free of any foreign exchange restrictions. The interest rates offered on such deposits are usually above world levels; deposits are highly liquid; even sight deposits earn considerable interest; and they are much more easily accessible than their counterparts in most industrial countries, where minimum limits and/or charges and commissions are applied.

The effect of introducing foreign currency deposits is generally to increase the importance of foreign currency in the domestic monetary system, i.e. encourage currency substitution and dollarization of the economy. In many developing countries where such deposits were introduced, there was not just a once-and-for-all shift from holding foreign banknotes; rather, foreign exchange deposits kept growing, often rapidly, even coming to exceed domestic currency deposits. The share of foreign exchange accounts in total deposits in recent years exceeded domestic currency deposits in a number of developing countries in Latin America as well as in Asia (e.g. Philippines), the Middle East and Europe (e.g. Turkey and Yugoslavia). Even in London the share of total bank claims (including inter-bank claims) on residents in foreign currencies barely exceeds 20 per cent (Bryant 1987, chapter 3; Akyüz 1992b). Moreover, some developing countries have started issuing dollar-denominated or dollar-indexed paper in domestic markets, and even quoted certain public sector goods prices in dollars. In short, the degree of financial openness of many developing countries is much greater than indicated by the degree of capital account convertibility.

Regarding the entry of non-residents to domestic markets in developing countries, recent years have witnessed two major developments: opening capital markets to non-residents and increased access of foreign banks. The debt crisis has increased the internationalization of finance. In many highly-indebted countries, especially in Latin America, the "market-based menu" has generated new prospects for international arbitrage, speculation and windfall profits for a handful of operators in creditor and debtor countries. Various debt conversion facilities have significantly raised the amount of equities and domestic-currency debt assets held by non-residents in such countries. Residents have also been allowed to buy foreign currency in the curb market to purchase debt in the secondary markets; some countries have also encouraged them to do so through tax and other forms of amnesty in order to bring back flight capital. The size of such operations increased so rapidly compared to the monetary base that Central Banks found it very difficult to sterilize their impact; thus, occasionally governments had to limit, discourage or suspend such operations in Argentina, Brazil, Chile and Mexico (UNCTAD 1989, pp. 105-107).

More recently, access of non-residents to national equity markets has been encouraged in the context of privatization programmes. While one of the stated objectives of privatization has been precisely to develop capital markets, increased access to such markets has been granted to non-residents in order to boost demand. Some of the newly-emerging capital markets have come to depend on foreign portfolio investment which often accounts for a major part of capital inflows.

Finally, recent deregulation of domestic financial markets in developing countries has often been accompanied by relaxing restrictions on the entry of foreign banks. However, some major industrialized countries, notably the United States and the United Kingdom, have been advocating further liberalization of trade in banking services in the context of an agreement in the current multilateral trade negotiations. This is largely a reflection of their belief that banks in these countries have a competitive edge compared to their counterparts in developing and other developed countries. The control that banks and other financial institutions can exert over the pattern and scale of production may be thought to help them to regain, at least partly, competitiveness in industry vis-à-vis Japan and Germany; it also explains why the United States and the United Kingdom have been putting pressure on these countries for greater financial openness.

While a fuller treatment of this issue goes beyond the scope of the present paper (see Cornford 1990; and UNCTAD 1990, pp. 137-162 for such a treatment), it is important to note the implications of such an agreement for financial openness in developing countries. Since the competitive edge of foreign banks in developing countries is primarily in transactions with international characteristics, rather than in intermediation in domestic markets (i.e. accepting deposits and extending credits in domestic currency), such an agreement can create considerable pressures for even greater financial openness in developing countries, and interfere not only with policies regarding trade in banking services, but also with the foreign exchange regime and capital controls.

## II. Nature of international capital flows

Financial openness has significant effects on domestic asset prices, interest rates and exchange rates because it increases the substitutability of domestic and external funds for resident borrowers, and between domestic and foreign currency assets for lenders. The mobility of capital can make it very difficult to delink the rates of return on domestic financial assets from those prevailing abroad and to decouple interest and exchange rates. Capital flows exert a considerable influence on exchange rates and financial asset prices, and are themselves influenced by expectations regarding rates of return on financial assets denominated in different currencies. This means not only that domestic policies have a new channel of influence on exchange rates, trade, balance of payments and, hence, the level of economic activity (namely, through their effects on capital flows), but also that these will all be influenced by financial policy abroad and by events at home and abroad that alter expectations. This effect of openness is known as loss of policy autonomy; i.e. reduced ability of governments to achieve national objectives by using the policy instruments at their disposal (Bryant 1980, chapter 12).

There is a widespread belief that external financial liberalization in developing countries will give rise to capital inflows provided that it comes after domestic capital markets have been liberalized. It is assumed that because of greater shortage of capital in developing countries, internal financial liberalization will raise interest rates above world levels, and a subsequent liberalization of the capital account will trigger a capital inflow. This is seen as a one-off phenomenon of adjustment of domestic asset prices and interest rates to world levels as capital scarcity is reduced through an increase in the underlying capital flows. This view is based on the assumption that the internationalization of finance allows savings to be pooled and allocated globally through movement of capital across countries in response to opportunities for real investment, thereby improving the allocation of resources internationally and equalizing rates of return on investment everywhere.

However, the evidence strongly suggests that most capital movements are motivated primarily by the prospect of short-term capital gains or losses, rather than by real investment opportunities and considerations of long-term risk and return. Comparison of rates of return on capital investment among the seven major industrial countries shows that, on average, inter-country differences (as measured by the coefficient of variation) in rates of return on capital in the business sector during the 1980s have been as large as they were during the 1960s and early 1970s, when capital was much less mobile among such countries (OECD 1989,

table 53; 1991, table 58). There can be little doubt that inter-country differences in rates of return are partly due to country-specific factors such as tax treatment of earnings on capital assets and depreciation allowances. However, there is no evidence that such differences have widened in more recent years.

In assessing the impact of increased capital mobility on rates of return on financial assets, it is necessary to distinguish between assets denominated in the same currency, but issued in different locations, and those denominated in different currencies. Lowering national barriers to financial flows has no doubt reduced substantially the degree of segmentation of national markets and international dispersion of prices for financial assets with identical default risk and term to maturity, and denominated in the same currency but issued in different countries (e.g. dollar CDs issued by London and New York banks). However, this is not true for assets denominated in different currencies (e.g. United States treasury bills in dollars and British treasury bills in sterling). Convergence of rates of return on such assets implies a tendency for interest rate differentials to equal the expected change in the exchange rate of the currencies in which they are denominated; i.e. the currency offering a higher rate of interest is expected to depreciate against the other currency, over the same time interval as the maturity of the assets. In efficient markets, these expectations should be reflected by forward exchange rates; i.e. the so-called "uncovered interest parity" should hold (allowing for differential risk premium). However, the evidence shows that this has not been the case, particularly in the 1980s, either for the dollar vis-à-vis other reserve currencies, or among the major European currencies (UNCTAD 1987; Akyüz 1992b).

Under these conditions there is no reason to expect real interest rates to be equalized across countries. For this to happen exchange rate changes would not only have to be fully covered by interest rate differentials, but also would have to move with purchasing power parities. The evidence from the major OECD countries shows that these conditions are not fulfilled (Kasman and Pigott 1988; McCauley and Zimmer 1989).

The evidence does not, of course, mean that financial markets are not integrated or that capital is not mobile. Rather, it suggests that international capital movements are not motivated by long-term investment opportunities, and financial markets are not efficient. The speculative element in the prospective return from financial assets is not only dominant but also highly variable, capable of generating gyrations in exchange rates and financial asset prices by causing sudden reversals in capital flows for reasons unrelated to the underlying fundamentals, as the experience of the last decade amply demonstrates. This predominance of speculation over enterprise in the sphere of international finance is not very different from the operation of modern capital markets that Keynes described in chapter 12 of *The General Theory* with metaphors such as "the game of Snap, of Old Maid, of Musical Chairs", and "newspaper competitions", "beauty contests" and "casino games".

### III. Capital flows to developing countries

The exposure to short-term, speculative capital flows is much greater for developing than for developed countries. On the one hand, their instability provides greater opportunities for quick, windfall profits on short-term capital movements. On the other hand, the ability of these countries to influence capital flows through monetary policy is much more limited. In a financially open developing country destabilizing capital inflows can always occur regardless of the order in which the markets are liberalized, and how much fiscal imbalance or policy-induced distortion in the exchange rate is present. Such booms do not always end with a soft landing in large part because of bandwagon-type, pro-cyclical behaviour that characterizes international lending and capital flows; a recently liberalized, well-performing economy can suddenly find favour with foreign capital of all sorts, but if things go wrong for some reason, the capital disappears just as rapidly.

While internal financial liberalization strengthens the link between inflation and interest rates, external financial liberalization (unlike trade liberalization) weakens the link between inflation and the exchange rate, causing the latter to be dominated by capital flows instead

of trade balances and the relative purchasing power of currencies; i.e. inflation differentials are more readily reflected in nominal interest rate differentials than in the movement of the nominal exchange rate. Thus, although short-term capital inflows motivated by the lure of quick, windfall profits are often associated with positive *real* interest rate differentials in favour of the recipient, such a differential is not always necessary or sufficient. Capital inflows usually occur when there are nominal interest rate differentials that markets do not expect to be matched by a nominal exchange rate depreciation. Such differentials often emerge when domestic inflation is much higher than abroad and domestic financial markets have been liberalized. Since in many developing countries inflation rates close to those prevailing in the major OECD countries are very difficult to attain, the scope for big arbitrage opportunities to emerge is much greater. Similarly, an expectation that equity prices will rise faster than domestic currency depreciation can prompt an inflow of capital. Both types of expectation can be self-fulfilling since the inflow of funds, if large enough, can itself maintain the value of the currency and boost equity prices.

Such inflows are typically initially a response to a favourable shift in market sentiment regarding the recipient country. This shift may result from external causes such as a sudden rise in export prices, or from internal ones such as reduced inflation, better growth prospects, and greater political stability and confidence in the government's policies and its resolve and capacity to maintain a financially open economy. After the initial shift in market sentiment, bandwagon-type behaviour often develops and creates a speculative bubble where people are lending or investing simply because everybody else is doing the same. When the bubble bursts and the currency comes under pressure, even a very large positive real interest rate differential may be unable to check the capital outflow.

As it is well known, these conditions were broadly fulfilled during the liberalization episodes in the Southern Cone countries in Latin America in the 1970s, when high domestic interest rates, overvalued exchange rates, freedom to borrow abroad and plentiful international liquidity combined to induce capital inflows. There are strong signs that a similar process is under way in a number of Latin American countries today, even though these countries are now in quite different positions compared to the 1970s, as well as differing among themselves with respect to inflation, fiscal posture, and exchange rate and trade policies. It is estimated that the region as a whole received about \$40 billion in 1991, three times the level of 1990, the main recipients being Mexico (\$16.1 billion), Brazil (\$11.6 billion), Argentina (\$5.1 billion), Venezuela (\$4.8 billion) and Chile (\$1.6 billion). In the majority of these countries capital inflows have continued at an accelerated pace in the early months of 1992.

To judge the nature of external capital inflows it is important to know both how the capital is being raised abroad and how it is being used in the recipient country. It is usually the latter aspect that determines its degree of volatility. FDI or enterprise borrowing abroad for investment in productive capacity is generally less susceptible to reversal than inflows directed at the equity market or acquired for relending in the domestic money market or depositing in domestic financial institutions.

While not the whole of the recent capital inflow into Latin America has been for short-term uses, much of it does appear to have been for this purpose. Of the total estimated inflow of \$40 billion in 1991, FDI accounted for only about one-third, and if receipts from privatization are excluded the proportion is about one-quarter. Medium- and long-term bank lending was less than 6 per cent of the total; the rest was raised through bond issues, commercial paper and other short-term money market instruments, much of it being used for relending in domestic capital markets, equity investment or refinancing. There were significant differences among countries in the shares of different types of capital inflow. In Chile about two-thirds consisted of FDI, and in Mexico one-third. By contrast, for Brazil about three-quarters seems to have been short-term (Griffith-Jones *et al.* 1992, tables 4 and 5). Thus, there appears to be a close correlation between the distribution of various types of capital flows and fundamentals.

Chile was the first country in Latin America to receive large short-term capital inflows and to experience in consequence real currency appreciation despite no evident "sequencing errors". As noted by ECLAC, the "substantial rise in interest rates ... and the stability of the (nominal) exchange rate encouraged a large increase in the inflow of short-term capital. This, together with the substantial inflow of direct foreign investment, made it more difficult to manage the monetary situation..." (ECLAC 1990, p. 39). Indeed, between mid-1980 and



mid-1990 the average annual rate of interest on short-term loans was about 40 per cent, the consumer price inflation was around 25 per cent while the nominal exchange rate of the dollar against the peso rose by 10 per cent, giving an arbitrage profit at a rate of about 17 per cent on dollars borrowed in the United States market at an interest rate of 10 per cent and lent in Chile in pesos. Export growth fell during the course of 1990, while imports and foreign exchange reserves rose considerably. The interest rate and inflation rate did not change very much between mid-1990 and mid-1991, but the rate of currency appreciation fell. This was because "the monetary authorities adopted a cautious approach based on the assumption that the oversupply of foreign exchange was only temporary and was due to the unusually high price of copper and the low international interest rates" ECLAC (1991, p. 41), and thus tried to slow the capital inflow and the appreciation of the currency through various measures designed to increase the demand for the dollar and to reduce the arbitrage margin. These measures seem to have had some success, since in 1991 the capital inflow declined moderately (by \$0.3 billion), whereas in most other countries of the region such inflows accelerated.

In Argentina, where capital inflows are partly connected with privatization, the dollar/peso rate remained virtually unchanged between March 1991 and March 1992 owing to the government's policy of stabilizing it as part of efforts to bring down inflation. Domestic interest rates were around 16 per cent, i.e. two-and-a-half times dollar rates, giving a considerable margin for arbitrage. This period was marked by oversupply of foreign currency, a booming stock market where prices increased more than 300 per cent in 1991, a dramatic rise in imports (encouraged partly by trade reform), and a drop in exports.

In Mexico average interest rates (average cost of procuring funds and Treasury certificate rates) were above 30 per cent in 1990, and above 20 per cent in 1991, whereas the currency depreciated in nominal terms by only about 10 per cent in the former year and even less in the latter. Capital inflows played a major role in the boom in the stock market, where the index more than doubled during 1991, foreigners being estimated in the second quarter of 1992 to be holding equities worth more than \$25 billion, or about a quarter of the market's capitalization (*Latin American Economy and Business*, May 1992, p.4). One consequence of the capital inflows and currency appreciation has been sharp increases in reserves, as well as in imports and the trade deficit. Although "the capital account surplus in Mexico over the last two years" is believed to be "a result of very favourable expectations for the economy's future, ... some capital flows have been a source of concern for the authorities", who did not rule out "the possibility of temporary short-term outflows", and thus tried to slow such flows through various measures, including the widening of the differential between intervention points for the peso-US dollar exchange rate to allow larger fluctuations and create greater exchange rate uncertainty (Banco de Mexico 1992, p. 144).

In Brazil inflows began to increase sharply at the beginning of 1992, amounting to about \$8 billion during the first quarter (of which about \$2 billion was for investment in the stock market). There has also been considerable borrowing abroad by exporters and other companies for relending or refinancing, and some accumulation of non-residents' foreign exchange deposits in special accounts. In nominal terms the cruzeiro has been depreciating in 1992 by almost as much as inflation, about 22 per cent per month. Early in the year, for the first time for many years, the rate for the dollar was lower in the parallel than in the official market. Due to a very tight monetary policy, monthly interest rates were around 30 per cent (or 5-6 per cent in real terms), giving a net arbitrage profit of 17 per cent over the first three months. The rise in prices on the stock exchange was even greater; Sao Paulo stock prices doubled in dollar terms from December 1991 to April 1992. Large purchases of foreign exchange raised central bank reserves to \$13.7 billion in March 1992, up from \$7.5 billion in the same month of 1991 (IESP, June 1992). The Central Bank has been issuing domestic debt in order to sterilize the effects of its dollar purchases on the money supply. Since reserves can earn no more than 5-6 per cent per annum in international markets, while domestic debt carries as much as that *per month*, the operation is extremely costly. On the assumption of a constant real exchange rate and 3 per cent real interest rates per month on domestic debt, the cost of carrying an extra \$5 billion of reserves can be estimated to be of the order of \$2 billion per annum.

In attempting to evaluate how far such capital inflows can be sustained it is necessary first to distinguish that part which is of a one-off nature. This includes repatriated flight capital and capital attracted by privatization. The latter has been important in Argentina and Venezuela (over one-quarter and three-quarters of their total inflows in 1991, respectively).



Repatriated flight capital is difficult to estimate but seems to be particularly important in Mexico and Chile. With regard to the rest of the capital inflow, it should be noted that the particular configuration of interest rates, exchange rates and stock prices currently prevailing in many Latin American countries, and which attracts short-term capital flows, cannot be expected to last. When the configuration changes, these flows could be suddenly reversed, thus setting off a cumulative process which might extend to all kinds of capital flows, including those unrelated to considerations of short-term gain.

That short-term capital flows can easily be reversed is evident from the experience of Turkey following the liberalization of its capital account and lifting of restrictions on private borrowing in August 1989, although financial capital flows were much more moderate in comparison with Latin America. The domestic lending rate on non-preferential loans was more than 70 per cent throughout 1990, while nominal depreciation of the currency against the dollar was less than 30 per cent, providing considerable incentives for arbitrage. The currency appreciated, although massive increases in imports, particularly of consumption goods (encouraged also by trade liberalization), absorbed most of the capital inflow; the rest was reflected in a surge in the level of reserves, matched by an unprecedented trade deficit and debt accumulation. The net short-term inflow reached \$3 billion in 1990 compared to a net outflow of \$2.3 billion in the year before. The shift towards the Turkish lira also played a role in a sharp increase in the Istanbul Stock Exchange index, which rose by more than five times in one year. However, the process was reversed in early 1991 with the outbreak of the Gulf War and political uncertainty at home, and the shift to foreign currency has continued after these ended. During 1991 the currency depreciated against the dollar by more than 70 per cent even though inflation was only moderately higher than in the previous year; stock prices fell by one-half from their peak; foreign exchange reserves declined considerably; and short-term capital flows were reversed, registering a \$3 billion net outflow in 1991. What is remarkable about this process is that the real domestic interest rates were barely different between the two phases; the major difference was in the state of confidence and expectations, and in the direction of capital flows and in the exchange rate.

The ideal response to increases in such capital inflows is a corresponding increase in domestic investment in traded goods sectors. Imported capital goods can absorb a large part of the capital inflow, thereby preventing a sharp appreciation of the currency. Moreover, they can enhance productivity growth and increase exports, both of which are needed to restore competitiveness impaired by currency appreciation and to raise debt-servicing capacity. But higher investment is not always possible when domestic interest rates are prohibitive, and long-term investment with funds borrowed abroad at lower rates carries considerable exchange rate risk. In such circumstances it is usually much more attractive to buy and sell existing assets than invest. The dilemma is that the high interest rates and/or currency appreciation that attract capital from abroad can also deter investment on which growth and sustainability of capital flows depend.

In most Latin American countries today the real lending rate is in double-digit figures and exchange rate uncertainties are widespread, which make it difficult to restore vigorous growth based on private investment. The public sector, on the other hand, lacks either the resources or the willingness to invest. It is not yet possible to determine the extent to which these capital flows have been translated into higher investment in Latin America over the last couple of years. Although there seems to have been a considerable increase in capital goods imports in some countries, encouraged partly by tariff reductions, the increase in investment in the region appears significantly smaller than the sharp swing in the transfer of resources abroad, which amounted to about 4 per cent of the region's GDP. Indeed, Brazil, which has been receiving large capital inflows, is in a deep recession and the rate of investment seems to have fallen below 16 per cent of GDP for the first time for many years. Similarly, Argentina does not appear to have been able to raise its investment ratio above 10 per cent, or well below levels attained during the late 1980s when the country was making net transfers abroad.

A foreign exchange glut generated by unsustainable capital flows can damage industry through currency appreciation, particularly when it is accompanied by tariff reductions. Concerns on this score are widespread in Latin America, one prominent industrialist being recently quoted as saying that there was a danger that the remainder of Argentina's industrial base would be wrecked because goods were being imported at prices which domestic industry could not possibly meet (*Latin American Economy and Business*, May 1992, p. 6). The dilemma is that if currency appreciation is prolonged, it leads eventually to an external

payments crisis; but if it is suddenly reversed, the arbitrage margin disappears, possibly triggering a sharp reversal in short-term capital flows.

To prevent currency appreciation when there is a massive inflow of capital is no easy task, particularly when it consists neither of FDI nor of borrowing by domestic entrepreneurs for investment and capital goods imports. Increased imports of consumer goods through trade liberalization can prevent a sharp appreciation of the currency. Recently Chile has deliberately used tariff reductions in order to raise the demand for imports and the dollar (ECLAC 1991, p. 41). However, such a strategy adds to foreign exchange liabilities without adding to export capacity - something that was often stressed during the 1980s as the major cause of the debt crisis.

When monetary expansion and currency appreciation are prevented by the accumulation of reserves and the issue of domestic debt, as in the Brazilian case discussed above, the burden falls on the public sector. Fiscal problems can be avoided only if the currency depreciates sufficiently to raise the real domestic currency value of reserves to a level at which the real capital gain on them offsets excess interest payments on domestic debt (i.e. payments arising from the difference between domestic and foreign rates in dollar terms). However, the real depreciation required may have to be very large - more than 35 per cent, for example, in the case of Brazil. Expectations of such a sharp depreciation can easily trigger a large capital outflow. Besides, since the government makes a net transfer abroad to service its external debt, the depreciation increases the real domestic currency value of interest payments abroad. If reserves are used to pay debt, this could mean that the government was borrowing at about 30-40 per cent per annum in real terms to pay its external debt.

There is, thus, no easy way out of the dilemmas caused by speculative capital inflows triggered by very high interest rates and bandwagon-type movements. A number of techniques have been used in order to slow them down. These include reserve requirements (sometimes non-interest-bearing ones) for liabilities of banks denominated in foreign currencies (Chile, Mexico and Turkey); compulsory liquidity requirements on the short-term forex liabilities of commercial banks (Mexico); minimum holding periods (Chile); extension of the fiscal stamp tax to foreign credits (Chile); restrictions on company borrowing abroad through stock and bond issues (Brazil); and limits on the dollar amounts that banks can raise in deposits abroad as a proportion of their total deposits (Mexico). However, such measures have generally had only limited success. Governments are often very shy in applying effective controls for fear of fending off genuine, long-term capital and investment. This is certainly a legitimate concern, particularly in Latin America, after a decade-long foreign exchange strangulation. However, experience shows that effective capital controls might have to be introduced anyway if the process develops into a payments crisis and capital flight. It may be easier to restrict short-term inflows and prevent debt accumulation early on than to check capital flight in a crisis.

Instability in short-term capital flows combined with the inherent volatility of capital held in stocks and shares exposes the economy to even greater risks when a close link develops between capital and currency markets. Since opening up domestic capital markets requires some form of currency convertibility for non-resident equity investors, such a link can develop even in countries where the capital account is not fully open. This may present a serious problem in Latin America because of the increased presence of non-residents in capital markets. The link is also strengthened because the residents of many countries of the region often have easy access to foreign currency assets.

This link increases the potential for the emergence of foreign exchange and/or stock market crises. Since the return on investment to the foreign investor depends largely on the movement of the exchange rate, a serious shock (e.g. a terms of trade deterioration) that makes a devaluation appear inevitable can trigger both a sharp decline in equity prices and an outflow of capital. Similarly, the mood in equity markets can exert a strong influence on the exchange rate - e.g. bullish expectations can trigger capital inflow, leading to overvaluation. By contrast, a more bearish mood in the capital market and/or massive profit-taking in dollars by non-residents can not only prick the speculative bubble in the stock market, but also lead to a currency crisis. This is a particularly acute danger when the currency is allowed to continue to appreciate and short-term flows are encouraged to enter the capital market unchecked. Evidence from recent years suggests that strong destabilizing influences between financial and currency markets can easily develop; for instance, when the bubble burst in the

Tokyo stock exchange at the beginning of 1990, there was a massive shift out of yen-denominated assets, causing also considerable drops in the government bond index and the currency (Akyüz 1992b).

In order to curb such destabilizing feedbacks between currency and capital markets various restrictions may be introduced in developing countries. One common measure is to limit foreign ownership to approved country funds and allow transactions on such funds only among non-residents in order to control the flow of foreign funds in and out of the country via capital markets. This can be combined with the requirement that such funds be managed by local managers who are generally more amenable to "moral suasion" by the authorities. It should be noted, however, that if such restrictions prove effective, they will tend to discourage capital inflow. In several industrialized countries capital markets have been opened up to non-residents only very recently. In Japan, for instance, they were largely closed until the 1984 agreement with the United States, and even in Europe, where an integrated financial market is seen as an important step in the completion of a single EEC market, restrictions on entry into capital markets still remain in a number of countries (e.g. France and Italy). Again, Korea only recently opened up its capital market to non-residents (apparently in order to help lift the prices after a massive drop), but restricted foreign acquisition to 10 per cent of total equity capital (i.e. less than one half of the level in Mexico mentioned above), and to 2 per cent in some strategic industries.

#### IV. Risk, cost of finance, investment and competitiveness

Integration of a developing country into an international financial system characterized by volatile capital flows tends to generate *systemic* influences that can undermine its growth and competitiveness. These effects occur primarily through two channels: risk and the cost of capital. Sharp swings in the direction of capital flows, and instability of exchange rates and interest rates associated with them, tend to increase risk, liquidity preference, and the interest rate, thereby reducing investment. The high cost of capital also creates a serious competitive disadvantage for industry in world markets, and competitiveness cannot always be restored through adjustments in exchange rates because they are governed by capital flows rather than trade.

The Keynesian notions and analysis of the borrower's risk and the lender's risk as determinants of investment and interest rate provide an appropriate framework for discussion of the effects of financial liberalization on risk and the cost of capital (Akyüz 1992a). The "entrepreneur's or borrower's risk ... arises out of doubts in his own mind as to the probability of his actually earning the prospective yield for which he hopes... (I)t is a real social cost, though susceptible to diminution by ... an increased accuracy of foresight" (Keynes 1936, p. 144). Thus, while the borrower's risk is inherent in all investment decisions, its level depends, among other things, on the access of the borrower to reliable information and the stability of economic conditions. The expected rate of return on investment must be high enough to cover both the borrower's risk and the cost of finance.

An important determinant of the rate of interest is the lender's risk. It arises in a number of ways. First, the risk due to the possibility of involuntary default by the borrower; in other words, in a system of borrowing and lending, the borrower's risk is at least partly duplicated in the interest rate. Second, voluntary default, or what Keynes calls the moral risk; the lender must make allowance for the dishonesty of the borrower and non-enforcement of contracts. Third, the lender also runs a risk regarding the capital value of his assets, due to uncertainties over future interest rates, asset prices and the price level.

External financial liberalization in a developing economy can increase both the borrower's and the lender's risks; i.e. it can raise the rate of return required by both investors and savers. Thus, contrary to the orthodox view, financial openness in developing countries can raise the cost of capital and depress investment.

The borrower's risk tends to increase because of instability of exchange rates. For investors in traded goods sectors, the real exchange rate (measured in terms of wages and prices

of non-tradeable inputs) is the single most important relative price affecting profits. Firms operating in non-traded goods sectors are also affected by the exchange rate, depending on the imported inputs they use. In both sectors, large swings in exchange rates result in considerable uncertainty regarding prospective yields of investment. This will raise the average rate of return required by investors to undertake investment, particularly in the traded goods sectors, and depress the level of investment to be undertaken at any given rate of interest.

The importance of the exchange rate as a variable influencing investment decisions increases with the share of foreign trade in the economy. It is thus of growing importance in the developing world because of widespread import liberalization and greater dependence on exports for growth. But simultaneously the exchange rate is becoming a variable pertaining to the sphere of finance, determined largely by capital flows delinked from trade and investment. Large swings in exchange rates can thus undermine the success of the new "outward oriented" strategy by depressing investment in traded goods sectors. The evidence suggests that such adverse effects have occurred even in industrial countries, where firms are better equipped to hedge against unexpectedly large swings in exchange rates, and that exchange rate stability has been an essential feature of countries with sustained export growth (UNCTAD 1987; UNCTAD 1989, Part One, chapter V).

Increased borrower's risk also affects the lender's risk and, hence, the interest rate, since it increases the probability of involuntary default, thereby tending to push up the interest rate and depress investment further. Moreover, the rate of interest also increases through other factors affecting the lender's risk. Increases in the volatility of interest rates and the prices of financial assets, including equities, lead to greater capital-value uncertainty which, in turn, raises the liquidity preference and lowers the demand for capital-uncertain assets. The result is to shorten the maturities of financial assets and push up interest rates, especially the long-term ones.

Increased competition between assets denominated in the domestic currency and in foreign currency tends to raise the cost of finance also because there is greater risk and uncertainty in developing countries. The fact that most developing countries are economically and politically more unstable than developed countries, together with the weaknesses in their financial and legal systems in ensuring enforcement of contracts, makes financial investment in these countries more hazardous. That is why spreads over LIBOR in international lending are much higher for developing than for developed country borrowers, and why foreign exchange deposits in developing countries have to offer higher rates than those in world markets. In a financially closed economy there are considerable transaction costs in shifting into foreign exchange assets, at least for a large number of small savers, which tend to offset the safety premium on such assets. Financial openness reduces these costs considerably. Consequently, domestic assets need to carry much higher rates of return than external assets to make up for their additional risk.

The effect of high interest rates on the competitiveness of industry in developing countries can be very serious. In these countries the equity base of corporations is usually very weak, leverage high, debt maturities short, and corporate debt contracted at variable rates. The corporate sector borrows heavily not only for fixed investment but also for working capital, and its ratio of debt to operating surplus is thus very high. Higher interest rates can therefore impose a very heavy burden on firms, requiring even greater reliance to be placed on keeping wages low in order to compete in world markets. That is why many governments have maintained preferential lending to export sectors when deregulating interest rates. In Turkey, for example, interest rates on export credits were kept at around 20-25 per cent during the first half of the 1980s when non-preferential lending rates had almost reached three-digit figures. In Korea all preferential lending rates were ostensibly abolished, loan rates unified, and interest rates officially deregulated in the course of the 1980s partly as a result of external pressures, but in practice targeted export industries continued to receive preferential treatment by virtue of access to bank loans which carried below-market interest rates (UNCTAD 1991, box 13).

It is now widely recognized that direct allocation of low-cost credits played a major role in the industrialization of the successful Asian NICs during the 1960s and 1970s (Amsden 1989; Bradford 1986; Cho and Khatkhate 1989; Hanson and Neal 1985; Lee 1992; and Westphal 1990). Indeed, almost all modern examples of industrialization have been accompanied by government intervention in the determination of the cost and availability of finance

in the pursuit of selective industrial policies. Success in overcoming productivity handicaps in international markets has often stemmed not so much from a keeping down wages as from the provision of selective incentives and subsidies. Government intervention in the financial sector is needed to ensure that firms facing what is typically a prolonged learning process are not deterred by a lack of long-term funds at low cost. Thus, in Korea "government intervention was necessary not just to steer credit in the right direction but to underwrite production during the learning process that was far more involved than what is commonly meant by 'infant industry protection.' Subsidized credit meant the difference between establishing new industries or not, rather than the difference between high or low profits" (Amsden and Euh 1990, p. 31). Thus, "extensive intervention by the government with South Korea's financial system can be viewed as an internal capital market and, consequently, it could have led to a more efficient allocation of credit than possible in a free-market financial system" (Lee 1992, p. 187). A principal feature of the external financial strategy of that country was to control external borrowing through official approval and guarantees, and allocate foreign capital via the government-owned Development Bank. Capital account liberalization was placed last on the agenda and foreign pressures were strongly resisted. Even in the late 1980s the government continued to prohibit firms outright from borrowing abroad and placed tight controls on short-run speculative capital inflows. In 1987-1988 it relaxed its controls on capital exports, but reimposed restrictions in 1989 as soon as the trade balance fell short of expectations (Amsden and Euh 1990, pp. 22-23).

Evidence from developed countries also points to the importance of financial control and low cost of finance for competitiveness. A comparison of the cost of capital for corporations in the United States, Japan, Germany and the United Kingdom for the period 1977-1988 indicates that the United States and the United Kingdom had a considerable disadvantage in relation to the other two economies. This has contributed to declining competitiveness of the United States in recent years; lower capital costs and a more predictable supply of finance appear to have enabled Japanese firms to undertake longer-term projects, including investment in research and development, whereas United States firms have been deterred (McCauley and Zimmer 1989; Poterba 1991; Zimmer and McCauley 1991). Historically, financial asset prices and interest rates in Japan and Germany have been less volatile than in the United States, bank deposits more stable, and financial disruptions and bank failures less frequent. It should be noted that for most of the postwar period these two countries, particularly Japan, have been financially much less open than the United States and Britain and much more regulated; in both countries industry has also had much greater integration with banking through financial organizations with characteristics of internal capital markets (Akyüz 1992a).

It should be noted that in recent years, particularly since the 1984 United States-Japan agreement on capital account liberalization, the Japanese financial system has been showing signs of strain in reconciling a policy of cheap finance with financial openness. There have been severe fluctuations in equity prices, interest rates and the exchange rate in recent years, which, as noted above, often posed serious policy dilemmas. With the collapse of equity prices and the rise in interest rates, the dilemma appears to have been resolved in favour of a higher-than-historical cost of finance in Japan, at least for the foreseeable future, eliminating (or even reversing) the cost advantage of Japanese firms vis-à-vis American firms (Martin 1992).

## V. Conclusions

The focus of attention in developing countries in the design of financial policies should be industrialization and stability. A common feature of all modern examples of industrialization is that all the countries concerned have succeeded in making finance serve industry and trade, not vice versa. This is no less true for external finance.

Complete isolation of the financial system in a developing country from the rest of world is neither feasible nor desirable. Successful export performance requires close interaction of banks at home with international markets in order to provide trade-related credits and facili-

tate international payments. The ability to borrow in international capital markets allows diversification in financing and helps reduce the vulnerability of private and public companies to unexpected changes in financial conditions. Entry of foreign banks into domestic markets can bring greater competition in the provision of trade-related banking services, thereby reducing intermediation margins and the cost of finance. Similarly, foreign investment in capital markets can help corporations to broaden their equity base and reduce their leverage.

However, particular care needs to be given to the design of external financial policies since mistakes in this area tend to be very costly and difficult to reverse. Allowing residents uncontrolled access to international capital markets has proved damaging in many developing countries, and short-term speculative capital flows have proved extremely troublesome even for industrial countries. Most developing countries need to exercise considerable control over external capital flows in order to be able to pursue autonomous interest rate and exchange rate policies. It is usually possible, despite the difficulties involved, to separate trade- and investment-related financial transactions from short-term capital transactions, and to "throw some sand in the wheels" through such means as a financial transaction tax in order to "deter short-term financial round-trip excursions" (Tobin 1978). They also need to control borrowing by residents in international capital markets in order to prevent debt accumulation not matched by greater export capacity. Finally, access of non-residents to domestic capital markets should be restricted since, among other things, close links between the two inherently volatile markets can be very dangerous.

It is important to bear in mind that price stability is vital for a financially open economy, since high inflation and wide interest rate differentials with reserve-currency areas can lead to big arbitrage opportunities and encourage unsustainable capital flows. Similarly, while controls can help prevent spontaneous destabilizing movements in currency and financial markets, they will not succeed in stemming capital flight in the face of economic and political instability. Foreign currency accounts may help to keep dollars at home, but they are poor substitutes for monetary and fiscal discipline.

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