

THE CURRENT ECONOMIC SITUATION,
OUTLOOK AND POLICY OPTIONS,
WITH SPECIAL EMPHASIS ON FISCAL POLICY ISSUES

Willem Buiter

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Centre for Economic Policy Research
6 Duke of York Street
London SW1Y 6LA

Tel: 01 930 2963

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ABSTRACT

The paper provides an account of the current global economic situation, outlook and policy options. Medium-term prospects are mediocre and fraught with considerable downside risk. Fiscal and monetary policy options for the main industrial countries to improve global economic performance are outlined. The worries about the US fiscal position are shown to be exaggerated. It is also argued that while the US economy is well on course to become a net external debtor, it has not yet reached that position. In the longer run, prosperity or depression will be determined to a large extent by policy choices.

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Willem Buiter
Professor of Economics
Yale University

Visiting Professor (1987-88)
Department of Economics
London School of Economics
Houghton Street, Aldwych
LONDON WC2A 2AE

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NON-TECHNICAL SUMMARY

The paper provides an account of the current situation, outlook and policy options for the global economy. Medium-term prospects are mediocre and fraught with considerable downside risk, as indicated in Section 1. Section 2 outlines fiscal and monetary policy options for the main industrial countries to improve global economic performance. Worries about the US fiscal position are shown to be exaggerated in Section 3. In Section 4 it is argued that while the US economy is well on course to become a net external debtor, it has not yet reached that position. In the longer run too, prosperity or depression will be determined to a large extent by policy choices.

Mediocre medium-term prospects and considerable downside risks for the world economy Among the few bright spots in the current world economic situation are the achievement of a lower rate of inflation and the absence of any serious immediate threats of a renewed inflationary surge. Another positive development is the realignment of nominal and real exchange rates which has taken place since 1985, mainly through the depreciation of the US dollar and the appreciation of the Deutschmark and Yen. This is a necessary, but by no means sufficient condition for the restoration of global macroeconomic equilibrium.

Barring significant changes in the fiscal-monetary policy mix in the leading industrial countries, there is unlikely to be a significant improvement in the medium-term outlook for global economic growth. The current tendency toward low and gently declining growth rates of GDP and world trade is therefore likely to continue. There also is considerable "downside risk" in the shape of a world recession which could be triggered by a number of unfavourable contingencies. These include:

- (1) An uncoordinated attempt to redress the intra-OECD macroeconomic imbalances by a unilateral fiscal contraction in the United States without offsetting changes in monetary policy in the United States and in monetary and fiscal policy in the

rest of the OECD to support the level of global economic activity.

(2) An abrupt "free fall" of the US dollar, triggered by a loss of confidence in the international financial markets. This could provoke a defensive tightening of US monetary policy, resulting in an increase in nominal and real interest rates (especially at the short end) and a recession in the United States, with spillovers to the rest of the world and an immediate worsening of the position of the major debtor countries.

(3) An exacerbation of the debt crisis, which weakens the banking and financial systems of the industrial countries and results in an increase in the cost and a reduction in the availability of credit for domestic and international lending. The reduced demand by badly affected debtor countries for the goods and services of the industrial countries would intensify the contractionary pressures in the world economy.

(4) A financial crisis triggered by a major stock market collapse in one or more of the world's financial centres. Price/earnings ratios of 100 or more have become routine recently on the Tokyo stock market and the sustainability of this situation is open to question. The interdependence of the major financial centres is now such that a serious collapse in any one of them is likely to spill over into the others. The very high levels of consumer and other private credit outstanding in many of the industrial countries (notably in the United States) make their financial systems much more vulnerable to shocks. The rapid pace of deregulation and innovation in domestic and international financial markets may have outstripped the capacity of the established mechanisms for prudential control. The resulting uncertainties and vulnerability matter little when the world economy is prospering and major shocks are absent. They carry the potential, however, for cumulative "debt deflation" and financial crisis should the world economy stagnate and

unanticipated shocks rock the system.

(5) A worsening of global protectionist tendencies and, in the worst-case scenario, a serious trade war. A global recession triggered by any set of unfavourable contingencies is likely to carry in its wake a tendency towards more intense protectionism. This would in turn deepen the recession and delay the recovery.

(6) A major increase in the price of oil, triggered by a conflagration in the Gulf for example.

Policy options to improve global economic performance. None of these adverse events may come to pass; most of them can be avoided by reasonable international cooperation spurred by no more than enlightened self-interest. Some form of global contingency planning does seem highly desirable. Anticipating adverse shocks, avoiding contributing to them and being ready to respond flexibly and in a coordinated manner to those that are beyond their control should figure prominently on the agendas of the monetary and fiscal authorities of the major industrial countries.

The elements of a policy package that would significantly improve global macroeconomic performance in the near and medium term are the following:

There should be a "supply-side friendly" fiscal expansion in the fiscally strong industrial countries, such as Japan, Germany, and the United Kingdom. The behaviour of their debt/GDP ratios, their primary government deficits and, in the case of Japan and Germany, their current account deficits suggest that these countries have ample fiscal elbow room. In addition there is considerable real slack in all three economies, which can be expanded in the case of Germany and the United Kingdom if the right supply-side friendly fiscal measures and other reforms of the key markets are undertaken (especially the labour market and,

in the United Kingdom, the housing market). These measures include cuts in employers' social security contributions, private investment subsidies (possibly temporary to get maximal short-term effects on demand), other cuts in direct taxation, increased investment in the social infrastructure and, especially in Japan, measures to stimulate investment in private housing. The recently announced fiscal stimulus in Japan is a step in the right direction but seems very small (about \$35 billion) in relation to both the macroeconomic and the structural needs of both Japan and the world economy. The German decision to bring forward some already scheduled tax cuts (0.9% of GDP in 1988) also seems inadequate. France, however, appears to have little room currently for a significant fiscal stimulus and Italy needs to retrench in view of the magnitude of its primary deficit. It is important in the case of Italy that the government does not abandon its seigniorage tax, as this would either cause a further debt explosion or necessitate a very savage cut in the primary deficit. Tight monetary policy in Italy today seems very counterproductive.

To prevent the Japanese-European fiscal expansion from being "crowded out" by further exchange rate appreciation, monetary policy in Japan and Europe should aim to stabilize the exchange rate or at least prevent a very sharp appreciation of their currencies.

Unilateral fiscal contraction in the United States, would only succeed in improving the US fiscal and trade deficits by exporting a recession to the rest of the world through a further depreciation of the US real exchange rate, unless this contraction is accompanied by a correspondingly expansionary US monetary policy and a European-Japanese fiscal-monetary package to expand demand at a given exchange. A coordinated global package of fiscal and monetary policies is therefore essential.

Unnecessary alarm about the US Fiscal position. The "unsustainability" of the current US fiscal position has been much exaggerated. If the United States has a general government primary deficit at all, it is small and no fiscal heroics to eliminate it seem required. In order to achieve full employment and surpluses in the current account and trade balance, spending cuts and/or tax increases are called for in the United States. It is important to announce these measures as soon as possible and to schedule the fiscal retrenchment over a number of years. Credible announcements today of future fiscal tightening have expansionary effects today: the anticipation of future spending cuts or tax increases lowers today's long real interest rates and may even boost the market price and shadow price of existing capital stock, encouraging new investment. When the fiscal contraction is actually phased in, it will have its normal depressing effect on aggregate demand. At that stage the Fed should be ready to provide the necessary once-off monetary stimulus to avoid a recession.

The net international investment position of the United States has worsened steadily since 1982. There had been small current account deficits previously but the recent current account deficits are unprecedented both in dollar terms and as a percentage of GNP. Since 1983, the current account deficit has been 1.4, 2.8, 2.9 and 3.3% of GNP. The previous postwar peaks in 1977 and 1978 were a mere 0.7% of GNP.

These current account deficits have eroded the net international investment position of the United States, but it is doubtful whether the United States is yet a net external debtor country, as is often reported. The official data on the US net international investment position support the view that the country became a net external creditor in 1985. The picture of the United States as a net external debtor is contradicted by the robustly positive stream of net investment income (or net foreign factor income) of \$29 billion in 1982, \$25 billion in 1983, \$19

billion in 1984, \$25 billion in 1985 and \$23 billion in 1986. A country that is a net external debtor cannot have a persistently positive net stream of foreign investment income.

The question therefore is whether to believe the negative stock data or the positive flow data. It is likely that both series are subject to severe measurement errors. The external assets and liabilities of the United States, for example, tend to be valued at "historic cost". On balance, it seems likely that the picture presented by the positive net stream of foreign investment income is correct and that the United States has not yet become a net external debtor. The persistence of current account deficits would mean, however, that it is only a matter of time until the true net external investment position of the United States becomes negative and the positive flow of net investment income turns negative. Regardless of the net external investment position of the United States, it hardly seems right from the point of view of a globally efficient allocation of scarce investible funds for the most capital-rich country to appropriate such a large share of the world's savings.

Long-run prospects. In the longer term, potential output growth is to a large extent the result of policy choices. Even if the underlying or trend growth rate of factor productivity is unaffected by stabilization policy, which is by no means certain, potential output growth is a function of the growth of the private and public sector capital stocks, which can be boosted by appropriate supply-side policies and by demand management aimed at securing a high degree of capacity utilization.

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I. Introduction

The current global economic situation is one of low and declining growth rates of real output, persistent external imbalances and growing protectionist pressures.

Among the few bright spots are the achievement of a lower rate of inflation and the absence of serious immediate threats of a renewed inflationary surge, both in the industrial and in many of the developing countries. Another positive development is the realignment of nominal and real exchange rates during 1985, 1986 and the first half of 1987, mainly through the depreciation of the U.S. dollar and the appreciation of the D-Mark and the Yen. This is a necessary, but by no means a sufficient, condition for the restoration of global macroeconomic equilibrium.

Barring significant changes in the fiscal-monetary policy mix in the leading industrial countries, the near- and medium- term outlook for global economic growth does not hold out great promise for a significant improvement over the growth stagnation of the past two years. Long-term global real growth rates much in excess of those achieved since the beginning of the 1980s will in addition require structural reforms in the industrial countries to enhance the flexibility of labor, product and financial markets, promote intersectoral resource mobility, boost full employment national savings rates and raise the share of capital formation and the yields on public and private investment.

The developing countries, which collectively account for a rising share of global economic activity, are an important component of any strategy for improved global economic performance. Individual developing countries,

even the larger ones, have, however, very little influence on their external economic environment. The growth of world trade, global nominal and real interest rates, the terms of trade, ease of access to world markets, and the availability of aid and of concessional finance are effectively beyond their control. While the economic performance of the developing countries is to a large extent determined by domestic events and by their own economic policies, an unfavorable international environment creates serious, and in some cases almost unsurmountable, obstacles to growth and development. The recent falling off of growth rates in the majority of the developing countries reflects the worsening international economic environment and the absence of a viable long-term strategy for dealing with the debt crisis.

As has been stated already, the median near- and medium-term prospects for global economic growth are not good, barring significant changes in the macroeconomic policy stance of the main industrial countries. A continuation of the current tendency of low and gently declining growth rates of GDP and world trade is therefore likely. There also is considerable "downside risk" in the shape of a world recession which could be triggered by a number of unfavorable contingencies. Among these are the following: (1) an uncoordinated attempt to redress the intra-OECD macroeconomic imbalances by a unilateral fiscal contraction in the United States without accompanying monetary policy actions in the United States and monetary and fiscal policy actions in the rest of the OECD to support the level of global economic activity; (2) a sudden, abrupt "free fall" of the U.S. dollar, triggered by a loss of confidence in the international financial markets, which provokes a defensive tightening of U.S. monetary policy, resulting in an increase in nominal and real interest rates (especially at the short end) and a recession

in the United States with spillovers to the rest of the world and an immediate worsening of the position of the major debtor countries; (3) an exacerbation of the debt crisis, which weakens the banking and financial systems of the industrial countries and results in an increase in the cost and a reduction in the availability of credit for domestic and international lending. The reduced demand by badly affected debtor countries for the goods and services of the industrial countries would intensify the contractionary pressures in the world economy; (4) a financial crisis triggered by a major stock market collapse in one or more the world's financial centres. Price earnings ratios of 100 or more have become routine recently on the Tokyo stock market and the sustainability of this situation is open to question. The interdependence of the major financial centres now is such that a serious collapse in any one of them is likely to spill over into each and everyone of them. The very high levels of consumer and other private credit outstanding in many of the industrial countries (notably in the United States) make their financial systems much more vulnerable to shocks. The rapid pace of deregulation and innovation in domestic and international financial markets may have outstripped the capacity of the established mechanisms and institutions for prudential control. The resulting uncertainties and vulnerability matter little when the world economy is prospering and major shocks are absent. They carry the potential for cumulative "debt deflation" and financial crisis when the world economy stagnates and unanticipated shocks rock the system; (5) a worsening of global protectionist tendencies and, in the worst-case scenario, a serious trade war. A global recession triggered by any set of unfavorable contingencies is likely to carry in its wake a tendency towards more intense protectionism. This would in turn deepen the recession and delay the

recovery; (6) a major increase in the price of oil, triggered say be a conflagration in the Gulf.

None of these adverse event may come to pass; most of them can be avoided by reasonable international cooperation spurred by no more than enlightened self-interest. Some form of global contingency planning does seem highly desirable. Anticipating adverse shocks, avoiding contributing to them and being ready to respond flexibly and in a coordinated manner to those that are beyond their control should figure prominently on the agendas of the monetary and fiscal authorities of the major industrial countries.

II. Developments In The World Economy

The slowdown of global economic growth since 1984, the peak year of the brief recovery that began in 1982 is apparent from Tables 1 and 2. Real GDP growth for the OECD as a whole peaked in 1984 at 4.8 percent and declined to 3.1 percent in 1985, 2.6 percent in 1986 and an estimated 2.3 percent in 1987. ^{1/} The decline in real growth rates was most pronounced in the United States, followed by Japan and Germany. No significant deceleration from the most recent cyclical peak occurred for the United Kingdom, Italy and France, but with the three main industrial powers slowing down significantly, the overall growth rate for the industrial world has been only a steady downward path since 1984. The slowdown in the growth rate of GDP in the industrial world is mirrored in the declining growth rates of world trade shown in Figure 2. One of the more striking differences between the 1980s and the high-growth

^{1/} Before the recent upwards revision of U.S. GDP growth the figure for the G5 reported in IBRD Sec M87-754 were 2.5 percent for 1986 and an estimate of 2.3 percent in 1987.

Table 1 Growth rates of real GDP, 1961-86

	Annual average 1961-65	Annual average 1966-70	Annual average 1971-75	Annual average 1976-80	1981	1982	1983	1984	1985	1986	1987 ^a
OECD					2.3	-0.5	2.9	4.8	3.1	2.9	2.9
United States	4.6	3.0	2.2	3.4	1.9	-2.5	3.5	6.8	3.0	2.9	2.9
Canada	5.6	4.8	5.0	3.1	3.3	-4.4	3.3	4.7	4.0	3.1	2.5
Japan	6.8	11.2	4.7	5.0	3.7	3.1	3.2	5.1	4.7	2.5	2.0
EEC ^b					-0.2	0.3	1.3	2.3	2.2	2.5	
France	4.7	4.5	2.8	3.0	.5	1.8	0.7	1.6	1.4	2.0	1.3
Germany	5.9	5.4	4.0	3.3	0.0	-1.0	1.5	3.0	2.5	2.4	1.5
Italy	4.7	4.2	2.1	3.4	0.2	-0.5	-0.4	2.8	2.3	2.7	3.0
United Kingdom	5.2	6.2	2.5	3.9	-1.4	1.4	3.5	1.8	3.4	2.7	3.3
United Kingdom	3.2	2.5	2.2	1.7							
Developing countries					3.4	2.1	2.1	5.1	4.7	4.4	4.0
Industrial countries ^c					1.4	-0.4	2.7	4.7	3.0	2.4	2.3
World ^c					1.8	0.6	2.6	4.4	3.1	2.9	2.7

Sources: Economic Report of the President, 1987; U.S. Department of Commerce; IBRD, "Short Term Outlook", June 29, 1987.

- a. Forecasts.
- b. Ten countries.
- c. IMF, WEO, June 1987.

Table 2 The growth of world trade
(percentage growth rates of world trade volume)

	<u>Total</u>	<u>Manufacturing</u>
1969-78	6.7	
1977		4.9
1978		4.7
1979	6.4	5.6
1980	1.2	5.3
1981	0.7	3.0
1982	-2.2	-2.9
1983	2.9	4.0
1984	8.6	9.6
1985	3.2	4.4
1986	4.9	0.8
1987	3.3	

Source: Manufacturing National Institute Economic Review,
January 1987, Table 23. Total IMF, WEO, June 1987.

year before 1973 is that the pre-1973 tendency for trade to grow much faster than GDP appears to have disappeared in the present decade.

The petering out of the economic recovery in the industrial world can also be inferred from the behavior of unemployment in the main industrial countries shown in Table 3. Only in the United States has unemployment declined significantly from its 1982 peak. European unemployment persists at or near its post World-War II high with only the United Kingdom likely to show some improvement during 1987-88.

The falling off in the growth rates of real fixed capital formation evident from Table 4 holds out little hope for sustained higher growth in the medium term, absent policies to strengthen this engine of growth. The disappointing performance of productivity growth outside the United Kingdom, Italy and perhaps France (see Table 5) reinforces the picture of underlying weakness.

The global slowdown has not left the developing countries unaffected. The average growth rate of the developing countries peaked in 1984 at 5.1 percent and has decelerated to an estimated 4 percent in 1987. This total figure does, however, conceal wide variations in the performances of individual developing countries and of different categories of developing countries.

The share of developing countries in world economic activity has grown in the post-World War II period, with a set back associated with the first oil price shock in 1973 and a significant decline since the early 1980s. As Table 6a shows, one set of calculations has developing countries'

Table 3 Standardized unemployment rates in the industrial countries
(percentage of total labor force)

	1971	1980	1981	1982	1983	1984	1985	1986	1987
United States	5.8	7.0	7.5	9.5	9.5	7.4	7.1	6.9	6.0
Japan	11.2	2.0	2.2	2.4	2.6	2.7	2.6	2.8	3.0
Germany	0.9	3.0	4.4	6.1	8.0	7.1	7.2	6.9	
France	2.6	6.3	7.4	8.1	8.3	9.7	10.1	10.3	
United Kingdom	3.6	6.4	9.8	11.3	12.5	11.7	11.3	11.5	
Italy	5.3	7.5	8.3	9.0	9.8	10.2	10.5	n.a.	

Source: OECD Economic Outlook, June 1987.

Table 4 Growth rates of real gross fixed investment
(percentage changes, annual rates)

	1969-78	1981	1982	1983	1984	1985	1986	1987
United States	3.8	1.1	-9.6	8.2	16.1	7.7	1.9	-0.2
Japan	6.4	3.1	0.8	-0.3	4.5	5.9	6.5	5.8
Germany	2.4	-4.8	-5.3	3.2	0.8	-0.4	3.3	4.0
France	3.6	-1.1	0.7	-2.3	-1.3	3.2	4.4	4.2
United Kingdom	0.9	-9.5	4.3	5.7	9.1	1.9	0.6	3.6
Italy	0.7	0.6	-5.2	-3.8	6.2	4.1	2.0	4.0
All industrial countries	3.4	-0.2	-4.6	3.3	8.6	5.4	3.1	2.3

Source: IMF, WEO, April 1987.

Table 5 Productivity trends in selected OECD countries
(private sector, compound annual growth rates)

	United States	Japan	Germany	United Kingdom	France	Italy
Total factor productivity						
Pre-1973 ^a	1.5	5.9	2.7	2.1	3.9	5.3
1973-79	-0.1	1.4	1.8	0.1	1.9	1.7
1979-84	-0.2	1.6	0.6	0.6	0.4	0.1
1984-86	0.0	1.1	1.4	1.4	0.8	1.6

a. United States 1960-73; Japan 1965-73; Germany 1962-73; United Kingdom 1963-73; France 1963-73, Italy 1970-73.

Actual labor productivity growth in selected OECD countries
(annual percentage rates of growth; total GDP minus general government)

	United States	Japan	Germany	United Kingdom	France	Italy	Total OECD
1984	2.1	4.3	3.5	1.9	2.8	3.2	3.4
1985	0.7	3.9	2.4	2.2	1.6	1.9	1.9
1986	0.2	1.3	1.8	1.7	2.5	1.0	1.0
1987	0.5	1.3	1.3	2.0	1.5	1.3	1.3

Source: OECD Economic Outlook, June 1987.

Table 6a The developing countries' share of world production
(percentage)

	1950	1965	1973	1980	1981	1982	1983	1984	1985	1986
Industrial market economies		82.1		76.4						75.9
Developing countries		16.5		21.4						22.3
High income oil exporters		1.4		2.2						1.7

Memo: Real GDP growth rates (annual percentage)

	1965-73	1973-80	1981	1982	1983	1984	1985	1986
Industrial market economies	4.7	2.8	1.4	-0.5	2.2	4.6	2.8	2.5
Developing countries	6.5	5.4	2.1	2.1	2.1	5.1	4.8	4.2
High income oil exporters	8.3	7.9	1.4	-0.5	-6.9	1.2	-3.8	..

Memo: Change in items of trade (annual percentage)

Industrial market economies	-1.0	-3.0	-1.8	3.0	0.1	0.3	1.0	8.3
Developing countries	0.7	1.6	-0.9	-1.8	-0.0	0.7	-0.8	-4.3
High income oil exporters	0.3	13.4	19.5	-5.4	-6.6	1.3	-1.3	-56.2

Source: World Development Report 1987 and IMF, World Economic Outlook (WEO), April 1987.

Table 6b An alternative calculation of the developing countries' share of world production (percentage of "world" GDP)

	1960	1965	1967	1973	1980	1981	1982	1983	1984	1985	1986
Industrial countries	75.7	78.0	78.8	78.7	74.9	73.9	74.1	75.4	76.5	77.1	78.9
Developing countries	22.3	21.1	20.2	20.4	22.9	23.5	23.4	22.6	21.6	20.9	18.4
Low income	9.3	8.6	7.4	6.4	5.6	5.4	5.5	5.7	5.5	5.3	4.5
Middle income	12.8	12.3	12.5	13.9	17.3	18.1	18.0	16.9	16.1	15.5	13.8
High Income Oil Exporters	..	0.4	0.5	0.7	2.2	2.5	2.5	2.1	1.9	1.7	..
Memo:											
Highly indebted	6.8	6.6	6.6	7.1	8.7	9.4	8.7	7.4	7.4	7.1	6.1

Note: Value of GDP, is in current US dollars.

World total = industrial countries and developing countries and high income oil exporters.

Source: IEC "WDR" data base.

Table 6c The developing countries' share of world trade (40)

	1967	1973	1980	1981	1982	1983	1984	1985	1986
Industrial countries	75.5	76.8	71.5	70.3	71.1	71.7	72.6	73.9	74.6
Developing countries	22.2	20.6	23.3	24.1	24.0	24.0	23.7	23.2	20.4
Low income	..	2.8	2.7	2.7	2.7	2.8	2.9	3.3	3.0
Middle income	17.6	17.8	20.5	21.4	21.3	21.2	20.8	19.9	17.3
High Income Oil Exporters	1.3	1.8	5.2	5.6	4.9	4.4	3.7	2.9	..
Memo:									
Highly indebted	6.3	6.2	7.4	7.7	7.3	6.4	6.4	6.2	5.2

Note: Value of exports and imports is in current U.S. dollars; world trade is imports and exports.
World Total = industrial countries and developing countries and high income oil exporters.

Source: IEC "WDR" data base.

Table 6d Industrial countries' shares of total industrial countries' GDP (percentage)

	1975		1985		1986	
	(A)	(B)	(A)	(B)	(A)	(B)
OECD Total	100.0	100.0	100.0	100.0	100.0	100.0
United States	35.0		35.3	45.5	35.4	39.4
Canada	3.3		3.5	4.0	3.5	3.4
OECD Europe	46.7		44.0	33.1	44.0	36.8
EEC	40.4		37.9	28.2	37.8	31.5
Germany	10.5		10.1	7.2	10.1	8.4
France	8.5		8.1	5.9	8.0	6.7
United Kingdom	7.5		6.8	5.2	6.8	5.2
Italy	5.0		4.8	4.1	4.8	4.8
Japan	12.7		14.9	15.3	14.9	18.5

Note:

A: At 1980 prices and 1980 exchange rates.

B: At current prices and exchange rates.

Source: OECD Main Economic indicators, June 1987.

share of world GDP rising from 16.5 percent in 1965 to 21.4 percent in 1980 and stood at 22.3 percent in 1985.^{2/}

An alternative set of calculations, reported in Table 6b, shows (very implausibly) no increase in the developing countries' GDP share between 1960 and 1980. It does reflect (rather more plausibly) a dramatic decline after 1982.

Table 6c shows that the evolution of the developing countries' share of world trade (based on the same data base as Table 6b). Again the almost flat developing country share between 1967 and 1980 seems suspicious, while the sharp decline since 1983 is much more plausible.

In any case, the developing countries as a group cannot be viewed as marginal from the point of view of the determination of global economic activity, even if one abstracts from the special forms of interdependence brought about through the debt crisis. In other words, a global macroeconomic strategy should allow for the possibility of significant demand or supply

^{2/} These calculations are very crude. The "world" consists of the sum of the three categories listed in Table 6, omitting a number of countries (mainly members of the Comecon). The 1980 shares were taken from the 1987 World Development Report. The 1965 and 1985 shares were obtained from the 1980 shares by applying the average annual growth rates of real GDP reported in the 1987 World Development Report. Let g^I be the growth rate of real GDP of the industrial countries, and g^d that for the developing countries. p is the relative GDP deflator of the developing countries (measured in a common currency) and n the base year share in world GDP of the developing countries. Ignore the high income oil exporters for simplicity. Then $\frac{dlnn}{dt} = (1-n)(g^d - g^I - \frac{dlnp}{dt})$. I have data on GDP inflation rates for the developing and the industrial countries, but not expressed in a common currency. The change in the terms of trade given in Table 6 may convey some information. If relative GDP deflators mirrored the terms of trade, then the developing countries' share of world GDP in 1965 was considerably lower than that reported in Table 6 and their share in 1985 would be somewhat lower.

shocks coming from the developing countries. It also should take into account the transmission of demand or supply shocks originating in the industrial countries via the developing countries back to the industrial world.

Individual developing countries, even the larger ones, must however take as given their external economic environment (growth of world markets, limitations on access to world markets through protectionism, terms of trade, cost and availability of foreign credit and capital, aid flows, etc.). The problems faced by many individually small but collectively significant countries in deciding rational macroeconomic, industrial, and trade strategies are familiar, but no less daunting for being so.

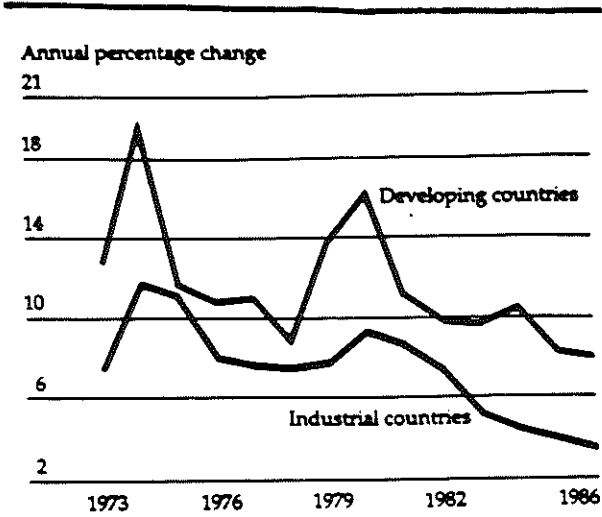
Table 6d is Exhibit One in the case for macroeconomic policy co-ordinator among the main industrial countries: there is no single overwhelmingly dominant player on the international economic scene. The United States, still by far the single largest player, accounts for about 35 percent to 40 percent of total OECD GDP (or between 25 percent and 30 percent of world GDP). This puts it in the same range as the EEC and somewhat below OECD Europe as a whole. North America (United States plus Canada) has roughly the same weight as OECD Europe. Japan has about 15 percent of OECD GDP or about 11 percent of world GDP. OECD Europe (or even the EEC) is of course not a single economic policy making unit. The largest national European player (Germany with 10 percent of OECD GDP) accounts for only one quarter of EEC GDP. The absence of a unified national economic policymaker in Europe is to a certain extent matched on the fiscal side in the United States by the enduring stalemate between the Congress and the executive. The existence of national monetary authorities with varying degrees of independence (greatest for the German Bundesbank, followed by the Federal Reserve Board of the United States) further complicates the task of co-ordinating macroeconomic policy.

Table 7 Inflation, 1973-87
(percentage changes)

	1973-80	1982	1983	1984	1985	1986	1987
G5, GNP (GDP)							
Deflator in local currency	8.8	6.3	3.9	3.5	3.5	2.7	2.7
United States	8.1	6.4	3.8	4.0	3.4	2.6	4.0
Japan	7.4	1.9	0.8	1.3	1.7	1.8	0.0
France	10.8	12.6	9.5	7.2	5.9	5.3	3.0
Germany	4.8	4.4	3.2	1.9	2.1	3.2	1.8
United Kingdom	16.5	7.6	4.9	3.9	6.1	3.8	4.8
CPI							
United States		6.1	3.2	4.3	3.6	1.9	4.8
Japan		2.7	1.9	2.3	2.0	0.6	0.1
France		11.8	9.6	7.4	5.8	2.2	2.5
Germany		5.3	3.3	2.4	2.2	-0.3	0.7
United Kingdom		8.6	4.6	5.0	6.1	3.4	4.4
All industrial countries		7.4	4.9	4.6	4.1	2.3	2.8

Source: IMF, World Economic Outlook, April 1987 and IBRD Short-term Outlook;
SEC M87-754, June 29, 1987.

Figure 1 Inflation, 1973-86



Note: Inflation is calculated as the change in the GDP deflator. For developing countries, the data points indicate median values; for industrial countries, average values.

Table 8 Major industrial countries' short-term and long-term nominal interest rates
(percentage per annum)

	1979	1980	1981	1982	1983	1984	1985	1986	June 1987	August 6 1987
Short-term interest rates										
United States	11.2	13.1	15.9	12.4	9.1	10.4	8.0	6.5	6.1	6.0
Japan	5.9	11.0	7.7	7.1	6.7	6.3	6.7	5.1	3.5	
Germany	6.6	9.5	12.0	8.0	5.7	6.0	5.4	4.6	3.7	
France	9.5	12.2	15.4	14.6	12.4	11.7	9.9	7.7	7.5	
United Kingdom	13.6	16.6	13.8	12.3	10.1	9.9	12.2	10.9	9.4	9.8
Italy	12.0	17.5	20.0	20.0	18.0	17.1	14.9	12.6	11.1	
Canada	11.9	13.4	18.3	14.4	9.5	11.3	9.6	9.2	7.0	
Average for the seven countries above	9.9	12.7	14.2	11.7	9.2	9.7	8.5	6.9		
Long-term interest rates										
United States	9.4	11.5	13.9	13.0	11.1	12.4	10.6	7.7	8.5	8.7
Japan	7.7	8.9	8.4	8.3	7.8	7.3	6.5	5.2	3.9	
Germany	7.4	8.5	10.4	8.9	7.9	7.8	6.9	5.9	6.3	
France	9.5	13.0	15.8	15.7	13.6	12.5	10.9	8.5	10.4	
United Kingdom	13.0	13.8	14.7	12.9	10.8	10.7	10.6	9.9	9.2	
Italy	14.1	16.1	20.6	20.9	18.0	14.9	13.0	10.4	10.4	
Canada	10.2	12.5	15.2	14.3	11.8	12.8	11.0	9.5	9.8	
Average for the seven countries above	9.5	11.3	13.2	12.4	10.8	11.0	9.7	7.5		

Note: Short rates 2 or 3 month private money market rates; long rates are rates on long-term government debt.

Source: IMF, World Economic Outlook, April 1987; Morgan Guarantee Trust Company, World Financial Markets, June/July 27, 1987.

Table 9 Ex-post short real interest rates^a
(percentage)

	1960-67	1968-73	1974-79	1980	1981	1982	1983	1984	1985	1986	1987Q1
United States	1.5	0.5	-0.7	1.8	4.7	3.4	4.0	3.8	3.6	2.9	1.7
Japan	0.6	-1.5	-2.6	3.4	2.9	3.6	4.6	5.0	5.7	2.6	3.9
Germany	1.1	1.6	0.8	4.9	7.6	4.0	2.5	3.9	2.7	1.6	2.2
France	..	..	-1.0	0.0	2.8	1.9	2.4	3.4	3.0	2.7	4.9
United Kingdom	1.4	0.1	-4.9	-4.0	1.2	4.0	4.2	5.2	5.1	6.8	5.2
Italy	-1.0	-0.6	-3.1	-3.9	1.3	1.2	2.4				
Canada	1.4	0.4	-1.3	1.2	6.4	3.0	3.8				

a. Nominal interest rate minus percentage change of GDP deflator.

Source: 1960-83: OECD Historical Statistics; 1984: own calculations.

Table 10 Interest costs for developing countries
(In percent per annum)

	1973-80	1982	1983	1984	1985	1986	1987
Six month-Libor(\$)	9.3	13.5	9.8	11.2	8.6	6.8	7.4
Average cost of funds (sample of 31 countries)	..	10.4	9.0	9.0	8.3	7.3	7.5
Six month "real" Libor ^a	2.2	7.1	6.0	7.2	5.2	4.1	3.4

a. Six month Libor in U.S. dollars minus percentage change in U.S. GNP deflator

Source: IBRD, Sec. M87-754.

One item of good news, not independent of the weakness of the real economy, are the major gains that have been made in the global fight against inflation (see Table 7 and Figure 1). Both industrial and developing countries shared in this development. The GNP deflator of the G5 countries increased by only 2.7 percent in 1986 and is likely to show a similar increase in 1987. Consumer price indices tell a similar tale. The very large exchange rate adjustments in 1986 and the first half of 1987 have had the effect of redistributing global inflation, with countries whose currencies depreciated "importing" inflation (e.g. the United States and the United Kingdom) and countries whose currencies appreciated "exporting" inflation (e.g. Japan and Germany).

Changes in inflation associated with major once-off exchange rate realignments are temporary, however, and it is likely therefore that the underlying rates of inflation in 1987 are overstated for the United States and the United Kingdom and understated for Japan and Germany. A significant revival of world inflation seems unlikely given the weakness of the world economy and the existence of considerable slack in Europe and Japan. This issue is addressed again when monetary policy is considered in Section 3.

The behavior of interest rates, shown in Tables 8, 9, and 10 is like the curate's egg (good in parts), with some recent worrying hints that more bad news may be on the way. Nominal interest rates in the main industrial countries came down steadily from their 1981 high of 14.2 percent for the short rate and 13.2 for the long rate. By the end of 1986 the average short nominal rate stood at just under 7 percent and the average long nominal rate at 7.5 percent. Since then, long nominal rates have risen quite sharply again while short nominal rates have edged down somewhat further. This steepening of the yield curve is especially pronounced in the United States where long

yields are now most 3 percentage points above short yields. The recent increase in short and long rates in the United Kingdom may be no more than a temporary setback but underlines the continuing anomaly of United Kingdom short rates exceeding those in the United States, Japan, and Germany by considerably more than the inflation differentials.

A crucial question is whether the steep, positive slope of the yield curves reflects anticipations of future increases in real rates or future increases in inflation. The behavior of ex-post short real interest rates on Treasury Bills, given in Table 9, shows a steady decline from 1984 to 1986 in the United States, Japan, and Germany with a leveling off or even some tendency to rise in the first half of 1987. France and the United Kingdom have higher ex-post real interest rates throughout without any downward tendency. High short real rates can either be due to a buoyant economy or to tight monetary policy. The "good news" interpretation of high real rates is contradicted by the low and declining real growth rates while the "bad news" interpretation is hard to reconcile with the behavior the monetary aggregates discussed below. Even if recent ex-post real interest rates accurately reflect the non-measurable ex-ante or expected real interest rates over the recent past, they do not convey any clear message about the expected future path of real interest rates. Only the yields on index-linked public debt in the United Kingdom provide directly relevant information on this subject. The real yield on long index-linked debt in the United Kingdom stood at just under 4 percent on August 7, 1987, an increase of about half a percent over its value a year ago. Since nominal yields in the United Kingdom went up by about the same amount over that same period, this suggests that the financial markets in the United Kingdom have come to anticipate over the past year, higher future real yields rather than higher future inflation. It is not

possible, absent index-linked debt in the other main industrial countries, to extend this interpretation to the rest of the industrial world. What can be said with some confidence, is that the downward trend of nominal and real interest rates appears to have come to an end and that moderate increases from their current levels are a distinct possibility.

The \$Libor rate and the average costs of funds to developing countries (Table 10) have followed a broadly similar pattern to U.S. short nominal rates in general. The "real" Libor obtained by subtracting U.S. inflation (as measured by the GNP deflator) from the nominal Libor has come down from a high of 7.2 percent in 1984 to an estimated 3.4 percent in 1987. Looking at ex-post "real" libor from the point of view of the borrowing countries using the inflation rates of various commodity price indices or the developing countries' merchandise export price index (see Table 11) (all in U.S. dollars) gives a picture of real interest rates that are both much higher on average and more volatile.

Real commodity prices, the terms of trade of the commodity exporting countries, (shown in Table 11 and Figure 2) fell dramatically in 1985 and 1986, with a further smaller decline likely in 1987. The real price of oil has rebounded somewhat in 1987 after its collapse in the preceding year. The real price of developing countries' merchandise exports fell by more than 14 percent in 1986 but is likely to stabilize during 1987. These developments are consistent with attempts by developing countries to boost exports encountering both weak growth of developing countries' export markets in the industrial countries in general and increased protectionism.

Evidence of persistent macroeconomic imbalances among the industrial countries is contained in Tables 12 and 13, while Tables 14 and 15 provide evidence that some of the necessary ingredients of their resolution

Table 11 Commodity prices
(annual percentage rates of change)

	1973-80	1982	1983	1984	1985	1986	1987
<u>Nominal commodity prices</u>							
(in U.S. dollars)							
Food and beverages	8.9	-10.8	4.8	6.9	-11.8	6.1	-11.5
Non-food agricultural							
raw material	9.2	-11.6	11.9	-6.4	-17.1	-8.2	10.4
Mineral and metals	8.0	-10.5	3.5	-5.7	-6.0	-7.7	0.0
Total non-oil	9.0	-10.6	4.8	2.3	-12.2	1.3	-5.0
Oil	40.9	-8.9	-9.8	-2.0	-3.0	-49.0	18.4
<u>Real commodity prices^a</u>							
Total non-oil	-2.3	-9.3	7.6	4.1	-13.0	-14.8	-5.7
Oil	26.3	-7.6	-7.4	-0.3	-3.9	-57.1	17.2
Developing countries'							
merchandise export							
price index	13.7	-6.7	-2.4	-1.0	-3.1	-4.0	6.0
G-5 Manufactures Unit							
Value Index	11.8	-1.4	-2.6	-1.7	0.7	18.4	6.8

a. Nominal deflated by the G-5 Manufactures Unit Value Index.

Source: IBRD, Sec. M87-754, June 29, 1987.

Figure 2 Real non-oil commodity prices, 1950-86

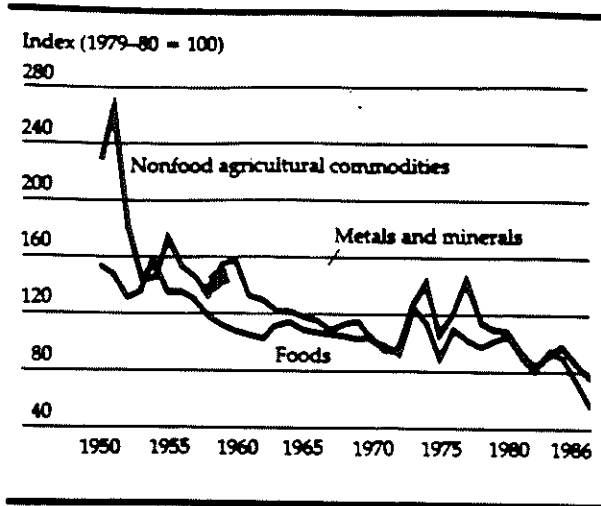


Table 12 Current account balance of the major industrial countries

	1979	1980	1981	1982	1983	1984	1985	1986	1987
United States ^a	0.0 (-0.9)	0.1 (1.9)	0.2 (6.3)	-0.3 (-9.1)	-1.4 (-46.6)	-2.8 (-106.4)	-2.9 (-117.6)	-3.3 (-140.6)	-3.3 (-147)
Japan ^a	-0.9	-1.0	0.4	0.6	1.8	2.8 (35.0)	3.7 (49.2)	4.4 (86.0)	4.1 (95)
Germany ^a	-0.8	-1.9	-0.8	0.6	0.6	1.1 (6.9)	2.1 (13.2)	4.0 (35.8)	3.3 (37)
France	0.9	-0.6	-0.8	-2.2	-0.9	-0.2 (-0.8)	0.0 (-0.2)	0.5 (3.5)	0.3 (3)
United Kingdom	-0.4	1.3	2.4	1.4	1.0	0.4 (1.7)	0.8 (3.8)	-0.3 (-1.6)	-0.4 (-3)
Italy	1.7	-2.4	-2.3	-1.6	0.2	-0.8 (-2.9)	-1.2 (-4.2)	1.0 (5.1)	0.4 (3)
Canada ^a	-1.7	-0.4	-1.7	0.8	0.7	0.8 (2.6)	-0.1 (-0.4)	-1.7 (-6.4)	-1.0 (-4)
Total OECD	-0.4 (-29)	-0.9 (-69)	-0.3 (-26)	-0.4 (-29)	-0.4 (-28)	-0.8 (-66)	-0.7 (-59)	-0.2 (-20)	-0.2 (-23)

Note: In brackets: \$billion.

a. Percentage of GNP or GDP.

Source: OECD Economic Outlook, June 1987, Table 56.

Table 13 Trade balances of the major industrial countries
(billions of U.S. dollars)

	1984	1985	1986	1987
United States	-112.5	-124.4	-147.7	-158
Japan	44.3	56.0	92.7	105
Germany	22.9	28.9	57.3	61
France	-4.1	-5.4	-1.6	-4
United Kingdom	-5.8	-2.8	-12.1	-14
Italy	-6.1	-7.0	2.7	0
Canada	16.7	13.1	7.7	11
Total OECD	-48.0	-45.9	-6.5	-10

Source: OECD Economic Outlook, June 1987, Table 52.

Table 14 Effective exchange rates
(1970Q1 = 100, average of daily rates)

	1972	1980	1981	1982	1983	1984	1985	1986	1987 ^a
United States	90.2	80.1	85.9	94.5	98.0	103.6	106.7	87.6	78.2
Japan	111.0	139.2	156.1	146.8	161.5	169.7	174.1	227.6	249.3
Germany	106.0	155.7	151.2	159.3	167.8	167.7	170.9	185.9	197.2
France	99.4	94.8	90.2	83.4	78.5	76.8	78.2	80.3	80.6
United Kingdom	96.1	72.5	74.8	71.9	67.3	64.6	65.3	59.8	58.4
Italy	97.7	49.6	45.4	42.6	41.7	40.2	38.5	39.4	40.1

a. As of 21 April 1987.

Source: OECD Economic Outlook, June 1987.

Table 15 Competitive positions
(indices 1982 = 100)

	1984	1985	1986	1987
Relative unit labor costs in manufacturing				
United States	106	109	86	75
Japan	107	106	139	151
Germany	100	97	106	111
France	97	99	99	96
United Kingdom	89	90	84	81
Italy	104	104	110	114
Relative export prices of manufactures				
United States	106	108	95	88
Japan	100	99	109	114
Germany	95	94	101	103
France	103	106	107	107
United Kingdom	95	95	90	90
Italy	98	98	100	101

Note: Relative costs and prices calculated in a common currency.

may be falling into place. The U.S. current account deficit, running at a post-War II high of 3.3 percent of GDP is roughly matched by the combined current account surpluses of Japan (4.4 percent of GDP in 1987) and of Germany (4.0 percent of GDP).^{3/} The trade balances tell a very similar story. The OECD countries as a group run a (small) current account deficit (\$20 billion in 1986) and a (small) trade balance deficit (\$6.5 billion in 1986). Even if we allow for the possibility that the proper allocation to the industrial countries of their share of the recorded global current account deficit would reduce the magnitude of their combined current account deficit,^{4/} this does not change the fact that (at least) since 1979, the industrial countries as a group have not generated any net transfer of resources to the rest of the world. Such a state of affairs is hard to reconcile with the efficient allocation of scarce global savings or with the alleviation of global poverty.

The emergence of and persistence of the U.S. current account deficit and the surpluses of Japan and Germany is to a large extent due to the divergent stances of fiscal policy in these three countries during the 1980s. It was reflected in the unprecedented nominal and real appreciation of the dollar that started in 1980 and did not begin to be reversed until the beginning of 1985. Table 14 gives the nominal effective exchange rates of the

^{3/} The Appendix contains a more detailed discussion of the external investment position of the United States.

^{4/} The IMF (WEO April 1987) provides the following corrected current account figures:

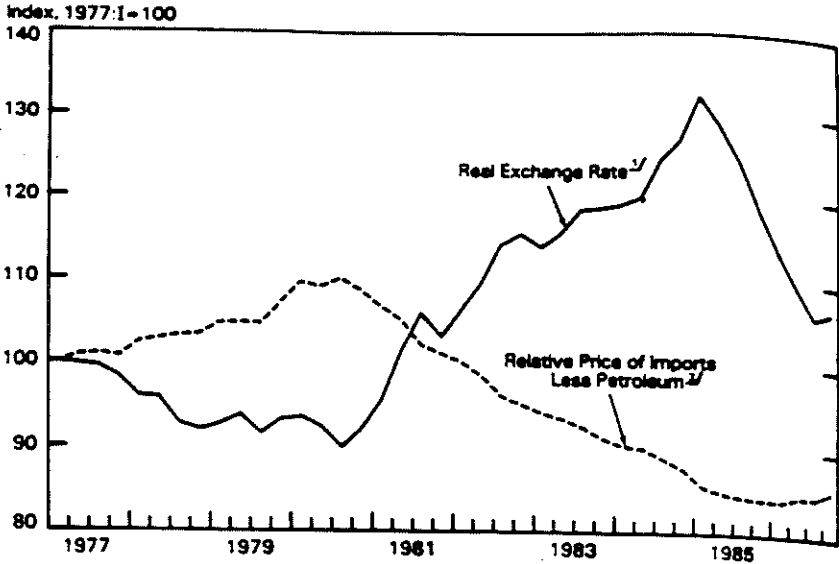
	1979	1980	1981	1982	1983	1984	1985	1985
Industrial countries								
Recorded	-23	-62	-20	-22	-22	-62	-55	-9
Adjusted	-27	-55	-6	..	-9	-44	-40	-2
Developing countries								
Recorded	6	30	-49	-87	-64	-34	-24	-47
Adjusted	4	33	-40	-70	-54	-21	-12	-44

major currencies and Figure 3 plots 2 real competitiveness indices for the United States since 1977. Since 1985, the earlier nominal and real appreciation of the U.S. dollar has been reversed to a large extent, although the magnitude of the corrections is probably overstated by Figure 3 and Tables 14 and 15. The reason for this is that since the beginning of the decade the role of a number of NICs (especially in South East Asia) as competitors of the United States has grown significantly. These new competitors are underrepresented in the effective exchange rate index and in the real competitiveness indices. In both nominal and real terms, the U.S. dollar has not depreciated against the currencies of these countries (it instead has appreciated somewhat against some of them). The true improvement in the international competitive position of the United States since 1985 is therefore smaller than the standard indices would indicate, although it has still been significant.

Table 16 supports this view by demonstrating that a real exchange rate index for the U.S. dollar which gives some weight to group of 22 developing countries shows a somewhat smaller gain in competitiveness than an index which only includes other industrial countries. Since the first quarter of 1987, the U.S. dollar has again strengthened against the currencies of its major competitors (by just over 6 percent against the D-Mark and by more than 9 percent against the Yen). A move towards more expansionary monetary policy in Japan (and to a somewhat lesser extent in Germany) in 1987 accounts for this partial reversal of the depreciation of the U.S. dollar. Any further erosion of the earlier gain in U.S. competitiveness would be a serious impediment to the restoration of external balance among the industrial countries.

A significant real depreciation of the U.S. dollar and real appreciation of the Yen and the Deutsche Mark are an essential ingredient of

Figure 3 Real Exchange Rate and Relative Price of Imports



∩/Trade-weighted value of the dollar adjusted by relative wholesale prices.

∩/Ratio of implicit price deflator for imports less petroleum to GNP implicit price deflator.

Sources: Morgan Guaranty Trust Company of New York and Department of Commerce.

Table 16 Real effective exchange rates of the seven main industrial countries (Morgan Guarantee)
(Index numbers, 1980-82 average = 100)

(A) Real against 15 other industrial countries

(B) real against 18 other industrial country and 22 LDC currencies.

	United States		Japan		Germany		France		United Kingdom		Italy		Canada	
	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)
1981	100.8	99.8	104.8	104.7	96.9	96.2	100.0	99.5	102.5	102.0	98.9	98.2	99.5	99.4
1982	109.3	109.6	92.4	94.0	99.9	99.3	97.3	96.9	98.8	98.5	98.5	98.1	100.6	101.8
1983	112.7	114.9	96.8	100.4	101.0	100.6	94.7	94.4	93.1	93.0	101.1	100.8	102.6	104.6
1984	119.6	120.8	78.8	102.4	98.0	96.8	97.0	96.4	90.2	81.7	101.8	101.0	100.2	102.7
1985	122.5	124.9	86.6	101.6	96.4	95.8	100.5	100.0	92.8	92.3	100.2	99.8	96.5	99.2
1986	101.5	107.1	119.2	124.0	103.4	104.5	103.9	104.5	87.4	88.2	102.6	104.1	93.4	94.5
June 1987	91.5	95.4	124.4	128.8	106.1	108.4	106.6	107.7	87.6	89.3	102.5	105.1	95.1	95.4

the reduction and eventual elimination of the trade imbalances in the industrial world. The gains in U.S. competitiveness thus far were achieved partly by the inevitable bursting of the speculative bubble that drove the dollar towards the end of its long ascent, but mainly by the coordinated decision of the finance ministers and central banks in the leading industrial countries to achieve a significantly lower value of the dollar. Whether the actual foreign exchange market interventions during 1985 and 1986 played a significant part in bringing the dollar down is doubtful. The relaxation of U.S. monetary policy relative to that in Japan and Germany probably played a more important part, as did the perception by financial market participants that the monetary authorities in the main industrial countries were willing and able to do whatever it took to end the overvaluation of the dollar.

Having achieved the major currency realignment, the authorities in the main industrial countries now put greater emphasis on exchange rate stability as an intermediate objective. This renders less likely a recurrence of the exchange rate and competitiveness roller coaster of the first six years of this decade.

While the real depreciation of the U.S. dollar and the real appreciation of the Yen and Deutsche Mark is an important part of the solution to the external imbalances among the industrial countries, it is unlikely to "stick" unless complementary fiscal corrections (tightening in the United States and relaxation in Japan and Germany) are also undertaken. This and other policy issues are considered in the final section of this paper.

III. Monetary Policy Issues and Options

The thrust of monetary policy in the main industrial countries has become increasingly hard to identify owing to the erratic behavior of many of

the monetary aggregates evident from Table 17. Many previously stable money demand functions, established using data from the 1950s, 1960s, and 1970s have broken down. While this is not the first time that money demand functions have behaved badly (the M1 demand function apparently broke down during the early 1970s in the United States), the magnitude and the international scope of the recent breakdown appears to be unprecedented. The failure of many simple money demand functions to explain the recent data (let alone to predict out of sample) may not be too surprising given the scale and scope of financial innovation and deregulation of domestic and international financial markets. The decline in inflation and in nominal interest rates is not an explanation of the breakdowns as most of the established money demand functions include these two variables as arguments. It is true that for most major industrial countries there is at least one monetary aggregate that fits the data for the period 1980-87 reasonably well. This is true for Central Bank Money (the monetary base) in Germany, for the broad monetary aggregate (M2 plus Certificates of Deposit) in Japan and for the broad monetary aggregate (M2) in the United States. The reasonable fits of the German CBM velocity equation, the Japanese M2 + CD velocity equation and the U.S. M2 velocity equation reported e.g. the OECD's Economic Outlook, June 1987, hide the fact that there is no reasonable economic explanation for the apparent downward trends in Japan's M2 + CD velocity and in Germany's CBM velocity and the apparent absence of any trend in U.S. M2 velocity. The dramatic failure of conventional money demand functions to explain the steep drop of M1 velocity in the United States since the end of 1984 and their inability to explain the behavior of any monetary aggregate in the United Kingdom underline the truth of the introductory sentence of this subsection.

Table 17 Growth rates of monetary aggregates
(percentage changes at annual rates)

	1980	1981	1982	1983	1984	1985	1986	1987Q1
United States								
Mo		3.3	6.2	6.0	6.3	9.9	14.9	
M1	6.6	6.5	8.8	9.8	6.0	12.2	16.6	
Broad money	8.0	9.4	9.3	12.5	7.9	9.1	8.0	
Japan								
Mo		2.7	6.2	5.4	8.5	3.8	8.1	
M1	2.6	3.3	5.8	3.6	2.8	5.0	6.9	
Broad money	9.2	8.9	9.2	7.4	7.8	8.4	8.7	
Germany								
Mo		-1.6	5.3	5.6	3.8	3.3	6.2	
M1	2.4	1.1	3.6	10.2	3.3	4.7	8.3	
Broad money	5.3	6.4	6.5	6.6	3.9	4.9	6.1	
France								
Mo		9.2	22.6	8.1	12.8	-7.3	19.0	
M1	7.7	11.8	11.1	10.3	11.4	6.1	7.5	
Broad money	10.7	11.8	11.5	10.0	10.3	6.7	5.5	
United Kingdom								
Mo	5.6	1.7	4.2	6.0	5.8	4.2	4.1	
M1	4.4	10.7	8.6	12.8	14.7	20.8	22.3	
£M3	15.2	17.3	11.7	10.5	9.2	15.0	18.1	
Italy								
Mo		13.5	14.9	15.4	14.6	17.8		
M1	16.1	10.9	11.8	15.1	12.3	13.7	10.1	
Broad money	14.4	10.7	12.3	16.5	12.3	13.9	9.0	
Seven major countries								
Mo								
M1	5.6	6.4	6.7	10.0	7.0	8.6	11.4	
Broad money	9.4	10.0	9.5	10.5	7.8	9.1	8.5	

Clearly, lower inflation and lower nominal interest rates imply a lower velocity of circulation, especially for narrow monetary aggregates with a large non-interest bearing component. The demand for money increases at any given level of nominal income or, equivalently, the nominal money stock can be larger without this implying any upward pressure on nominal income. This would indicate that monetary policy in the United States was expansionary during 1983, neutral in 1984, slightly expansionary in 1985 and rather more expansionary in 1986 and the first half of 1987. If the old M1 velocity pattern were to re-establish itself, the recent stance of United States monetary policy would carry implications of higher future inflation. If the downward shift of M1 velocity is permanent, there is no such danger. Allowing for the decline in inflation and interest rates, Japanese monetary policy has been neutral or slightly contractionary in recent years with a more expansionary stance apparent in 1987. German monetary policy appears to have been tight during 1984 and 1985 followed by some loosening in 1986 and 1987.

The stance of monetary policy in the United Kingdom is anybody's guess, with the monetary base signaling tight policy throughout, broad money (£M3) signaling a significant relaxation starting in 1985 and M1 signaling runaway monetary growth. Short nominal and real interest rates tell a story for the United States, Germany, and Japan broadly consistent with that told (somewhat mutedly) by the monetary aggregates. For the United Kingdom they indicate a slight tightening of monetary policy towards the end of 1986 and early in 1987 with a sudden upsurge of monetary growth in the third quarter of 1987 and an immediate official response in the form of a higher Bank Rate.

The overall picture is of a globally neutral monetary policy stance with relaxation of monetary policy in the United States relative to Japan and Germany starting in 1985 and a partial reversal of this during 1987. This is

consistent with the view that a global monetary policy adjustment has been primarily responsible for the decline of the U.S. dollar since early 1985 and the strengthening of the U.S. dollar since 1987Q1.

How can monetary policy be used to contribute to the reversal of the recent slowdown of real growth without creating the risk of rekindling inflation? First it should be noted that there are no signs of any significant global upsurge in inflation. What we see is a temporary "redistribution" of inflation from countries whose currencies have appreciated recently (Japan and Germany) to countries whose currencies have depreciated recently (the United States and the United Kingdom). There is therefore no case for global monetary tightening to head off an incipient surge in inflation. Second, this may be a bad time for attempting to squeeze the remaining world inflation out of the system. Any such attempt now would be likely to precipitate a global recession. It is better to postpone the last installment of the global anti-inflation strategy until the world economy is in more robust shape.

Third, while global monetary policy should not be pursued in such a way as to generate a permanently higher rate of growth of the global money stock relative to the trend growth rate of real output (allowing for predictable changes in velocity not related to variations in inflation), there is likely to be a case for a selective, once-off increase in the level of the U.S. monetary money stock if and when the United States undertakes measures to reduce its fiscal deficit. The anti-inflationary credibility of the monetary authorities in the main industrial countries has by now been established sufficiently firmly for the financial markets to appreciate the difference between, on the one hand, a permanently higher growth rate of the money stock and what it implies for the underlying rate of inflation, and on the other

hand a once-off "liquification" of the economy to forestall a recession which will have no permanent inflationary consequences.

IV. Fiscal policy issues and options

Fiscal policy has important structural or allocative, distributional and stabilization aspects. The level of "exhaustive" public spending [government consumption, wages and salaries as well as direct procurement of private sector output, and public sector capital formation] measures the direct claim of the government on the current output of the economy. The composition of exhaustive public spending determines the current supply of public consumption goods and the rate of accumulation of infrastructure capital. "Direct" crowding out or crowding in of private consumption and investment (at given prices, interest rates, and disposable income levels), due to substitutability or complementarity between public and private consumption and between public and private sector capital may be important for health, education, and investment in social overhead capital.

The public sector, (by far the largest single employer in most countries) has an important direct influence on labor market conditions. The structure of the tax-transfer system and the interaction of marginal tax rates and marginal benefit rates affect the incentives governing labor supply and demand, the supply of private saving and its composition and the level and composition of private capital formation.

The distribution of income and wealth is affected by all aspects of the government's fiscal program, i.e., by the provision and pricing of public goods and services as well as by the taxes, transfers, and subsidies.

Exhaustive public spending, taxes and transfers and the way in which the government finances its financial deficit also have important implications for macroeconomic stabilization, i.e., for the cyclical behavior of output and employment, for inflation and for the external accounts. For a given path of current and future exhaustive public spending, the choice of financing through current explicit taxes, through borrowing (or deferred taxes) or through monetization (seigniorage or the inflation tax) will influence private saving and capital formation and the current account, even if problems of deficient or excess demand can be avoided. Borrowing crowds out saving and thus either domestic capital formation or the current account surplus. The magnitude of such financial crowding out at full employment is unclear (it would be negligible in the implausible case in which the economy possesses a near debt-neutral structure) but its potential importance should be allowed for. In an economy with general slack and underutilized resources financial crowding out is, of course, avoidable, even if the economy is very far from debt neutral. Monetary policy can be used under those circumstances to prevent any rise in the cost of capital.

IVa. Structural aspects of fiscal policy

One declared structural objective in many of the industrial countries since the beginning of the decade has been to reduce the size and scope of the public sector in all its dimensions. The United Kingdom government adopted this objective in 1979, the United States in 1980, France after the recent change in government and Germany since the beginning of the decade. The pursuit of this objective was to involve cuts in public spending, privatization through the sale of public sector assets to the private sector,

tax reform aimed at reducing the disincentive effects of high marginal tax rates on labor supply, saving and investment, deregulation including the abolition of remaining wage-price controls, foreign exchange controls and capital controls and other measures aimed at improving the competitiveness and flexibility of factor markets, goods market and credit markets.

Privatization has been (and is being) pursued especially determinedly in the United Kingdom, while significant deregulation has been achieved in the United States and in the United Kingdom. Labor market reforms aimed at reducing union power have also figured prominently in these two countries.

Many dimensions of the scope of government intervention in the economy are very hard to quantify, especially the "intrusiveness" of regulatory interventions. The public spending shares and average tax burdens reported in Tables 18-21 below therefore only tell a small part of the whole story. In the United Kingdom, for example, a far reaching privatization of public enterprises and sale of general government assets (housing) to the private sector has been under way for several years and continues apace. The economic consequences of this are not captured by its limited impact on the budget. The same holds for labor market reforms, deregulation of intercity transport, the professions, the financial markets, etc. The budgetary aspects of structural reform are nevertheless important, both as positive economics and as exercises in political economy.

Tables 18-21 show just how hard it has been in the industrial countries to cut public spending and reduce the average tax burden. None of seven main industrial countries has succeeded in cutting the volume of public spending since 1980. What has been achieved is a reversal of the pre-1980 trend towards an ever growing ratio of total public spending to GDP and an ever-rising average tax burden (total taxes or total current general

Table 18 Level and composition of public spending in the main industrial countries
(percentage of GDP)

	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987
<u>United States</u>											
* General Government											
Final consumption		16.9	18.8	17.6	17.5	18.4	18.4	18.0	18.3	18.3	
* General Government											
Fixed capital formation			2.4	1.8	1.5	1.5	1.5	1.4	1.6		
* Net Interest	1.5	1.3	1.2	1.4	1.7	1.9	2.0	2.3	2.6	2.6	
* Transfer payments, subsidies, etc.				11.5	11.8	12.7	12.9	11.9	12.0	12.3	
* Total outlays of General Government		27.5	31.6	33.7	34.1	36.5	36.9	35.8	36.7	35.6	
<u>Japan</u>											
* General Government											
Final consumption		7.9	7.4	9.8	9.9	9.9	10.0	9.9	9.7	9.9	
* General Government											
Fixed capital formation				6.1	6.1	5.8	5.5	5.1	4.8		
* Net Interest				1.2	1.4	1.5	1.8	1.9	1.8		
* Transfer payments, subsidies, etc.				13.0	13.5	13.9	14.2	13.8	13.5		
* Total outlays of General Government		..	19.4	32.6	33.5	33.7	34.1	33.2	32.7		
<u>Germany</u>											
* General Government											
Final consumption		13.4	15.8	20.1	20.6	20.4	20.1	20.0	19.9	19.7	
* General Government											
Fixed capital formation				3.6	3.2	2.8	2.5	2.4	2.3	3.0	
* Net Interest				0.8	1.0	0.9	1.2	1.2	1.1		
* Transfer payments, subsidies, etc.				23.2	23.5	23.8	23.2	23.2	22.4		
* Total outlays of General Government		32.4	38.6	48.3	49.2	49.4	48.3	48.0	47.2	46.6	
<u>France</u>											
* General Government											
Final consumption		13.0	13.4	15.2	15.8	16.2	16.4	16.4	16.3	16.0	
* General Government											
Fixed capital formation											
* Net Interest									2.8	2.8	
* Transfer payments, subsidies, etc.									30.4	29.9	
* Total outlays of General Government		34.6	38.9	46.4	49.1	51.1	52.0	52.7	52.4	51.7	

Table 18 (Continued)

	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987
<u>United Kingdom</u>											
* General Government											
Final consumption		16.4	17.6	21.3	21.9	22.0	22.0	21.7	21.0	21.1	22.7
* General Government											
Fixed capital formation	3.4	3.3	4.8	2.4	1.8	1.6	2.0	2.0	2.0	1.9	
* Net Interest			2.2	3.1	3.3	3.1	3.1	3.3	3.2		
* Transfer payments, subsidies, etc.			14.2	15.3	16.4	17.0	17.3	17.6	17.5	15.7	
* Total outlays of General Government	34.4	32.4	38.2	43.7	45.1	45.4	45.8	46.1	45.2	44.2	
<u>Italy</u>											
* General Government											
Final consumption		12.8	13.8	16.4	18.3	18.6	19.3	19.4	19.5	19.0	
* General Government											
Fixed capital formation											
* Net Interest									9.3	9.5	
* Transfer payments, subsidies, etc.									23.1	22.3	
* Total outlays of General Government		30.1	34.2	46.1	51.4	54.8	57.0	57.4	58.4	56.7	
<u>Canada</u>											
* General Government											
Final consumption		13.6	18.5	19.2	19.4	20.9	20.6	20.3	20.1		
* General Government											
Fixed capital formation											
* Net Interest											
* Transfer payments, subsidies, etc.											
* Total outlays of General Government		28.9	34.8	40.5	41.5	46.4	46.9	47.0	47.0		
<u>Total 7 main industrial countries</u>											
* General Government											
Final consumption		15.5	16.1	16.7	16.8	17.4	17.3	17.0	17.1		
* General Government											
Fixed capital formation											
* Net Interest											
* Transfer payments, subsidies, etc.											
* Total outlays of General Government		29.1	32.4	38.7	39.2	40.8	40.9	39.8	39.6		

Table 18 (Continued)

	1950	1960	1970	1980	1981	1982	1983	1984	1986	1987
<u>Total OECD</u>										
* General Government										
Final consumption		15.0	16.2	16.9	17.0	17.5	17.5	17.1	17.2	
* General Government										
Fixed capital formation										
* Interest on the public debt										
* Transfer payments, subsidies, etc.										
* Total outlays of General Government		28.9	32.4	39.5	40.1	41.6	41.7	40.7	40.6	

Source: OECD Economic Outlook, June 1987; OECD Historical Statistics, 1960-84; IMF, IFS, June 1987.

Table 19 General Government employment as a share of total employment

Government percentage of total	1960	1968	1975	1980	1981	1982	1983	1984	1985	Average 1980-85	Average 1960-85
United States	15.7	18.0	17.8	16.5	16.3	16.5	16.4	15.9	15.8	16.2	16.9
Japan	..	..	6.5	6.7	6.7	6.7	6.6	6.6	6.4	6.6	..
Germany	8.0	10.9	13.9	14.9	15.2	15.6	15.9	15.9	16.0	15.6	12.4
France	13.1	13.2	14.3	15.6	16.0	16.4	16.8	17.3	17.8	16.7	14.3
United Kingdom	14.8	17.4	20.8	21.1	21.8	22.0	22.4	22.0	21.8	21.9	18.9
Italy	8.7	11.3	14.0	15.0	15.3	15.5	15.7	15.8	15.8	15.5	12.8
Canada	..	18.6	20.3	18.8	18.9	19.9	20.2	20.0	..	..	19.5
Total above	11.5	13.5	14.7	14.6	14.6	14.8	14.8	14.7	14.6	14.7	13.7
Total OECD	11.3	13.3	14.9	15.1	15.2	15.4	15.5	15.4	15.4	15.3	13.8

.. = not available

Source: OECD Historical Statistics, 1960-85.

Table 20 Current receipts of General Government as percentage of GDP

	1950	1960	1970	1973	1980	1981	1982	1983	1984	1985	1986	1987
United States	24.2	27.4	30.4	31.2	31.9	32.6	32.1	31.6	31.6	31.9	32.1	
Japan		..	20.7	22.5	27.6	29.1	29.5	29.8	30.4	31.2		
Germany		32.4	38.3	42.2	44.7	44.8	45.4	45.1	46.4	46.4	45.9	46.2
France		34.6	39.0	38.6	45.5	46.2	47.1	47.7	48.5	50.0	49.2	48.7
United Kingdom		32.4	41.2	35.9	40.1	42.2	43.3	42.3	42.3	42.0	40.9	40.1
Italy		30.1	30.4	30.4	37.8	39.3	42.0	45.0	44.2	44.4	44.0	43.0
Canada		28.9	34.2	34.9	36.2	38.5	39.0	38.7	38.9	38.9		
Total of above countries		29.1	30.9	31.6	34.9	35.3	35.4	35.1	34.9	34.7		
OECD		28.9	31.2	32.2	36.0	36.2	36.4	36.1	35.9	35.9		

Note: Current receipts mainly consist of direct and indirect taxes and social security contributions paid by employers and employees.

Source: OECD Economic Outlook, June 1987. OECD Historical Statistics, 1960-1984.

Table 21 Total tax revenue as percentage of GDP at market prices, 1980-86

	1980	1981	1982	1982	1983	1984	1985	1986	1987
France	42.53	42.80	43.79	44.57	45.49	45.55	46.3	45.5	45.0
Italy	33.21	36.14	38.91	42.10	41.17	40.18	41.9	41.6	41.1
United Kingdom	35.33	36.51	39.27	37.91	38.29	38.32	37.9	37.4	36.8
Germany	38.00	37.57	37.44	37.45	37.73	37.97	42.7	42.3	
Canada	32.05	34.07	33.74	33.37	33.72	34.18			
United States	30.35	30.77	30.55	29.03	28.99	..			
Japan	25.45	26.24	26.66	27.20	27.38	..			

.. Data non-available.

Source: OECD, Revenue Statistics of OECD Member Countries 1965-1985 (1986) and European Economy, July 1987.

government receipts as a percentage of GDP). While real public spending has continued to grow in each the seven main industrial countries and in the OECD as a whole, there is since 1983 a slight tendency for public expenditure growth rates to fall below GDP growth rates.

The main categories of public spending have also been remarkably stable since 1980 as proportions of GDP. General government final consumption (wages and salaries plus public sector purchases from the private sector) has stayed roughly constant at 17 percent of GDP for the OECD as a whole. Its share of GDP indeed only shows a small increase since 1950. The very low Japanese share stands out sharply. General government fixed capital formation has remained a small fraction of GDP (about 1.5 percent in the United States and 2 percent in the United Kingdom).^{5/} Transfer payments and subsidies, the main growth item in the 1950s, 1960s, and 1970s have stabilized as a proportion of GDP. The share of interest on the debt as a percentage of GDP has increased very little, even in the United States where it went up from 1.4 percent in 1980 to 2.6 percent in 1986. The decline in nominal interest rates since 1981 has helped here. Note that the interest figures are not the debt interest figures reported in the national accounts (except for the United States). These reported figures do not net out interest receipts of the general government against interest payments on the national debt. This issue is discussed at greater length below.

The inability of the industrial countries' governments to cut spending is mirrored in their inability to reduce public sector employment as a proportion of total employment, evident from Table 19. The constant United Kingdom public sector employment share masks a decline in total public sector employment as total employment fell sharply from 1980 to 1985.

^{5/} In the United Kingdom local government sales of public housing to the private sector are netted out of local government capital expenditure.

Despite the degree of freedom provided by the government's financial deficit, the behavior of current receipts and of total tax revenues as a percentage of GDP closely matches that of total spending. There has been no change in these shares for the OECD as a whole since 1980. The U.S. tax reductions in 1982, 1983, and 1984 (apparent from Table 21) show up rather more weakly in total current receipts (Table 20).

The sharp increase in the United Kingdom tax burden of almost 4 percent of GDP between 1980 and 1982 and its subsequent partial reversal stand out. One of the results of privatization in the United Kingdom is the loss of non-tax current revenues (especially operating surpluses from profitable public enterprises). This is beginning to show up in the data although its full impact has not yet been felt.

As regards the structure of taxation, it is very hard to be informative in the limited space that is available. There are vast intra-OECD differences in the relative importance of taxes on household income, household property taxes, employers and employees social security contributions, indirect taxes, corporate income taxes and other taxes (including tariffs) and there have been significant shifts over time in most of the industrial countries in the share of particular taxes in total receipts. The "cross-sectional" difference in the importance of personal income taxes, property taxes, employers social security contributions and consumption taxes between France and the United States are apparent from Table 22. The time series evidence of the growing importance of employers' and employees social security contributions is contained in Table 22 and Figure 4, as is the small and declining share of the corporate income tax. The importance of the

Figure 4 Relative importance of different types of taxation in 1965 and 1985

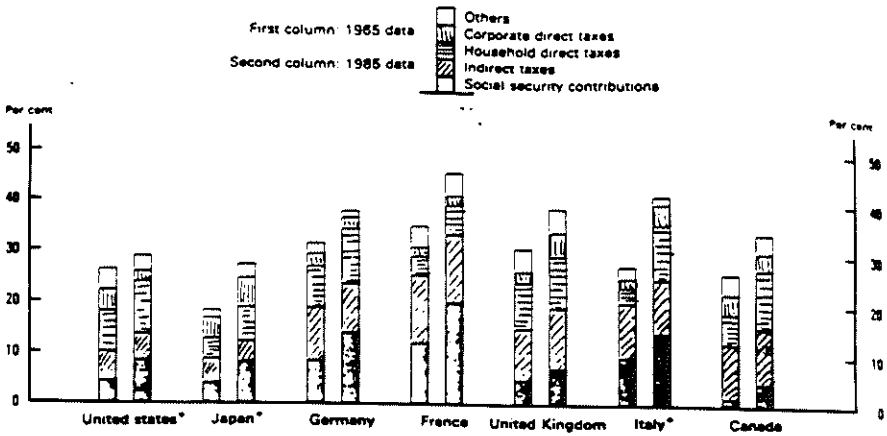


Table 22 Receipts from particular taxes as a percentage of total tax receipts for fourteen selected OECD countries (1965, 1974, 1983)

OECD Heading in Annex I	(1100) Personal income tax		(1200) Corporation income tax		(2100) Employees* contributions		(2200) Employer's contributions		(4000) Property		(5110) General consumption		(5120) Excises										
	1965	1974	1983	1965	1974	1983	1965	1974	1983	1965	1974	1983	1965	1974	1983								
France	11	12	13	5	5	4	7	8	12	25	28	29	4	2	4	23	25	21	14	9	8		
Greece	7	12	13	2	5	2	..	..	15	..	..	15	10	9	3	11	19	15	36	22	22		
Italy	11	16	28	7	5	9	..	8	7	..	33	26	7	3	3	13	17	15	24	15	10		
Portugal	..	..	..	..	..	..	9	11	10	13	19	15	5	4	2	10	11	13	41	27	28		
Spain	14	13	21	6	3	5	7	9	9	22	36	33	6	6	4	22	18	9	18	9	12		
Australia	34	44	49	14	10	9	..	..	..	..	..	..	..	..	..	12	9	8	7	7	22	17	21
Canada	23	33	36	15	13	7	2	3	5	4	5	8	13	9	9	16	14	12	17	14	14	14	
New Zealand	39	55	60	21	14	6	..	..	..	..	..	..	..	..	..	12	8	8	8	12	19	13	13
United States	31	34	37	16	11	6	6	9	11	10	13	17	15	13	11	5	6	7	15	10	9	9	
Belgium	21	29	35	6	7	6	9	9	11	21	20	17	4	2	2	21	18	17	13	9	8	8	
Denmark	41	58	52	5	3	3	4	1	2	2	1	2	8	6	5	9	17	21	29	13	13	13	
Netherlands	28	28	21	8	7	6	15	17	20	13	18	18	5	3	3	12	14	15	15	15	8	7	7
Norway	40	31	25	4	3	15	0	5	6	10	18	15	3	3	2	22	20	18	18	15	17	17	17
Sweden	49	45	39	6	3	3	2	3	..	9	16	26	2	1	2	10	13	14	19	11	10	10	10
OECD unweighted average	26	31	33	9	9	7	6	7	8	10	12	13	8	6	5	11	13	14	23	15	14	14	14

a. Excluding Portugal
b. Excluding Greece and Italy.

SOURCE: OECD (1985). 1974 figures taken from Revenue Statistics of OECD Member Countries 1965-1983 (1984).

Table 23 Recent and proposed changes in personal taxation systems

	<u>Overall taxation</u> Marginal tax rates on average wages under present tax systems ^a	<u>Income tax</u>		
		Top marginal rate ^b		
		Previous	Present	Proposed
Australia	47.3	60.0	55.0	49.0
Austria	54.5		62.0	
Belgium	62.7		86.7	
Canada	33.7	63.6	51.3	
Denmark	62.4	73.0	68.0	
Finland	53.2		68.5	
France	51.2	65.0	58.0	50.0
Germany	62.7		56.0	53.0
Greece	40.1	60.0	63.0	
Iceland	n.a.		55.6	
Ireland	61.3	65.0	58.0	
Italy	57.8	76.0	65.0	56.0
Japan	31.5	88.0	76.5	65.0
Luxembourg	53.6	57.0	56.0	
Netherlands	61.9	60.0	72.0	
New Zealand	30.0	66.0	48.0	
Norway	60.1	71.0	57.6	
Portugal	35.9	84.4	68.8	
Spain	52.8	68.5	66.0	
Sweden	62.0	87.7	77.4	
Switzerland	39.4		45.8	
Turkey	n.a.	78.0	50.0	
United Kingdom	43.9	83.0	60.0	
United States	40.9	75.0	38.0	

a. Overall marginal tax rate for an average (unmarried) production worker, allowing for direct taxes at all levels of government, social security contribution by both employers and employees, and relevant tax concessions. The major data source is OECD (1986), *The Tax/Benefit Position of Production Workers 1981-85*. The figure shown are estimates for 1986.

b. Global effective rate (excluding social security contributions) but allowing for deductibility of taxes paid to lower levels of government.

personal income tax and of social security taxes as revenue sources in the industrial countries and the negligible revenue implications of tariffs and other trade taxes make for a sharp contrast with the revenue structure in most developing countries.

The distortionary effects of the tax transfer system is a function not of average burdens but of marginal tax and benefit rates. Here too, there is considerable cross-sectional variety within the industrial countries, as is apparent from the first column of Table 23. Recent reforms in this area have concentrated on reducing the top marginal rates of the personal income tax (see the second column of Table 23). Many of the most severe distortions, however, occur through the interaction of progressive tax and benefit schedules at rather low levels of income. The "poverty trap" (marginal tax net of benefit rates of more than 100 percent at low levels of income) and the "why work trap" (small or even negative differences between income when employed and income when unemployed) have not yet been addressed very seriously in most of the industrial countries where the emphasis on the reform of direct taxation has crowded out a systematic reconsideration of the integrated tax and benefit systems.

In conclusion, the picture of structural reforms of public expenditure and taxation since 1980 is not very impressive.

The growth of public spending has been reduced to a rate equal to or very slightly below that of GDP. No major industrial country has cut public spending in real terms. The political economy of this failure to reduce public spending in spite of the clear commitment of governments (notably in the United Kingdom and in the United States) to such a policy is not very well understood. In the case of the United States and the United Kingdom both the institutions of government and the incumbent government seemed stable. Yet

they could not deliver on their promises to cut public spending and reduce the tax burden. If the industrial countries' governments and political institutions cannot supply public spending cuts, the likelihood of lasting success in developing countries with less stable institutions of government and often less secure incumbency must be rather slim. Significant progress in minimizing the distortions and disincentive effects of the tax-transfer system (given a roughly constant overall tax burden reflecting the roughly constant share of public spending) has not yet been made in most of the industrial countries, although major changes have been made on the taxation side alone in the United States and to a lesser extent in the United Kingdom.

IVb. Debt, deficits, and solvency

How is the solvency of the public sector to be evaluated, and more specifically, is the threat of government insolvency in the main industrial countries an obstacle to expansionary fiscal policy actions in some, many or all of them? The issue of government solvency is quite clear in principle, although the data required for any practical evaluation still tend to be beyond what's available. Consider the stylized consolidated budget identity of the general government and the Central Bank:

$$(1) \quad \frac{\Delta H - E\Delta F^* + \Delta B}{PY} \equiv g-t + \frac{\Delta K}{Y} + \frac{iB}{PY} - \frac{i^* EF^*}{PY} - \rho \frac{K}{Y}$$

H is the nominal stock of high-powered money, B the stock of interest bearing government debt (assumed to be denominated in terms of domestic currency and to have a fixed nominal value), F^* the stock of official foreign exchange reserves, K the public sector capital stock, g government final

consumption as a proportion of GDP, t taxes net of transfers and subsidies as a proportion of GDP, Y real GDP, P the GDP deflator, E the nominal spot exchange rate, i the nominal interest rate on public debt, i^* the interest rate on reserves and ρ the rate of return on the public sector capital stock accruing to the government (net of depreciation). Let lower-case quantities denote upper-case quantities as a proportion of GDP, i.e.,

$h \equiv \frac{H}{PY}$, $f^* \equiv \frac{F^*E}{PY}$, $b \equiv \frac{B}{PY}$ and $k \equiv \frac{K}{Y}$. Let $\pi \equiv \frac{\Delta P}{P}$ denote the rate of inflation, $n \equiv \frac{\Delta Y}{Y}$ the growth rate of real GDP, $r \equiv i - \pi$ the short real interest rate and $\epsilon \equiv \frac{\Delta E}{E}$ the proportional rate of depreciation of the nominal exchange rate. Finally let the net non-monetary debt of the public sector be defined by:

$$(2) \quad D \equiv B - EF^* - K$$

and

$$d \equiv \frac{D}{PY}$$

The budget identity (1) can be rewritten as:

$$(3a) \quad \Delta d \equiv g - t + (r - n)d + \ell - s$$

$$(3b) \quad \ell \equiv (r - \rho)k + (i - (i^* + \epsilon))f^*$$

$$(3c) \quad s \equiv \frac{\Delta H}{PY} = \Delta h + (\pi + n)h$$

Equation (3a) tells us that the net debt of government will be rising as a proportion of GDP if $g - t$, the primary (non-interest) current deficit plus $(r - n)d$, interest paid on the (net) debt corrected for inflation and real GDP growth and imputing a common nominal rate of return i to all assets and liabilities, plus $\ell \equiv (r - \rho)k + (i - (i^* + \epsilon))f^*$, losses due to the cash rate of return a public sector capital $(\rho + \pi)$ and the rate of return an international

reserves $(i^* + \epsilon)$ falling short of the opportunity cost of borrowing (i) minus $s \equiv \frac{\Delta H}{PY}$, seigniorage or the real resources appropriated by printing money, is positive.^{6/} A government is solvent at time t_0 if $PDV(t-g; r-n; t_0)$, the present discounted value of future primary current surpluses as a proportion of GDP (using real interest rates net of real growth rates $r-n$ to discount future surpluses), minus $PDV(l; r-n; t_0)$, the present discounted value of future losses on capital and international reserves, plus $PDV(s; r-n; t_0)$ the present discounted value of future seigniorage, equals the value of the existing stock of debt at t_0 or if:

$$(4) \quad d(t_0) = PDV(t-g; r-n; t_0) - PDV(l; r-n; t_0) + PDV(s; r-n; t_0) \quad 7/$$

The solvency constraint or intertemporal budget constraint (4) is obtained from the current flow budget identity (3a) by imposing the "terminal" or transversality condition that the present discounted value, at t_0 , of government debt very far (strictly speaking infinitely far) into the future will be equal to zero.^{8/} This means that ultimately the debt-GDP ratio will have to grow at a rate below the real interest rate minus the growth rate of

^{6/} Note that $g-t$, $(r-n)d$, l and s all are fractions of GDP.

^{7/} Instead of discounting future flows as a proportion of GDP using $r-n$ we could equivalently discount future real flows using r or future nominal flows using i . In the last case, (4) could be rewritten as:

$$D(t_0) = PDV(P(T-G); i; t_0) - PDV(PYl; i; t_0) + PDV(\Delta H; i; t_0) - \int_{t_0}^{\tau} (\tau(u) - n(u)) du$$

^{8/} Technically, the condition is $\lim_{\tau \rightarrow \infty} d(\tau) e^{-(r-n)(\tau-t_0)} = 0$

GDP, or equivalently that ultimately the real debt must grow at a rate below the real interest rate or again that the nominal debt will ultimately have to grow at a rate below the nominal interest rate. This rules out everlasting "Ponzi-games": the government cannot forever pay the interest on its outstanding debt simply by borrowing more. At some stage the debt must be serviced either by running primary surpluses or through seigniorage, i.e. by recourse to the inflation tax.

Before attempting to apply this intertemporal consistency check to the fiscal, financial, and monetary strategies of the main industrial countries, four brief remarks are in order:

First, the accounting framework can conceptually be extended quite easily to include other assets and liabilities. Public sector natural resource property rights, the stream of income from them and the proceeds from their sale through privatization are important for a number of countries such as the United Kingdom. Contingent public sector liabilities such as formally or informally publicly guaranteed private debt can be allowed for (in a certainty equivalent manner) by including on the liability side the full value of these liabilities multiplied by the probability that the guarantee will be called upon.

Second, the interest rates used in the present value calculations should be after-tax interest rates. Whose tax rate corresponds to the appropriate marginal rate is by no means obvious.

Third, the solvency constraint should be viewed as a consistency check on a specific set of plans for future taxation, spending and monetization. Only if there exists no economically and politically feasible set of tax, spending, and seigniorage plans that permits the existing stock of debt to be serviced, can one truly speak insolvency. If, say, extrapolation

of current values of $t-g$, z and s violates equation (4) we cannot infer that (part of) the debt will be defaulted upon. Instead alternative tax, spending, and monetization policies are likely to be adopted that will ensure that equation (4) holds.

Fourth, seigniorage $\frac{\Delta H}{PY}$ can be decomposed into 2 components as shown in equation (3c). Higher real growth and higher inflation mean cet. par. that the demand for nominal money balances will grow more rapidly and that the authorities can appropriate a higher volume of real resources through the inflation tax. This is the $(\pi+n)h$ component. Higher inflation however, and the higher nominal interest rates associated with it, will tend to reduce the demand for real money balances (i.e. to raise the velocity of circulation of high-powered money). The Δh component will be negative in that case.

Another way of looking at this is to note that seigniorage can be rewritten as in equation (5) where $\mu \equiv \Delta H/H$ is the proportional growth rate of the nominal stock of high-powered money and $V \equiv \frac{Y}{PH}$ is its income velocity of circulation.

$$(5) \quad s \equiv \frac{\mu}{V}$$

A higher value of μ , the growth rate of nominal base money can be viewed as an increase in the seigniorage tax rate. Given the seigniorage tax base, it will raise seigniorage revenue. V , the velocity of circulation is the reciprocal of the seigniorage tax base. If higher monetary growth rates sooner or later imply higher inflation, V will rise, i.e. the seigniorage tax base will fall. A higher value of μ will only raise seigniorage revenue if the elasticity of velocity with respect to the inflation rate is less than unity.

The available data on industrial countries' debt and deficits in recent years are given in Table 24, 25, and 26.

Table 24 General (G) and Central (C) government financial balances
(Surplus(+)) or deficit as a percentage of GNP/GDP)

		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
United States	G	0.2	0.6	-1.2	-1.0	-3.5	-3.8	-2.7	-3.4	-3.3	-2.7
	C	-2.0	-1.1	-2.3	-2.4	-4.1	-5.6	-4.9	-5.1	-5.0	-4.0
Japan	G	-5.5	-4.8	-4.5	-3.8	-3.6	-3.7	-2.1	-0.8	-0.9	-0.9
	C	-5.2	-6.1	-6.2	-5.9	-5.9	-5.6	-4.9	-4.1	-4.3	-4.7
Germany	G	-2.5	-2.6	-2.9	-3.7	-3.3	-2.4	-1.9	-1.1	-1.2	-1.5
	C	-2.1	-1.8	-1.6	-2.1	-2.1	-2.0	-1.8	-1.1	-0.7	-0.8
France	G	-1.9	-0.7	0.2	-1.8	-2.7	-3.1	-2.9	-2.6	-2.9	-2.7
	C	-1.6	-1.5	-1.1	-2.6	-2.8	-3.3	-3.4	-3.3	-2.9	-2.5
United Kingdom	G	-4.2	-3.5	-3.5	-2.8	-2.3	-3.6	-3.9	-2.7	-2.9	-2.7
	C	-3.3	-2.3	-2.5	-2.9	-2.7	-3.1	-3.2	-2.4	-2.6	-2.4
Italy	G	-9.7	-9.5	-8.0	-11.9	-12.6	-11.7	-13.0	-14.0	-12.6	-12.6
	C	-13.1	-10.8	-10.8	-12.8	-15.1	-16.4	-15.5	16.3	-14.2	-13.1
17 OECD countries	G	-2.2	-1.8	-2.5	-2.7	-4.0	-4.2	-3.4	-3.4	-3.3	-3.0
European countries	G				-4.5	-4.9	-4.7	-4.5	-4.2	-4.1	-4.0
Seven major countries excl. United States	C	-4.4	-4.1	-4.1	-4.5	-5.0	-5.3	-5.1	-4.7	-4.3	-4.2

Note: WEO - Central Government; OECD EO - General Government.

Source: OECD Economic Outlook, June 1987. IMF, World Economic Outlook, April 1987.

Table 25 Net debt of general government
(percentage of GNP/GDP)

	1973	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
United States	22.9	21.0	19.4	19.5	18.8	21.4	24.0	25.1	26.8	28.8	29.9
Japan	-6.1	11.3	14.9	17.3	20.7	23.2	26.2	26.9	26.5	26.2	26.6
Germany	-6.7	9.4	11.5	14.3	17.4	19.8	21.4	21.7	22.1	22.2	23.0
France	8.3	10.2	9.8	9.1	9.9	11.3	13.4	15.2	16.7	18.5	20.4
United Kingdom	57.5	53.3	48.6	48.0	47.2	46.4	47.1	48.5	46.9	46.9	46.1
Italy	52.1	63.9	63.7	61.8	66.8	73.4	80.6	87.8	96.3	99.2	103.9
Canada	2.7	10.6	10.7	11.5	10.7	16.9	20.4	24.7	30.3	34.0	36.7
Total of the above countries	17.2	21.6	21.2	21.8	22.5	25.1	27.8	29.3	30.8	32.2	33.3

Source: OECD Economic Outlook, June 1987.

The general government and central government deficits shown in Table 24 perhaps contain one or two surprises. First, the U.S. general government deficit (as a proportion of GDP) has been below the OECD average for every year since 1981. Italy and the smaller European countries contributed significantly to the high OECD average. The European countries as a group had a general government deficit well above that of the United States for the entire 1981-87 period. It is, of course, true that the United States' general government deficit increased sharply from 1981 on while Japan sharply reduced its general government deficit and the European countries, after a small increase, were back in 1986 where they had been in 1981. The increase in the U.S. general government deficit is more than accounted for by the increase in its federal deficit. State and local government maintained and even increased slightly its surplus.

It may be the case that the state and local government surplus in the United States is to a certain extent spurious, say because contributions to effectively funded pension schemes are counted as current receipts. While this would raise the true general government deficit in the United States, it is not obvious that it would raise it relative to the deficits in the rest of the industrial world if similar corrections were made there. Even if just the central government deficits are considered, the U.S. deficit relative to GDP is very similar (since 1982) to the Japanese and European deficits.

To single out the U.S. deficit for special concern and opprobrium therefore requires one to go beyond the recorded deficit shares by relating the government deficits to the perceived existing real slack in the economy (in the case of Europe) and to differences in private savings propensities (in the case of Japan).

The 1987 (estimated) U.S. general government deficit of 2.7 percent of GDP and (estimated) Federal deficit of 4.0 percent are very close to being "full employment deficits." If the high European unemployment rates reflect to a significant extent cyclical or demand-deficient rather than structural (real wage constrained, etc.) unemployment, then the longer term implications for the growth of the public debt are more serious in the United States than in Europe on the assumption, underlying cyclical corrections, that a "normal" cyclical recovery will occur in Europe in the absence of further "discretionary" fiscal actions.

As regards the United States-Japan comparison, similar public sector deficits may have very different macroeconomic implications in the United States with a gross private saving ratio of 16.2 percent in 1980 (and a gross private investment ratio of 16.3 percent) and in Japan with a private saving ratio in 1986 of 28.7 percent (and a gross private investment ratio of 23.2 percent).

On balance, the case that general government or central government fiscal deficits in the United States are larger and less sustainable than those in Europe appears to be much less straightforward than it is often made out to be. The same holds, as regards central government deficits, also when comparing the United States and Japan.

The same ambiguous message is carried by the public debt-GDP ratios reported in Table 25. The United States ratio, while rising, is still below the average for the seven main industrial countries. Omitting Italy brings the United States up to the average of the remaining six main industrial countries. A little arithmetic shows that with nominal income growth of 7.5 percent in 1987 and a debt-GDP ratio of 30 percent, the U.S. debt-GDP ratio will rise only if the deficit-GDP ratio exceeds 2.25 percent (ignoring

seigniorage). The current deficit projections are above this threshold level, but not by very much. The increase in the U.S. high-powered money stock was 5.2 billion in 1986, 8.4 billion in 1985 and 1.1 billion in 1984 (.12 percent of GDP, 0.21 percent of GDP, and 0.03 percent of GDP respectively).

With no more than 0.1 percent or 0.2 percent of GDP extracted through seigniorage, the threshold U.S. general government deficit that just stabilizes the debt-GDP ratio would go up to 2.35 percent or 2.45 percent of GDP.

To evaluate the sustainability of current fiscal, financial and monetary policy in the main industrial countries we need, from equation (4), the current net stock of debt, current and prospective future primary current deficits, current and prospective future interest losses on international reserves and public sector capital, current and prospective future seigniorage and interest rate projections. Most of these can be disposed of quite easily.

Seigniorage has in recent years been a negligible source of revenue in all the main industrial countries except for Italy. For example, recent U.S. figures hovered between 0 percent and 0.2 percent of GDP and the United Kingdom average for 1981-83 was 0.21 percent of GDP. In Italy the shares were 2.8 percent in 1985, 2.2 percent in 1984, and 2.3 percent in both 1983 and 1982. Recent changes in Central Bank policy in Italy are likely to have lowered these percentages sharply. An estimate in Buiter [1985] of the maximal amount of seigniorage that could have been extracted in the United Kingdom over the period since 1948 is 2.74 percent of GDP (at an annual inflation rate of 67 percent). Except for Italy it seems safe to put the likely contribution of seigniorage to government financing at no more than 0.2 percent of GDP.

Interest losses on international gold and foreign exchange reserves are negligible in the industrial countries, especially now that foreign exchange reserves earn (close to) market rates of interests. In what follows, foreign exchange reserves will be omitted altogether.

As regards income from the general government capital stock, no usable data are available but two informative benchmarks can be calculated. The first assumes that there is not gross cash return from the capital stock, i.e. that the net return is minus public sector capital consumption: $\rho = -\delta$. Letting a denote gross public sector capital formation as a proportion of GDP, the budget identity can (ignoring international reserves) in this case be rewritten as:

$$(3a') \quad \Delta b \equiv g + a - t + (r-n)b - s$$

The solvency constraint in this case is:

$$(4') \quad b(t_0) = PDV(t - (g+a); r-n; t_0) + PDV(s; r-n; t_0)$$

In the second benchmark case, the net cash rate of return on the general government capital stock equals the opportunity cost of borrowing, i.e. $\rho = i - \pi$. In that case the budget identity (again ignoring international reserves) can be rewritten as:

$$(3a'') \quad \Delta d \equiv g - t + (r-n)d - s$$

where

$$d \equiv b - k$$

The solvency constraint becomes:

$$(4'') \quad d(t_0) = PDV(t - g; r-n; t_0) + PDV(s; r-n; t_0)$$

While we cannot confidentially predict the future course of the primary current government deficit (crucial for equation (4'')) or of the primary current government deficit plus gross public sector capital formation (crucial for equation (4')) we can evaluate the implications of extrapolating recent values of these deficits (as proportions of GDP).

For the United States reasonable net debt interest figure are available, both for the general government (given in Table 18) and for the Federal government, given in Table 26 below.

Table 26 United States federal government net interest paid and primary surplus
(percentage of GDP)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Net interest paid	1.6	1.7	1.9	2.2	2.6	2.7	3.0	3.2	3.3	
Primary surplus ($\rho = -\delta$)	-0.4	0.6	-0.4	-0.2	-1.5	-2.9	-1.9	-1.9	-1.7	

Source: Economic Report of the President, 1987 and OECD Economic Outlook, June 1987.

The recent U.S. general government primary surpluses are given in Table 27.

Table 27 The primary general government surplus of the United States
(percentage of GDP)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
$\rho = -\delta$	1.5	1.8	0.2	0.7	-1.6	-1.8	-0.4	-0.8	-0.7	
$\rho = i-\pi$	3.2	3.5	1.9	2.2	-0.1	-0.3	1.0	0.8	n.a.	

Source: OECD Economic Outlook, June 1987 and Economic Report of the President, 1987.

The first line shows the surplus on the pessimistic assumption that the net cash return on the general government capital stock is negative (and equal to the depreciation of the capital stock). It shows a small surplus in 1980 and 1981, a deficit of 1.6 percent in 1982 and 1.8 percent in 1983 and a smaller deficit of about 3/4 percent of GDP in 1985 and 1986.

The second line shows the surplus on the optimistic assumption that the net cash rate of return on general government capital equals the opportunity cost of borrowing. It shows a large surplus in 1980 and 1981 which almost vanishes in 1983 and settles at just over 1.5 percent of GDP in 1984, 1985, and 1986.

What constant general government primary surplus $\tau-(g+a)$ would be necessary to service the outstanding public debt of the United States in the pessimistic case ($\rho = -\delta$)? assuming $r-n$ and s to be constant at $\overline{r-n}$ and \overline{s} respectively, the answer is, from equation (4') given by:

$$(6) \quad \overline{\tau-(g+a)} = \overline{(r-n)} b(\tau_0) - \overline{s} \underline{g/}$$

9/ Note that this primary surplus would keep b constant.

With $\bar{s} = .002$ and $b(t_0) = .3$, we can calculate the debt burden stabilizing permanent primary surplus for different values of $\bar{r-n}$ as follows: 10/

(7)	$\begin{aligned} \overline{t-(g+a)} &= 0.1\% \\ &= 0.4\% \\ &= 0.7\% \\ &= 1.0\% \end{aligned}$	$\begin{aligned} (\bar{r-n} = .01) \\ (\bar{r-n} = .02) \\ (\bar{r-n} = .03) \\ (\bar{r-n} = .04) \end{aligned}$
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Even when the long run (after-tax) real interest rate exceed the long-run real growth rate by much as 4 percentage points, the required primary surplus is only one percent of GDP. More plausible values of $\bar{r-n}$ of 0.02 or 0.03 yield required primary surpluses of 0.4 percent and 0.7 percent of GDP respectively. Compared to recent actual general government primary surpluses in the pessimistic case of -0.8 percent and -0.7 in 1985 and 1986, a permanent reduction in the primary deficit of between 1.0 percent and 1.5 percent of GDP would be sufficient to restore solvency.

In the optimistic case ($\rho=i-\pi$) solvency is already assured and there is indeed room for a reduction in the permanent general government primary surplus. From equation (4'') the permanent primary current surplus $\overline{t-g}$ required to stabilize the current net debt ratio is:

$$(8) \quad \overline{t-g} = (\bar{r-n}) d(t_0) + \bar{s}$$

Since $d(t_0) = b(t_0) - k(t_0)$, $\overline{t-g}$ is strictly less than $\overline{t-(g+a)}$ for the same values of $\bar{r-n}$ and \bar{s} . The actual recent values of the primary current surplus of the general government in the optimistic case are equal to the largest value given in equation (7). Indeed, with $\bar{r-n} = 0.02$ or 0.03, the primary surpluses reported in the second line of

10/ The final numbers are multiplied by 100 to obtain percentages of GDP.

Table 27 indicate that the U.S. government would be on course for paying off the national debt if the optimistic case were correct.

For the U.S. Federal Government I could not find information on gross fixed capital formation. Table 26 therefore gives only the pessimistic case calculation of the Federal primary deficit. Net Federal Government debt in 1986 II was about 36 percent of GDP. 11/ The Federal debt share stabilizing permanent primary surplus in the United States for the pessimistic case is in that case given by:

$\overline{t-(g+a)}$	=	0.16%	$\overline{(r-n)}$	=	.01)
	=	0.52%	$\overline{(r-n)}$	=	.02)
	=	0.88%	$\overline{(r-n)}$	=	.03)
	=	1.24%	$\overline{(r-n)}$	=	.04)

This would imply the need for a reduction in the primary Federal deficit of between 2.0 and 2.5 percent of GDP if the Federal debt-GDP ratio is to be stabilized.

For the other industrial countries, the interest on the national debt reported in the national accounts is gross of any general government interest receipts, which are often quite sizeable. Table 28 shows interest payments, receipts and net interest payments for the United States, Japan, Germany, and the United Kingdom.

In order to have an indirect check on the reported net interest payments figures, I have constructed an alternative estimate by multiplying the net debt figures of Table 25 by the nominal interest rates on long government debt. As these are before-tax interest rates, they are likely to overstate the net debt payments, a problem I also believe to affect even the "net" U.S. interest payment figures. The method is very crude, as it ignores

11/ Economic Report of the President, 1987.

Table 28 Interest payments and receipts of general government in four industrial countries

	1960	1970	1980	1981	1982	1983	1984	1985	1986
<u>United States</u>									
Payments	2.0	2.2	3.1	3.6	4.1	4.3	4.7	4.9	5.0
Receipts	0.7	1.0	1.7	1.9	2.2	2.3	2.4	2.3	2.4
Net Payments	1.3	1.2	1.4	1.7	1.9	2.0	2.3	2.6	2.6
<u>Japan</u>									
Payment			3.1	3.6	3.8	4.2	4.4	4.5	
Receipts			1.9	2.2	2.3	2.4	2.4	2.6	
Net Payments			1.2	1.4	1.5	1.8	1.9	1.8	
<u>Germany</u>									
Payment			1.9	2.2	2.7	2.9	3.0	2.9	
Receipts			1.1	1.3	1.8	1.8	1.8	1.8	
Net Payments			0.8	1.0	0.9	1.2	1.2	1.1	
<u>United Kingdom</u>									
Payment		4.0	4.7	5.0	5.1	4.7	4.9	5.0	4.9
Receipts		1.8	1.6	1.7	1.9	1.6	1.6	1.8	
Net Payments		2.2	3.1	3.3	3.1	3.1	3.3	3.2	

Source: National Income Accounts.

the maturity structure of the existing debt, but may at least given some idea of orders of magnitude. The net interest payments estimates are in Table 29, and estimates of the general government primary surpluses are in Table 30. As the United Kingdom estimates in Table 29 are about the same as the official gross data reported in Table 28, either the estimates in Table 29 still overstate true net interest payments for the United Kingdom or the interest receipts entry for the United Kingdom in Table 28 is suspect.

IVc. Debt, deficits, and monetization

The analysis of the previous subsection can be turned on its head by treating debt and the primary deficit as exogenous and considering the implications for seigniorage and inflation. If the real debt burden is to be kept constant at some given level \bar{b} (not necessarily the current debt-GDP ratio) and if the primary deficit is a fixed share of GDP, $\overline{g+a-t}$, the implied seigniorage is given, for the pessimistic case, by:

$$(9) \quad s = \overline{g+a-t} + (r-n)\bar{b}$$

From equation (5), the proportional rate of growth of the nominal high-powered money stock is:

$$(10) \quad \mu = V(\overline{g-t} + (r-n)\bar{d})$$

A higher value of $\overline{g+a-t} + (r-n)\bar{b}$, the long-run inflation-and-real-growth-corrected deficit as a proportion of GDP, implies a need for more seigniorage to satisfy the government budget identity. At a given velocity, V , more seigniorage means higher inflation. Lower inflation, however, means lower velocity and therefore, given μ , more seigniorage. Many standard money

Table 29 Estimated net interest payments of the General Government
(percentage of GDP)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
United States	1.8	1.8	2.2	2.6	2.8	2.7	3.1	2.8	2.2	
Japan	0.7	1.1	1.5	1.7	1.9	2.0	2.0	1.7	1.4	
Germany	0.5	0.9	1.2	1.8	1.8	1.8	1.7	1.5	1.3	
France	0.9	0.9	1.2	1.6	1.6	1.7	1.9	1.8	1.6	
United Kingdom	6.7	6.3	6.6	6.9	6.0	5.1	5.2	5.0	4.6	
Italy	8.8	9.0	9.9	13.8	15.3	14.5	13.0	12.5	10.3	
Canada	1.0	1.1	1.4	1.6	2.4	2.4	3.2	3.3	3.2	

Source: Net debt of general government as a percentage of GDP: Table 25.

Long-term interest rates on public debt: IMF, World Economic Outlook, April 1987.

Table 30 General Government primary surpluses in the main industrial countries
(percentage of GDP)

		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
<u>United States</u> ^a	$\rho = -\delta$	1.5	1.8	0.2	0.7	-1.6	-1.8	-0.4	-0.8	-0.7	
	$\rho = i-\pi$	3.2	3.5	1.9	2.2	-0.1	-0.3	1.0	0.8	n.a.	
<u>United States</u> ^b	$\rho = -\delta$	2.0	2.4	1.0	1.6	-0.7	-1.1	0.4	-0.6	-1.1	
	$\rho = i-\pi$	3.7	4.1	2.8	3.1	0.8	0.4	1.8	1.0	n.a.	
<u>Japan</u> ^a	$\rho = -\delta$	-4.8	-3.9	-3.3	-2.4	-2.1	-1.9	-0.1	n.a.	n.a.	
	$\rho = i-\pi$	1.3	2.4	2.8	3.7	4.0	3.9	5.4	n.a.	n.a.	
<u>Japan</u> ^b	$\rho = -\delta$	-4.8	-3.7	-3.0	-2.1	-1.7	-1.7	-0.1	0.9	0.5	
	$\rho = i-\pi$	1.3	2.6	3.1	4.0	4.1	3.8	5.0	5.7	n.a.	
<u>Germany</u> ^a	$\rho = -\delta$	-1.8	-2.0	-2.1	-2.7	-2.4	-1.2	-0.7	0.0	n.a.	
	$\rho = i-\pi$	1.5	1.4	1.5	0.5	0.4	1.3	1.7	2.3	n.a.	
<u>Germany</u> ^b	$\rho = -\delta$	-2.0	-1.7	-1.7	-1.9	-1.5	-0.6	-0.2	0.4	0.1	
	$\rho = i-\pi$	1.3	1.7	1.9	1.3	1.3	1.9	2.2	2.7	n.a.	
<u>United Kingdom</u> ^a	$\rho = -\delta$			-0.4	0.5	0.8	-0.5	-0.7	0.5	n.a.	
	$\rho = i-\pi$			2.0	2.3	2.3	1.4	1.3	2.4	n.a.	
<u>United Kingdom</u> ^b	$\rho = -\delta$	2.5	2.8	3.1	4.1	3.7	1.5	1.3	2.3	1.7	
	$\rho = i-\pi$				5.9	5.2	3.4	3.3	4.2	n.a.	
<u>France</u> ^b	$\rho = -\delta$	-1.0	0.2	1.4	-0.2	-1.1	-1.4	-1.0	-0.8	-1.3	
<u>Italy</u> ^b	$\rho = -\delta$	-0.9	-0.5	1.9	1.9	2.7	1.5	0.0	-1.5	-2.6	

a. Using net interest payments from Table 28.

b. Using estimated interest payments from Table 29.

demand functions (e.g. the linear and the log-linear ones) have the property that any given amount of real seigniorage can be extracted both with a low rate of inflation and a low velocity (on the nice side of the "seigniorage Laffer curve") and with a high rate of inflation and a high velocity (on the unpleasant side of the seigniorage Laffer curve). For this reason alone, the use of equation (10) to infer the "eventual monetization" implied by the fiscal program is problematic (see Sargent and Wallace [1981] and Buiter [1987]). With velocity rising with inflation there may be more than one solution to equation (10).

Quite a part from the theoretical considerations, seigniorage seems to have disappeared as a serious source of government revenue in the main industrial countries (except for Italy). Very minor increases in t or cuts in g would allow the authorities to dispense altogether with the 0.1 percent or 0.2 percent of GDP brought in through seigniorage.

The data in Table 30 suggest that, even in the pessimistic case ($\rho = -\delta$), Japan, and Germany now are running small primary surpluses while the United Kingdom even has a sizeable primary surplus. The United States and France have primary deficits of just under and just over 1 percent of GDP respectively. Italy has a rapidly growing primary deficit which reached 2.6 percent of GDP in 1986 (Note that seigniorage was 2.8 percent of GDP in Italy during 1985). In the optimistic case ($\rho = i - \pi$) all industrial countries with the possible exception of Italy would be running primary surpluses, several of them quite large. Except in the case of Italy, the analysis does not suggest that great fiscal stringency is required in order to avoid either threats to solvency or the need for much increased recourse to the inflation tax.

IVd. Debt, deficits, and crowding out

In virtually any model that does not exhibit debt neutrality, the degree of financial crowding out pressure is, given the current and anticipated future paths of public spending and taxation, an increasing function of the existing real net stock of public debt (or of the debt-GDP ratio).

In open economies financial crowding out occurs through upward pressures on real interest rates, through more intense credit rationing of the private sector, and through appreciation of the real exchange rate. The global economy only has the first two mechanisms. From the net debt figures of Table 25 it is clear that financial crowding out pressure has increased globally since the beginning of the 1980s, although the increase in the debt-GDP ratio of the seven main industrial countries by just over 10 percentage points between 1980 and 1986 does not seem alarming. Again the United States does not differ significantly from the average of the big seven. The United Kingdom appears to be the only country to have reduced its debt-GDP ratio, but this small decline hides a reduction in public sector assets due to privatization. Again Italy appears to be the only major country with a potentially serious debt problem.

With sticky nominal prices or wages and demand-constrained employment and output, monetary policy can reduce short real interest rates and prevent financial crowding out. At full employment monetary policy can only influence financial crowding out by permitting the substitution of real money balances for real debt in private portfolios. With high-powered money less than 5 percent of annual GDP in the United States and 6 percent in the United Kingdom, the scope for monetary policy to influence financial crowding out at

full employment must be rather limited. Its cyclical role is likely to be much more significant.

Short-run demand effects of fiscal policy

As pointed out by Blinder and Solow [1974] and reiterated in Buiter [1985], there are no "model-free" measures of fiscal stance. To evaluate the impact of past, current and anticipated future fiscal policy on any aspect of the economy we need a model relating policy instruments to outcomes both directly (i.e. given private sector expectations about the future) and indirectly via the effect of current and past policy actions on expectations about the future.

It is therefore with some reluctance that Table 31 is presented here. It contains the IMF's and OECD's fiscal impulse measures which purport to indicate the direction and magnitude of the impact of current discretionary fiscal measures on aggregate demand. Both the OECD's and the IMF's measures try to correct variations in the general government deficit for endogenous variations in receipts and outlays associated with cyclical variations in output and employment under given spending programs and tax laws and regulations. Neither measure is "model-based". They differ from the current demand impact measure of the simple, static, expectations-innocent Keynesian model by not weighting the different outlays and receipts by their different multipliers and by evaluating the effect of tax rate and transfer rate changes at some cyclically corrected output level rather than at the actual output level. They differ from the more classical and forward-looking fiscal impact measures of Blanchard [1985] by not considering the effects of (changes in) anticipated future fiscal policy actions on aggregate demand today.

Taken at face value, a few points emerge from Table 31. First, U.S. fiscal policy diverged in an expansionary direction from that pursued on average in the rest of the industrial world after 1981 and until 1985.

Table 31 OECD and IMF Measures of Fiscal Stance

	1980	1981	1982	1983	1984	1985	1986	1987
IMF General Government Fiscal Implus (percentage of GDP)								
United States	0.7	-0.5	0.5	0.6	0.6	0.7	-0.4	-0.5
Japan	-0.4	-1.2	-0.1	-0.2	-1.2	-0.9	-0.5	-0.1
Germany	-0.2	-0.5	-1.9	-0.5	0.4	-0.6	..	-0.2
France	-1.8	0.6	0.3	-0.5	-0.6	-0.7	0.2	-0.3
United Kingdom	-1.9	-2.8	-1.0	1.7	0.4	-0.5	0.1	0.3
Italy	-1.3	2.2	-1.1	-2.4	1.0	1.0	-1.4	-0.6
Canada	0.5	-0.7	1.1	0.9	1.5	0.9	-0.8	-0.6
Seven countries above	-0.1	-0.5	-0.1	0.2	0.2	0.1	-0.4	-0.3
Seven countries excl. United States	-0.8	-0.6	-0.6	-0.2	-0.1	-0.4	-0.4	-0.2
OECD Change in General Government Structural Budget Deficit (percentage of GNP)								
United States	0.5	-0.9	1.3	0.5	0.3	0.8	0.0	-0.6
Japan	-0.2	-0.6	-0.7	-0.6	-0.9	-0.9	-0.4	-0.4
Germany	0.2	-0.1	-1.5	-1.4	-1.2	-0.6	0.3	0.0
France	-1.6	1.0	0.4	0.1	-0.6	-0.6	0.4	-0.5
United Kingdom	-2.1	-2.9	-1.5	1.7	-0.4	-0.4	0.5	0.5
Italy	-1.1	3.4	0.0	-2.3	-0.3	1.2	-0.9	0.6
Canada	-0.1	-1.2	0.7	0.7	0.2	0.6	-0.9	-0.5
Seven countries above	-0.1	-0.6	0.3	0.1	-0.3	0.2	-0.1	-0.3
Major six excl. United States	-0.5	-0.1	-0.3	-0.3	-0.5	-0.4	-0.1	-0.1
OECD Change in general government inflation-adjusted structural budget deficit (percentage of GDP)								
United States	0.2	-0.3	1.8	0.8	0.2	0.8	0.2	-1.0
Japan	-1.1	0.2	-0.4	-0.4	-1.0	-0.9	0.1	-0.2
Germany	-0.1	-0.2	-1.4	-1.2	-1.2	-0.5	0.8	-0.2
France	-1.7	1.0	0.4	0.1	-0.6	-0.5	0.7	-0.7
United Kingdom	-3.4	-0.4	-0.1	3.0	-0.3	-0.6	1.2	0.4
Italy	-4.5	4.8	0.7	-1.8	2.2	1.7	1.5	1.6
Canada	0.1	-1.3	0.5	0.6	0.2	0.5	-1.0	-0.5
Seven countries above	-0.7	0.0	0.7	0.4	-0.2	0.2	0.4	-0.5
Major six excl. United States	-1.3	0.4	-0.2	0.1	-0.4	-0.4	0.5	-0.1

(+) Indicates a move toward expansion

Source: OECD Economic Outlook, June 1987, IMF, World Economic Outlook, April 1987.

Second, after 1985 fiscal policy turns mildly contractionary throughout the industrial world. Third, German fiscal policy was contractionary in every year except 1986 (and possibly 1984). Japanese fiscal policy was contractionary in every year. The expansionary fiscal package recently announced by Japan would break this run of tight fiscal policy. Fourth, the data flag the severe fiscal contraction in 1980, 1981, and 1982 in the United Kingdom, the sharp reversal in 1983 and a moderately expansionary fiscal stance since then. Finally, the very large year-to-year variations in fiscal stance in Italy stand out, supporting the view that this country has rather deep-seated problems in the design and implementation of fiscal policy.

The relatively expansionary U.S. fiscal stance from 1982 until 1985 and its subsequent reversion to the OECD mean or even slightly beyond in the other direction, support qualitatively the real appreciation and depreciation of the dollar, although the magnitude of the fiscal impulses and the magnitude of the real exchange rate response seem out of line with each other. Relative monetary policy stances in the United States and in the rest of the OECD no doubt reduce the size of the unexplained real exchange rate residual, but there remains a sizeable chunk that can only be rationalized, if at all, by appealing to unobservable expectations of future fiscal and/or monetary policy.

Table 31 also suggests that global fiscal policy in its aggregate demand aspect has not been supportive of global economic activity, at least since 1986. When the normal downturn of the business cycle is reinforced by mildly contractionary fiscal policy, it is not surprising to see global economic growth petering out.

Conclusions

At the beginning of this paper the short and medium-term prospects for the world economy were characterized as mediocre and fraught with considerable downside risk.

The medium-term forecast up to 1990 for real GDP growth in the G5 presented in Table 32 and prepared by the World Bank's IECAP is not unrepresentative of the emerging consensus on this issue. The slightly greater optimism for the period 1990-95 and for 1995-2000 is, I believe, justified if even moderately sensible and reasonably well-coordinated demand and supply management policies are adopted in the main industrial countries. As regards the 1987-90 projections, only the figures for the United Kingdom seem significantly too pessimistic (as do the 1990-95 projections for that country).

It should be noted that the short- and medium-term scenario in Table 32 assumes that there will be no global recession and indeed no recession in any of the G5 countries. It also holds out a continuation of the unfriendly external economic environment for the developing countries that has prevailed since 1973 (except for the one-year blip in 1984). If anything like this short- and medium-term growth pattern for the industrial countries emerges, economic development will be hurt badly and the hope that heavily indebted countries will grow their way out of trouble can be shelved.

Fortunately the scenario of Table 32 is not inescapable. The elements of a global macroeconomic policy package that would significantly improve global macroeconomic performance in the near- and medium-term future are the following.

There should be a "supply-side friendly" fiscal expansion in the fiscally strong industrial countries. This includes Japan, Germany, and the United Kingdom. The behavior of their debt-GDP ratios, their primary government deficits and, in the case of Japan and Germany their current account deficits suggest that these countries have ample fiscal elbow room. In addition there is considerable real slack in all three economies, slack that can be expanded considerably in the case of Germany and the United Kingdom if the right supply-side friendly fiscal measures and other regulating reforms of the key markets (especially the labor market and, in the United Kingdom, the housing market) are undertaken. The supply-side friendly fiscal measures that come to mind are cuts in employers' social security contributions, private investment subsidies (possibly temporary to get maximal short-term effects on demand), other cuts in direct taxation, increased social infrastructure investment and, especially in Japan, measures to stimulate investment in private housing. The recently announced fiscal stimulus in Japan is a step in the right direction but seems very small (about \$35 billion) in relation to both the macroeconomic and the structural needs of the country and the world economy. The German decision to bring forward some already scheduled tax cuts (0.9 percent of GDP in 1988) also seems far too little.

France appears to have little room currently for a significant fiscal stimulus and Italy needs to retrench, as is apparent from the primary deficit figures in Table 30. It is important in the case of Italy that the government does not abandon its seigniorage tax, as this would either cause a further debt explosion or necessitate a very savage cut in the primary deficit. Tight monetary policy in Italy today seems very counterproductive. To prevent the Japanese-European fiscal expansion from being "crowded out" by further

exchange rate appreciation, monetary policy in Japan and Europe should aim to stabilize the exchange rate or at least prevent a very sharp appreciation of their currencies.

As regards the United States, the analysis of the previous section suggests that the unsustainability of the current fiscal position has been much exaggerated. If the United States has a general government primary deficit at all, it is small and no fiscal heroics to eliminate it seem required. If spending cuts and/or tax increases are deemed necessary in the United States (and I consider them to be desirable from the point of view of generating full employment current account and trade balance surpluses of the industrial countries as a group vis-a-vis the developing countries), it is important to announce these measures as soon as possible (i.e., as soon as political credibility can be attached to such announcements) and to schedule the fiscal retrenchment over a number of years. The rationale for this is that credible announcements today of future fiscal tightening have expansionary effects today because the anticipation of the future spending cuts or tax increases lowers today's long real interest rates and may even boost the market price and the shadow price of existing capital stock (It will certainly raise them relative to their values under immediately implemented fiscal tightening). When the fiscal contraction is actually phased in, it will have have its normal depressing effect on aggregate demand. At that stage the Fed should be ready to provide the necessary once-off monetary stimulus to avoid a recession. Some monetary accommodation may indeed be necessary right away if the first stage of the fiscal package were to be in place unexpectedly early.

Unilateral fiscal contraction in the United States without a supporting expansionary U.S. monetary policy and without a European-Japanese

fiscal-monetary package to expand demand at a given exchange rate would only succeed in improving the U.S. fiscal and trade deficits by exporting a recession to the rest of the world through a further depreciation of the U.S. real exchange rate.

Assuming that a co-ordinated global fiscal-monetary package in the spirit of the one just outlined improves global macroeconomic performance over the next few years, what of the longer-term future?

The IMF's estimates of potential output growth for the G7 until 1995, shown in Table 33, are fairly depressing. They are indeed rather close to the actual growth projections of Table 32.

Like actual output growth, potential output growth is, over any relevant time horizon, to a large extent the result of policy choices. Even if the underlying or trend growth rate of factor productivity is stabilization policy-invariant (which is by no means certain), potential output growth is a function of the growth of the private and public sector capital stocks which can be boosted by the right supply side policies and by demand management aimed at securing a high degree of capacity utilization.

The figures in Table 33 also do not give the upper bound to the actual growth rates that can be achieved without danger of overheating the economy, because they do not appear to contain any allowance for the taking up of the existing slack in Europe and Japan or for supply-side measures that permit a once-off improvement in the efficiency with which existing resources are used. Finally, even when all this is said and done, the United Kingdom

Table 32 GDP growth in the G5: retrospect and prospect
(Changes in logarithms)

	1973-80	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-95	1995-2000
<u>Real GNP/GDP</u>													
France (GDP)	2.6	0.5	1.8	0.7	1.5	1.3	2.0	1.3	1.8	2.5	2.5	2.4	3.0
								(2.2)	(2.2)	(3.0)	(3.0)	(2.7)	
Germany	2.3	0.0	-1.0	1.5	3.0	2.4	2.5	1.5	1.8	2.2	2.3	2.8	3.0
								(2.8)	(3.0)	(3.4)	(4.4)	(3.0)	
Japan	3.7	3.6	3.1	3.2	4.9	4.4	2.5	2.0	2.0	2.9	3.2	4.0	3.9
								(2.7)	(3.4)	(3.9)	(3.9)	(4.4)	
United Kingdom (GDP)	1.0	-1.2	1.2	3.5	2.0	3.0	2.7	3.3	2.3	1.7	1.3	1.9	2.5
								(2.5)	(2.2)	(2.5)	(2.7)	(2.4)	
United States	2.2	1.9	-2.6	3.5	6.3	2.7	2.5	2.4	3.3	2.3	1.9	3.0	3.2
								(2.0)	(2.5)	(4.4)	(3.4)	(3.5)	
Total ^a	2.4	1.6	-0.7	3.0	4.9	2.9	2.5	2.2	2.6	2.4	2.2	3.0	3.2
								(2.3)	(2.6)	(3.9)	(3.5)	(3.4)	

Note: Figures in parentheses were EPDCL projections as of January 1987.

a. Weighted by nominal GNP/GDP in 1982. These weights are: France, .091; Germany, .104; Japan, .185; United Kingdom, .082; United States, .537.

Source: Historical data for GNP/GDP use the definitions in OECD Economic Outlook; U.S. figures are consistent with IFS. Historical data on HUV indices are based on data published in the UN Monthly Bulletin Statistics. Projections (1986 onward) are by IEC.

Table 33 Major industrial countries: estimates of potential GDP/GNP, 1966-95
(percentage changes, compound annual rates)

	1966-73	1974-85	1986-88	1989-95
Canada	5.2	2.9	3.0	2.7
United States	3.4	2.3	2.7	2.6
Japan	8.5	3.8	3.6	3.1
France	5.4	2.2	2.8	2.6
Germany, Fed. Rep. of	4.3	1.9	2.6	2.2
Italy	5.1	2.2	2.6	2.5
United Kingdom	2.8	1.1	2.2	2.0

Source: "Potential output in the major industrial countries." Staff
Studies for the World Economic Outlook (forthcoming).

(again) seems to get stuck with an excessively low potential growth rate. To summarize, the figures in Table 33 should be interpreted as the price the world economy may have to pay if it fails to adopt the right demand and supply management strategies rather than as the upper limit to what moderately well-informed self interest can achieve.

One more major challenge faces the industrial countries for the remainder of the 1980s and for the next decade, that of achieving a significant combined current account and trade balance surplus at full employment vis-a-vis the developing countries. Only when a sizeable net resource transfer towards the developing countries occurs along a path for GDP growth in the industrial countries that is closer to 4 percent per annum than to the stingy 2.5 percent that seems more likely in the current policy environment, can economic development for most of the world's inhabitants become a reality.

Appendix

Has the United States already become a net external debtor?

The net international investment position of the United States has worsened steadily since 1982, the year in which the U.S. current account began a run of deficits not seen before in the post-World War II period. There had been small current account deficits before (in 1950, 1953, 1959, 1971, 1972, 1977, 1978, and 1979) but both in dollar terms and as a percentage of GNP, the recent current account deficits are unprecedented. Starting in 1983, the sequence of annual current account deficit as a percentage of GNP has been 1.4 percent, 2.8 percent, 2.9 percent, and 3.3 percent. The previous post-War peak current account deficits, during 1977 and 1978, were a mere .7 percent of GNP.

These recent cumulative current account deficits have eroded the net international investment position of the United States, but it is doubtful whether the United States already is a net external debtor country, as is often reported. The official data on the U.S. net international investment position ^{4/} support the view that the country became a net external creditor in 1985. Adding the current account deficits since 1985 to the end-1985 total net external debt of \$107 billion suggests an end-1986 net external debt of about \$250 billion and an end-1987 net external debt of about \$400 billion (see Table A1). This picture of the United States as a net external debtor is contradicted by the robustly positive stream of net investment income (or net foreign factor income) of \$29 billion in 1982, \$25 billion in 1983, \$19 billion in 1984, \$25 billion in 1985 and \$23 billion in 1986. A country that

^{4/} See e.g. Economic Report of the President, 1987.

Table A1 Aspects of the international investment position of the United States
(millions of U.S. dollars)

	1980	1981	1982	1983	1984	1985	1986	1987
Current account Surplus	1,873	6,339	-9,131	-46,604	-106,466	-117,677	-140,569	
Merchandise trade Surplus	-25,480	-27,978	-36,444	-67,080	-112,522	-124,439	-147,708	
Net investment income	30,386	34,082	28,666	24,841	18,752	25,188	22,865	
Investment income:								
Receipts	72,506	86,411	83,549	77,251	86,221	89,991	91,000	
Payments	42,120	52,329	54,883	52,410	67,469	64,803	68,000	
Net investment income:								
Direct					12,280	26,252	32,538	
U.S. government					-14,540	-15,815	-16,083	
Other private					21,012	14,751	6,410	
Net international investment position of the United States	106,000	140,700	136,200	88,500	4,400	-107,400		
U.S. assets abroad	606,900	719,700	824,900	874,100	898,200	952,400		
Foreign assets in United States	500,800	579,000	688,700	785,600	893,800	1,059,800		

Sources: Survey of Current Business, March 1987 Economic Report of the President, 1987.

is a net external debtor cannot have a persistently positive net stream of foreign investment income. The question therefore is what to believe, the negative stock data or the positive flow data.

It is likely that both series are subject to severe measurement errors. The external assets and liabilities of the United States tend to be valued "at historic cost". This is the case notably for direct investments. The current market value or replacement value of much U.S. direct foreign investment abroad since the 1950s is now likely to be a multiple of the historic value of the capital outflows that tends to be reflected in the recorded net international investment position. The same holds, of course, for the current market or replacement value of past direct investment in the United States by residents of the rest of the world. On balance the understatement of the true direct foreign investment position of the United States is likely to exceed that of the true direct foreign investment position of the rest of the world in the United States.

The investment income data are unreliable because they involve a large amount of imputation rather than direct measurement of foreign factor income flows. This problem is least serious with direct investment income, a very buoyant item in the U.S. current account since the revival of economic activity outside the United States.

The growing flow of U.S. government interest payments abroad and the decline of "other private investment income", shown in Table A1, are undoubtedly correct as regards the trends they signal, but may be quite seriously off the mark as regards the levels.

On balance, it seems likely that the picture presented by the positive net stream of foreign investment income is correct and that the United States has not yet become a net external debtor. The persistence of

current trends for the U.S. current account deficit would mean, however, that it is only a matter of time until the true net external investment position of the United States becomes negative and the positive flow of net investment income turns negative.

Regardless of the net external investment position, it hardly seems right from the point of view of a globally efficient allocation of scarce investible funds, for the most capital-rich country to appropriate such a large share of the world's savings.

References

1. Economic Report of the President, 1987.
2. IBRD "Short Term Outlook for the Developing Countries and the International Economy", See M87-754, June 29, 1987.
3. IMF World Economic Outlook, April 1987.
4. IMF International Financial Statistics, July 1987.
5. National Institute Economic Review, February 1987.
6. OECD Economic Outlook, Historical Statistics, July 1987.
7. OECD Economic Outlook, June 1987.
8. U.S. Department of Commerce, Survey of Current Business, March 1987.
9. World Development Report, 1987
10. O. J. Blanchard [1985], "Debt, Deficits, and Finite Horizons," Journal of Political Economy
11. O. Blanchard, P. Dornbusch and R. Layard and [1986] Restoring Europe's Prosperity, MIT Press, Cambridge, Massachusetts.
12. O.J. Blanchard and L.H. Summers [1986] "Fiscal Increasing Returns, Hysteresis, Real Wages and Unemployment", NBER Working Paper No. 2034, October.
13. A.S. Blinder and R.M. Solow [1974], The Economics of Public Finance, the Brookings Institute, Washington, D.C.
14. W. H. Buiter [1984] "Allocative and Stabilization Aspects of Budgetary and Financial Policy", LSE Inaugural Lecture, LSE, London.
15. W. H. Buiter [1985] "A Guide to Public Sector Debt and Deficits" in Economic Policy, Vol. 1, No. 1, November pp. 14-79.
16. Willem H. Buiter [1987], "A Fiscal Theory of Hyperdeflations?, Some Surprising Monetarist Arithmetic", Oxford Economic Papers, March.
17. R. Dornbusch [1986] Dollars, Debts, and Deficits, MIT Press, Cambridge, Massachusetts.
18. K.C. Messere and J.P. Owens [1987], "International Comparisons of Tax Levels: Pitfalls and Insights." OECD Economic Studies, No. 8, Spring 1987, pp. 93-119.
19. F. Modigliani, M. Monti, J. Dreze, H. Giersch and R. Layard [1986]"Reducing Unemployment in Europe: The Role of Capital Formation", CEPS Papers No. 28.

20. Morgan Guarantee Trust Company [1987], World Financial Markets, June/July.
21. W.R. Price and P. Muller [1984], "Structural Budget Indicates and the Interpretation of Fiscal Policy Stance in OECD Economies," in OECD Economic Studies, No. 3.
22. T.J. Sargent and N. Wallace [1981], "Some Unpleasant Monetarist Arithmetic", Federal Reserve Board of Minneapolis Quarterly Review, Minneapolis.