

# MEDIUM-TERM FINANCIAL STRATEGY: THE CO-ORDINATION OF FISCAL AND MONETARY POLICIES

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## INTRODUCTION

Over recent years there has been an increasingly medium-term orientation of policies in many countries. One important motive has been the reduction of inflation expectations through the controlled growth of monetary aggregates, and this has carried with it the need for a consistent medium-term budget profile. This paper explores the implications of such an approach for monetary-fiscal policy co-ordination, and for the role of the budget deficit as an economic regulator'. A particular issue addressed is why economic policies based on medium-term rationales for budgetary retrenchment have been widely adopted when the evidence of most (forecasting) models suggests that fiscal policy is effective in raising demand, and that short-term fiscal multipliers are positive.

To the extent that central banks can contain the pressures stemming from the mix of restrictive monetary targets and expansionary budgets, monetary and fiscal policies may – and in fact sometimes do – diverge. In this case the burden of inflation control tends to be borne by tight money, while fiscal policy is used to support short-term employment. The extent to which the objectives of the two instruments can be fully positioned in this way is arguable, and of course this assignment may not free expansionary fiscal policy of short-run inflationary effects if demand were to rise as a result. But, whatever the initial effectiveness of this policy setting to sustain activity, a persistent imbalance between the two instruments is likely to result in diminishing fiscal effectiveness because of cumulative budget financing difficulties. Output and employment gains may be progressively eroded as private spending is "crowded out", either by the upward pressure on interest rates arising from government credit demands or by the fears of eventual monetary accommodation and heightened inflation expectations which may accompany persistent deficits. The room for permanent fiscal policy independence – i.e. for longer-run asymmetry between fiscal stance and monetary objectives – may therefore be limited, so that fiscal and monetary policies would seem to offer policy-makers nearer one instrument than two.

Part I of the paper examines the rationales for medium-term policy-making. The analysis is on a cross-country basis. OECD economies are sufficiently different to make generalisation difficult; but they have experienced many similar trends and motivations, based on growing aversion to ad *hoc* interventionism – to "fine-tuning" – and a gravitation towards "consistency, continuity and credibility" in

policy-making. This has been associated with the adoption of monetary targets and the creation of a climate of medium-term price stability, with the need to control the rapid growth of public spending relative to nominal income, and with the intention to reduce interest rates and debt service costs.

Given that medium-term consistency between fiscal and monetary policy is desirable, how do governments set about achieving it? What rules and objectives should be applied? Part II addresses this issue, reviewing the question of monetary-fiscal policy mix from the point of view of sustainable – or optimal – balance between public sector borrowing and monetary growth. This reflects more than the need for government deficits to equate with private savings flows; public debt issues need to be balanced both with private sector capacity to absorb government stock and with the sustainable growth of government debt service obligations.

Part III discusses problems of achieving consistency between short-term policy stance and medium-term financial objectives. Most countries are trying to regain a balanced growth path, from which the inflationary shocks of recent years have caused them to diverge. Reducing inflation and budget deficits is seen as necessary for restoring growth; but given the fact that deficits may be increased both by monetary tightness (through debt interest payments) and by the output (and revenue) falls accompanying policy restraint, the path to lower deficits, interest rates and inflation expectations can be impeded if too rapid a transition is attempted.

## I. THE RATIONALES FOR MEDIUM-TERM FINANCIAL STRATEGY

As they have developed over recent years, the rationales for medium-term financial strategy involve four distinguishable strands:

- a) the search for convergence between monetary and fiscal stance in order better to control monetary growth and inflation expectations;
- b) the need to alleviate the "supply side" distortions associated with too rapid a growth of public spending relative to nominal income;
- c) the concern that high budget deficits may "crowd out" private investors from financial markets, implying that priority be given to the reduction of government borrowing in order to lower interest rates; and
- d) the problems of servicing growing amounts of public sector debt in the context of high real interest rates.

### A. Medium-term budgeting, monetary targets and inflation control

The inadequacy of conventional short-term public sector financial planning showed up most clearly, in the first half of the 1970s, in excess monetary growth

and increasing inflation expectations. To prevent a recurrence of these phenomena, increased emphasis has come to be placed on medium-term monetary stability. A corresponding need for medium-term budgetary planning has also become evident, because of both the potential role of public sector deficits – and "excess" public expenditures in general – in the inflation process, and the costs (lower capital investment, slower growth and higher future tax rates) of avoiding such inflationary repercussions through long-term borrowing at high real interest rates.

Because levels of public spending, domestic indebtedness and external borrowing differ significantly across countries, as do private sector savings and, perhaps, the sensitivity of inflation expectations to persistent budget deficits, problems differ in type and intensity between countries. Nevertheless, the issue has a collective significance for all OECD economies, insofar as interest rate pressures stemming from large budget deficits may, in certain circumstances, be transmitted throughout the OECD area, leading to a degree of international financial crowding-out.

### **1. *The mix of monetary and fiscal policies up to the second oil shock***

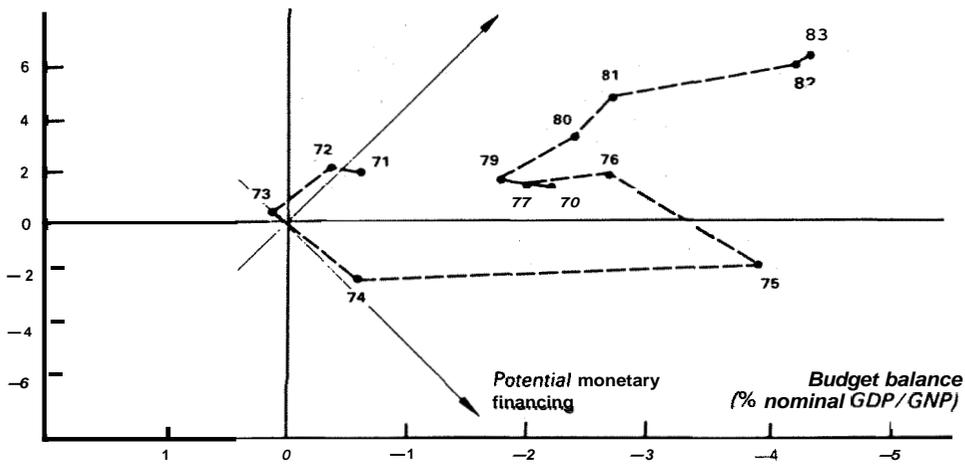
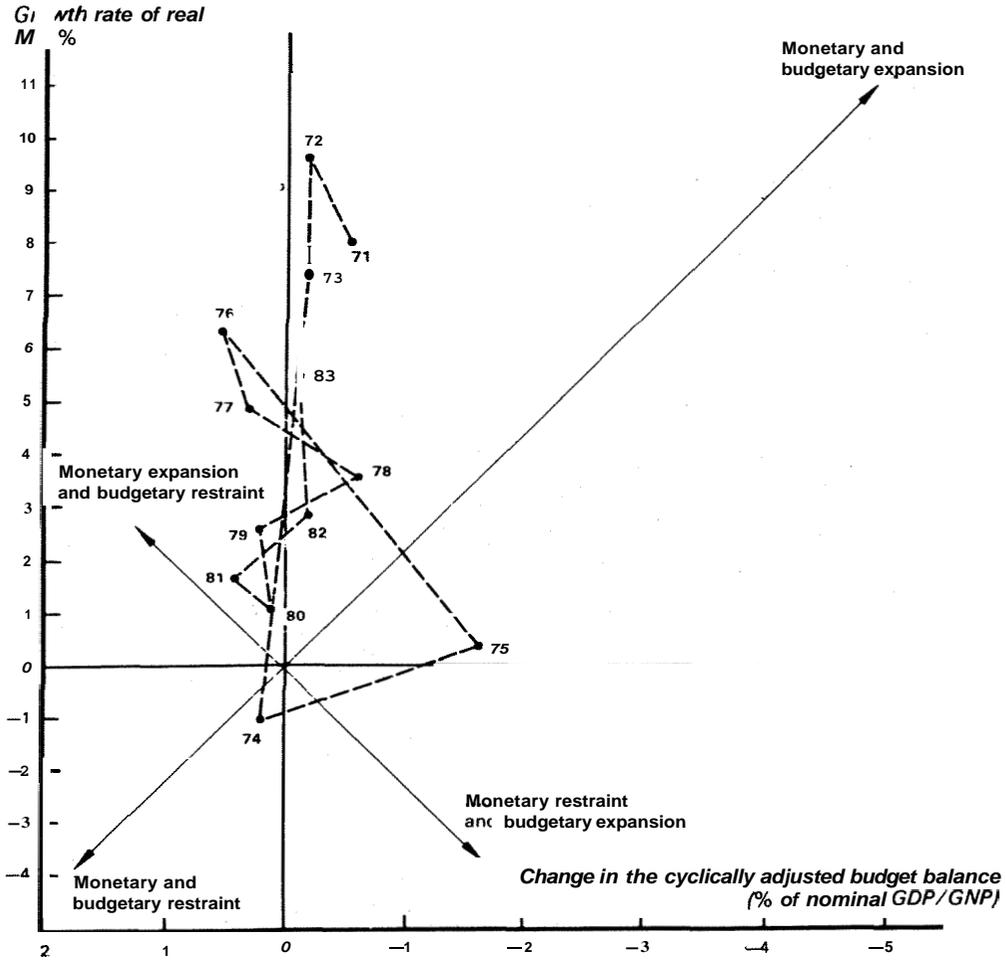
During the late 1960s fiscal and monetary policies were usually mutually reinforcing, although constrained by interest rate and exchange rate objectives (which were sometimes in conflict). Periodic asymmetries emerged because monetary policies were considered to be quicker-acting in deflations than reflations, so that in some countries there may have been a tendency towards "loose budgets and tight money". But one of the main characteristics of the late 1960s was the monetary "accommodation" of the United States budget deficit through relatively low interest rates. Given the prevailing fixed exchange rate regime, there followed a growing US balance of payments deficit with the rest of the OECD and a build-up of world liquidity which, in conjunction with accommodating monetary policies, served to underwrite a generalised monetary expansion within the OECD area in 1971-72. This was accompanied by fiscal reflation in the United States<sup>2</sup>, Japan, Germany, the United Kingdom and Italy, and by the transition to a managed floating exchange rate regime<sup>3</sup>. As may be seen from Chart 1, which compares real money supply changes and interest rates with indicators of budget stance, demand management policies were mutually supporting in 1971-72<sup>4</sup>. The emphasis *ex post* appears to have been on monetary rather than budgetary expansion, but the cyclically-adjusted budget indicators show both fiscal and monetary stance to have been expansionary<sup>5</sup>.

In reaction to growing inflationary pressures, monetary conditions were generally tightened in 1973 and became more restrictive in response to the oil price shock. Budget stances also became more restrictive, as inflation-induced fiscal drag reduced government deficits<sup>6</sup>. Fiscal and monetary policies therefore remained synchronised (in favour of restraint) in the immediate aftermath of the oil shock. Budgetary policies continued to be cautious for most of 1974, but became

CHART 1

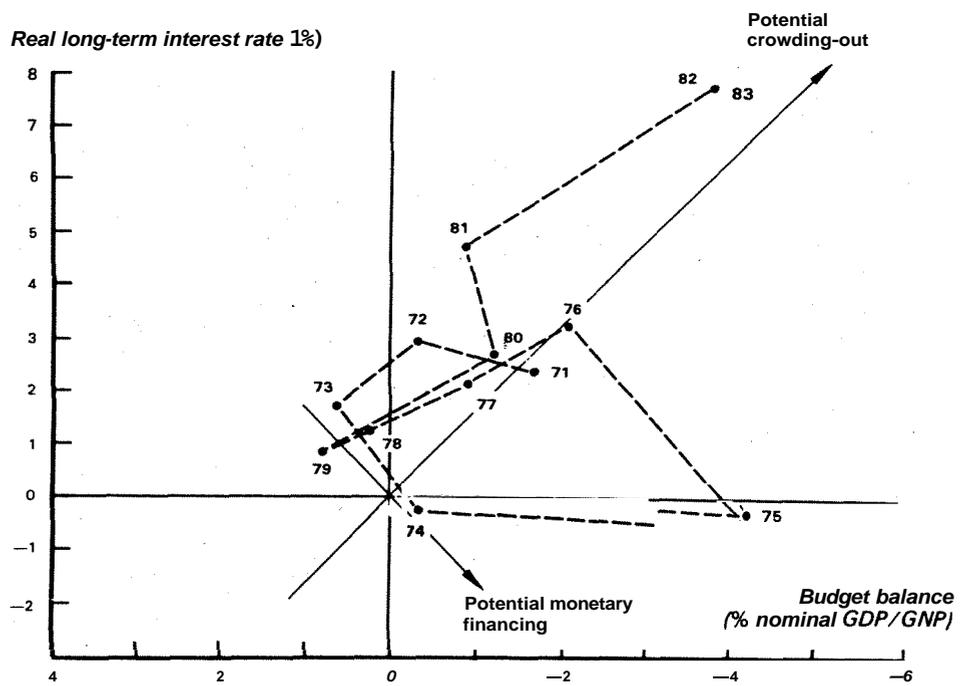
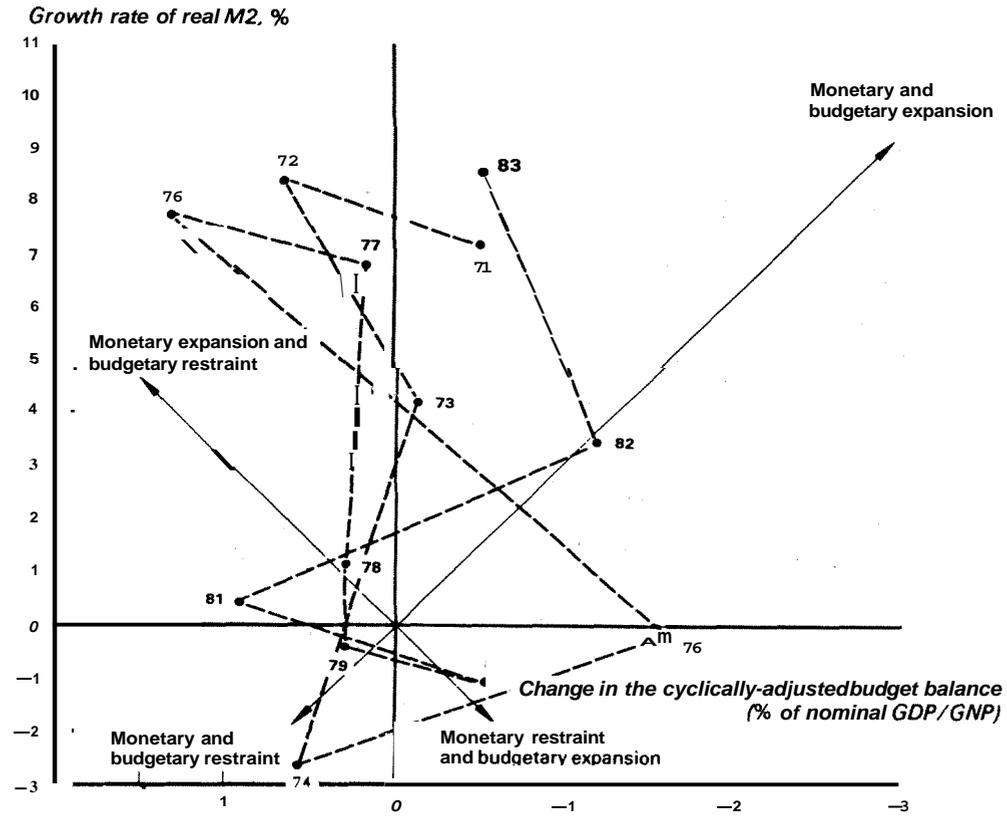
FISCAL-MONETARY POLICY MIX IN THE OECD AREA

A. — REAL MONEY SUPPLY, REAL INTEREST RATES AND GENERAL GOVERNMENT BUDGET BALANCES: AGGREGATE FOR THE OECD AREA 1971-1983



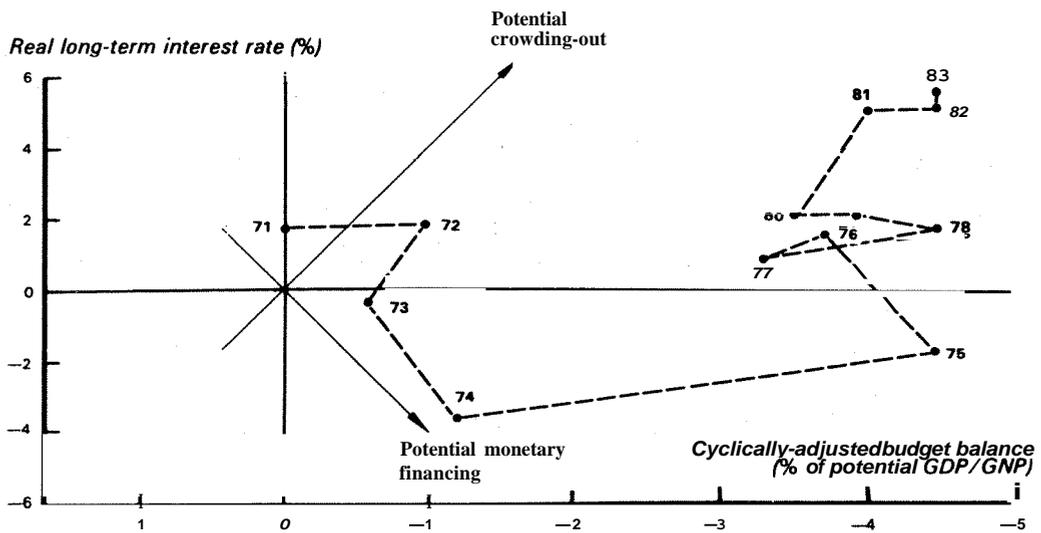
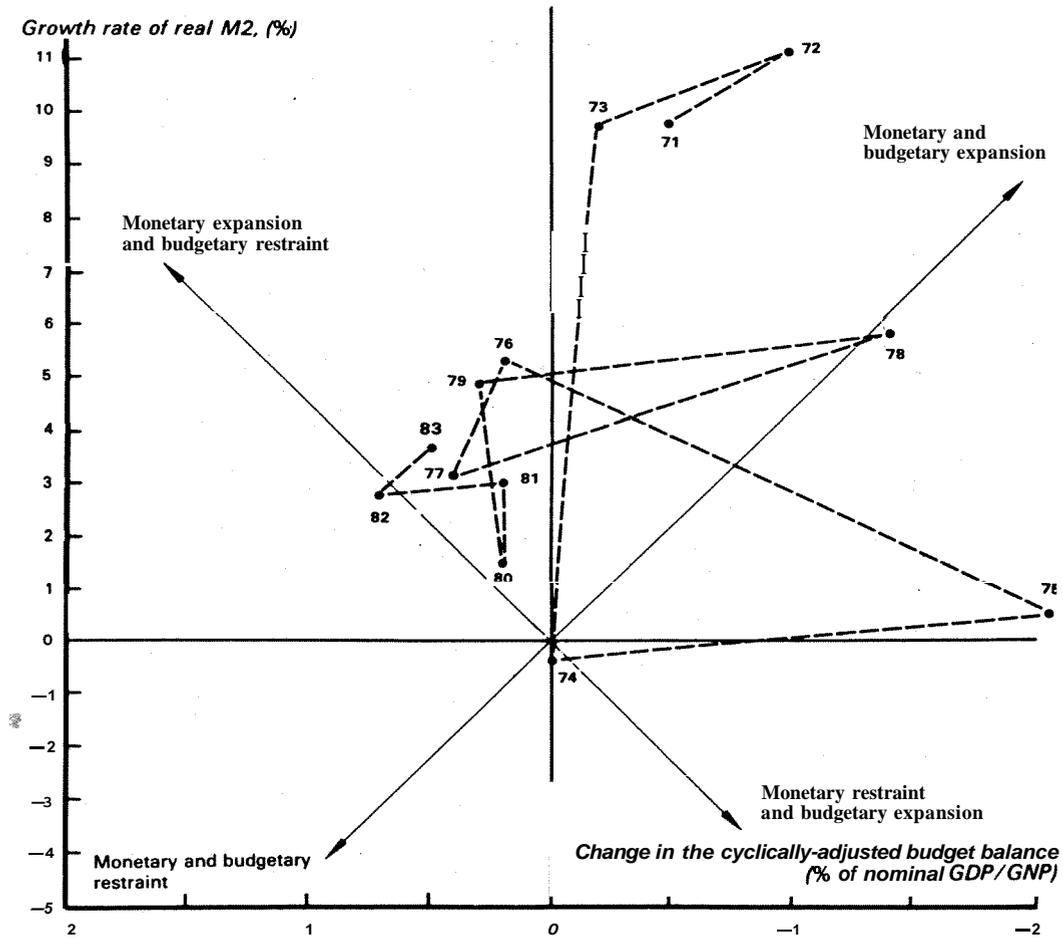
## FISCAL-MONETARY POLICY MIX IN THE OECD AREA

### B. — REAL MONEY SUPPLY, REAL INTEREST RATES AND GENERAL GOVERNMENT BUDGET BALANCES: THE UNITED STATES 1971-1983



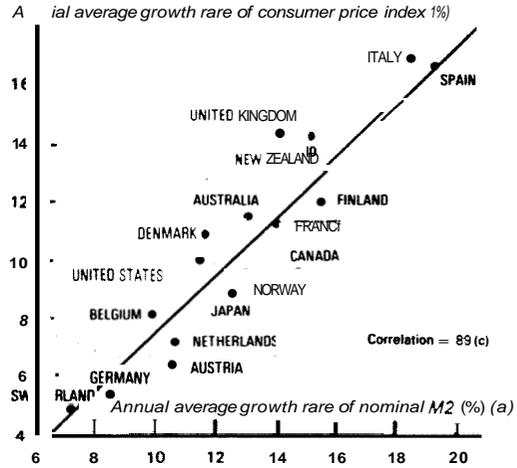
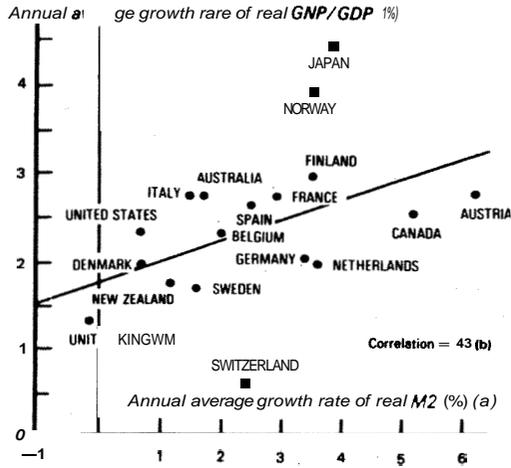
### FISCAL-MONETARY POLICY MIX IN THE OECD AREA

C. — REAL MONEY SUPPLY, REAL INTEREST RATES AND GENERAL GOVERNMENT BUDGET BALANCES: AGGREGATE FOR THE MAJOR SEVEN COUNTRIES EXCLUDING THE USA 1971-1983

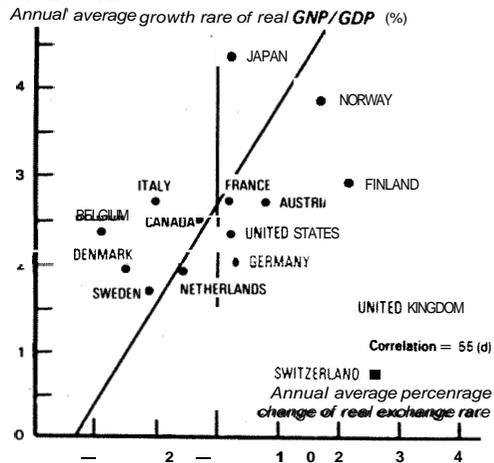
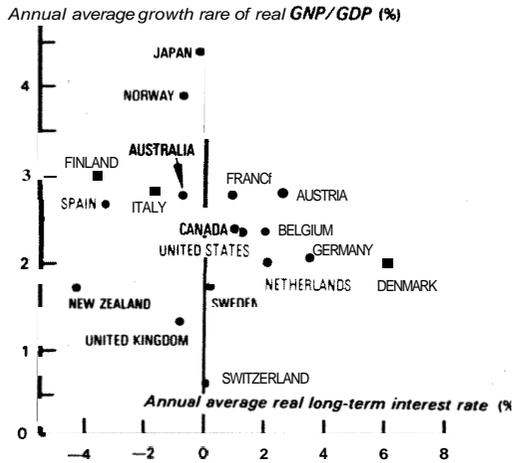


**CHART 2**  
**ECONOMIC PERFORMANCE AND INDICATORS OF MONETARY STANCE IN**  
**SELECTED OECD COUNTRIES**  
**1973-1982**

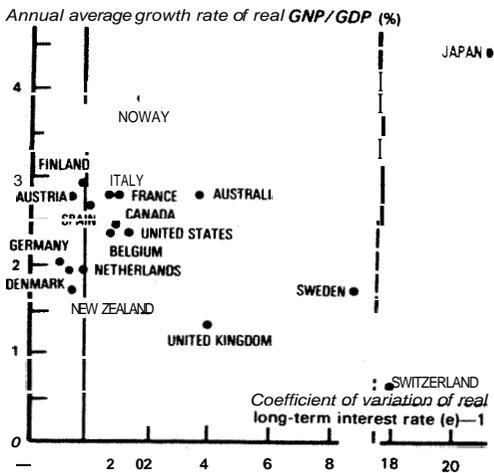
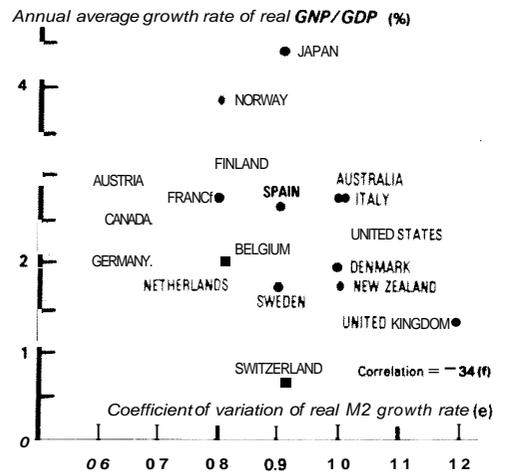
**A. — REAL GDP, INFLATION AND MONETARY GROWTH**



**B. — REAL GDP, REAL INTEREST RATES AND REAL EXCHANGE RATES**



**C. — REAL GDP AND VARIATIONS IN REAL MONETARY GROWTH AND REAL INTEREST RATES**



(a) M3 for Germany and £M3 for United Kingdom (b) Significant at 10% (c) Significant at 1% (d) Excluding United Kingdom and Switzerland significant at 5% (e) Coefficient of variation = standard deviation/mean (f) Excluding Japan, United Kingdom and Switzerland significant at 20%

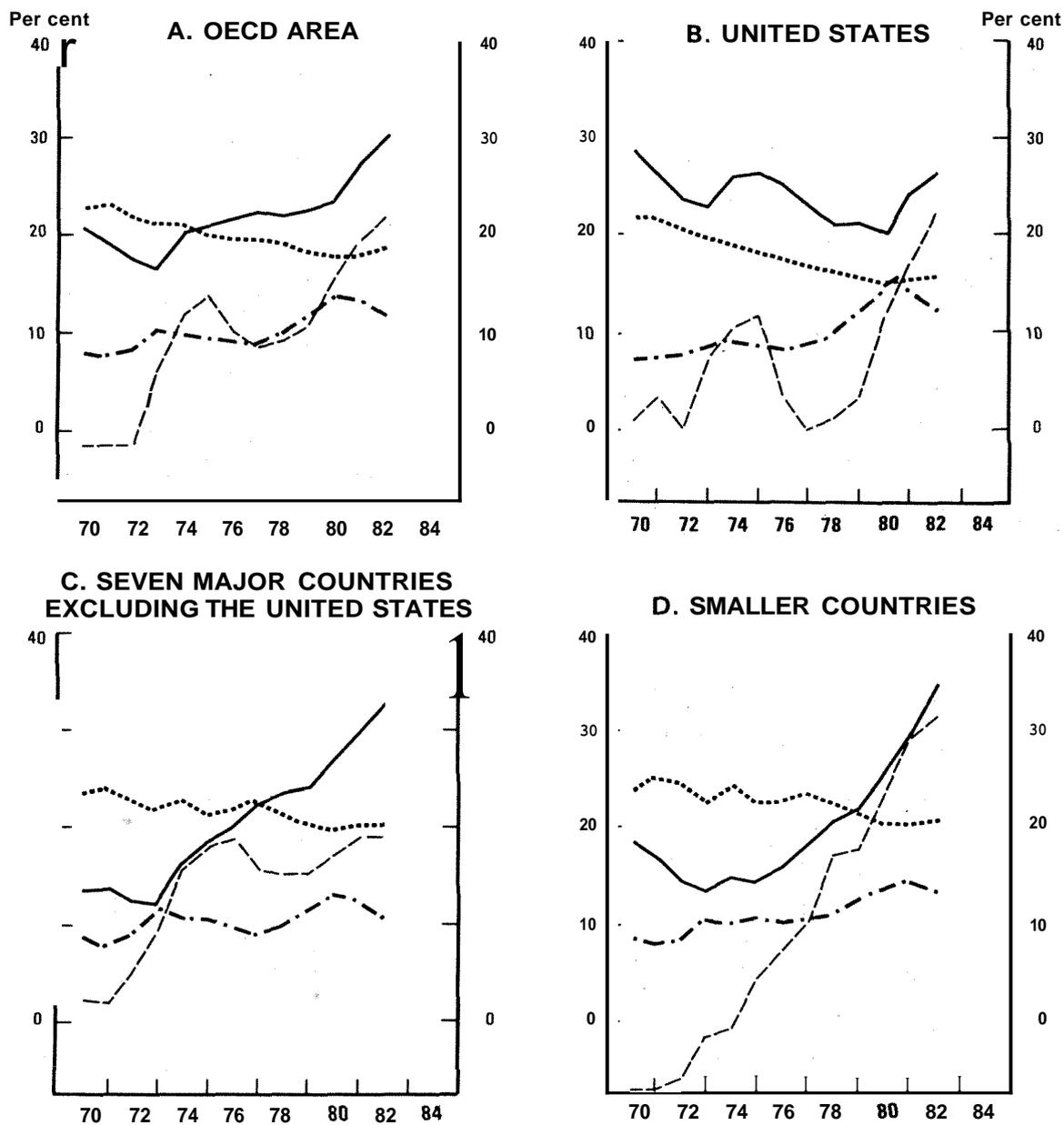
progressively more expansionary towards the end of that year and through 1975 as the authorities in several countries accepted the need to finance the oil-related external deficits through the public sector. Monetary restraint also eased, and demand management policies remained mutually accommodating<sup>7</sup>, though they became less so in 1976-77 as most of the large countries turned towards fiscal retrenchment (Chart 1C).

As output continued to stagnate, unemployment to increase and inflation expectations to persist, the combined fiscal and monetary expansion of the early 1970s was perceived as having adverse results; attempts to "fine-tune" the economy to continuous high employment were considered to have had too high a cost (ex post at least) in terms of inflation. There were two dimensions to this failure. The 1970-75 experience suggested, first, that short-term discretionary action might be destabilizing because of forecasting and timing errors, in which case it might be appropriate instead to frame monetary and fiscal policies in a more stable, medium-term framework, so that demand management would become "steadier and more predictable"\*. Second, the limited gains to output which followed monetary expansion suggested that governments should not – and in the end could not – acquiesce in high rates of monetary growth and inflation; countries that sought to achieve a high level of employment and rapid growth by means of "easy money" and currency depreciation had, by the second half of the decade, to concede failure<sup>8</sup>. From late 1975 OECD countries, with exceptions among the smaller economies, began to take action to reduce budget deficits and public spending; this was linked to the increasing adoption either of monetary targets or the "hard currency option", which implies that the exchange rate is tied to a strong currency, such as the Deutschmark. These policies were aimed at a gradual reduction in inflation expectations<sup>10</sup>. A corollary was the need for public sector borrowing requirements to be explicitly linked to targets for monetary growth.

Another reason why the coincidence of high unemployment and inflation brought with it a reappraisal of policy trade-offs and the appropriate monetary-fiscal mix was that countries with the best inflation and balance of payments performance appeared to be those with the most successful output and employment records. Chart 2 illustrates the relationship between economic performance and intermediate targets of monetary policy: monetary growth rates, real interest rates and exchange rates. It also examines the link between economic goals and the variability of monetary growth and interest rates, because the case for stable medium-term policies has developed in part from a scepticism about the effectiveness of short-term activism, the unpredictability of which may be a destabilizing factor. In fact, both the link between monetary accommodation and inflation and that between real monetary growth and GDP growth emerge as positive, while greater stability in monetary conditions also seems to be significantly associated with better economic performance. The benefits of "sound money" might also be inferred (prima facie) from the positive correlation between exchange rate appreciation and growth,

CHART 3  
**GENERAL GOVERNMENT BUDGET DEFICITS,  
 PUBLIC DEBT ACCUMULATION  
 AND MONETARY CONDITIONS, 1970-1983**

— General government net debt/GDP ratio      ..... Money supply/GDP ratio  
 - - - Budget deficit/gross private savings ratio      - - - Long term interest rate



For sources and definitions, see "notes to charts".

though no strong conclusion emerges from the correlation of real interest rates with economic performance<sup>11</sup>.

An examination of the links between budget deficits, government net debt accumulation<sup>12</sup> and monetary conditions from 1975 onwards (Chart 3) shows, however, that a recognition of the potential benefits of policy consistency and continuity for economic performance, though associated with an overall tightening of fiscal stance, was not reflected in a haste to eliminate budget deficits. The major break with the past can be seen in the tendency to rapid government debt accumulation, associated with a mix of historically high fiscal deficits and monetary tightness. Indeed, public debt accumulation (sometimes including borrowing from abroad) was even seen as a means of allowing fiscal support to demand in a number of smaller countries (the Scandinavian economies especially) and in Japan.

Though "fine-tuning" appears to have been discredited by the events of the early 1970s, the possibility of using selective discretionary action to steer OECD economies gradually back to higher employment emerged as an increasingly attractive strategy as activity stagnated in 1977-78<sup>13</sup>. With monetary targets acting as a medium-term prevention against excessive monetary financing of budget deficits, fiscal policy was still thought capable, in principle, of promoting a sustained increase in employment without engendering inflation<sup>4</sup>. Nor were higher interest rates and "crowding out" of private demand considered a necessary consequence of reflation, provided action was overtly temporary and governments correctly set their budget deficit targets to equate with the supply and demand for loanable funds over the (medium-term) budget period<sup>15</sup>. The potential usefulness of fiscal policy as a means of stimulating OECD economies in a way consistent, *a priori*, with both monetary growth targets and balance of payments constraints, was thus re-asserted in the context of co-ordinated fiscal reflation – the "concerted action programme" – in 1978.

## 2. *The current instrument-objective setting*

In the event, the second oil shock, which occurred in 1979, meant that the expected growth of economic activity needed to finance budget deficits (through automatic increases in tax receipts) did not emerge, so that OECD countries were again faced with higher deficits and inflation. Given the inflationary consequences of the joint monetary-budgetary expansion after the first shock, and the restricted room for manoeuvre allowed by already-large budget deficits, response to OPEC II was non-accommodating. Fiscal policy became restrictive, as the maintenance of existing nominal money supply targets – lower in real terms because of higher inflation – called for deflationary budget action to prevent upward pressures on interest rates. However, in the context of a recession which turned out to be more severe than expected, "automatic stabilizers" kept actual budget deficits high. Judged by the high level of government borrowing and real interest rates, the stance

of policy might thus be characterised as one of relatively loose fiscal policy and monetary tightness (Charts 1 and 3).

"Discretionary" fiscal restraint is reflected in the move towards surplus of the cyclically-adjusted budget balance of the major seven countries between **1979-81**: fiscal policies have – on this measure – supported monetary tightness in most major countries (Chart **1B**). However, from **1982** the combination of high budget deficits and tight money in the United States (Chart **1C**) has counter-balanced the mix of fiscal restraint and (less marked) monetary tightness in the other major countries. Also, though some of the smaller OECD countries (notably the Netherlands and Belgium) have actively followed a course of budgetary retrenchment, no generalised move towards fiscal restraint is evident among the smaller OECD economies as a group up to **1983**<sup>16</sup>.

Though fiscal policies have tended, in principle, to be at least partially subordinated to monetary and inflation control considerations in the process of medium-term policy re-orientation, the extent of the subordination has, in practice, varied. In countries which have experienced relatively high inflation, such as the United Kingdom and (up to **1982**) Australia, the reduction in budget deficits has been seen as a *prior* requirement for the attainment of balanced medium-term growth: fiscal policy was viewed, at least in part, as an instrument for the achievement of monetary targets. In other OECD economies, the pursuit of budget deficit cuts has mainly reflected the need for fiscal policy to support monetary restriction in order to remove a source of potential inflationary pressure and reduce interest rates (Germany and Japan<sup>17</sup>); to contain government credit demands within the limit of domestic saving availability so as to free domestic capital resources for private investment (Belgium, Netherlands); or more generally to prevent excess domestic liquidity.

The need to suppress inflation expectations has been a strong motivation for budgetary restraint, and has derived from the rationale that inflation tends – sooner or later – to undermine any immediately positive demand impact stemming from a money-accommodated budget deficit. However, in those countries which have had recourse to foreign borrowing (Sweden, Denmark, Norway, Ireland), or where governments have considered that the relatively low level of government indebtedness gave scope for supporting activity (France in **1981-82**, Spain, Austria and, since **1982**, Australia), the fiscal stance has for a time been more supportive.

Subsequently, exchange rate weakness has intervened to force fiscal restraint (as in France) and/or the need has increasingly emerged to prevent the mounting balance of payments costs of high interest rates and debt service charges. In low inflation countries generally, the interest payments on government borrowing have become an actual and/or prospective burden calling into question both the long-run effectiveness of supporting activity by budget deficits and the cost-benefit trade-off involved in maintaining domestic demand in the short term by this means (see

below). Such costs are seen in terms of domestic savings pre-emption, lower productive investment, higher debt service charges, and lower long-run revenue growth in exchange for a transient ability of budget deficits to sustain demand.

In the United States, on the other hand, the costs of budget deficits have tended to be weighed against "supply-side" considerations, emphasising the adverse effects of high taxation. Tax cuts have, *de facto*, been given priority over budget deficit cuts, in contrast to the situation elsewhere. While a reduction in medium-term budget deficits is ultimately considered necessary for balanced recovery, the United States fiscal stance, from 1982, has been expansionary, so that tight money has borne the principal burden of suppressing domestic inflation with resulting high real interest rates. The following section explores the reasons for giving priority to tax reductions over deficit cuts – and the implications for the current mix of policies.

## **B. Public sector expansion and supply-side considerations**

Nearly all **CECD** economies have experienced the same trends with respect to the growth of the public sector and composition of public spending, i.e.:

- an increasing share of government in total employment and an increasing tax burden;
- an increasing proportion of current transfers in total public spending, which together with a growing employment in the public services has implied an increasing ratio of government-dependent incomes (public sector wages and transfers) to total national income;
- an increasing proportion of consumption in total government spending and a correspondingly smaller share of resources allocated to public investment.

The perceived inflationary and allocational consequences of sustaining such trends have led many countries to seek to reverse them and have given the medium-term restructuring of public spending a new impetus, the aim being that past planning mistakes (basing programmes on over-estimated economic growth rates, too liberal fiscal indexation provisions, cumulating debt interest payments etc.) should not be repeated. Reducing the public sector's share of both total spending and borrowing is the joint aim of medium-term financial strategies in the majority of **OECD** countries, with public spending cuts intended to reduce government borrowing and interest rates first and taxes second: a reduction in budget deficits is generally seen as more important for recovery than cutting taxes.

In practice, however, public spending has proved difficult to cut and in most countries effective tax rates have been increased to control deficits. The exception has been the United States, where the Administration has given priority to cutting both taxes and public spending. The 1981 tax reduction act was drafted with the

intention of forcing Congress to legislate spending cuts, and to this end tax reductions have been allowed to be reflected in a higher budget deficit. Although it would probably be generally accepted that increasing the budget deficit via tax cuts would be less detrimental for interest rates than increasing it through further spending (cutting taxes freeing resources for the private sector and reducing company borrowing), the ensuing United States' budget deficit has generally been seen as raising both government and total claims on savings and, with them, interest rates. While admitting that budget deficits may crowd out investment and adversely affect future growth, "supply-side" economists argue, however, that public borrowing may have no more impact on interest rates than the equivalent tax finance, because of two factors:

- i) Budget deficits may be "discounted" by taxpayers – who will save an equivalent amount to the deficit in anticipation of future tax liabilities; this would leave interest rates (approximately) unchanged, because government credit demands would lead to an exactly equivalent increase in savings.
- ii) More generally, because the empirical validity of the tax discounting argument is in doubt, companies may gain more from tax cuts than would individuals, so that lower company credit demands will compensate for higher governmental pressures on credit markets.

Thus a business tax cut may be more advantageous to growth than a rise in tax-financed public spending, because of its effect in redistributing income from wages to profits<sup>18</sup>.

**As** in traditional demand-determined models (but for different reasons), a budget deficit induced by a tax cut is accompanied in the "supply side" approach by an expansion of activity. The contrast with the conventional view about the positive effects of higher public spending is most evident in the proposition that simultaneous tax and expenditure cuts are expansionary: this inverts the usual view that the "balanced budget multiplier" is positive, and is a premise underlying medium-term budgeting in most OECD countries<sup>19</sup>. Many governments are trying to restructure their spending and taxation to favour companies. In this respect "supply side" rationales for public sector retrenchment are not confined to the United States: but advocacy of a mix of lower taxes and higher deficits – in the belief that cutting taxes may be more beneficial for investment than cutting public borrowing – is not so widely accepted. The predominant view (of governments and financial markets) would be that budget deficits raise interest rates (though they are not the only factor) and that the United States deficit, because of the transmission of high real rates to Europe and Japan, may be a source of "international crowding out". This link between budget deficits and interest rates is examined next.

## **C. Government borrowing and interest rates**

Interest rate increases might be a natural corollary of a successful fiscal policy: if deficit spending raised aggregate demand then it would increase the demand for money, and in the face of tight monetary policy the costs of holding money would rise. Concern about fiscal imbalances in most OECD economies is, however, of a different dimension, being based on the "portfolio" repercussions of continuous public claims on new savings and credit and of persistent increases in the stock of public sector debt in relation to other financial instruments<sup>20</sup>. The medium-term repercussions of such debt accumulation have come to be seen as greater obstacles to long-run economic performance than high taxation, both because of the adverse investment effects of high interest rates (associated in some cases with doubts about the ability to prevent "monetization"), and their debt service implications. Reducing budget deficits has taken priority over cutting taxes in the attempts of most economies to move towards medium-term public sector balance.

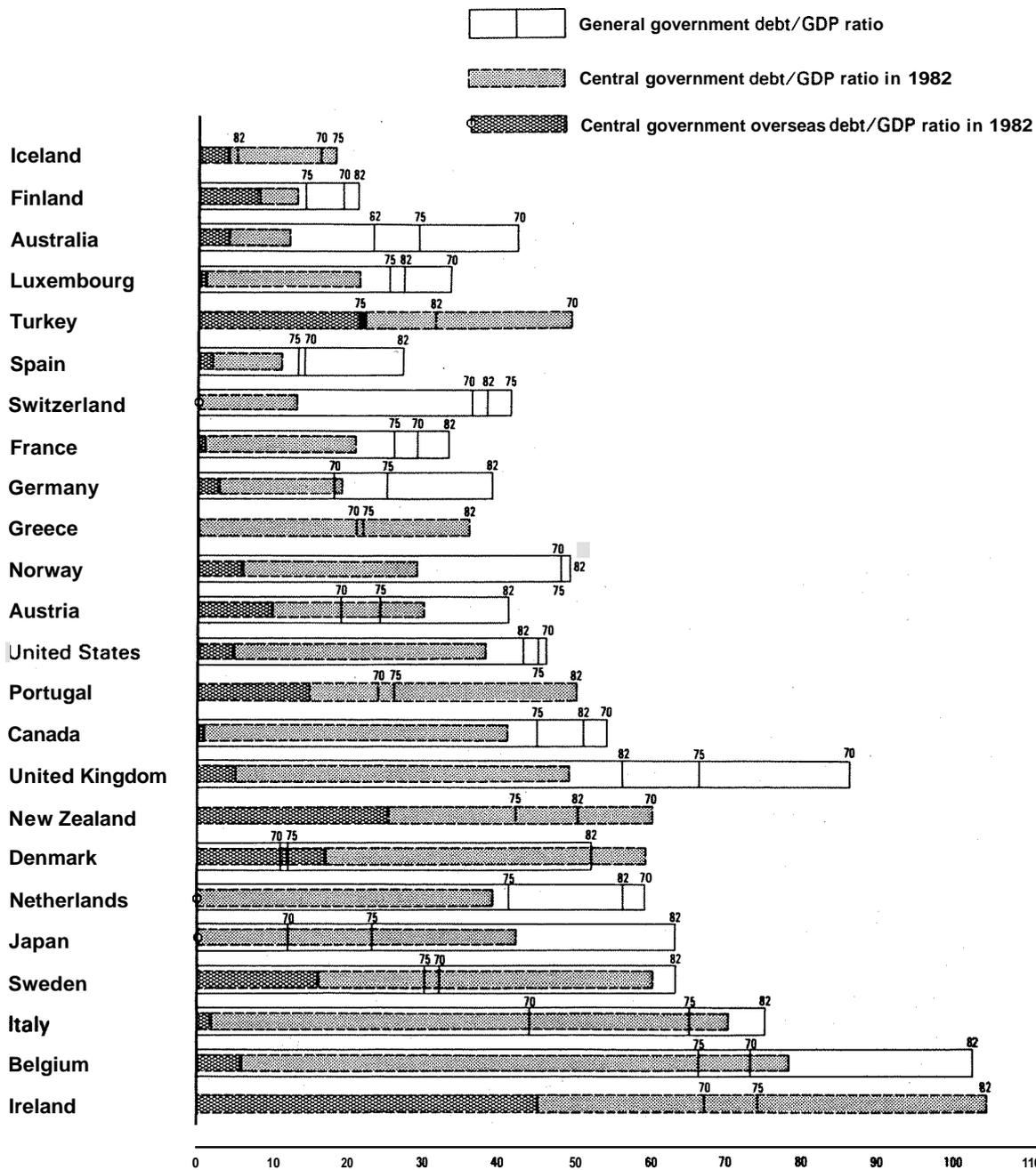
### **1. The growth of government debt**

Chart 4 and Table 1 illustrate the growing scale of government indebtedness to both private domestic and foreign sectors. Between 1970 and 1982 the average ratio of general government debt to GDP increased by a quarter, to approximately 50 per cent for the OECD as a whole. This global trend masks a variety of different national patterns. In the small group of countries where the ratio was stable or falling over the decade – the United States, the United Kingdom, Canada and Australia – inflation was at least partly instrumental<sup>21</sup>. Elsewhere the ratio increased. Some low-inflation countries experienced an almost continuous rise – notably Germany, Switzerland and Japan. In others – the largest category – the ratio fell up to mid-decade, as inflation eroded the real value of government liabilities, but has subsequently increased.

In most OECD countries (the United States being an exception) the second half of the 1970s thus saw an increased pre-emption of domestic private savings by governments (Chart 3), with a sometimes large and rapid increase in government debt relative to GDP. Because private financial wealth has tended to rise faster than GDP, the effects of government debt expansion on private portfolios (i.e. the share of government securities in private sector assets) may not have been so dramatic as appears from an analysis of debt/GDP ratios. But a gradually rising share of government debt in private sector wealth can be discerned among the majority of the major seven economies<sup>22</sup>.

At the same time, external borrowing by the public sector became an increasingly important source of budget finance during the second half of the last decade as governments sought to avoid the domestic interest rate consequences of their deficits. This has often been associated with current account deficits. After

CHART 4  
**GOVERNMENT DEBT-GDP RATIOS (a)**



(a) Country ranking is approximate, based on 1983 data.  
 For definitions and sources, see "Notes to Charts".

Debt/GDP ratio in per cent

**Table 1. Central government debt and interest payments"**

	Debt held by						Debt servicing					
	Private sector			Overseas sector			Total interest payments (as % of GDP/GNP)			Interest paid abroad (as % of total interest payments)		
	Year-end value as % of GDP/GNP											
	1971	1975	1982	1971	1975	1982	1971	1975	1982	1971	1975	1982
United States	16.6	13.9	17.6	3.1	4.5	5.0	1.6	1.7	3.2	8.0	18.2	16.6
Japan	9.6	11.5	30.9	0.0	0.0	0.0	0.4	0.7	2.9	0.0	0.0	0.0
Germany	7.0	10.8	16.3	0.2	0.1	3.0	0.4	0.5	1.4	2.3	3.9	3.5
France	9.3	7.8	13.3	0.9	0.4	1.1	0.6	0.7	1.3	..	..	..
United Kingdom	52.9	42.9	42.4	13.0	8.8	4.8	2.5	2.7	4.4	13.4	15.2	10.2
Italy <sup>b</sup>	40.1	40.9	56.7	0.7	0.5	1.8	2.0	4.0	8.4	..	..	..
Canada	41.5	33.4	38.4	0.3 <sup>c</sup>	0.1	1.3	2.1	2.3	4.7	13.3	15.9	19.0 <sup>d</sup>
Australia <sup>f</sup>	23.0	18.7	15.6	4.6	1.9	4.3	2.5	2.1	2.3	10.6	5.8	8.5
Austria	8.3	10.5	20.3	2.9	4.9	9.9	0.7	0.7	2.4	..	..	..
Belgium	44.0	40.0	50.7 <sup>e</sup>	1.8	0.6	5.5 <sup>e</sup>	2.6	2.7	7.8	..	..	..
Denmark	2.6	0.8	44.5	3.0	3.6	17.0	1.3	1.2	5.3	..	..	..
Finland	1.5 <sup>g</sup>	1.1	4.5	3.1	1.6	7.8	0.5	0.2	0.9	..	..	..
Ireland	47.6	44.5	50.0	5.3	12.5	44.8	3.7	5.2	9.3 <sup>d</sup>	9.1	22.6	26.9 <sup>d</sup>
Netherlands	24.9 <sup>c</sup>	22.3	39.4	0.0	0.0	0.0	3.1	3.2	5.2	0.0	0.0	0.0
New Zealand	23.0	14.9	21.8	10.4	8.6	24.8	2.8	2.2	4.2	21.0	18.7	34.6
Norway	6.9	5.4	10.2	1.9	3.6	5.7	1.1	1.3	2.4	..	..	..
Portugal	13.4 <sup>g</sup>	12.7	17.7	..	4.9	14.9	..	..	5.3	..	4.9 <sup>h</sup>	20.2
Spain	12.1	7.8	9.0	1.0	0.6	1.5	0.5	0.4	1.5	..	..	..
Sweden	13.0	13.3	30.0	0.1	15.8	1.1	1.4	6.4	..	..	..	..
Switzerland	6.7	9.0	12.7 <sup>b</sup>	..	..	..	0.3	0.4	0.5 <sup>d</sup>	..	..	..
Turkey	10.9	9.0	9.1	28.2	12.1	21.9	..	..	..	..	..	..

a) Financial years: United States (fiscal year ending June until 1976, ending September from 1977 on); Japan (fiscal year ending March); Germany, France (calendar year); United Kingdom (fiscal year ending March); Italy (calendar year); Canada (fiscal year ending March); Australia (fiscal year ending June); Austria, Belgium (calendar year); Denmark (fiscal year ending March until 1977, calendar year from 1978); Finland (calendar year); Ireland (fiscal year ending March until 1974, calendar year from 1975); Netherlands (calendar year); New Zealand (fiscal year ending March); Norway, Portugal, Spain. Sweden. Switzerland, Turkey (calendar year).

b) Total public sector debt.

c) 1972.

d) 1981.

e) 1980.

f) Commonwealth and State debt.

g) 1973.

h) 1976.

Sources: National publications.

remaining stable at an average of about 4 per cent of GDP between 1971 and 1975, OECD central government debt held overseas almost doubled to 9 per cent in 1982. The United Kingdom was an exception, while external government borrowing remained negligible (or zero) in Japan, France (until 1981), Italy, Canada, the Netherlands and Spain. In the United States, Germany, Australia, Norway and Finland some modest increases in overseas debt have occurred, especially more recently, while in Austria, Denmark, Ireland, New Zealand, Portugal and Sweden the external government debt/GDP ratio has risen quite rapidly, attaining relatively high levels.

## 2. *Prospective budget deficits, government claims on savings, and interest rates*

The share – or the rate of change in the share – of government debt in GDP (or in private portfolios) may be factors in high long-term interest rates<sup>23</sup>. If international differences in inflation and balance of payments are also taken into account as determinants of interest rates, countries with relatively high average long-term interest rates over the past decade also appear to be those with higher average debt/GDP ratios. However, the link between government debt and credit costs is not clear-cut. Because cyclical increases in debt may be associated with weakening private credit demands, and because unanticipated inflation may cause debt/GDP ratios to fall, higher interest rates may be associated – proximately – with declining debt/GDP ratios<sup>24</sup>. Much depends on whether a given debt stock is being willingly held by investors, or whether they consider it, in some way, in excess of their portfolio requirements. Thus a falling debt share could still be associated with an excess supply of bonds, and with portfolio imbalance insofar – for example – as greater inflationary uncertainty would tend to reduce the demand for the existing stock of long-term government securities for a given nominal or expected real yield. Concerns about capital market strains have at times been perceived in these terms in the United Kingdom and Australia, where private portfolios have had a relatively high public debt content.

Elsewhere, the stock of government debt may not have reached levels where a "risk premium" would be needed to persuade financial investors to hold government bonds; the expansion of such debt may, in fact, have been justified in many cases by portfolio preference for government paper. But countries are generally not indifferent to the fact that there may be a ceiling to the amount of government debt (relative to the financial assets) that is acceptable to financial investors. Above this, interest rates – and monetization pressures – will increase. Investor resistance will be greater the nearer debt is to attaining such a level (or the more it exceeds it).

Given such considerations about the level of indebtedness, the rate of new government borrowing (i.e. additions to debt) relative to flows of new savings may also cause interest rate pressures. This may be so even where levels of outstanding government debt are relatively low if the issue of new debt is increased rapidly, because the called-for portfolio adjustment may be relatively large. It may not only be a matter of higher long-term interest rates being needed for large borrowing requirements to be absorbed by savers. Even where the current level of public domestic borrowing relative to new savings (or new credit raised) may not be causing immediate problems for the absorption of government bonds by the private sector (recession having reduced private sector demands for credit and increased the savings available to governments), the prospective rate of increase in public

indebtedness may be causing high interest rates and crowding-out because bond purchasers need to insure against future falls in bond prices.

Expectations of persistent high budget deficits relative to available savings may thus be a factor behind high interest rates. These threaten, at worst, to impede recovery, because the higher interest rates demanded by private savers crowd out private spending as projects are deferred by the prospect of continuously high real interest rates in the future<sup>25</sup>. At best, where high nominal interest rates are not an impediment, perhaps because after-tax interest rates are much lower<sup>26</sup>, recovery may be lop-sided, with insufficient investment relative to government and private consumption.

In the United States, for example, the level of public domestic borrowing relative to new credit supplies would not necessarily have displaced company borrowers while investment demand was cyclically weak. But projected government claims on new savings flows imply a continuing substantial increase in the proportion of government bonds in total private sector financial assets, and government credit pre-emption as the cyclical peak is reached. High interest rates based partly on the "shadow" of persistent future budget deficits have thereby made crowding-out a cause of current concern. Likewise, the difficulty of funding the budget deficit in France in recent years (i.e. selling bonds to the non-bank private sector) has shown that inflationary and interest rate pressures may arise if the size of the deficit is large compared with a small outstanding public debt. In the French case, the capital market – although growing – has not been able to absorb the substantial increase in government borrowing in a short time. The heavy demands made by the Italian budget deficit have also tended to exceed the relatively large supply of available domestic credit.

In other countries – Germany, Japan, Austria, Canada, and Switzerland – government borrowing is not perceived in terms of monetization risks (real rates of return on government debt have traditionally been positive and confidence in the containment of inflation more deep-set). Nor is there necessarily a fear of appropriating an excessive proportion of national savings (in Japan lower public deficits tend to be associated with higher capital exports). Some investor resistance has nevertheless ensured relatively high real rates of interest, though it is probably the projected rate of increase in debt and debt servicing costs, under unchanged policies, which is the more important cause for concern.

Elsewhere, pressures on domestic capital markets have been avoided by foreign borrowing and current balance of payments deficits. Borrowing from abroad can fill a domestic savings gap thereby alleviating domestic interest rate pressures. It may also finance structural deficits in the current account of the balance of payments arising from increased energy costs, as in Sweden, Denmark, Ireland and New Zealand in particular. In some countries, however, recourse to such measures has been considered unwelcome. Overseas indebtedness carries disadvantages which

can make the prospect of even limited recourse to external borrowing a matter of concern; this is, for example, the case in Belgium and the Netherlands, which have hitherto financed most of their budget deficits on domestic markets but where public sector borrowing seems to have reached the limits set by domestic private sector savings.

Thus, though the evidence is that a budget deficit, particularly in a recession, gives short-term support to demand, such support may tend to diminish rather than remain stable. This erosion might be gradual; but at worst the demand-sustaining impact of a budget deficit may be cancelled out by the effect of adverse expectations on financial markets and entrepreneurial confidence. Because of this, action to cut budget deficits has increasingly stressed the need to reduce future rather than present deficits. In this case the immediate deflationary effects of such action on demand may be minimised while the expectational and confidence effects – in the form of lower interest rates – may be maximised. Cutting deficits might then be seen as unambiguously increasing demand and promoting economic recovery.

#### **D. The costs of public debt service**

In line with higher government debt and/or interest rates, the gross burden of servicing government debt has also increased (Table 1). While in 1971 the ratio of central government interest charges to GDP was 1 1/4 per cent for the OECD as a whole, it rose to 1 1/2 per cent in 1975 and to 3 1/4 per cent in 1982. The proportion of debt interest in total general government spending rose from 5 per cent to 9 per cent in the same period. **All** member countries saw their public debt service cost increase, and a few countries experienced more than a doubling in their debt service cost/GDP ratio between 1971 and 1982 (Japan, Italy, Belgium, Denmark, Norway and Sweden). Similarly, interest payments overseas have risen rapidly in some countries, reflecting both the greater use of external deficit financing and higher interest rates.

Such rates of increase in debt interest payments raise questions about the sustainability of the fiscal impulse behind deficit finance. "Rolling over" interest payments by borrowing more might cause outstanding government debt to expand indefinitely as a ratio of GDP. This would be more likely to occur if interest rates, themselves pushed upward by rising debt, rose above the rate of growth of GNP. If other spending items are cut (or taxes raised) to pay for debt service costs the budget deficit may be held to a fixed proportion of GDP. The outstanding debt/GDP ratio would then also tend to a ceiling; but if the rate of interest on debt is greater than or equal to the growth rate (of the economy and the tax base) interest payments would eventually equal or exceed the deficit itself<sup>27</sup>. Such payments may have a significantly higher savings "weight" than the public expenditure which they displace, so that the demand impact of the budget deficit would diminish<sup>28</sup>.

This problem of interest payments has pre-occupied budget-making in recent years in countries where real interest rates on government bonds are positive. Cumulating government debt raises fears that the point may be reached where the rate of increase may be unsustainable without large tax increases, and governments have been acting to forestall this possibility.

For those countries where governments have made substantial foreign currency borrowings – Denmark, Ireland, and New Zealand for example – the problem of debt servicing can sometimes be more pressing. Whereas interest payments on domestically-held public debt represent an internal income redistribution (from present and future taxpayers to purchasers of government bonds), interest payments abroad imply a (generally untaxed) transfer of spending power from the nation as a whole to foreign lenders. Prolonged government borrowing abroad may lead in this case (if it is associated with public consumption rather than investment support to export industries) to a more rapid diminution of the demand-sustaining effect of a budget deficit than would occur as a result of domestic borrowing.

Sustaining overseas borrowing at a fixed rate relative to national income (an increasing rate – covering the roll-over of debt service – can generally be ruled out as unstable) would entail a persistent rise in the external debt/GDP ratio to a point where debt service expenditures equalled the current balance of payments deficit<sup>29</sup>. Spending on items other than debt service would then – via tax increases and/or public spending cuts – have at best been brought back to original levels. But at the same time increasing international indebtedness associated with a balance of payments deficit on current account is more likely than domestic borrowing to raise real interest rates above the growth rate of the economy<sup>30</sup>. This would call for further budget retrenchment to balance the external payments gap and perhaps reduce accrued debt; real domestic spending might then fall below original levels as debt was repaid.

While capital imports may sustain public spending, they would thus tend to be linked with current account deficits and increasing real interest payments, in which case the budget impulse would appear not to be permanently sustainable.

## II. MEDIUM-TERM RULES AND OBJECTIVES

### A. The consistency of budgetary norms and monetary targets

Pressures emanating from a portfolio "excess" of government bonds, or from their debt service consequences, do not necessarily imply a need for budget balance; rather they imply a need for medium-term budget deficit norms consistent both with flows of savings in the economy and balanced portfolio acquisition by lenders.

Earlier budgetary norms did not necessarily take government financing constraints directly into account. Such norms have generally been framed in terms of the longer-run deficit required to offset the excess or deficiency of savings in the private sector, assuming (approximate) equilibrium on the current account of the balance of payments. In the Netherlands the desired size of the budget deficit has, in principle, been attuned to the average savings surplus of the private sector which is expected to prevail over the business cycle: in Germany, the normative structural budget deficit (as developed by the Council of Economic Experts) is derived from a historical full employment benchmark of balanced private and public sector (dis)savings, assuming a fixed ratio of public spending to potential output<sup>31</sup>. The level of private sector savings – the longer-run ability of the private sector to absorb government debt – is thus critical to the specification of ."normal" budget deficit levels, subject to the achievement of equilibrium in the current balance of payments, or to the attainment of capital import/export objectives.

Consistency between budgetary norms and monetary targets may be ensured by adjusting interest rates, at least in the short run. Over a longer period, however, as has been seen in the previous section, a persistent conflict between budget deficits and monetary stance may lead to cumulative financing pressures. Matching budget deficits with the flows of private savings in the economy will not necessarily prevent the emergence of financing strains, upward pressure on interest rates, mounting debt service requirements and monetization pressures, unless portfolio imbalances stemming from the disproportionate growth of government stock are avoided. An important issue is to specify the budget deficit norms needed to ensure that the stock of government debt expands at a manageable rate and does not lead to financing instabilities and eventual crowding-out.

Where policies aim at a steady medium-term growth of monetary aggregates, the supporting fiscal strategy might be based on a "stable budget" rule entailing a long-term deficit sufficient to provide the specified secular increase in the quantity of money; this approximates to a balanced budget rule, because long-run debt accumulation will be zero<sup>32</sup>. Balanced budgets have usually been associated with relatively narrow definitions of government activity, which exclude public corporations and other "off-budget" agencies, and treat government spending as consumption. The argument for balanced budgets then derives from the perception that government debt needs to be financed by higher future taxes, because public spending yields a zero rate of return. Sustaining the original spending indefinitely would entail borrowing to cover interest payments and persistently-increasing debt/GDP ratios. The unsustainability of this process may lead to financing problems and monetization pressures (leading to the erosion of the debt burden via an "inflation tax"), which would make persistent deficits incompatible with longer-run control of monetary growth.

The principle of balanced budgets was applied (with occasional exceptions) in France during the 1960s and in Japan up to 1965, while the approach also has been

more recently and persistently advocated in the United States. The compromise variant of balancing the budget at *high* employment, however, involves the cumulation of public debt because debt issues associated with "built-in stabilizers" are not redeemed if the budget is only balanced – rather than in surplus – at the cyclical peak. Elsewhere, though unbalanced budgets may be seen as representing a choice in favour of present expenditure and deferred taxation, these may be considered appropriate if the government's role as a supplier of public goods and social overhead capital is seen as justifying a transfer of part of the cost to beneficiaries in future generations, via the sale of long-term bonds – as in Japan since 1965. If capital market imperfections exist, moreover, governments may be able to borrow at better terms than individuals who may thus welcome government deficits as a means of reducing liquidity constraints on their current spending<sup>33</sup>.

Viewed, in general, as a means of anchoring – or gradually reducing – inflation expectations over the medium term (rather than as precisely determining nominal income) monetary targeting usually allows the budget deficit a long-run role in meeting employment and growth objectives. Government debt issues may satisfy a private sector portfolio demand for public bonds. In the German medium-term financial strategy (as developed by the Council of Experts) the cyclically-neutral deficit is set, in principle, so as to ensure that the growth of government debt equates with private sector asset demands, the government aiming to take up a fixed long-run share of private savings by issuing long-term debt (for public investment) in proportion to the projected high employment deficit. Interest rates would, in principle, be unaffected and funding pressures would not arise where the public have a portfolio preference for government bonds, and public spending generates a real rate of return.

In other countries, the various medium-term objectives for reducing the growth of public sector debt tend also to be framed in such a way as to allow for long-run "structural" budget deficits and positive public sector debt accumulation. In Japan the relatively high private savings ratio leaves room for accumulating government debt to be – in principle – compatible with growing public and private investment. In other countries, notably Canada, maintaining a steady ratio of debt to GDP also allows a long-run positive public sector borrowing requirement, although no given ratio is taken as a formal target. Among the other OECD countries, France has probably been alone in considering, in recent years, that there was scope for the public debt-GDP ratio to be increased, but this development has been constrained by monetization pressures, balance of payments deficits on current account, and exchange rate depreciation.

Inflation is a complicating factor. A balanced budget may be in effective surplus (in the sense that debt/GDP ratios would be falling) if inflation is reducing the real value of government debt<sup>34</sup>. if, for instance, the capital gains accruing to OECD governments, as a result of the inflationary devaluation of their debt obligations, is added to their income, their budgets would tend towards real balance or even

surplus, though they may appear in conventional deficit. Adjusted for inflation in this way, the aggregate budget deficit of OECD economies would be reduced by about a third in 1983, and would have been eliminated altogether in 1980. Such considerations may be incorporated into budgetary strategy. In the United Kingdom the "medium-term financial strategy" evaluates the budget stance in terms which (implicitly) make allowance for the fact that a fall in the inflation rate reduces the "inflation tax" on holders of government bonds, thereby reducing the real budget surplus. A reduction in government borrowing might, by decreasing inflation, have positive effects on demand because falling inflation acts as a longer-run automatic stabilizer by promoting lower private savings and reductions in interest rates. The implications of inflation for budgetary stance are thus that if the budget goes automatically into "real" surplus when inflation rises, this will dampen demand and then, by reducing inflation, subsequently alleviate the "inflation tax"<sup>35</sup>. This has not implied that governments have been – or ought to have been – willing to adapt the budget stance to inflation by targeting on a given "real" budget balance.

Public corporation borrowing may or may not be excluded from medium-term budget goals and legislative control: as finance for productive investment it may be treated as earning an explicit or implicit return which is available for the repayment of the borrowing in the longer run. Though covered by government guarantee (and hence, in principle, substitutable for other government debt instruments) it is not usually treated as a cause of present or future crowding-out. Investment may, on the other hand, be difficult to define, because "capital expenditure" may lead to operating losses and higher government subsidies. Such considerations have led to borrowing constraints being defined quite widely in the United Kingdom, Italy and Australia: public sector borrowing targets cover nationalised industry expenditures. The implication is that such investment should, to a significant degree, be financed internally out of operating surpluses. If this is not possible then public investment would tend to have the same consequences for economic performance as public consumption.

The drawback is that the wider the range of activities included in the budget, the harder medium-term budget targets may be to achieve (the profits and losses of nationalised industries typically fluctuate a great deal). Moreover, balancing a budget which incorporates large parts of the economy's industry would tend to have somewhat different consequences for the long-run growth of the capital stock than balancing expenditures and revenues in the traditional public goods sector.

## **B. Automatic fiscal stabilizers and monetary targeting**

If budgetary norms, as described above, may be necessary for the achievement of balanced economic growth, they may not be sufficient to ensure self-stabilization of the economy around its potential growth trend. Thus, while the trend in medium-term budgeting has been to give greater weight to automatic stabilizers and

to de-emphasise budgetary activism, a strong motivation behind the Dutch and German approaches has also been the desire to enhance the potency of counter-cyclical action (with which, for example, the 1967 German Law on Stability and Growth was associated). Defining the longer-term implications of short-term counter-cyclical fiscal policy has been regarded as essential to maximizing its stabilizing impact<sup>36</sup>. Similarly, though the 1972 United States budget adopted the principle of full employment budget balance as a "self-fulfilling prophecy" (the assumption being that "by operating as if we were at full employment we will help bring about that full employment"), it has been argued that a budget which would be balanced at high employment may not be sufficient in itself to create full employment conditions: discretionary action may then be necessary to promote recovery and sustain medium-term growth<sup>37</sup>.

Experience with discretionary fiscal policies has, however, tended to show that reliable long-term principles may be more important for the growth process than short-term budget reactions; consequently, budgetary norms aimed at stabilizing the budget deficit (subject to unavoidable automatic cyclical variations) have come – *de facto* – to be seen as embodying self-righting principles to a greater extent than hitherto, because doubts have arisen about the true effectiveness of automatic fiscal stabilizers. The self-righting properties of such norms may depend, however, on other instruments – the elimination of supply-side rigidities for instance – and they have implied, primarily, a subordination to monetary targets.

In principle, once the appropriate medium-term budget and monetary targets have been set, monetary and fiscal stance could be allowed to change automatically with short-term demand conditions. The budget deficit would vary counter-cyclically owing to the operation of "built-in stabilizers". For an economy on its long-run balanced growth path, but subject to short-run demand variations, such automatic budget responses would be consistent with the maintenance of balanced economic growth – in terms of public sector resource claims, public borrowing, monetary creation and price and interest rate stability. With such stabilizers in operation, the economy and the budget deficit might be self-correcting and as such market expectations would discount short-term increases in government "demands" for credit as transitory<sup>38</sup>. Private sector demands for money and credit being lower in recession, no net pressure on interest rates need, in principle, arise either from current or expected public sector claims on private savings.

In practice such automatic fiscal stabilizers have tended to be imperfect and inadequate economic regulators. In the first place, tax and expenditure systems reflect social as well as economic objectives, so that their short-term stabilizing properties are to some extent arbitrary and not necessarily consistent with medium-term structural balance. Unemployment compensation may affect longer-run economic growth adversely by discouraging labour supply (increasing structural unemployment), though the evidence is not conclusive on this. Or, where government transfers are indexed to prices, a degree of inflexibility in adjusting to

supply-side (particularly terms-of-trade) shocks may be introduced, increasing real wage rigidity and decreasing labour mobility. "Built-in stabilizers" may, in certain circumstances reduce the long-run growth rate of the economy, thereby becoming part of the structural budget problem.

Secondly, automatic stabilizers add to the stock of outstanding government debt insofar as they are not "redeemed" through a budget surplus as the economy recovers. They will therefore have longer-run cumulative effects, which will help determine market expectations of future interest rates. The operation of automatic stabilizers is consistent with medium-term budgetary balance only insofar as it ensures that balanced economic growth is resumed, and this raises questions as to how automatic rules can facilitate the attainment of the longer-run growth on which they are predicated.

Automatic fiscal stabilizers may thus be a mixed blessing. They may be potentially beneficial in the face of demand shocks, and they may provide a more reliable source of fiscal support than "fine-tuning". But they may contain structural biases which make for rigidities of response to inflationary supply-side shocks, reducing growth potential, sustaining long-term interest rate pressures and making structural budget deficit problems more intractable. In the process, they may – while supporting current demand – impede the implementation of recovery strategies based on reducing interest rates and inflation expectations. OECD economies have, therefore, been seeking to reshape such stabilizers, through reforms of marginal tax and unemployment benefit rates and revisions of indexation commitments; in the process their impact may be made more consistent with longer-run structural budget balance. At the same time, the reduction in budget deficits has been seen to demand that at least part of the "automatic stabilizer" element in the deficit be offset.

Though the adoption of monetary targets has reflected an "eclectic" approach to the suppression of inflation expectations more than strictly monetarist views, much stronger presumptions about the self-righting properties of market economies and the longer-run "neutrality" of fiscal actions may sometimes be attributed to monetary targeting. Indeed, a dependable medium-term relationship between monetary aggregate(s) and total expenditure can imply the sufficiency of monetary (plus structural) policies to achieve long-run economic stability. In this context, the choice of monetary growth rate will depend on how far out of balance the economy is, in terms of deteriorating growth and inflation prospects. Where there is a perceived disequilibrium – accelerating inflation – the authorities may aim at a gradual reduction in monetary targets (negative real monetary growth) to contain inflationary expectations; where the economy is varying around its secular growth path the target growth rate of the money supply will usually be the sum of productive potential (i.e. real) growth, "unavoidable inflation" and an allowance for trend changes in velocity<sup>39</sup>.

Although subscribing to the same aims, several smaller countries (Austria, Belgium, Denmark, the Netherlands, Norway and Sweden<sup>40</sup>) have preferred a hard-currency approach toward price stability, via fixed exchange rates rather than monetary targets. The choice of exchange rate stability may be based largely on the fact that, in highly-indexed economies, currency depreciation would tend to feed through quickly into prices, with little beneficial effect on output to offset the cost in terms of inflation. Or it may be based on a perceived short-run price inelasticity of exports and imports, whereby exchange rate depreciation could correct any current payments imbalance only very slowly. It may also derive from the specific advantages of linking to the currency of a dominant trading partner – Germany in particular – whose "domestic policy discipline" is highly rated, while exerting pressure on wages in the exposed sector of the economy through which wage-discipline would be also be transmitted to protected sectors<sup>41</sup>. A fixed exchange rate policy may still require long-run plans for domestic monetary expansion in order to regulate the domestic value of the currency; in the Netherlands, for example, the growth of the money supply ( $M_2$ ) is geared to the longer-run expansion of net national income in volume terms augmented for unavoidable price rises. In Austria and Belgium, on the other hand, the authorities do not consider the money supply an appropriate medium-term objective in conjunction with exchange rate targeting.

Monetary and exchange rate targets, however, owe at least part of their rationale to their role as short-term economic regulators. Interest rates in the 1960s proved increasingly unreliable instruments (and indicators) of policy as inflation expectations became more volatile and persistent. Assuming a stable relationship between the demand for money and nominal income, monetary aggregates can give an early indication of deviations from price and output objectives, so that interest rate adjustments can be more effective. (Short-run monetary stability may of course entail greater interest rate "fine tuning" and volatility, notably when monetary control operates on bank liquidity). If monetary growth norms are based on a constant long-run expansion of the money supply, the response to inflation shocks will be non-accommodating, real interest rates being forced up. The response to demand shocks – i.e. lower private sector credit demands – will also be beneficially counter-cyclical, as interest rates will tend to decline as demand falls.

### **C. The institutional co-ordination of monetary and fiscal instruments**

While demand management has, in principle, moved from an almost unique dependence on automatic fiscal stabilizers towards a greater reliance on the stabilizing properties of intermediate monetary objectives, the operational significance of this new assignment has depended on the institutional effectiveness with which the strategy has been implemented. Three factors are directly involved:

**Table 2. Projected and actual growth rates of monetary aggregates**

Country	Aggregate	Period	Target		Outcome	
			M1	M2	M1	M2
United States	M1/M2 <sup>a</sup> % increase	March 1975-March 1976	5.0-7.5	8.5-10.5	5.0	9.6
		1975 9 2-1976 9 2	5.0-7.5	8.5-10.5	5.2	9.5
		1975 9 3-1976 9 3	5.0-7.5	7.5-10.5	4.6	9.3
		1975 Q4-1976 Q4	4.5-7.5	7.5-10.5	5.7	10.9
		1976 Q1-1977 Q1	4.5-7.0	7.5-10.0	6.3	10.9
		1976 Q2-1977 9 2	4.5-7.0	7.5- 9.5	6.6	10.7
		1976 Q3-1977 9 3	4.5-6.5	7.5-10.0	7.8	11.0
		1976 Q4-1977 Q4	4.5-6.5	7.0-10.0	7.8	9.8
		1977 Q1-1978 Q1	4.5-6.5	7.0- 9.5	7.7	8.7
		1977 9 2-1978 9 2	4.5-6.5	7.0- 9.5	8.2	8.4
		1977 Q3-1978 9 3	4.0-6.5	6.5- 9.0	8.0	8.2
		1977 Q4-1978 Q4	4.0-6.5	6.5- 9.0	7.2	8.6
		1978 Q1-1979 Q1	4.0-6.5	6.5- 9.0	5.1	7.6
		1978 9 2-1979 9 2	4.0-6.5	6.5- 9.0	4.8	7.7
		1978 9 3-1979 9 3	2.0-6.0	6.5- 9.0	5.3	8.2
		1978 9 4-1979 9 4	3.0-6.0	5.0- 8.0	5.5	8.3
		1979 Q4-1980 Q4 <sup>b</sup>	4.0-6.5	6.0- 9.0	7.5	9.9
		1980 Q4-1981 9 4	3.5-6.0	6.0- 9.0	5.1	9.4
		1981 Q4-1982 9 4	2.5-5.5	6.0- 9.0	9.0	9.4
1983 9 2-1983 Q4 <sup>c</sup>	5.0-9.0	7.0-10.0	7.3	8.4		
Japan	M2 <sup>d</sup> % increase	1977 Q3-1978 9 3	11.0-12.0		12.0	
		1977 Q4-1978 9 4	12.0		12.6	
		1978 Q4-1979 9 4	11.0		9.1	
		1979 9 4-1980 9 4	10.0		7.7	
		1980 Q4-1981 Q4	10.0		10.3	
		1981 Q4-1982 9 4	11.0		7.9	
		1982 Q4-1983 9 4	7.0		7.1	
Germany	Central bank money % increase	End 1974-End 1975	8.0		10.0	
		Average 1975-1976	8.0		9.2	
		Average 1976-1977	8.0		9.0	
		Average 1977-1978	8.0		11.4	
		1978 Q4-1979 Q4	6.0-9.0		6.3	
		1979 Q4-1980 Q4	5.0-8.0		6.0	
		1980 Q4-1981 9 4	4.0-7.0		3.6	
		1981 Q4-1982 Q4	4.0-7.0		6.1	
1982 Q4-1983 Q4	4.0-7.0		7.0			
France	M2 % increase	Dec. 1976-Dec. 1977	12.5		13.9	
		Dec. 1977-Dec. 1978	12.0		12.2	
		Dec. 1978-Dec. 1979	11.0		14.4	
		Dec. 1979-Dec. 1980	11.0		9.8	
		Dec. 1980-Dec. 1981	10.0 <sup>e</sup>		11.4	
		Dec. 1981-Dec. 1982	12.5-13.5		12.0	
		Nov./Dec./Jan. 1982- Nov./Dec./Jan. 1983	9.0		..	
United Kingdom	Sterling M3 % increase	Fiscal year ending April 1977	9.0-13.0 <sup>f</sup>		7.8	
		Fiscal year ending April 1978	9.0-13.0		14.9	
		Fiscal year ending April 1979	8.0-12.0		10.9	
		Oct. 1978-Oct. 1979	8.0-12.0		13.4	
		June 1979-April 1980	7.0-11.0		9.7	
		Feb. 1980-April 1981	7.0-11.0		19.9	

**Table 2. Projected and actual growth rates of monetary aggregates (cont.)**

Country	Aggregate	Period	Target	Outcome
United Kingdom (continued)		Feb. 1981-April 1982	6.0-10.0	13.6
		Feb. 1982-April 1983	8.0-12.0	10.8
		Feb. 1983-April 1984	7.0-11.0	
Italy	Total domestic credit absolute increase	March 1974-March 1975	Lit. 21 800 bn	19600 bn
		March 1975-March 1976	Lit. 24 700 bn	35 280 bn
		Dec. 1975-Dec. 1976	Lit. 29 500 bn	33 280 bn
		Dec. 1976-Dec. 1977	Lit. 32 000 bn <sup>g</sup>	35 652 bn
		March 1977-March 1978	Lit. 30 000 bn	39 265 bn
		Dec. 1977-Dec. 1978	Lit. 46 000 bn	49 013 bn
		Dec. 1978-Dec. 1979	Lit. 53 000 bn	53 348 bn
		Dec. 1979-Dec. 1980	Lit. 59 300 bn	62 141 bn
		Dec. 1983-Dec. 1981	Lit. 64 500 bn	72 368 bn
		Dec. 1981-Dec. 1982	Lit. 73 000 bn	98 430 bn
Dec. 1982-Dec. 1983	Lit. 105 000 bn			
Canada	M1 % increase	1975 Q2-1976 9 2	10.0-15.0	12.6 <sup>h</sup>
		Feb./April 1976-1977 9 2	8.0-12.0	7.0
		1977 9 2-1978 9 2	7.0-11.0	9.5
		1978 Q2-1979 9 2	6.0-10.0	8.1
		1979 Q2-1980 Q3	5.0- 9.0	3.3
		1980 Q3-1982 9 4'	4.0- 8.0	3.1
Australia	M3 % increase	June 1976-June 1977	10.0-12.0	10.5
		June 1977-June 1978	8.0-10.0	8.0
		June 1978-June 1979	6.0- 8.0	11.8
		June 1979-June 1980	10.0	12.3
		June 1980-June 1981	9.0-11.0	12.7
		June 1981-June 1982	10.0-11.0	11.3
June 1982-June 1983	11.0	12.5		
Netherlands	Domestic private sector M2 creation' % increase	July 1977-March 1978	5.1 <sup>k</sup>	7.8
		April 1978-March 1979	5.2	4.6
		Jan. 1979-Dec. 1979	5.5	6.3
		Jan. 1980-Dec. 1980	4.5	4.7
		Jan. 1981-Dec. 1981	4.5	2.3
Switzerland	M1 % increase	Dec. 1974-Dec. 1975	6.0	5.9
		Average 1975-1976	6.0	8.0
		Average 1976-1977	5.0	5.4
		Average 1977-1978	5.0	16.2
	Monetary base % increase	Average 1979-1980	4.0	0.2
		Average 1980-1981	4.0	-1.5
		Average 1981-1982	3.0	2.6
	Average 1982-1983	3.0	3.6	

a) M3 targets, which have less operational meaning, are not shown.

b) M1B in 1979 and 1980.

c) 1983 M1 target is based on 1983 Q2; M2 target is based on February-March 1983 average.

d) Forecast. Including certificates of deposits from 1979.

e) Raised implicitly to 12 per cent in the second half of 1981.

f) Revised from 12 per cent target to be consistent with objective for domestic credit expansion.

g) Revised from Lit. 36 600 billion.

h) 1975 Q2 - Feb./April 1976, excluding effects of postal strikes.

i) Targets suspended from December 1982.

j) Domestic private sector M2 creation targets were used to bring the 'liquidity ratio' (M2 in relation to national income) back from about 40 per cent in early 1977 to a desired level of 35 per cent in 1981. No targets have been announced for 1982 and 1983.

k) In per cent of total M2.

Sources: National publications.

- i) The stability of the relationship between nominal income and different monetary aggregates;
- ii) The effectiveness of monetary control and the level of interest rates associated with it; and
- iii) Market expectations regarding the consistency and feasibility of the monetary and fiscal stance.

The monetary targets pursued by OECD economies since the mid-1970s are set out in Table 2, together with the actual growth rates of the relevant aggregates. While the choice will to some extent depend on the method of monetary control (discussed below), the principal criteria involved are the stability, measurability and predictability of the relationship between monetary aggregates and total expenditure. From this point of view a relatively narrow definition may seem preferable, on the ground that this would be more likely to represent money as a spending medium than as a store of savings and wealth; but in fact broader measures may be less disturbed by switches in asset demands induced by institutional changes and movements in interest rates. This consideration, together with the fact that even broader money aggregates may be dominated by transactions demand, has supported the choice of such aggregates ( $M_2$  or  $M_3$ ) outside North America and Switzerland.

However, the institutionally-induced instabilities in the demand for narrow money have, in fact, led to the de-emphasis of the  $M_1$  target in the United States and to its abandonment in Canada. Likewise, uncertainty about the stability of the link between the broad money stock and nominal income in the United Kingdom has led to the adoption of multiple monetary targets. Doubts about the stability of the relationship between targeted aggregates and nominal income have thus led to some concern about the efficacy of monetary objectives.

At the same time, monetary control procedures may have different interest rate implications. The money supply may be controlled from the supply side – via money market operations (as in the United States, and to some extent in Canada, Germany and Switzerland). In this case interest rates would automatically tend to rise as higher public sector borrowing increased demands for the limited supply of bank credit. If budgetary and monetary responsibilities are separated by the constitutional independence of the central bank, the scope for budget deficits to diverge from levels compatible with monetary growth targets may, in principle, be limited, because the interest rate costs of such divergence will be immediately evident. However, the recent experience of the United States has shown that where budgetary and monetary stance are decided and implemented autonomously such a divergence can in fact occur.

The money stock may also be controlled via its asset counterparts – influencing bank lending by altering private and government demands for credit (as in Japan, France, Italy, and to some extent the United Kingdom). In this case,

attention focuses on broad monetary aggregates (which cover most of the deposit liabilities of the banking system) or on domestic credit expansion, and on the role of the government borrowing requirement in money creation (private credit demands and overseas capital flows being the other principal determinants). The role of the budget deficit is then seen more explicitly, and this may allow the use of the public sector borrowing requirement as an instrument of monetary control (in the United Kingdom and Australia in particular). The choice of a broad money aggregate may thus serve to strengthen the subordination of fiscal to monetary policy. In the process it may also give Treasuries explicit leverage over monetary targets and encourage centralisation of monetary and fiscal decision-making. The problem is that interest rate adjustments tend to be made with a lag, as monetary growth rates are seen to exceed their target because of higher government borrowing. Thus, if monetary aggregates give conflicting signals, there may at times be a tendency to allow too little interest rate flexibility, so that there may in practice be too much fiscal and monetary "accommodation".

At root, there is a choice between the merits of co-ordinated policy setting, but with the associated risk of monetary accommodation, and a system where the central bank acts as a bulwark against the monetary financing of budget deficits, but where division of responsibilities may allow, for a time, an unbalanced monetary-fiscal mix.

Finally, though an effective medium-term strategy requires a commitment to restrictive targets if it is to influence inflation expectations, only in the United States and the United Kingdom have long-range (three-to-four-year) monetary targets been in operation<sup>42</sup>. The Bundesbank, though basing its strategy on the medium-term stability in the demand for money and longer-run **GDP** growth potential, avoids setting targets beyond one year on the ground that uncertainties about the future make targets for longer horizons inadvisable. Monetary flexibility is considered to be necessary beyond the current year, and, with the adoption (since 1979) of target ranges, monetary policy has been given room for manoeuvre where conflicts between internal and external objectives arise<sup>43</sup>.

The institutional experience with monetary targeting has therefore tended to emphasise the difficulties involved in relying on monetary aggregates alone to provide automatic economic stability. For monetary targeting to be properly effective, without high and volatile interest rates, budgetary stance needs to be co-ordinated with monetary objectives even in the short term. On the other hand, the imprecise short-term links between money and nominal income argue for some flexibility in implementing monetary targets: automatic fiscal stabilizers need to operate jointly with monetary targeting, rather than being suppressed via the pursuit of inflexible short-term budget balance targets.

### III. SHORT AND MEDIUM-TERM POLICY CO-ORDINATION

The analysis so far has shown that the increasing tendency towards the medium-term planning of budgetary and monetary policies has been based on the principle that, beyond the short run, such policies need to be harmonised. Lack of co-ordination risks financial crowding-out and/or growing inflationary pressure. However, implementation difficulties have prevented fiscal stance from reaching a position of symmetry, while monetary instabilities have prevented monetary targets from asserting themselves effectively. At the same time, budget deficits and interest rates have remained high even though inflation has been reduced. Part of this may be due to the interaction of fiscal with monetary stance: higher interest rates raise government spending by increasing debt service costs and unemployment transfers.

This section analyses the implications of such interaction for the maintenance or restoration of balanced growth, especially insofar as such growth may be affected by expectations about future budgetary trends. Two issues are involved here:

- i)* ensuring consistency between short-term fiscal stance and medium-term structural budget objectives, from the viewpoint of maximising the interest rate-reducing effects of cutting budget deficits and minimising the deflationary impact of such action; and
- ii)* choosing the appropriate short-run monetary stance – gradualism versus rapid adjustment – given that the feedbacks, via lower activity and higher interest rates, from monetary restraint to the budget deficit may heighten expectations of future monetary accommodation (and inflation) even when current inflation is falling.

#### A. Short-term fiscal stance and medium-term budgetary objectives

As described above the tendency has been to question the effectiveness, feasibility and scope for counter-cyclical activism to aid economic recovery. Indeed, a corollary of "inflation first" strategies is generally a belief in the capacity of the private sector to achieve automatic recovery as a result of budget cuts. Two principal automatic mechanisms may be discerned:

- i)* **Beneficial effects on private sector wealth.** Lower inflation may mean a smaller erosion of the real value of private sector financial wealth (or a lower "inflation tax"); private savers may then have to allocate a lower proportion of their income to maintaining the real value of their savings, so that personal spending may rise as a result.
- ii)* **Improved company profitability.** Capital investment may rise as lower credit costs follow cuts in public borrowing and as falling (wage) inflation raises the real profitability of investment – especially insofar as the taxation of real returns may be artificially raised by inflation.

The quantitative effects of these mechanisms on demand have been only imprecisely

established. However, economic recovery has been seen as facilitated by budget cuts through a process which reverses the conventionally positive multiplier properties attaching to tax- and deficit-financed public spending. (This leaves unresolved, of course, the conflict between the principles upon which governments are acting and the properties of short-term econometric models, which do not generally show budget restriction as having marked positive effects on private investment in the short run.) The combination of short-term fiscal and monetary restraint which followed the second oil price rise may therefore be seen not just in terms of a trade-off between disinflation objectives and output, but as aiming to secure a viable and lasting increase in output and employment via lower public spending and inflation. Medium-term monetary and budgetary restraint has been regarded as requiring a parallel restrictive co-ordination in the short run.

In the event, the fall in inflation has acted as a potentially expansionary force on demand! as the inflationary erosion of the real value of government securities has slowed, so has the need for the personal sector to cut back spending in order to rebuild its real financial wealth; household savings ratios have fallen, and this has been a factor in the present recovery. Adjusted for the lower "inflation tax" on holders of government debt, the "structural" budget balance of the United States appears to have become demand-supportive to the extent of moving towards deficit by about **2 1/4** per cent of **GDP** between **1981** and **1983**, compared with an apparent swing of 1 per cent in the budget balance corrected for the cycle alone – see Table 3. The restrictive fiscal stance among the other major economies appears, at the same time, to have been much less severe when the "inflation tax" is allowed for: a swing perhaps of only **1/4** per cent of **GDP** compared with an apparent tightening of **1 1/2** per cent<sup>44</sup>.

However, the combination of fiscal and monetary tightness (evident especially in **1980-81**) has been associated with recession, stagnant investment and sustained government credit demands; public sector borrowing and interest rates have remained high, while the achievement of medium-term budgetary goals has had to be deferred. Because of increased unemployment-related transfers, lower tax receipts and higher public debt service costs, simultaneously tight fiscal and monetary policies have tended automatically to inflate budget deficits, frustrating – wholly or in part – attempted deficit reductions. In the process, economic recovery may also have been retarded: deflationary policies reduce expected demand and anticipated profits, while budget "feedbacks" from lower growth prevented reductions in interest rates because of continuing portfolio pressures stemming from sustained public sector borrowing.

This problem has two related dimensions. In the first place, realised budget deficit cuts may be quite small in the short run when all countries are attempting simultaneously to reduce public borrowing by joint monetary and fiscal restriction<sup>45</sup>. Second, to avoid the "feedback" on to the budget deficit from lower activity, interest rates need to fall in order to encourage interest-sensitive private spending and

Table 3. General government structural budget balances

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
<b>I. Structural budget balances</b>														
United States														
Balance	0.0	-0.5	0.2	0.1	0.7	-0.9	0.4	0.6	0.9	1.2	0.7	<b>1.6</b>	0.3	-0.2
Change in balance		-0.5	0.7	-0.1	0.6	-1.6	1.3	0.2	0.3	0.3	-0.5	0.9	-1.3	-0.5
Six major countries <sup>4 b</sup>														
Balance	0.8	0.3	-0.7	-0.9	-0.9	-3.0	-2.8	-2.4	-3.8	-3.5	-2.8	-2.5	-1.8	-1.3
Change in balance		-0.5	-1.0	-0.2	-0.0	-2.1	0.2	0.4	-1.4	0.3	0.7	0.3	0.7	0.5
Major seven countries <sup>b</sup>														
Balance	0.4	-0.1	-0.3	<b>-0.4</b>	-0.2	-2.0	-1.3	-1.0	-1.5	-1.3	-1.1	-0.6	-0.8	-0.8
Change in balance		-0.5	-0.2	-0.1	0.2	-1.8	0.7	0.3	-0.5	0.2	0.2	0.5	-0.2	0.0
<b>II. Inflation-adjusted structural budget balances</b>														
United States														
Balance	1.6	-0.5	0.9	1.3	2.7	0.8	1.5	1.8	2.2	3.0	2.7	3.1	1.3	0.5
Change in balance		-1.1	0.4	0.4	1.4	-1.9	0.7	0.3	0.4	0.8	-0.3	0.4	-1.8	-0.8
Six major countries <sup>a, b</sup>														
Balance	1.4	1.0	0.0	0.2	0.7	-0.5	-0.5	-0.1	-2.1	-1.3	0.3	0.1	0.4	0.5
Change in balance		-0.4	-1.0	0.2	0.5	-1.2	0.0	<b>0.4</b>	-2.0	0.8	1.6	-0.2	0.5	0.1
Major seven countries <sup>b</sup>														
Balance	1.5	0.8	0.4	0.7	1.6	0.1	0.4	0.8	-0.1	0.7	1.4	1.4	0.8	0.5
Change in balance		-0.7	-0.4	0.3	0.9	-1.5	0.3	<b>0.4</b>	-0.9	0.8	0.7	0.0	-0.6	-0.3

a) Japan, Germany, France, United Kingdom, Italy, Canada.

b) GNP/GDP weighted

Source: OECD Economic Outlook, No. 34, December 1983, pp. 38-40.

reduce debt service costs. In such a case, to the extent that crowding out of private demand may be virtually complete in the medium run, public sector deficits could be reduced without eventual loss in terms of activity and output: private spending would tend to substitute for public. However, if the realised budget deficit cut is small, or negligible, so will be the interest rate reduction and the increase in interest-sensitive private spending<sup>46</sup>. Indeed, attempts to cut deficits, in conjunction with restrictive monetary targets, contain the danger that lower demand and sustained high interest rates will deter investment and risk locking OECD economies into a slow-growth trap<sup>47</sup>.

In such circumstances, a strategy of reducing interest rates by combined fiscal and monetary restraint may be slow to take effect because ex ante budget cuts may not lower expectations about future portfolio pressures and future interest rates. In conjunction with lower output expectations, high interest rates might then persist as recovery is frustrated and as slow growth ensures continuing high government claims on savings<sup>48</sup>.

In this case, the difficulty of reducing budget deficits in the face of "built-in stabilizers" may demand a degree of autonomy in the setting of short-term fiscal stance, even if medium-term strategy needs to be based on the inter-dependence of fiscal and monetary policies and (currently) on the gradual reduction in budget deficits. Attempts to control monetary growth and reduce interest rates by cutting budget deficits appear, because of the dependence of the government deficit on economic activity, to be open to difficulties which may make the process "self-defeating".

The difficulties of avoiding the short-term deflationary impact of attempted budget cuts, while assuring that excess spending is eliminated in the long run, has been accompanied by an increasing recognition of the need to distinguish between structural and cyclical budget deficits. Because continuous future deficits appear to affect present interest rates, these have needed (and still need in some cases) to be reduced. Concentrating budget cuts less on the present and more on following years is seen as allowing the aims of budget consolidation to be achieved without the adverse effects of fiscal deflation on demand. The extent to which short-run cuts in deficits are still needed, in order to instill confidence that budgets are under control, will vary; but in some cases (Canada, for instance) controlling future budget deficits has been seen as allowing greater scope for additional short-term demand support via temporary fiscal stimulus. The proposition that budget cuts may raise activity and ensure recovery is more likely to be validated where future deficit cuts can be traded off for cuts in current interest rates.

## **B. Short-term monetary stance and medium-term financial objectives**

In seeking to influence output by controlling inflation expectations, the possible impact of budget deficits on future monetary expansion also has to be taken into

account. Central banks may, in the short term, offset the monetary effects of budget deficits and monetary targets may, in principle, be set independently of fiscal policy (as appears to be the case in the United States). But the higher the interest rates necessary to reconcile monetary restriction with the fiscal stance, the greater the danger that they may feed – through automatic increases in budget deficits associated with lower economic activity and higher debt-servicing costs – into expectations of future monetary accommodation via inflated deficits.

In this case, too tight a short-term monetary stance may be inconsistent with the attainment of slow medium-term growth of monetary aggregates. Cumulative interest payments and indebtedness will make longer-run financing of budget deficits difficult, and if financial markets put less weight on the attainment of short-run monetary targets than on the prospective monetization pressures attaching to future budget deficits, inflation expectations might rise<sup>49</sup>. In this case, short-term monetary targets might, in certain circumstances, be raised without necessarily prejudicing long-term monetary growth.

Essentially, this concerns the balance between gradualism and flexibility in monetary targetry on the one hand, and consistency and confidence in progress towards longer-run inflation goals on the other. This is an empirical matter. But it highlights the potential significance of whether monetary targets are set in co-ordination, or in competition, with fiscal policy.

## CONCLUSIONS

The setting of budgetary and monetary policies in the context of co-ordinated medium-term financial strategies stems from a recognition that budget deficits, though effective in raising short-run demand, may have problematic longer-run implications. With restrictive monetary targets designed to suppress inflation expectations, higher government debt, interest rates, debt service costs and /or higher tax rates would tend eventually to undermine the demand effectiveness of long-term public sector borrowing. Such deficits may also have detrimental longer-run supply-side effects.

For the medium term, fiscal and monetary policies cannot therefore be considered to constitute separate instruments. They may, however, – if budget deficit norms are properly defined to take up excess private savings – constitute more than one instrument; for this to be so, government debt issues have to be kept in line with portfolio preferences, so that the stock of government debt does not become excessive.

For the short term, the relative inflexibility of fiscal stance caused by automatic stabilizers, may imply that budgetary policy is – to a degree – autonomous. Monetary stance needs to be chosen with this inflexibility in mind, in order best to achieve medium-term financial and economic balance. The principle of distinguishing between "structural" and "cyclical" budget deficit components thus has advantages. In particular, it might allow the reduction in budget deficits to be phased gradually over the medium term, subject to the compatibility of public sector indebtedness with monetary objectives.

## NOTES

1. Monetary policy is discussed in this paper mainly insofar as its explicit relationship to fiscal policy is at issue, though questions of monetary control per se – which affect policy choices – are touched upon. These are more fully discussed in OECD (1982). In particular, the paper is concerned with the harmonization of fiscal and monetary stance in the context of a monetary target strategy aimed at medium-term price stability – on the motivations for which see OECD (1979) – and in an environment of high and persistent public sector deficits. The causes of such deficits, and their possible consequences are discussed in Price and Chouraqui (1983).
2. Cyclically-corrected, the federal budget swung towards deficit by 2 per cent of GDP in 1971-1972; see de Leeuw and Holloway (1982), Table 3.
3. Reflation was associated in some cases with the belief that both monetary and fiscal policies could be more effective if they acted in concert, exchange rate depreciation preserving, where necessary, external competitiveness and payments balance. The small anti-inflation gains resulting from demand deflation in 1970 had led to an assertion of the primacy of cost factors in the inflation process. Consequently, the abandonment of the fixed parity system in 1971-72 and the accompanying reflation were associated with – and provided justification for – incomes policy experiments in the United States and the United Kingdom.
4. The Charts are drawn so that, in the upper-right quadrant, policies are mutually accommodating (budget expansion supported by monetary growth): see "notes to charts". The contrast between the ex ante thrust of fiscal policy, which was generally expansionary in 1971-72, and the ex post trend to lower budget deficits may be seen in the difference between the upper and lower parts of Chart 1.
5. The US federal budget moved from a cyclically-adjusted surplus in 1969 to a deficit of 1 1/2 per cent of GDP in 1971-1972. The shift in the cyclically-adjusted general government balance is less marked, however, because the state and local sector moved into surplus. See de Leeuw and Holloway (1982), p.26.
6. The effect of inflation-induced fiscal drag on budget stance is illustrated by the swing of the US cyclically-adjusted federal government budget indicator towards surplus by \$9.2 billion (0.7 per cent of GNP) in 1974, all of which may be ascribed to automatic inflation-induced effects on government revenues: see de Leeuw and Holloway (1982) p.29.

7. The real money supply of the major seven economies as a group declined through 1973 and 1974, picking up from the fourth quarter and continuing to grow until the first quarter of 1976. The average money stock in 1975 was, however, about the same as the average for 1974 (Chart 1A), though its level at the end of 1975 was 4 per cent above that at the end of 1974.
8. See OECD (1977) p.192.
9. Memorandum of the Deutsche Bundesbank to the United Kingdom House of Commons (1980) p.12.
10. For an evaluation of the policy responses to the two oil shocks, see Llewellyn (1983).
11. The relationship between real interest rates and growth is ambivalent from Charts 2B and 2D, again depending on the sub-set of countries chosen. Conflicts may, of course, occur between money stock and interest rate stability; hence the advantages of steady real interest rates and monetary growth may not be simultaneously available. The same applies to exchange rates. Moreover, cross-section correlations are not to be taken as expressing causality in any definitive sense.
12. Government net debt is defined as gross liabilities less financial assets (not including equities).
13. See OECD (1977) *op. cit.* which, while arguing for medium-term budgetary consistency, also diagnosed the need for active demand management to re-achieve the medium-term growth path, (pp. 191-2).
14. OECD (1977), p.197.
15. OECD (1977), pp.197 et seq.
16. See OECD Economic Outlook No.34, Table 10, for cyclically-adjusted budget indicators 1981-1983.
17. Memorandum of the Deutsche Bundesbank to the UK House of Commons (1980), p.13, and The Budget in Brief, Japanese Ministry of Finance (1982), p. 12.
18. See, for instance, US Treasury (1984), and Roberts (1983). The US tax cuts have been designed to increase pressure for expenditure cuts, and it is the expenditure-cutting process which is hypothesised as freeing resources for private sector use. The switch from tax to deficit-financed spending is seen only as a choice for deferred instead of present taxation.
19. This proposition that simultaneous cuts in expenditures and revenues will tend to increase output and reduce government deficits relies significantly on the argument that taxes are borne, for the most part, by companies: reducing taxes is of more benefit to investment than cutting government borrowing and interest rates. See, for instance, A. Knoester (1983). On the other hand, it has been argued, for instance, that joint public spending and (indirect) tax increases in Japan would have a positive impact on demand. See OECD Economic Survey on Japan, 1982-83, p.65.
20. Where higher interest rates resulted from greater transactions demand for money, they might not be deleterious for longer-run growth if, as a consequence, saving was increased and if investment reacted to higher demand rather than to costs of credit. (Higher interest rates would merely be a sign of more efficient use of transactions balances). Nor, if the effect on demand (i.e. the fiscal multiplier) were high enough would the ultimate increase in the budget deficit be large (since tax receipts would rise to cover the initial "excess" public spending); because of this, budget-financing constraints – deriving from the need to cover ex post budget deficits – tend not to arise in traditional demand-determination models.
21. For an estimate of the impact of inflation on the ratio of central government debt to GDP, see Price and Chouraqui (1983), Table 7.
22. In the major countries apart from the United States general government debt seems to have risen, on average, from about 7 1/2 per cent of gross non-bank private sector financial assets in the mid-1970s to about 10 per cent at the beginning of the 1980s. Information available for the United Kingdom suggests that this could imply a general government share of perhaps 40 per cent of net non-bank private financial wealth: between 1975 and 1981 UK general government debt formed about 10 per cent of gross and nearly 40 per cent of net private sector non-bank financial assets. (See UK Central Statistical Office, Financial Statistics, February 1984).

23. In addition to affecting interest rates via changes in demand, budgetary stance may influence interest rates both by pre-empting savings flows and by portfolio and wealth effects consequent upon the accumulation of government debt. Different policy implications ensue from these influences. In particular, where interest rates are affected by the stock of outstanding debt, they will tend to be permanently influenced by public sector borrowing at least until such time as budget surpluses reduce public debt to previous levels.
24. The impact of asset **stocks** on interest rates has been the subject of extensive debate. Significant effects have been found in Canada, see Masson (1978). Evidence for the United States is mixed; Feldstein and Eckstein (1970) found that government debt had a significant positive effect on bond rates in the 1960s, though such a result was not confirmed by subsequent research – see Feldstein and Chamberlain (1973). If present *and* future deficits, or debt accumulation, are related to nominal long-term interest rates, a positive effect on US and OECD bond rates does, however, emerge: see for instance Price and Chouraqui (1983).
25. Portfolio resistance to government bonds may not crowd out investment if asset preferences switch towards, say, equities, provided savers were willing to draw down their money balances – see Price and Chouraqui (1983) p.30. Nor need it happen if investors were willing to borrow short term, as savers' preferences switched towards monetary instruments (bank deposits etc.). But just as financial investors may demand higher yields to prevent future capital losses, so investors in fixed capital may be unwilling to borrow short if refinancing problems made total capital costs uncertain. Displacement from long-term capital markets would therefore be likely to reduce investment. Total demand would also fall if monetary policy – in the form of attempted reductions in short rates – were ruled out by dangers of kindling inflation expectations.
26. The extent to which interest costs can be set against tax liabilities (thereby reducing the effective marginal cost of capital) varies. The United States allows offsets against personal income tax for both housing investment and consumption expenditures, while Japan, for instance, allows none. A given nominal rate of interest may be transmitted, via capital flows, from a dominant economy throughout the OECD area, but may have quite different effective interest rate consequences.
27. The outstanding debt/GDP ratio would tend to a ceiling, of  $b[1 + g]/g$ , where  $b$  is the deficit/GDP ratio and  $g$  is the rate of economic growth. In a continuous time formulation this becomes  $b/g$ , from which it would follow that if the interest rate equalled the growth rate then interest payments as a proportion of GDP would equal  $b$ .
28. On the other hand, if individuals raised their spending because they felt more wealthy from holding government bonds then the fiscal deficit – being accompanied by debt accumulation – would continue to affect demand. Much depends on whether such debt displaces private consumption (via the discounting of future tax liabilities) or investment (via financial crowding out).
29. This is on the assumption that the private sector was in financial balance.
30. In most cases, Governments borrow abroad to relieve domestic interest rate strains. However, foreign borrowing is more likely to be at variable rates and will therefore reflect tightening world monetary conditions more quickly. An index of interest rate strains – i.e. international credit-worthiness – is often taken as the "debt service ratio": the ratio of gross amortisation plus interest to total government revenue. The real interest rate on refinanced debt may rise as this ratio increases, or because international monetary conditions change.

Den Dunnen (1981) p.2. Doubts about potential growth rates have meant that policy has focused, more recently, on actual rather than potential savings availability. The German federal government is not committed to adopting the normative proposals of the Council of Economic Experts. See Dernburg (1975) pp.827-8.

See Friedman (1948) p.249, which called for automatic variations in the budget deficit, to be financed dollar-for-dollar by money creation. Where monetary growth is set independently of the cycle, however, the policy choice becomes one of tax-finance (permanently balanced budgets) versus bond-financed automatic stabilizers.

33. For a discussion of the effects of government borrowing in optimising private spending, see Buiter (1983).
34. See Cukierman and Mortensen (1983) for a fuller discussion of this issue.
35. Falling household savings ratios have generally given impetus to the recovery since 1982, and this would tend to support the view that a lower "inflation tax" contributes to demand in much the same way as any capital tax. See *OECD Economic Outlook*, December 1983, pp. 15-16 and pp.40-41.
36. The German budget deficit is divided into two elements: (i) the "cyclically-neutral" deficit, composed of a normal structural borrowing requirement (of about 1 1/4 per cent of potential GDP) and automatic stabilizers (excluding unemployment transfers) which are phased out as recession ends; and (ii) the "cyclical impulse". This helps prevent discretionary fiscal action from spilling over into the medium term.
37. See *The Budget of the United States Government, Fiscal Year 1972*, p.7; Musgrave (1964) and Blinder and Solow (1974).
38. Where the economy was thought to be self stabilizing, public sector debt could be issued and retired as the cycle caused the budget to fluctuate between deficit and surplus; expectations of future crowding-out or monetization would not occur and automatic stabilizers would be self-correcting; see Infante and Stein (1980) p.284. To the extent that the budget deficit is covered by government borrowing, however, interest charges will be incurred: these would add to the structural budget deficit and could – if taxes are not increased or transfers reduced to pay for them – lead to a expectations of cumulative budget imbalance. See Christ (1979). The relative merits of automatic stabilization regimes in the face of various shocks, or differing exchange rate regimes is discussed in Currie (1979).
39. Few central banks divulge their method of arriving at their target growth rates, but the Bundesbank rule probably approximates to this norm. It consists, in principle, of productive potential, plus (in the short run) desired change in capacity utilization, plus unavoidable inflation, less the expected change in velocity allowing for the change in the cyclical position of the economy. See Memorandum of the Bundesbank to the **UK** House of Commons (1980), p. 40.
40. Belgium, Denmark and the Netherlands are members of the EMS (European Monetary System); Austria links to the Deutschemark; Norway and Sweden link to a basket of their most important trading partners' currencies.
41. "Memorandum by the Oesterreichischen Nationalbank" to the **UK** House of Commons (1980) p. 44. Conversely, the rationale for preferring a monetary objective may be that "inflationary policies abroad that were causing foreign currencies to depreciate relative to the dollar would force similar policies on the United States if the announced parity in exchange rates were to be maintained": see Axilrod (1982) p.15.
42. The Medium-term Financial Strategy aimed to reduce monetary growth from to 4-6 per cent between 1980-81 and 1983-84; similarly, the new American administration indicated its intention of halving the rate of monetary growth (from 10-11 per cent in 1980) by 1984.
43. Such conditionality has been explicitly defined in terms of aiming at the lower end of the target range if nominal income and money velocity rise too fast but at the top end if the exchange rate comes under unwarranted upward pressure or if money velocity declines unexpectedly.
44. See *OECD Economic Outlook* No.34, December 1983, Chapter 3.
45. See *OECD Economic Outlook* No.29, July 1981, pp. 30-31 and Larsen, Llewellyn and Potter, *OECD* (1983), especially p.54 and pp.76-77. Again, there are two aspects to this problem: (i) In an international context, the short-term fiscal multiplier will approximate to the case where import leakages are zero. This raises the multiplier substantially, while reducing the ratio of budget deficit reduction to the initial budget cut. (ii) Failure to take account of the budget response in other economies may lead to over-estimates of likely budget deficit cuts.
46. Against this, pressures on interest rates might be eased as a result of the lower transactions demand for money consequent upon the deflationary effect of budget cuts.

47. A similar argument for the existence of an "expectations trap" is to be found in Boltho (1983) pp.1-13.
48. For a discussion of the potential importance of business and financial expectations to present activity see Blanchard (1981).
49. See Sargent and Wallace (1981).

## NOTES TO CHARTS

**Chart 7** shows the fiscal-monetary policy mix for an aggregate of both the major seven OECD economies and eleven smaller countries (Austria, Australia, Belgium, Denmark, Greece, Finland, Ireland, Netherlands, Norway, Spain and Sweden). It describes policies in terms of cyclically-corrected budget balance changes and real monetary growth, and in terms of general government budget balance/GDP ratios and real interest rates. The chart has been constructed to give an approximate indication of the extent to which the "mix" of policies is mutually accommodating or otherwise. There are four money supply-budget deficit combinations, defined by the quadrants of the chart: **(i) upper-right:** policies are mutually expansionary and accommodating; **(ii) lower-left:** re-enforcing restriction; **(iii) upper left:** budgetary restraint is accompanied by expansionary monetary policies, while **(iv) lower-right:** budgetary expansion is combined with non-accommodating monetary growth. The interest rate-budget deficit mix is, conversely, designed to illustrate potential crowding-out (upper-right) and potential monetary accommodation (lower right quadrant). A perfectly accommodating monetary stance would (depending on the demand for money to finance other sources of spending) expand the money supply sufficiently to meet a growth of aggregate demand equal to the budget impulse times the fiscal multiplier. The chosen scale should, therefore, be taken only as an 'approximation'.

Real  $M_2$  is nominal money supply for the year ( $M_1 +$  quasi money) deflated by the GDP deflator. Growth rates are annual averages. Real interest rates are generally long-term public or semi-public yields deflated by the consumer price index growth rate. (United States, Moody's AAA Corporate bonds; Japan, NTT subscriber bonds; Germany, long-term government bonds; France, public corporations bonds; United Kingdom, 20 year government bonds; Italy, private sector bonds; Canada, Government of Canada bonds 10 years and over; smaller economies, long-term government bonds.)

**Chart 2** relates monetary indicators, as described for Chart 1, to economic performance. The real exchange rate is equal to the relative manufacturing unit labour cost expressed in a common currency.

**Chart 3** describes the growth of general government *net* debt relative to GDP (i.e. gross financial liabilities *less* financial assets, except for equity holdings). The budget deficit/savings ratio relates to general government net lending as a percentage of private sector gross savings. (See Economic **Outlook** No.34, December 1983, Table 13.) The money supply indicator is  $M_1/GDP$ ; Interest rates are nominal long-term rates defined as for Chart 1 above.

In **Chart 4** government debt relates to gross liabilities, excluding, so far as general government debt is concerned, local authority and social security holdings of central government debt. The social security sector is included in the general government debt definition except in the case of Australia, Switzerland, Austria and the Netherlands. (Precise definitions are available from the authors.) Total debt includes central bank holdings. Table 1 shows private sector holdings of government debt, including those of commercial banks, but excluding borrowing from central banks.

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