IV. FISCAL SUSTAINABILITY: THE CONTRIBUTION OF FISCAL RULES

Introduction

Problems of fiscal sustainability have re-emerged…

The 1990s saw considerable progress in fiscal consolidation, but fiscal positions have recently deteriorated in most OECD countries, both in actual and cyclically-adjusted terms. Public debt ratios, which except in Japan had been declining in the second half of the 1990s, have stopped falling and even started to rise again in some cases. At the same time, pension and other age-related spending pressures are intensifying. This chapter begins by describing how the fiscal outlook has changed over time and asks whether, on current policies, public finances in OECD countries are on a sustainable course.

… raising questions about appropriate fiscal policy rules

The budgetary outlook has worsened despite the operation of a variety of fiscal rules in OECD countries. In the United States these have been based on nominal caps for discretionary spending and in the euro area on limits to the size of fiscal deficits. Rules or norms based on deficits, debt and/or public spending have also been operational in a number of other countries, including Canada, Switzerland and the United Kingdom. Rules have been an important factor behind the fiscal consolidation in the latter part of the 1990s and have helped to create the room for a flexible fiscal response to the current downturn. But they have not been proof against an unforeseen deterioration in budgetary positions or political pressures, especially when budget positions are cyclically strong, and may not guarantee medium-term fiscal sustainability. The chapter discusses the factors that seem to have contributed to the imperfect effectiveness of existing rules and how various possible fiscal targets (public spending, headline balance, structural position, debt) can help attain and safeguard a sustainable fiscal position.

Changing perspectives on sustainability

Fiscal sustainability concerns have evolved…

The recent fiscal deterioration should be seen in the context of the substantial progress made, over the past two decades, in controlling adverse public debt dynamics (Figure IV.1). There have been a number of distinct phases in the chronology of sustainability concerns. Originally, these were largely related to unstable debt dynamics, given the interrelationships between deficits, debt and interest rates. But as governments moved toward better borrowing discipline, the focus shifted towards expenditure and taxation trends, under two major constraints: fulfilling public commitments to an ageing population and avoiding the imposition of tax rates harmful to longer-term growth.

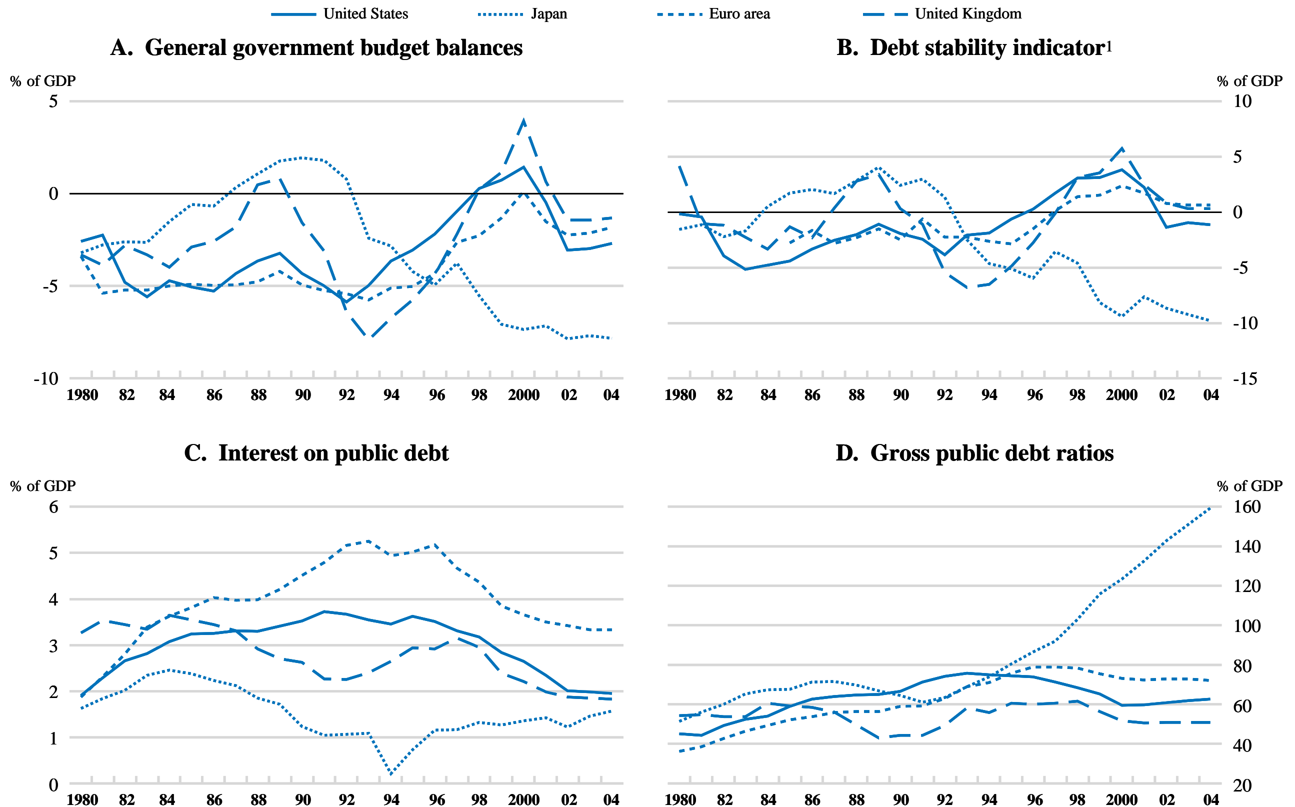
… from the inflationary pressures stemming from deficits…

Prior to the second oil shock, the burden of public debt was reduced by large unanticipated inflation-induced transfers of wealth from bond-holders to the public sector (the so-called "inflation tax").[1] The unsustainable mix of loose fiscal and loose monetary policy manifested itself in rising inflation and its deleterious consequences for growth.

1. For a description of the dependence of governments on this form of "seignorage", see OECD (1989).

© OECD 2002

Figure IV.1. **Changing debt dynamics**



1. This is the difference between the actual primary balance and the primary balance needed to stabilise the debt ratio.
Source: OECD.

… to crowding out and adverse debt dynamics…

During the 1980s, tight monetary policy coupled with still rather loose fiscal policy was associated with high real rates of interest and increasing debt/GDP ratios in most OECD countries. In the OECD area at large, the debt/GDP ratio rose by over 16 percentage points of GDP. Sustainability issues during this period revolved around the familiar debt dynamics of primary surpluses inadequate to offset spiralling debt interest payments (Figure IV.1, panel B). The debt spiral can be exacerbated where an actual or perceived lack of fiscal discipline leads to continuous upward pressure on interest rates.[2] At the limit, the credibility of central bank inflation control can be undermined if the rate of debt accumulation becomes unsustainable.[3]

2. The precise links between public-sector deficits and interest rates are controversial but deficits and interest rates do seem to be related (Ford and Laxton, 1995, Helbling and Wescott, 1995 and Orr *et al.*, 1995). A recent study suggests that in the United States, a one percentage point increase in the Congressional Budget Office projection of the deficit ratio causes the spread between long and short-term interest rates to widen by over 50 basis points, and documents that positive public spending shocks push up interest rates, so that the stimulus to activity is partly neutralised by the reaction of financial markets (Canzoneri *et al.*, 2002).
3. This is the contention of the so-called fiscal theory of the price level, which concludes that in order for central banks to truly benefit from functional independence, an institutional mechanism imposing fiscal discipline may be needed. This theory, however, is controversial (Buiter, 2002). Moreover, in a context of high capital mobility, unsustainable fiscal policies would be sanctioned by financial markets before reaching the point of threatening the control of central banks on inflation. Even so, long-run inflation expectations are probably influenced by the strong political pressures on monetary policy that high debt service usually entails.

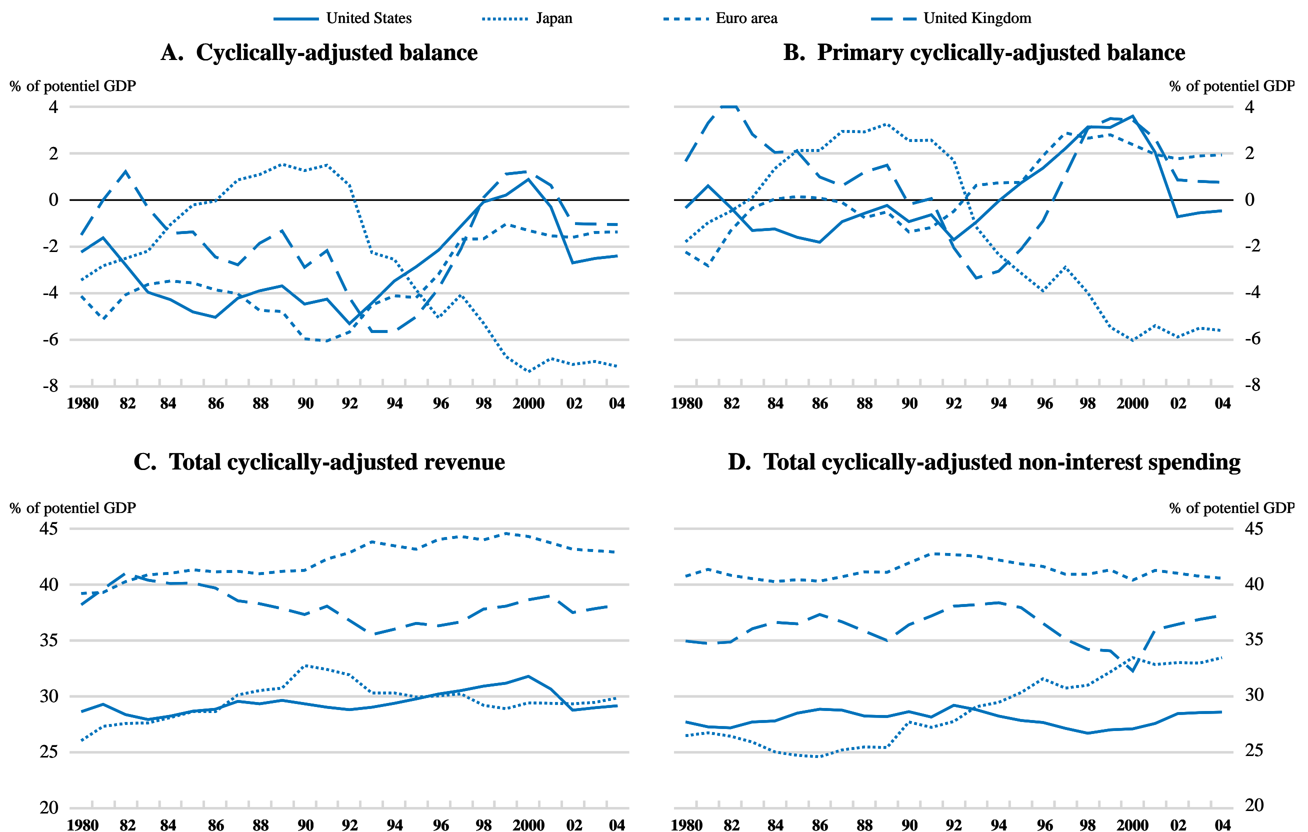
… which have been reduced by fiscal consolidation

By the early 1990s, the problem of unsustainability had been widely recognised and prompted fiscal consolidation to bring debt dynamics under control (Figure IV.2 and Table IV.1). Fiscal positions worsened during the recession of the early 1990s but subsequently improved, as consolidation became a priority in Europe, the United States and a number of other countries, Japan being a notable exception. Structural reforms enhancing potential output growth also helped in a number of cases. In several euro area countries, falling nominal interest rates were a potent factor, as they converged to the levels prevailing in those countries that historically had low inflation. By 2000, debt ratios had fallen substantially in the United States and somewhat less so in Europe, although they were trending down. The rather slow turnaround was at least partly due to the fact that fiscal retrenchment in highly indebted countries was being offset by the slower erosion of the real debt as inflation came down. Indeed, in some cases, the effect of a falling inflation tax almost outweighed the improvement in the cyclically-adjusted balance.

Progress has stalled…

During the initial years of the current decade, there has been a slowing in, and in some cases reversal of, the consolidation process, but with the exception of Japan the progress made towards sounder debt dynamics has been more or less preserved. Fiscal positions have deteriorated during the downturn, in cyclically-adjusted as well as actual terms. In 2002, the OECD-wide general government deficit is projected to approach 3 per cent of GDP, and in cyclically-adjusted terms, it is set to exceed 2½ per cent of potential GDP. On current policies, very modest fiscal adjustment is to be expected over the next two years in the euro area or Japan. Some improvement

Figure IV.2. **The process of fiscal consolidation**



Source: OECD.

© OECD 2002

Table IV.1. **Fiscal consolidations in selected OECD countries**

Changes in general government, in per cent of GDP[a]

	Net lending	Cyclically-adjusted net lending	Cyclically-adjusted revenues	Cyclically-adjusted expenditures[b]	Net interest payments	Gross debt
Major economies						
United States (1993-2000)	7.3	6.2	3.0	-1.9	-1.0	-14.6
United Kingdom (1994-2000)	11.9	6.9	3.1	-2.0	-0.2	-6.6
Canada (1993-2000)	12.2	9.4	0.2	-6.9	-1.9	-7.6
Euro area (1994-2000)	5.9	3.2	0.5	-0.6	-1.6	4.1
Euro area countries						
Austria (1996-2001)	5.3	5.1	3.0	-1.4	-1.2	-6.0
Belgium (1993-2001)	8.5	8.8	2.8	-1.0	-4.6	-24.2
Finland (1994-2000)	14.4	4.6	-0.9	-3.9	1.4	-5.4
France (1994-2000)	4.6	3.3	2.1	-0.6	-0.1	13.8
Germany (1997-2000)	4.5	1.0	0.5	-0.3	-0.3	0.2
Greece (1994-2001)	12.4	10.0	7.2	4.0	-6.3	-3.2
Ireland (1996-2000)	6.7	3.8	-1.3	-4.0	-3.0	-43.6
Italy (1991-2000)	11.2	10.8	3.0	-1.6	-3.9	13.2
Netherlands (1995-2000)	6.4	4.7	0.3	-4.3	-1.1	-19.9
Portugal (1994-2000)	3.0	1.0	0.4	3.9	-2.8	-6.0
Spain (1996-2001)	6.5	4.7	1.7	-0.4	-2.0	-5.4
Other OECD						
Australia (1993-99)	7.1	5.4	4.5	0.6	-1.4	-0.5
Denmark (1994-99)	6.0	2.7	0.5	0.1	-1.2	-28.9
Iceland (1995-2000)	7.2	4.3	6.2	4.0	-0.6	-14.2
New Zealand (1991-94)	7.7	5.8	-1.2	-2.3	-2.9	..
Norway (1994-97)	9.9	7.2	1.7	-4.0	1.0	-12.6
Sweden (1994-98)	14.0	10.6	2.2	-4.5	1.8	2.6
Total OECD (1994-2000)	5.1	3.3	1.1	..	-1.0	1.9

Note: Fiscal consolidation are defined between 1990 and 2001 as periods of protracted (more than three years) improvements in the annual general government's net lending position in per cent of GDP, as compared to the previous year, where such periods are allowed to be interrupted if the worsening of that balance does not exceed 0.5 per cent of GDP and does not last for more than one year.

a) Value in the last year of the consolidation minus the value in the year before the consolidation.

b) Excluding interest payments.

Source: OECD.

in the underlying balance would occur in the United States, but in the context of a much sharper deterioration in the two years to 2002. Nevertheless, at the current juncture, apart from Japan, no substantial imminent increase in debt/GDP ratios is in store (Figure IV.1, panel B). Indeed, bond yields have fallen, and markets do not currently seem to be responding to the risk that higher structural deficits could durably push up interest rates.

… and medium-term prospects are now bleaker

Looking further out, the prospects are now less optimistic. Medium-run projections published in early 2001 by the US Congressional Budget Office had the general government surplus rise to 4.3 per cent of GDP by 2008. This has been revised down several times since, to a surplus of only 0.6 per cent of GDP, largely reflecting the 2001 tax cuts, unexpectedly low tax elasticities and an acceleration in spending (see Chapter I). The most recent OECD medium-term baseline (Table IV.2) – which is

Table IV.2. Fiscal trends in the medium-term baseline

Per cent of GDP or potential GDP

	General government balance			Cyclically-adjusted balance			Gross public debt		
	2002	2004	2008	2002	2004	2008	2002	2004	2008
Australia	0.1	0.8	0.8	0.3	0.9	0.8	22	20	16
Austria	-1.6	-0.8	-0.1	-1.1	-0.5	-0.1	63	60	54
Belgium	0.0	0.5	1.6	0.9	1.0	1.6	105	97	80
Canada	0.6	0.6	1.2	0.5	0.3	1.2	81	77	66
Denmark	2.2	2.9	3.7	2.8	3.2	3.7	43	36	22
Finland	3.2	3.6	3.7	4.3	4.4	3.7	48	46	41
France	-2.7	-2.5	-1.9	-2.5	-2.4	-1.9	67	69	69
Germany	-3.7	-2.6	-1.7	-2.7	-2.1	-1.7	62	64	66
Greece	-1.1	-0.7	-0.4	-1.3	-1.1	-0.4	106	100	90
Iceland	0.3	0.3	0.3	0.0	0.0	0.3	44	41	32
Ireland	-0.5	-1.8	-1.3	-1.4	-0.9	-1.3	34	32	35
Italy	-2.3	-2.8	-1.9	-1.6	-2.3	-1.9	110	107	101
Japan	-7.9	-7.8	-8.7	-7.1	-7.1	-8.7	143	159	193
Netherlands	-0.8	-0.3	1.6	0.4	1.3	1.6	52	49	39
New Zealand	1.6	1.1	1.8	1.4	0.9	1.8	41	37	38
Norway[a]	12.4	9.8	8.9	1.4	0.2	0.0	25	23	27
Portugal	-3.4	-2.4	-0.7	-2.9	-1.5	-0.7	60	59	52
Spain	0.0	0.1	0.3	0.3	0.4	0.3	66	62	55
Sweden	1.7	1.9	1.5	1.9	1.7	1.5	63	61	55
United Kingdom	-1.4	-1.3	-1.1	-1.0	-1.1	-1.1	51	51	51
United States	-3.1	-2.7	-1.3	-2.7	-2.4	-1.3	61	63	61
Euro area	-2.2	-1.8	-1.0	-1.6	-1.4	-1.0	73	72	69
European Union	-2.0	-1.6	-0.9	-1.4	-1.2	-0.9	70	69	66
Total of above OECD countries	-3.1	-2.8	-2.1	-2.6	-2.5	-2.2	77	80	83

a) Oil-related revenues are excluded form the cyclically-adjusted balance.
Source: OECD.

based on current tax legislation and spending trends, and which is less a projection than a simulation assuming that output gaps close over the medium term – shows that in the OECD as a whole, public debt as a share of GDP is on course to rise during this decade. There could be a slight decline in the United States and the European Union (EU) at large, but modest increases in several large European countries (France and Germany) and snowballing debt dynamics in Japan.

Long-term sustainability

Age-related spending pressures are building up

The main concern about current budget positions is that they do not adequately take account of future contingent liabilities tied to age-related spending. These commitments, combined with existing tax and spending arrangements, may be saddling future generations with an unmanageable bill. Indeed, pension, health care and other relevant structural reforms have proceeded very unevenly across countries. Past consolidation has been achieved only partially through primary expenditure restraint and

© OECD 2002

to a significant extent through tax increases and/or falls in nominal interest rates (Figure IV.2 and Table IV.1). The demographic transition to older societies (Figure IV.3) is already starting to affect public finances, or about to do so. Public age-related spending (taking into account old-age pensions, health and education) is projected to increase on average in OECD countries by 6 to 7 percentage points of GDP by the middle of the century, putting heavy pressure on public finances (Table IV.3).[4]

While quantification is difficult…

While the magnitude of the above spending pressures is unquestionably worrying, quantification of the size of the fiscal adjustment required to restore sustainability is fraught with difficulties:

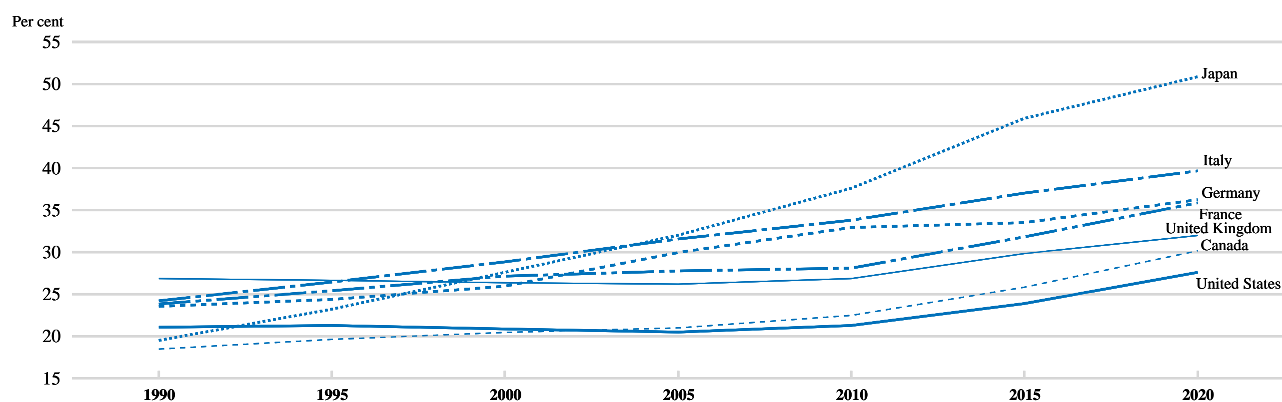
– There are different ways to define a long-term condition that has to be satisfied in order to ensure sustainability, and different approaches to estimating the needed fiscal adjustment for any given condition.[5]

– Once the methodological approach to assessing sustainability is selected, the long-run projections underpinning scenarios are bound to rest on the assumptions made about potential growth rates, real interest rates, labour market trends and demographics. They are also very sensitive to uncertainty surrounding the starting point.

– In a proper sustainability assessment, net rather than gross public debt would be the relevant concept. In some countries (*e.g.* Finland, Japan, Norway and

Figure IV.3. **Old-age dependency ratios in the major 7 countries**

Population aged 65 and over as a percentage of the working age population (aged 20-64)



Source: United Nations (2000); Eurostat.

4. See Dang *et al.* (2001), which compiles projections based on national models but using a commonly agreed set of macroeconomic and demographic assumptions. This study was conducted in co-ordination with an EU effort along similar lines (Economic Policy Committee of the European Union, 2001).
5. See Buiter (1985), Blanchard *et al.* (1990) and Auerbach (1994). For more detailed discussions of how to go from the government's intertemporal budget constraint in a theoretical infinite horizon model to an operational sustainability benchmark, see Banca d'Italia (2000).

Table IV.3. **Age-related spending pressures**

Levels in per cent of GDP, changes in percentage points

	Total age-related spending		**Old-age pensions**		**Early retirement programmes**		**Health care and long-term care**		**Child/family benefits and education**	
	Level 2000	Change 2000-50	Level 2000	Change 2000-50	Level 2000	Change 2000-50	Level 2000	Change 2000-50	Level 2000	Change 2000-50
Australia	16.7	5.6	3.0	1.6	0.9	0.2	6.8	6.2	6.1	-2.3
Austria[a]	10.4	2.3	9.5	2.2	..	..	5.1[g]	3.1[g]	..	..
Belgium	22.1	5.2	8.8	3.3	1.1	0.1	6.2	3.0	6.0	-1.3
Canada	17.9	8.7	5.1	5.8	..	..	6.3	4.2	6.4	-1.3
Czech Republic	23.1	6.9	7.8	6.8	1.8	-0.7	7.5	2.0	6.0	-1.2
Denmark[b]	29.3	5.7	6.1	2.7	4.0	0.2	6.6	2.7	6.3	0.0
Finland	19.4	8.5	8.1	4.8	3.1	-0.1	8.1	3.8	..	..
France[c]	18.0	6.4	12.1	3.9	..	..	6.9[g]	2.5[g]	..	..
Germany	17.5	8.1	11.8	5.0	..	..	5.7[g]	3.1[g]	..	..
Hungary[d]	7.1	1.6	6.0	1.2	1.2	0.3	..	..	..	..
Italy	19.7	1.9	14.2	-0.3	..	..	5.5[g]	2.1[g]	..	..
Japan	13.7	3.0	7.9	0.6	..	..	5.8	2.4	..	..
Korea	3.1	8.5	2.1	8.0	0.3	0.0	0.7	0.5	..	..
Netherlands[e]	19.1	9.9	5.2	4.8	1.2	0.4	7.2	4.8	5.4	0.0
New Zealand	18.7	8.4	4.8	5.7	..	..	6.7	4.0	7.2	-1.3
Norway	17.9	13.4	4.9	8.0	2.4	1.6	5.2	3.2	5.5	0.5
Poland[d]	12.2	-2.6	10.8	-2.5	1.4	-0.1	..	..	..	..
Portugal	15.6	4.3	8.0	4.5	2.5	-0.4	..	..	..	..
Spain	15.6	10.5	9.4	8.0	..	..	6.2[g]	2.5[g]	..	..
Sweden	29.0	3.2	9.2	1.6	1.9	-0.4	8.1	3.2	9.8	-1.2
United Kingdom	15.6	0.2	4.3	-0.7	..	..	5.6	1.7	5.7	-0.9
United States	11.2	5.5	4.4	1.8	0.2	0.3	2.6	4.4	3.9	-1.0
Average of countries above[f]	21.2	5.8	7.4	3.4	1.6	0.2	5.9	3.1	6.2	-0.9
Average of countries which provide all or nearly all spending components	18.7	6.9	..	..	..	..	..	..	..	..

a) Total pension spending includes other age-related spending which does not fall within the identified sub-components, represents 0.9 per cent of GDP in 2000 and rises by 0.1 percentage point in the period to 2050.
b) Total includes other age-related spending not classifiable under the other headings, which represents 0.6 per cent of GDP in 2000 and increases by 0.2 percentage points from 2000 to 2050.
c) The lastest available year is 2040.
d) Total includes old-age pension spending and "early retirement" programmes only.
e) "Early retirement" programmes only include spending on persons aged 55 and over.
f) Average excludes countries where information is not available and Portugal.
g) Estimate from Economic Policy Committee of the European Union (2001).
Source: Dang *et al.* (2001), Economic Policy Committee of the European Union (2001).

Sweden), the difference between gross and net debt is very large. But the value of publicly-held assets is uncertain and volatile (especially where, as in Finland, they include large stakes in information and telecommunication companies).

A further complication is that simulations often ignore some important feedback effects, in particular the effects of taxation on incentives to work and to save and invest (which depend on the level and mix of taxes) and of the composition of spending (with longer-run value-for-money varying considerably across outlays). Moreover, fiscal

© OECD 2002

sustainability might be achieved on paper but at the cost of politically implausible assumptions. For instance, it might imply pensions at poverty levels or an unsustainable shift of the burden from the current to future generations (such as could be the case when a country decides to go from a pay-as-you-go to a fully-funded pension system).

… longer-run sustainability is in doubt…

For many OECD countries, the uncertainty associated with these caveats is an extra reason to worry about how sustainable the projected long-term increase in spending commitments is, although the severity of the problem varies considerably across countries:

… most immediately in Japan…

– In Japan, the debt dynamics are potentially explosive with the real interest rate rather high relative to growth. The ratio of gross (as well as net) public debt to GDP is indeed on a sharply rising trend, even under fairly favourable assumptions. Given low potential growth and the spending pressures implied by an old and rapidly ageing society, substantial adjustment measures are needed to restore fiscal sustainability (OECD, 2002a).

… but even in the United States

– In the United States, long-run imbalances in public pensions and health care for the elderly are less severe than in most other OECD countries, thanks to later retirement, immigration and relatively high fertility. Nonetheless, a significant rise in tax rates would be required for future obligations to be financed (OECD, 2002b).

In the European Union there are large disparities…

– In the European Union, countries are on average somewhere in between Japan and the United States, but with large disparities from one to the next. Even before recent reappraisals of 2001 fiscal outcomes, the European Commission judged that on unchanged policies and over the longer run, there was a risk of significant budgetary imbalances, in breach of the requirements of the Stability and Growth Pact, in seven member states (Austria, France, Germany, Greece, Ireland, Portugal and Spain).[6] In high-public-debt countries such as Belgium and Italy, preserving the current large primary surpluses indefinitely would ensure sustainability, but restraint may be difficult to maintain permanently. In Italy and the United Kingdom, large falls in pension replacement rates may appear to ensure budget sustainability but will need to be accompanied by higher private pension saving to be politically sustainable.

… while even where current stocks and flows look sound, action is needed

– In Australia, despite a comparatively low public debt ratio, a well-developed system of private retirement saving, a targeted public pension and welfare system, and a relatively efficient health system, current arrangements are unsustainable in the long run (Australian Government, 2002). In New Zealand also, an increase in the primary surplus is estimated to be necessary at some point if the public debt ratio is to be kept within reasonable bounds at mid-century horizon (Janssen, 2002). Even in the case of Norway, where oil receipts are being used to build up a sizeable reserve for future generations, estimates suggest that in the absence of pension reform, public finances are unsustainable (OECD, 2002c).

6. See European Commission (2002). The central simulation ran to 2050 and assumed that age-related outlays would rise in line with commonly agreed projections, that the tax burden and other primary spending would remain constant as a share of GDP and that interest rates would stay 2 percentage points above GDP growth rates.

– Public debt ratios in the four OECD Central European countries are below 60 per cent of GDP and demographic pressures are lower in Hungary and Poland. But they face major fiscal challenges over the medium run, including enterprise restructuring costs, public service reforms and, in the context of EU accession, the adoption of the *acquis communautaire* (which for example involves large environmental outlays), against the background of an already fairly high tax burden, notably on labour. In Hungary, the recent widening of the pay-as-you-go pillar of the old-age pension system has put public finance sustainability at risk (OECD, 2002d).

Central European economies face different challenges

Policy responses

Structural reform

Financial sustainability demands structural reforms…

Policy action to ensure long-term fiscal sustainability, and in particular to anticipate ageing-related expenditure increases, includes labour and product market reforms designed to boost the future resource base as well as reforms that affect expenditure on pensions and health directly. A few countries have already set up reserve funds, although in general limited contributions have as yet been channelled into them (Ireland and Norway being exceptions). Pension system reform improving the viability of the publicly-funded pillar has been particularly far-reaching in some Nordic countries (Finland and Sweden), although it has run into problems in Central Europe (Poland and Hungary). In a number of other countries, including several large EU member states, the case for pension reform has been made recurrently and some changes have been introduced but decisive action remains urgently needed. Efforts have been made to control the growth of public spending on health, but in many cases, public health outlays almost systematically overshoot projections or targets. Cost containment has apparently been more successful in a few countries (Canada, Denmark, Finland), although it remains to be seen how durable restraint will be. More broadly, the effectiveness of public spending at large has been reconsidered in a number of countries.[7]

Introducing new fiscal rules

… as well as effective fiscal rules

Effective budgetary rules can also help restore or safeguard fiscal sustainability. Indeed, in many OECD countries, budget processes are subjected to rules with a view to ensuring better discipline and efficiency (see Appendix).[8] These rules may apply to budget deficits and/or expenditures and may be expressed in actual or cyclically-adjusted terms (see Box IV.1). They always contain a normative element, the most venerable rule in that regard being some variant of a balanced budget. However, in the absence of indisputable optimality criteria, any indebtedness target is

7. See Atkinson and van den Noord (2001) as well as the special public spending chapters published in a number of recent *OECD Economic Surveys*. In some countries, enhancing the efficiency of budgetary interaction between levels of government would also help (OECD, 2002f).
8. An alternative approach would be the set-up of new institutions: Wyplosz (2002) for instance argues that given the limitations inherent to any set of rules, the creation of a Fiscal Policy Committee, alongside and analogous to the Monetary Policy Committee existing in a number of countries, would be preferable.

© OECD 2002

Box IV.1. Designing effective rules

Rules involve choices. The diversity of rules that have been put in place raises a number of questions. What should the appropriate target be (the level of debt, deficit or expenditures)? Should it be satisfied at all times or only over a defined horizon (such as the business cycle)? Should specific items (in particular public investment) be excluded from the target's definition? In many cases, there are trade-offs between economic efficiency and more practical considerations.

Targets. Targeting the debt level directly is in principle better suited to addressing considerations of long-term sustainability and inter-generational equity. But defining a desirable debt level is bound to remain judgmental, and targets for the budget balance or for expenditures may be more easily understood by the wider public. A deficit target, however, while useful during a period of fiscal consolidation, may not provide adequate control on expenditures in times of budgetary surpluses. A drawback shared by debt and deficit targets is that they can always be satisfied through higher taxes with adverse consequences for economic growth. This would then point towards an expenditure target. But such targets are often circumvented and do not ensure that stability objectives will be met. Jointly targeting the budget balance and adhering to an expenditure norm may be an option, possibly with more leeway built in when the debt level is lower. Putting constraints both on flows and on stocks can help reduce the incentive to meet a deficit or an expenditure rule in pro forma terms only by pushing some spending below the line.

Relevant horizon. The rule can be defined on a yearly basis or over the business cycle. Defining a deficit target in cyclically-adjusted terms allows for automatic stabilisers to respond to cyclical fluctuations and to deal with exceptional circumstances while avoiding pro-cyclical loosening in upturns. It also discourages the use of excessively optimistic growth projections, relative to longer-run potential, since such optimism would entail ambitious targets for the unadjusted fiscal balance (Bini Smaghi, 2002).[1] These benefits, however, come at the cost of reduced simplicity and clarity given that the target is unobservable and subject to substantial margins of interpretation. Targeting the actual balance has, in this respect, the advantage of stronger credibility, although the latter can be undermined by excessive use of "escape" clauses and/or creative accounting.

What to leave out of the target. As public investment confers benefits to future generations, inter-generational equity considerations may seem to favour targeting the current rather than the overall fiscal balance (the so-called "golden rule").[2] Such a rule can also help counteract the bias against public investment observed in the past in several countries, where it was an easy target for cutbacks. In practice, however, the distinction between current and capital outlays embedded in accounting conventions is somewhat arbitrary: current education and health spending for example can be viewed to some extent as investment in human capital. In addition, current and capital outlays are frequently linked such as in the case of expenditures to maintain the existing capital stock. Where a debt norm is in place, the question arises of whether to define it in gross or in net terms. In principle, publicly-held assets should be taken into account, but their future (and even current) value may be highly uncertain.

Rules should be credible but not overly rigid. While the nature and strength of the rules has varied across countries, in all cases the aim has been to tighten the constraints on discretionary interventions. In this respect, the rules should be credible, simple to understand, perceived as binding and backed by sanctions. The rules embedded in the US Budget Enforcement Act and in the European Stability and Growth Pact satisfy these criteria. Both are set in terms of actual deficit or expenditures and the legislated limits are underpinned with explicit sanctions. However, they contain escape clauses providing some flexibility so that fiscal policy can fulfil its stabilising role or deal with special events. The spending caps imposed under the Budget Enforcement Act are thus accompanied by a clause allowing for "emergency appropriations". Likewise, European countries breaching the 3 per cent deficit ceiling can avoid financial sanctions if the excessive deficit is due to exceptional circumstances, temporary and close to the ceiling.[3] Taking another approach, Canada has anticipated special events by establishing a contingency reserve.

Increased transparency helps. A way to alleviate the trade-off between credibility and flexibility is by improving transparency. Australia, New Zealand and the United Kingdom have followed this route.[4] Numerical rules are set but they are not necessarily legislated and they are defined in a way that allows for a more flexible use of discretionary policy, at least over the business cycle. It is argued that despite this extra flexibility, credibility can be maintained by raising the transparency of the budgetary process (Kilpatrick, 2001).[5] In all three countries the change was introduced after much of the consolidation effort was achieved, suggesting that such a framework may be more useful once a position of budget balance has been established. In the EU context, the requirement that member states submit annual stability or convergence programmes and their obligation to notify flow and stock outcomes twice a year is meant, *inter alia*, to enhance transparency.

1. On the other hand, governments might be tempted to assume too-high estimates of potential growth.
2. Some have long advocated the shift to a golden rule in the euro area (Modigliani *et al*., 1998). The idea has been floated in France that defence spending should be excluded from the targeted fiscal balance because it has beneficial EU-wide spillovers.
3. The exceptionality clause applies automatically if GDP falls by over 2 per cent the year the 3 per cent ceiling is breached. It can still be granted if GDP falls by between 0.75 and 2.0 per cent, but subject to a formal approval by the EU Council.
4. Their approach has contributed to the development of international codes in the late 1990s (*OECD Best Practices for Budget Transparency* and *IMF Code on Good Practices on Fiscal Transparency*).
5. Von Hagen and Harden (1995) present empirical evidence that transparency of budget procedures has a positive impact on fiscal discipline.

bound to remain judgmental. Beyond their importance for ensuring sustainability, rules also have a role to play in communicating with the public.

In the United States, rules have been imposed on the expenditure side

In the United States, the deficit targets set in the 1985 Balanced Budget and Emergency Deficit Control Act (Gramm-Rudman Act) were vastly exceeded and were subsequently relaxed. Against this backdrop, the 1990 Budget Enforcement Act (BEA) introduced caps on discretionary spending (which encompasses almost all defence outlays, salaries and other governmental operating expenses as well as many grant programmes). These caps were set in nominal terms and with sub-limits for specific spending categories. Caps could be exceeded, though, in the event of "emergencies". The BEA also stipulated that legislated changes affecting revenues or mandatory spending programmes (such as health care, unemployment benefits and farm price support) should be budget neutral. However, this did not apply to Social Security (*i.e.* pensions). Both provisions applied over five-year periods. The BEA was enforced through sequestration procedures. Most of its provisions elapsed in September 2002, without being extended or replaced.[9]

The euro area has moved towards a cyclically-adjusted budget rule

In the European Union, public debts and fiscal balances varied considerably across member states in the early 1990s, as did interest rates. The Maastricht Treaty and the Stability and Growth Pact (SGP) put in place in 1997 set out conditions necessary to safeguard fiscal discipline in a common currency area. The Treaty set the deficit hurdle for entry into monetary union at 3 per cent of GDP, allowing for long-run debt convergence around 60 per cent of GDP (on the assumption of trend growth around 3 per cent and trend inflation around 2 per cent). The SGP – which introduced possible financial penalties for non-compliance with the deficit ceiling – also calls for fiscal positions to be "close to balance" or in surplus over the medium run, which would asymptotically lead to zero net debt. These conditions were probably the minimum that would have been necessary in any case to achieve long-term fiscal sustainability in the individual countries involved absent the Pact. In practice, the emphasis has gradually shifted from the actual deficit measure to the cyclically-adjusted one, to avoid pro-cyclical budgeting. This approach was made very explicit in 2001 in the revised Code of Conduct on the format and content of the stability and convergence programmes. Besides, some euro area member states have also put in place domestic "stability pacts" in order to promote fiscal discipline at sub-national levels (Austria, Belgium, Germany and Spain).

Other types of rules were put in place elsewhere

In the United Kingdom, two fiscal rules were set out in 1997: the so-called "golden rule", which states that over the cycle current outlays, including the consumption of fixed capital, should not be financed by borrowing; and a debt rule, or "sustainable investment rule", stipulating that over the cycle the ratio of net debt to GDP should not exceed a prudent level, defined for the time being as 40 per cent. Several other OECD countries have adopted new rules since the 1990s. For example, in New Zealand, the Government has been required, since the mid-1990s, to run operating surpluses on average over the cycle so as to achieve "prudent" levels of debt, currently defined as 30 per cent of GDP or less. In Switzerland, an expenditure rule was recently introduced at the federal government level, effective from 2003. It aims at keeping the cyclically-adjusted balance close to zero and sets a ceiling for expenditure, which cannot exceed cyclically-adjusted revenue.

9. In mid-October 2002, some of the provisions of the BEA were extended, but only for six months, applying only to the Senate and excluding any discretionary spending cap.

© OECD 2002

Implementation of rules in practice

How effective have rules been?

The specific contribution of rules to good fiscal performance cannot be easily established (Hemming and Kell, 2001). As long as political momentum and a measure of popular support for fiscal consolidation are present, rules based on numerical targets as in the United States and the European Union can prove to be quite useful in helping countries to focus on clear objectives. Some of the Nordic countries have led the way, for example, by having an explicit budgetary objective of consistently running surpluses, backed by comprehensive pension system reforms. But elsewhere recent developments have highlighted a number of drawbacks and weaknesses of implementation. In the United States, the framework has been increasingly circumvented, and the rules have now expired without being renewed. In the euro area, the framework is being questioned, and the issue of the optimal design and implementation of such rules has taken centre stage.

Some rules have lost their bite over time

With surpluses being generated in the United States, the constraint of the spending caps was lifted through a series of emergency appropriations in 1999 and 2000 and an upward revision of the caps for 2001 and 2002. In a number of European countries, the deficit ceiling did not prevent the relapse described above, nor did the "close-to-balance or surplus" requirement. Experience thus illustrates that the types of rules that may be helpful during a phase of deficit reduction may no longer be sufficient later on. In this regard, it is worth noting that both Canada and Switzerland modified their rules after the initial balanced budget objective was achieved, with Canada shifting the emphasis from deficit to debt reduction and Switzerland adopting an expenditure rule.

Where they are absent, rules should be (re)introduced

Where medium or long-term oriented rules have elapsed or are missing, it is desirable to consider their (re)introduction. In the United States, an improved version of the BEA could serve to foster budget discipline and transparency. Proposals to this effect include enhancing flexibility within the discretionary spending caps and setting more stringent criteria for what can be considered as emergency spending. They also involve creating a contingency reserve for emergencies, introducing an explicit link with the public debt ratio and reducing the leeway to score tax and spending programmes in ways that understate their full impact.

In the Japanese case, rules may help retrenchment

In Japan, restoring fiscal sustainability requires retrenchment but would also be assisted by a firm medium-term framework for anchoring policy decisions, which is currently missing. The Government did assume a ceiling on the ratio of total expenditure to GDP in an indicative medium-term simulation exercise presented in January 2002 and set out broad directions for controlling expenditure. More recently, the draft FY 2003 budget replaced a ceiling on bond issuance by an expenditure cap allowing cyclical fluctuation in tax revenue. But a firmer and more binding framework, with short-run targets for the growth of real spending, would help in the process of restoring sounder public finances.

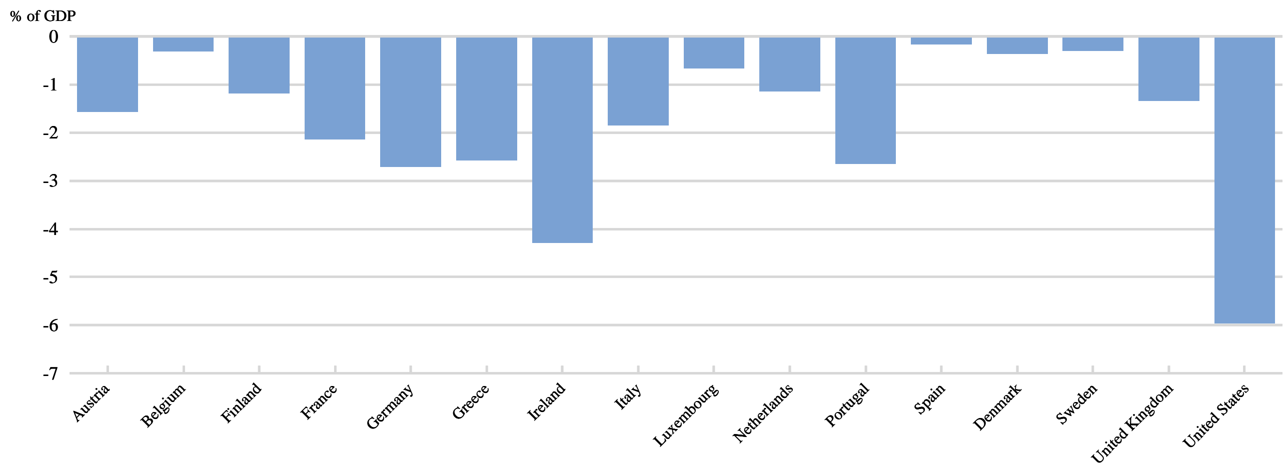
The rules have come under strain in Europe…

In the euro area, the SGP did not prevent some member states from letting structural balances deteriorate during the latest upswing. Assumptions about underlying growth were made which turned out to be overoptimistic. Unpleasant fiscal surprises also occurred because the tax receipts stemming from booming equity markets were not always recognised as transient.[10] As a result, and given the weakness of activity,

10. Asset market cycles are not perfectly correlated with cycles in economic activity and standard cyclical-adjustment methodologies – including the OECD's – treat the impact of capital gains or losses on the fiscal balance as partly structural. For further discussion, see Eschenbach and Schuknecht (2002).

Figure IV.4. **Fiscal projection errors**

2002 general government balance, in per cent of GDP, latest OECD projection minus official projection in late 2000-early 2001[1]



1. For EU countries, projection in the late 2000-early 2001 stability or convergence programme. For the United States, the national projection is the one published by the Congressional Budget Office in January 2001 (on current policy assumptions).

Source: National stability and convergence programmes, US Congressional Budget Office; OECD.

the batch of stability and convergence programmes submitted around late 2001 (fourth vintage) revealed widespread slippages of unadjusted fiscal balances compared with the projections in previous vintages. For 2002, the deviation of current OECD projections from these national projections amounts to some 2 percentage points of GDP for the three largest euro area economies (Figure IV.4).

… because of a perceived conflict with automatic stabilisers…

The fifth vintage of the programmes, insofar as they have been published, as well as the 2003 budgets submitted to national parliaments, embody further slippages. Thus, the objective to reach balance or surplus by 2004 – which had been reconfirmed by the EU Council in March 2002 – will be missed by a sizeable margin. Sticking to the earlier fiscal plans, however, would have required some member states to tighten the fiscal stance before the recovery is well underway, in some cases substantially so.[11] As automatic stabilisers are generally recognised as a timely and powerful mechanism damping business cycle volatility, at least in the case of demand shocks and especially in the euro area (Brunila *et al.*, 2002), the inability to let them function freely imposes significant costs.[12]

… leading to greater emphasis on cyclically-adjusted outcomes

Against this background, the European Commission recently proposed to postpone the target year for reaching close to balance or surplus positions from 2004 to 2006.[13] At the same time, however, it called for member states that are still far from

11. In fact, even with slippages, some member states, including Germany, are set to tighten their fiscal stance before the recovery is firmly established.
12. Simulations based on the OECD's Interlink model suggest that for most OECD countries, output gap variance would have been *ceteris paribus* 10 to 50 per cent higher in the 1990s without the contribution from automatic stabilisers, and that they reduced output volatility by a quarter on average (van den Noord, 2002). This is in itself welfare-enhancing but also has welcome indirect effects on trend GDP via stronger and/or better quality investment and a reduced risk of adverse hysteresis effects in labour or product markets.
13. This is not the first postponement. When multilateral budgetary surveillance under the aegis of the SGP started, the target date was 2002.

© OECD 2002

such a position to reduce their structural deficits by at least half a percentage point *per annum*, an effort at variance with what OECD estimates suggest is implied in the French and Italian 2003 draft budgets. The European Commission further suggested that in future, any pro-cyclical loosening of the budget during high-growth years leading to a violation of the "close-to-balance or surplus" rule should be treated as a failure to comply with the SGP. While the 3 per cent of GDP threshold remains a binding constraint, more importance is thus to be given to the structural budget balances. This approach should be facilitated by the agreement reached among EU finance ministers, in July 2002, on a common methodology for the calculation of output gaps.

Concerns have arisen that rules can be arbitrarily waived

These recent developments, following the refusal by the EU finance ministers in February 2002 to endorse the early warning that the European Commission had proposed for Germany and Portugal, has heightened two types of concerns. One is that future political pressures to reinterpret, amend or waive existing rules might prove irresistible once these rules start biting, thereby undermining the credibility and effectiveness of the fiscal framework. It is sensed for example that if deficits in some member states were to exceed the 3 per cent mark, the wording of the escape clause would provide room for judgement allowing the deferral of any financial sanctions (OECD, 2002e). A second worry, expressed by several EU member states with balanced or surplus budget positions, is that rules seem to impose less discipline on the three largest countries than on themselves. These concerns should, however, be alleviated by the initiation of the excessive deficit procedure for Germany.

Lessons and challenges

Safeguarding fiscal sustainability requires structural reform…

Establishing longer-term fiscal sustainability remains a challenge, or at least an issue, in many OECD countries, even where recorded budget stocks and flows may look reassuring. At the root of sustainability problems lie future public spending commitments which outstrip what can be supported by the revenue base. Restoring or safeguarding sustainability has thus to be achieved not just via further budget balance adjustments but through reforms that reshape public spending – especially the age-related components – and boost economic growth. Some reforms can actually help on both scores, *e.g.* labour market initiatives aiming at increasing the participation ratios of older workers, or product market reforms enhancing competition.

… but well-designed and properly implemented rules can help too…

At the same time, well-designed rules can help in setting and achieving fiscal consolidation objectives consistent with stable debt dynamics. Fiscal discipline is especially strong when there is a clear incentive to comply, as was the case in the 1990s for countries wishing to qualify for monetary union. The application of rules in more "steady-state" circumstances is often more difficult and requires careful consideration of the appropriate target. Even so, and whatever the rule chosen, it usually rests on some compromises and may have to be adapted or changed at some point. Most importantly, its effectiveness will depend heavily on how it is implemented. Rules which are specified in cyclically-adjusted form offer the greatest flexibility, through the operation of built-in stabilisers. But they need to be implemented symmetrically and transparently. This calls for realistic growth assumptions and objectivity in assessing cyclically-adjusted positions, based on output gap estimates produced in accordance

with a commonly agreed methodology. Following the large corrections to initial budgetary estimates that came to light this year for some countries, orthodoxy and openness in scoring revenue and outlays are also indispensable.[14]

… provided the political economy of enforcement is right

A potential problem is that the more economically-refined the fiscal rule, the more vulnerable it may be politically, especially at times when surpluses are building up. Indeed, applying and enforcing rules is a political-economy as much as a technical issue. The implementation process may be assisted by explicit sanctions within an economic and monetary union, but even so the penalties may be small relative to the interest-rate premia which would be imposed on individual countries by the market. To pre-empt pressures for rules to be inappropriately modified or set aside, governments must thus be prepared to adopt a more pedagogic approach to their operation, generating both peer and public pressure for their consistent enforcement.

14. The decision taken by Eurostat in July 2002 on the treatment of governments' securitisation operations – which in the case of Italy in particular had led to a substantial understatement of the 2001 deficit – constitutes one important step which should help improve the comparability of fiscal positions across EU member states. The problem of statistical disclosure, coverage, timeliness and reliability is even more acute in EU accession countries.

© OECD 2002

Appendix Table IV.A.1. Changes in the fiscal frameworks since the 1990s

Country/region	Year	Summary of changes
Australia	1998	**Charter for Budget Honesty** ***Rule*** • No legislated numerical rules. The Charter requires the government to spell out objectives and targets but places no constraints on their nature. ***Enforcement/Sanctions*** • No sanctions. ***Transparency*** • Requires the Government to prepare an annual fiscal strategy statement outlining long-term fiscal policy objectives and fiscal targets for the following three years. External auditors assess the statement and performance.
Austria	2000	**Domestic Stability Pact** ***Rule*** • Negotiated floors on the budget balance for each government level (0.75 per cent of GDP for the *Länder*, zero for municipalities and the federal government balance should be such that the Stability Programme target is met). The floors apply on average, over several years. ***Enforcement/Sanctions*** • Possible fines (8 per cent of the floor plus 15 per cent of the shortfall, up to a ceiling), subject to a unanimous decision from all interested parties. ***Escape clause*** • In case of a serious economic slowdown for example, the sanctions do not apply.
Belgium	1996 to 1999	**Intergovernmental treaties**
	1999 to 2002	***Rule*** • Permissible deficits are established for the federal government plus Social Security on the one hand, and for the regions and the local governments on the other. ***Enforcement/Sanctions*** • The borrowing capacity of regions and communities may be restricted. ***Transparency*** • Permissible deficits for the different government levels and for Social Security are established on the basis of recommendations of the High Council of Finance (a wise men committee), which are published in annual reports.
Canada	1991 to 1996	**Federal Spending Control Act** ***Rules*** • Limits on all programme spending except self-financing programmes. • Overspending in one year permitted if offset in following two years. ***Enforcement/Sanctions*** • No explicit sanctions. Compliance with the Act was assessed by Auditor General.
	1998	**Debt Repayment Plan** ***Rules*** • There are no legislated rules at the federal level but the government has a "balanced budget or better" policy. • Most provinces have some form of balanced budget legislation, with sanctions that may include salary cuts for cabinet members or forced elections. • A Contingency Reserve and an economic prudence factor are built into the federal budget and may be devoted to debt reduction if not needed.
Euro area/ EU countries	1992	**Maastricht Treaty; extended in 1997 under the Stability and Growth Pact** ***Rules*** • 3 per cent of GDP ceiling on general government net borrowing. • 60 per cent of gross government debt-to-GDP ratio norm. • "Close to balance or surplus" target. ***Enforcement/Sanctions*** • Non-remunerated deposits with a fixed component equal to 0.2 per cent of deficit and a variable component rising with size of excessive deficit. • Financial sanction applies only in case of non-respect of deficit rule, although peer pressures can be exerted in the form of policy recommendations on the basis of the Commission's assessment. ***Escape clause*** • Exceptional circumstances including if output falls by over 2 per cent during the year the deficit exceeds the limit. ***Transparency*** • Member States are required to report twice a year to the Commission their planned and actual deficits and their debt levels under the excessive deficit procedure. Once a year they must also submit a stability (euro area "ins") or convergence ("outs") programme, which is subject to an opinion from the Council.

Appendix Table IV.A.1. **Changes in the fiscal frameworks since the 1990s** *(cont.)*

Country/region	Year	Summary of changes
Germany	2002	**Domestic Stability Pact** ***Rules*** • Golden rule: the budgeted deficit of the federal government must not exceed federal investment spending (by constitutional law; most *Länder* constitutions have a similar law). • Both the government and the states (including the communities) should aim at balanced budgets. ***Enforcement/Sanctions*** • No explicit sanctions. ***Transparency*** • The inter-governmental Financial Planning Council should make recommendations on how to achieve fiscal discipline and monitor whether authorities' spending and the budget evolve in line with the requirements of the EU Stability and Growth Pact. It can also make recommendations on how to restore fiscal discipline.
Japan	1997 to 1998	**Fiscal Structural Reform Act** ***Rules*** • Reduce fiscal deficits to 3 per cent of GDP by FY 2003. • Terminate issuance of special deficit-financing bonds by FY 2003. • Set numerical reduction targets for major expenditure areas over the subsequent three years. ***Enforcement/Sanctions*** • No explicit sanctions. ***Escape clause*** • Added in 1998 in response to the economic slowdown.
	2002	**Cabinet Decision on the Medium-Term Fiscal Perspective** ***Rules*** • Maintain the size of government (measured by total general government outlays as a share of GDP) at or below the current level until FY 2006. • Achieve primary balance surplus in the early 2010s. ***Enforcement/Sanctions*** • No explicit sanctions.
Netherlands	1994	**Multi-year expenditure agreements** ***Rules*** • Use deliberately cautious growth projections. • Ceilings on central government, social security and health care spending. • If the balance exceeds –¾ per cent of GDP, half of the revenue windfalls can go to tax cuts.
New Zealand	1994	**Fiscal Responsibility Act** ***Rule*** • Maintain debt and net worth at "prudent" levels and run operating surpluses on average over a "reasonable" period of time. The government of the day sets its own numerical targets consistent with these principles. ***Enforcement/Sanctions*** • Given that the numerical targets are not legislated, no sanctions are specified. ***Transparency*** • The Act requires the Government to strengthen reporting requirements so as to provide parliamentary assessments of fiscal policy, to spell out clearly the objectives and consequences of policy choices and to take an aggregate and medium-term perspective.
Norway	2001	**Fiscal Stability Guidelines** ***Rules*** • Structural non-oil central-government budget deficit should equal 4 per cent of the Government Petroleum Fund over the cycle. Discretionary easing or tightening during the cycle is allowed. • In the event of non-compliance due to extraordinary circumstances (major revaluations of the Fund's capital or statistical revisions of the structural deficit), corrective action should be spread over several years. ***Enforcement/Sanctions*** • No sanctions. ***Transparency*** • Budget documentation reports the structural fiscal balances including and excluding oil revenues. This is complemented with an annual update of long-term projections.

© OECD 2002

Appendix Table IV.A.1. **Changes in the fiscal frameworks since the 1990s** *(cont.)*

Country/region	Year	Summary of changes
Poland	1999	**Act on Public Finance** ***Rule*** • The Constitution sets a limit of 60 per cent of GDP for total public debt. ***Enforcement/Sanctions*** • Constraints are put on deficits, both at the national and at the sub-national level, once public debt exceeds 50 per cent of GDP.
Spain	2003	**Fiscal Stability Law** ***Rules*** • Accounts should balance or show a surplus at all levels of government (central, social, territorial and local) as well as for public enterprises and corporations. • A cap will be put on expenditure and a contingency fund (2 per cent of expenditure) will be set up to cover unscheduled expenditure. ***Escape clauses*** • Possibility of running deficits restricted to temporary and exceptional situations. Two-to-three-year plans to restore the accounts to balance will have to be discussed in Parliament.
Sweden	1996	**Fiscal budget Act** ***Rules*** • Set nominal expenditure limits for the subsequent three years on 27 expenditure areas (including social security). • Maintain a general government surplus of 2 per cent of GDP on average over the business cycle. ***Enforcement/Sanctions*** • No explicit sanctions.
Switzerland	1998	**Budget Objective 2001** ***Rule*** • Capped the federal deficit at 2 per cent of revenues or 0.25 per cent of GDP by 2001. ***Enforcement/Sanctions*** • Expenditure excess to be financed by tax increase.
	2001	**Debt Containment Rule** ***Rule*** • Sets a ceiling for expenditures which is equal to total revenues adjusted for the cycle and for *ex post* deviations of out-turns from the norm laid out in the rule. ***Enforcement/Sanctions*** • No explicit sanctions, though deviations from the rule must be corrected within three years. ***Escape clauses*** • Exceptional circumstances require an absolute majority in both houses of Parliament.
United Kingdom	1997	**Code for Fiscal Stability** ***Rules*** • Golden rule: over the business cycle the Government will borrow only to invest and not to fund current spending. • Sustainable investment rule: net debt as a proportion of GDP must be held stable over the business cycle at a prudent level defined so far as net debt below 40 per cent of GDP. ***Enforcement/Sanctions*** • No explicit sanctions. ***Transparency*** • Annual reporting cycle, including a Pre-Budget Report, an Economic and Fiscal Strategy Report and a Debt Management Report.
United States	1990 to 2002	**Budget Enforcement Act** ***Rules*** • Medium-term nominal caps for discretionary spending. • Legislated changes to revenues or mandatory spending programmes should be budget neutral over a five-year horizon. ***Enforcement/Sanctions*** • Sequestration procedures (cuts across-the-board). ***Escape clause*** • "Emergency appropriations" could be passed.

BIBLIOGRAPHY

ATKINSON, P. and P. van den NOORD (2001),
"Managing public expenditure: some emerging policy issues and a framework for analysis", *OECD Economics Department Working Papers*, No. 285.

AUERBACH, A. (1994),
"The US fiscal problem: where we are, how we got here and where we're going", *in* S. Fischer and J. Rotemberg (eds), *NBER Macroeconomics Annual 1994*.

AUSTRALIAN GOVERNMENT (2002),
*2002-03 Budget Paper*s, No. 5.

BANCA D'ITALIA (ed.) (2000),
Fiscal Sustainability, Proceedings of a Research Department Public Finance Workshop.

BINI SMAGHI, L. (2002),
"Fiscal discipline and policy coordination in the eurozone: comments on Jean Pisani-Ferry", *www.dt.tesoro.it/Aree-Docum/Relazioni-/Working-Pa/*

BLANCHARD, O., J-C. CHOURAQUI, R. HAGEMANN and N. SARTOR (1990),
"The sustainability of fiscal policy: new answers to an old question", *OECD Economic Studies*, No. 15.

BRUNILA, A., M. BUTI and J. IN'T VELD (2002),
"Fiscal policy in Europe: how effective are the automatic stabilisers?", *European Economy Economic Papers*, No. 177.

BUITER, W. (1985),
"A guide to public sector debt and deficits", *Economic Policy,* No. 1.

BUITER, W. (2002),
"The fiscal theory of the price level: a critique", *Economic Journal,* Vol. 112, No. 481.

CANZONERI, M., R. CUMBY and B. DIBA (2002),
"Should the European Central Bank and the Federal Reserve be concerned about fiscal policy?", *mimeo*, September, *www.georgetown.edu/faculty/canzonem/JH.pdf*

DANG, T.T., P. ANTOLIN and H. OXLEY (2001),
"Fiscal implications of ageing: projections of age-related spending", *OECD Economics Department Working Papers*, No. 305.

ECONOMIC POLICY COMMITTEE OF THE EUROPEAN UNION (2001),
Budgetary challenges posed by ageing populations, EPC/ECFIN/655/01-EN final.

ESCHENBACH, F. AND L. SCHUKNECHT (2002),
"Asset prices and fiscal balances", *ECB Working Papers*, No. 141.

EUROPEAN COMMISSION (2000),
Public Finances in EMU – 2000, European Economy, No. 3.

EUROPEAN COMMISSION (2002),
Public Finances in EMU – 2002, European Economy, No. 3.

FORD, R. and D. LAXTON (1995),
"World public debt and real interest rates", *IMF Working Papers*, No. 95/30.

HELBLING, T. and R. WESCOTT (1995),
"The global real interest rate", *Staff Studies for the World Economic Outlook*, International Monetary Fund, Washington DC.

HEMMING, R. and M. KELL (2001),
"Promoting fiscal responsibility: transparency, rules and independent fiscal authorities", *in* Banca d'Italia (ed.), *Fiscal rules*, Proceedings of a Research Department Public Finance Workshop.

© OECD 2002

HEMMING, R., S. MAHFOUZ and A. SCHIMMELPFENNIG (2002),
"Fiscal policy and economic activity during recessions in advanced economies", *IMF Working Papers*, WP/02/87.

JANSSEN, J., (2002),
"Long-term fiscal projections and their relationship with the intertemporal budget constraint: an application to New Zealand", *New Zealand Treasury Working Paper*, No. 02/04.

JOUMARD, I. (2001),
"Tax systems in European Union countries", *OECD Economics Department Working Papers*, No. 301.

KILPATRICK, A. (2001),
"Transparent frameworks, fiscal rules and policy making under uncertainty", *in* Banca d'Italia (ed.), *Fiscal rules*, Proceedings of a Research Department Public Finance Workshop.

MODIGLIANI, F., J.-P. FITOUSSI, A. LINDBECK, B. MORO, D. SNOWER, R. SOLOW, A. STEINHERR and P. LABINI,
"An economists' manifesto on unemployment in the European Union", *Banca Nazionale del Lavoro Quarterly Review*, Vol. 51, No. 206.

OECD (1989),
"The public sector: restoring the balance", in *Economies in transition, Structural Adjustment in OECD countries,* Paris.

OECD (2002a),
OECD Economic Survey of Japan, Paris.

OECD (2002b),
OECD Economic Survey of the United States, Paris.

OECD (2002c),
OECD Economic Survey of Norway, Paris.

OECD (2002d),
OECD Economic Survey of Hungary, Paris.

OECD (2002e),
OECD Economic Survey of the euro area, Paris.

OECD (2002f),
OECD Economic Survey of Germany, forthcoming, Paris.

ORR, A., M. EDEY and M. KENNEDY (1995),
"Real long-term interest rates: the evidence from pooled time series", *OECD Economic Studies*, No. 25.

PEARSON, M. and S. SCARPETTA (2000),
"An overview: what do we know about policies to make work pay?", *OECD Economic Studies*, No. 31.

VAN DEN NOORD, P. (2002),
"Automatic stabilizers in the 1990s and beyond", *in* M. Buti, J. von Hagen and C. Martinez-Mongay (eds), *The Behaviour of Fiscal Authorities*, Palgrave.

VON HAGEN, J. and I. HARDEN (1995),
"Budget processes and commitment to fiscal discipline", *European Economic Review*, Vol. 39, Issues 3-4.

WYPLOSZ, C. (2002),
"Fiscal policy: rules or institutions?", *http://europa.eu.int/comm/dgs/policy_advisers/gea/gea_2002_04/wyplosz.pdf*