Monthly Economic Review

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More years of "prudence" under Mr Brown?

Recent developments in Eurozone worrying for financial stability

Mr Brown and the sustainable investment rule

At this stage of the proceedings the opinion polls have a clear message. A lacklustre general election campaign will result in another comfortable victory for the Labour Party and, by extension, a few more years for Mr. Brown as Chancellor of the Exchequer. He has spent much of the last eight years proclaiming his commitment to "prudence", and it is true that the ratio of public debt to gross domestic product is lower now than in 1997. Although most newspaper comment focuses on "the golden rule" (i.e., the principle that current expenditure must be covered from taxation), the "sustainable investment rule" (that the ratio of public debt to GDP should not exceed 40%) was the more radical of Mr. Brown's two fiscal innovations. The sustainable investment rule is not blessed in macroeconomic textbooks (or, at any rate, in the Keynesian textbooks of the English-speaking world), but it should give reassurance to investors in British government debt. The last few years have indeed seen a fall in the ratio of debt interest costs to GDP.

The Eurozone needs something similar, but the Stability and Growth Pact has collapsed

Mr. Brown has made fairly clear that a UK application to join the Eurozone will not be made in Labour's third term. He wants the emphasis to be on domestic financial stability and - in contrast to his unfortunate Conservative predecessors - he is not interested in a flirtation with the euro. Although he denies being a Eurosceptic, Mr. Brown must be intrigued by recent developments in the Eurozone. At the March meeting of the European Council Mr. Schroder, the German Chancellor, proposed that control over budget deficits should be transferred back to national capitals. Given Germany's long-run commitment to both European monetary union and political integration, Schroder's stance has to be regarded as astonishing. One interpretation is that key members of the German political elite did not understand that the single currency necessitates central monitoring of budget deficits and a massive surrender of fiscal sovereignty. Pace Prodi's remark about the "stupidity" of the Stability and Growth Pact, the SGP was essential to keep Eurozone members' public finances in good order. Now that the SGP is dead, there has to be a risk that the Eurozone deficit/GDP ratio (which has already moved up from 1% in 2000 to 3% now) moves out to 4% or 5%. (The accompanying research paper defends "a fundamental rule of fiscal prudence" to explain how foolish such fiscal adventurism would be in the long run.)

Some tax rise probably needed in the UK

Some increase in taxation seems inevitable in Labour's third term, over and above the rise in the tax burden implied by "fiscal drag" (i.e., the tendency for people to move into tax and/or higher tax brackets as real incomes grow). But the UK's fiscal policy ought to be more responsible than its European neighbours'.

Professor Tim Congdon   **29th April, 2005**

Summary of paper on

'The SGP is dead, long live the SGP!'

Purpose of the paper

Eurosceptics have long argued that monetary union requires political union. The research paper suggests that the recent breakdown of the Stability and Growth Pact (which had an excellent rationale in "a fundamental rule of fiscal prudence") validates the argument.

Main points

- Budget deficits in the Eurozone were falling until 2000, but since then have risen sharply. The apparent breakdown of the SGP implies that the deficit/GDP ratio may rise further to perhaps 4% or 5%.

- Mr. Schroder, Germany's Chancellor, has urged that control over public finances be fully returned to national capitals, but this has been rejected by other members of the Eurozone.

- The Eurozone suffers from a serious "free rider problem" in controlling member states' budget deficits. (See p. 4 and also the August 1996 issue of this *Review*, which said that monetary union needed members to "surrender control of taxation and government expenditure to a new central government which has fiscal sovereignty over all of them".)

- The Stability and Growth Pact was the Eurozone's answer to the free rider problem. Contrary to Prodi's description of the pact as "stupid", the SGP had a clear rationale in what might be termed "the fundamental rule of fiscal prudence". (See pp. 6 - 7.)

- The fundamental rule of fiscal prudence states that - in a steady state - the ratio of the budget deficit to GDP is equal to the ratio of public debt to GDP multiplied by the desired growth rate of nominal GDP.

- With a desired 2% inflation rate and a 3% trend growth rate of output, the fundamental rule says that a deficit/GDP ratio of 3% is consistent with a 60% debt/GDP ratio. These were the entirely logical numbers in the SGP. (See p. 7.)

- A rise in the deficit/GDP ratio may not allow governments to increase non-interest expenditure (or to cut taxes), because a rise in the deficit/GDP ratio implies a rise in the steady-state debt/GDP ratio and higher debt interest costs. The rise in the ratio of debt interest costs to GDP may exceed the rise in the budget deficit, so that non-interest expenditure has to be cut. (See pp. 9 - 10.)

This paper was written by Professor Tim Congdon

The SGP is dead, long live the SGP!

A fundamental rule of fiscal prudence

Schroder's somersault on fiscal centralisation in the EU,

European integration has been a more or less continuous process since the early 1950s, but it has had the occasional zigzag, and its moments of paradox and comedy. For over 30 years Germany has been the driving force between European monetary integration, seeing the establishment of the single currency as key to the forging of political union. Over the years numerous statements have been made by German politicians that a properly conceived monetary union would necessitate political union. If the phrase "political union" means anything in this context, one of its aspects must be a degree of centralised control over public finances. Indeed, article 99 of the current European Communities Treaty says that member states must seek the European Council's approval of "broad guidelines" for macroeconomic policy and article 104 sets out an excessive deficit to be enforced by the Council against nations with a deficit above 3% of gross domestic product. As is well-known, the 3% limit on deficits originated in the Stability and Growth Pact which was adopted in 1997 on German insistence. Yet at the March 2005 meeting of the Euro Group (i.e., the finance ministers of the Eurozone) Jean-Claude Juncker, its president, had to slap down a proposal from German Chancellor Gerhard Schroder that called for the return on SGP enforcement powers from the Commission to national capitals!

to which Luxembourg's prime minister objects

As *Institutional Investor* correctly remarked in its March 2005 issue, if fiscal control were again located entirely at the national level, that "would effectively dismantle the pact". Juncker made clear to Germany representatives at the Euro Group that he would have none of it. In his words, "I pointed out to Germany, as did others, that I would be prepared at no stage to propose" the return of fiscal powers to national capitals. Juncker, who is also prime minister and finance minister of Luxembourg, later remarked of Schroder, "He is not in charge of the European economies. He is not a head of state, either. He's just a head of government." (Germany's GDP in 2003 was $2,400b., Luxembourg's $26b.)

Excessive deficits procedure always lacked credibilty

For economists who have long had their doubts about the extent to which member governments would be prepared to surrender powers to European Union institutions, the spat between Juncker and Schroder has to be described as highly predictable as well as deliciously ironic. The excessive deficit procedure – by which governments could be fined for running continuing deficits above 3% of GDP – has always lacked credibility. According to the rules, the fine would have to be agreed by qualified majority voting in the European Council. So – in theory – countries with public finances which are satisfactory now but might deteriorate at a future date would have to gang up on one or more countries with public finances which are already unsatisfactory. But why would any country constrain its freedom of manoeuvre in that way? No government – even one with a healthy budget surplus today – can be confident that its public finances will stay in good order indefinitely. The excessive deficit procedure was particularly implausible if the fine were to be levied on Germany, as it is the largest net contributor to the EU's finances. Had no one worked out that Germany might retaliate by cutting the amount of money it

gives to the EU?

The Stability and Growth Pact is dead

At any rate, the SGP is dead. The March meeting of the Euro Group not only found more pretexts (so-called "relevant factors") for not imposing the excessive deficits procedure, but also agreed that high-deficit nations could have a longer period of grace before the procedure had to be applied. Moreover, possibly insuperable difficulties in surveillance have emerged. Different nations have different accounting standards in their state sectors and they enforce these standards with varying degrees of rigour. By subtle reclassifications (or even outright concealment) of spending, countries can claim to be meeting the SGP when in fact they are not. The European Commission has found flaws in the numbers it has received from Portugal and Greece, and has become particularly suspicious of Italy. But – without enforcement powers similar to those in a genuine nation state (i.e., the ability to apply legal sanctions against errant local politicians and officials) – the Commission is ultimately powerless to control statistical tricks at the national level.

and the budget deficit-to-GDP ratio in the Eurozone, only 1% in 2000 and now 3%, could reach 4% or 5%

The likely outcome is that the average ratio of the budget deficit to GDP in the Eurozone will increase to over 3% and may move out to 4% or 5%. (See the chart on p. 5 .) The difficulty of maintaining fiscal restraint over nations in a monetary union of the present type is greater than that of maintaining fiscal restraint over local authorities and government departments in a fully-fledged nation state. As has frequently been observed, Europe's monetary union suffers from a free-rider problem. A nation state has one government, one central bank and one currency. The blame for failing to keep inflation down therefore falls – very clearly – with that one government and one central bank. If the government runs a large deficit, borrows from the banking system and causes rapid money supply growth, it is easy to identify the culprit. But the European monetary union of today has 12 governments, one central bank and one currency. There is a risk that one (or two) of the 12 runs a large deficit, but still enjoys the currency stability attributable to fiscal control in the other 11 (or the other ten).

The fiscal free-rider problem

Plainly, if all the nations have similar ratios of public expenditure to GDP, the high-deficit nation(s) have lower taxes. In that sense they are cheating on the rest. The express purpose of the SGP was to establish a benchmark by which fiscally delinquent governments could be fingered and punished, and so to pre-empt free-rider behaviour. But it has failed. Of course, for a given ratio of spending to GDP, a government running a balanced budget is taking 4% more of GDP in taxes than a government running a deficit of 4% of GDP. If there is no penalty in running a deficit of 4% of GDP, the temptation to sin is difficult to resist. So many Eurozone nations will commit fiscal sin. But – when the Eurozone's members realise that control is breaking down – what is the constraint on their behaviour? Is there any limit at all? If a deficit equal to 4% of GDP is not punished, why not slip to 5% of GDP? And then what is wrong with 6%? And so on.

The budget deficit in the Eurozone

A false prospectus?

Chart shows the ratio of the budget deficit (general government financial deficit) to GDP for all Eurozone numbers combined

% of GDP

Single currency introduced, in scriptural form, on 1st January 1999
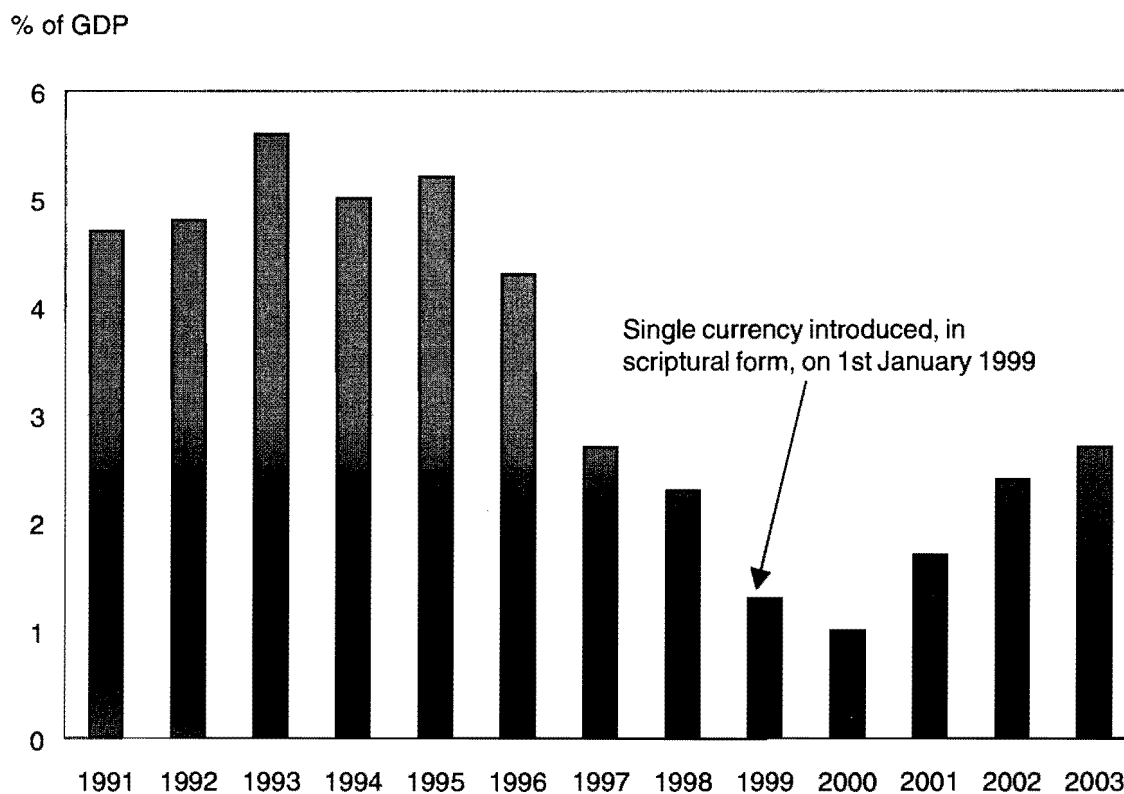
The introduction of the euro encouraged fiscal consolidation in the Eurozone's applicant countries. Impressive reductions in the ratios of the budget deficit to GDP were achieved in, for example, Italy (from 10.1% in 1991 to 0.3% in 2000) and Spain (from 7.1% in 1995 to a surplus in 2003). But – with the inducement of entry no longer ahead – governments have found it difficult to maintain fiscal restraint. In that sense the Stability and Growth Pact has turned out to be a false prospectus. Germany, which had a surplus of over 1% of GDP in 2000, now has a deficit of roughly 4% of GDP. Countries still close to budget balance or even in surplus (such as Belgium, Ireland, Luxembourg and Finland, according to the latest data) could deliver tax cuts to their citizens, and slide into deficit, without risking rebuke from other Eurozone members. (Quite large revisions to previous estimates of budget deficits also raise questions about the accuracy of the data being supplied by national governments to the European Commission.)

SGP number often dismissed as arbitrary, even "stupid",

When the SGP was first mooted, many economists claimed that its terms (i.e., the 60% limit on the debt/GDP ratio and the 3% limit on the deficit/GDP ratio) were "arbitrary". For example, a 2004 paper on *The European Union: a politically incorrect view* by Alesina and Perotti observed that "Economists have long tried to find an economic rationale for the budget deficit provisions of the SGP, with little success" and went on to say that their function was "largely political". This sort of low-key technical denigration of the SGP by academic economists undoubtedly goes some way to explain its poor reputation. When Romani Prodi described the pact as "stupid" in October 2002, he was not immediately denounced for making an elementary analytical blunder.

but this research paper will argue that the SGP had a strong analytical rationale

The purpose of this note is to argue that the contents of the SGP were neither arbitrary nor stupid. It will propose an analytical framework for thinking about the relationship between the public finances and the inflation rate. One conclusion will be that the 60% debt/GDP and 3% deficit/GDP numbers were sensible when the pact was introduced, but that the 3% deficit/GDP number is no longer appropriate. In fact, the decline in the trend rate of output growth in the Eurozone over the last decade implies that the maximum permissible deficit/GDP ratio ought to be reduced.

Key idea of "a fundamental rule of fiscal prudence"

The approach borrows from a standard result in growth theory, known as the Harrod-Domar equation. According to this equation, which holds in a steady state (i.e., a situation familiar to economic theory in which all ratios and all growth rates are constant), the growth rate of output is equal to the savings ratio divided by the capital/output ratio. A similar result, based on the same kind of simple algebraic development as that from which the Harrod-Domar equation is derived, is readily obtained for the relationship between,

i.   the ratio of the budget deficit (B) to national output (Y), and
ii.   the growth rate of nominal GDP.

The result could be called "the fundamental rule of fiscal prudence". (1)

As a steady state is assumed, we can let 'a' be the constant ratio of public debt (D) to nominal national output (Y). We have

$$D = a. Y$$

and

$$d\text{D} = a. d\text{Y,}$$

where the d operator denotes the change in the variables. But the change in the debt is the same thing as the budget deficit. So

$$B = a. d\text{Y}$$

and

$$B/Y = a. \, dY/Y.$$

Now dY/Y is the growth rate of nominal output. In other words, the ratio of the budget deficit to output is equal to the debt/output ratio multiplied by the growth rate of nominal output. As an approximation, at low inflation rates, the growth rate of nominal output can be regarded as the sum of the rates of increase of real output (g) and the price level (p). So

$$B/Y = a \, (g + p)$$

With debt at 60% of GDP and a desired 5% growth rate of nominal GDP, fundamental rule of fiscal prudence says that budget deficit should be 3% of GDP

How does this bear on the Stability and Growth Pact? "Price stability" in the European context has for many years been interpreted as an increase in prices of between 0% and 2%, with 2% being in principle the maximum. The trend growth rate of output in the Eurozone in the early 1990s would commonly have been estimated as 3% a year. Then, with 'a' at the highest value prescribed in the treaty of 0.6, the implied *maximum* ratio of the budget deficit to output comes out as (0.6 X [2% + 3%]), which is 3%. In other words, with wide acceptance that public debt should not exceed 60% of GDP (as in the Europe of the early 1990s), and given that the trend growth of nominal GDP consistent with low inflation was 5%, the SGP's 3% limit on the deficit/GDP ratio emerged neatly and logically. It was in no sense "stupid".

The 60% debt-to-GDP figure might still be desribed as "arbitrary", but at least three weighty arguments could be deployed against increasing it

The 60% figure may still seem arbitrary, but it could be defended on several grounds. One rationale might be that – if the debt/GDP ratio exceeds a certain (fairly high) figure – savers need to be compensated for the risk of default and that puts upward pressure on real interest rates. With the real interest rate climbing, the increase in the debt/GDP ratio implies an even sharper increase in debt interest costs. These have to be covered by taxation, with all the adverse effects on incentives and resource allocation, or offset by lower non-interest expenditure. Another viewpoint might be that, to the extent that savers' portfolios have a large holding of government debt, they have less room for claims on the private sector. As a result, the equilibrium capital/output ratio (and so the trend growth rate, according to the Harrod-Domar equation) is lower in an economy with a high ratio of public debt to GDP than in one with a low debt/GDP ratio. Finally, the monetary control dimension needs to be mentioned. Public debt is being constantly redeemed and renewed, and the refinancing requirement (relative to GDP) is of course larger the higher is the debt/GDP ratio. Every refinancing puts strain on the capital markets, with a risk that the government may be unable to sell debt outside the banks. If the government has to borrow from the banks, that creates new money balances. These new money balances may or may not be undesirable, depending on whether money supply growth is currently appropriate relative to the inflation target. If they are

undesirable, so also is the high debt/GDP ratio.

As noticed by the European Commission, the effect of deficits on real interest rates may be important

Now these three arguments about the significance of public debt – the debt interest burden and its effect on tax levels; the crowding-out of private investment; and the threat to monetary control from a large refinancing requirement – are controversial. Many economists would reject all of them as misguided or even downright false, and would deny that they merit extended discussion. Perhaps so, but surely the arguments are not stupid. As it happens, the European Commission's Directorate-General for Economic and Financial Affairs produced a report last year on *Public Finances in EMU* which elaborated the arguments in more detail and quantified aspects of them. For example, it summarised a large body of research with the claim that

> A significant impact of budget balances on interest rates is found especially in those analyses that employ measures of expected rather than actual budget deficits as explanatory variables. Concerning the magnitude of the estimated impact, most of the studies indicate that a 1 GDP point of additional deficit increases long-term interest rates on government bonds by between 20 and 100 basis points and long-term real interest rates by between 15 and 80 basis points. (p. 150 of *Public Finances in EMU*)

If a 1% increase in the deficit/GDP ratio is plugged into "the fundamental equation of fiscal prudence" in a nation with a trend 5%-a-year increase in nominal GDP, the debt/GDP ratio has to rise by 20% in the steady state. If the real interest rate on long-term government bonds rises by 15 basis points because of the expansion of the budget deficit (i.e., if it rises by the lowest amount implied by the various studies, as the Commission has interpreted them), debt interest costs increase as a share of GDP by (0.015 X [20 + {debt/GDP ratio before fiscal change}])%. If – for example – the debt/GDP ratio and deficit/GDP ratios were 60% and 3% in a nation with a trend annual increase in nominal GDP of 5%, a real interest rate on the debt of 3% and an inflation rate of 2%, and if this nation went ahead with a trend 1% increase in the deficit/ratio, the new steady-state would be associated with a 80% debt/GDP ratio and an increase in the ratio of debt interest costs to GDP of just over 1%. (Of this 1%, the bulk would be the interest on the 20% of GDP extra debt and 0.09% would be the extra interest on the debt of 60% of GDP associated with the previous steady state.)

Note that, as debt interest costs rise,

This is not dramatic, but neither is it irrelevant to major public finance decisions. For a given ratio of tax to GDP and a given deficit/GDP ratio, an increase in the debt-interest-to-GDP ratio must entail a reduction in non-interest expenditure. The growth of the debt-holders' claims on the national cake eats into spending on teachers, doctors and nurses. What about the objection that the increase in the deficit/GDP ratio allows the government to spend more without an increase in taxation? The answer is that a boost to non-interest expenditure is possible only if the increase in debt interest costs is less than the increase in the deficit/GDP ratio.

**non-interest
expenditure may
have to be cut**

As shown in Table 1 (which is only a particular example, although not at all a silly one), when the deficit/GDP ratio rises to 5%, 6% and 7% and the associated steady-state debt/GDP ratios climb to 100%, 120% and 140%, the fiscal arithmetic is unpleasant. The increase in the debt-interest-to-GDP ratio exceeds the increase in the deficit/GDP ratio.

The need to accommodate the additional debt interest within the national budget

Table 1 Some unpleasant fiscal arithmetic: does an increase in the budget deficit allow the politicians to increase non-interest expenditure?

In this example, it is assumed that the desired trend rate of increase in nominal GDP is 5% a year. This 5% increase in nominal GDP is split, roughly, between 3% real growth and 2% inflation. The initial real interest rate on government debt is 3%, but rises by 0.15% for every extra 1% on the deficit/GDP ratio

(1) Deficit/GDP ratio %	(2) Debt/GDP implied by the fundamental rule of fiscal prudence %	(3) Real interest rate on debt %	(4) Inflation rate %	(5) Debt interest costs, % of GDP
3	60	3	2	3
4	80	3.15	2	4.12
5	100	3.3	2	5.3
6	120	3.45	2	6.54
7	140	3.6	2	7.84

(1) Deficit/GDP ratio %	(6) Increase in debt interest costs as % of GDP, relative to starting-point with 3% deficit/GDP ratio	Part of increase due to interest on extra debt relative to starting-point	Part of increase due to higher interest on original debt (i.e., of 60% of GDP)	(7) Excess of increase in debt interest costs over increase in deficit/GDP ratio, as % of GDP relative to starting-point
3	0	0	0	0
4	1.12	1.03	0.09	0.12
5	2.3	2.12	0.18	0.3
6	3.54	3.27	0.27	0.54
7	4.84	4.48	0.36	0.84

*The message of the table is that - if a government increases the deficit/GDP ratio by 1% (for example, from 3% to 4%) - debt interest rises so sharply that the increase in debt interest costs exceeds the increase in the budget deficit. So, in the long-run steady state, non-interest public expenditure has to be **lower** than if the government left the budget deficit alone.*

When increase in debt interest costs larger than increase in the budget deficit, apparent *"fiscal relaxation" requires a cut in non-interest expenditure in the steady state*

implies either an increase in the tax burden or cuts in non-interest expenditure. Politicians' deliberate move into a wider budget deficit, which may arise from apparent generosity to the citizenry, does not enable them to spend a higher ratio of GDP on non-interest items. In fact, the indulgence in budget deficits is pure folly, as it requires *greater* restraint over non-interest public expenditure. The message emerges more vividly from Table 2, where the real interest rate on the public debt is taken to rise by 30 basis points for each extra 1% on the deficit/GDP ratio. In this case an increase in the budget deficit has serious adverse effects on the debt interest burden in the new steady states. When the deficit/GDP ratio reaches 6% - 7%, either non-interest expenditure has to be cut, as a share of GDP, by 1% - 1 ¾% or taxation has to rise, again as a share of GDP.

This outcome might be avoided if the increased deficit were accompanied by higher inflation, but that is not to be recommended

Evidently, when a lurch into deficit financing leads to a rise in the debt/GDP ratio the outcomes are unpalatable. It is true that the increase in the budget deficit is not necessarily associated with an increase in the debt/GDP ratio. The fundamental rule of fiscal prudence could be met in a different way, by a rise in the inflation rate. Thus, with the trend growth rate of output given at 3% a year and the debt/GDP ratio also given at 60%, the inflation rate implied by a deficit/GDP ratio of 3% is 2%. (This figure is obtained by deducting the trend growth rate of output, %, from [the deficit/GDP ratio divided by the debt/GDP ratio] multiplied by 100, %.) By the same reasoning, the inflation rate implied by a deficit/GDP ratio of 4% is 3.6% and that implied by a deficit/GDP ratio of 5% is over 5%. Of course a deterioration in inflation of this kind would tarnish the image of the euro and would certainly not to be welcomed by the European Central Bank.

Fiscal laxity is miguided

The reasoning in the last few paragraphs constitutes a powerful argument for the fiscal rules contained in the SGP. In essence, if governments breach the rules, they are punished either by a rise in interest costs associated with a higher steady-state debt/income ratio or by extra inflation. Nothing is to be gained by fiscal laxity, and Europe's politicians as a bloc are deluding themselves and their electorates in the aggregate if they engineer a larger Eurozone budget deficit in the belief that this would somehow make everyone better-off. (But – as explained – there is a dangerous free-rider problem. Particular governments may be tempted to take advantage of the sound currency attributable to good fiscal management of other governments.) Further, it is clear that the numbers in the original SGP were chosen with a particular macroeconomic context in mind. As we have seen, the 3% deficit/GDP and 60% debt/GDP numbers made sense in European economies with an assumed trend growth rate of nominal GDP of 5%, where this 5% was split between 2% inflation and 3% real growth.

Do the numbers in the SGP still apply today? Is the macroeconomic context now much the same as it was in the early 1990s? The answer is, "certainly not, because the underlying growth rate of Eurozone output has fallen and is likely to decline

Fall in the Eurozone's trend growth rate argues that the maximum deficit / GDP ratio should be lowered, not increased

again from about 2010 as the demographic trends become less favourable". Most observers would say that the underlying growth rate of Eurozone output has fallen from 3% a year to 1 ½% a year. It follows that the deficit/GDP ratio consistent with a 60% debt/GDP ratio in a steady state with 2% inflation is now not 3%, but about 2%. (To recall the formula, it is 0.6 multiplied by [output growth plus inflation, which is 3 ½% in this case], i.e., 2.1%.) The relaxation of the SGP is a move in exactly the wrong direction. The fall in the Eurozone's trend growth rate since the early 1990s argues that the maximum deficit/GDP ratio should be lowered, not increased.

Table 2 Some unpleasant fiscal arithmetic: a particularly vicious case, where the interest rate on govenment debt rises by 30 basis points for every 1% on the deficit/GDP ratio

In this example, it is assumed that the desired trend rate of increase in nominal GDP is 5% a year. This 5% increase in nominal GDP is split, roughly, between 3% real growth and 2% inflation. The initial real interest rate on government debt is 3%, but rises by 30 basis points for every 1% increase in the deficit/GDP ratio

(1) Deficit/GDP ratio %	(2) Debt/GDP implied by the fundamental rule of fiscal prudence %	(3) Real interest rate on debt %	(4) Inflation rate %	(5) Debt interest costs, % of GDP
3	60	3	2	3
4	80	3.3	2	4.24
5	100	3.6	2	5.6
6	120	3.9	2	7.08
7	140	4.2	2	8.68

(1) Deficit/GDP ratio %	(6) Increase in debt interest costs as % of GDP relative to starting-point with 3% deficit/GDP ratio	Part of increase due to interest on extra debt relative to starting-point	Part of increase due to higher interest on original debt (i.e., of 60% of GDP)	(7) Excess of increase in debt interest costs over increase in deficit/GDP ratio, as % of GDP relative to starting-point
3	0	0	0	0
4	1.24	1.06	0.18	0.24
5	2.6	2.24	0.36	0.6
6	4.08	3.54	0.54	1.08
7	5.68	4.96	0.72	1.68

In this example the penalty for fiscal laxity is more severe than in Table 1. Because the required return to bondholders rises by 30 basis points for every 1 % on the deficit/GDP ratio, and because the debt/GDP ration in the steady state rises by 20% for every 1% on the deficit/GDP ratio, an increase in the deficit/GDP ratio from 3% to 7% necessitates a reduction of almost 1¾% in non-interest public expenditure.

Political difficulties in maintaining fiscal discipline in low-growth nations

Unhappily, Europe's leaders show no sign of recognising the inescapable logic which justifies the case for fiscal prudence. Indeed, fiscal restraint is proving particularly difficult in those nations where the macroeconomic background is least favourable for fiscal expansionism. It has to be conceded that the application of the fundamental rule of fiscal prudence at the national level may be politically problematic. A clear implication of the rule is that nations with relatively low trend rates of economic growth should also have budget-deficit-to-output ratios lower than the average. So the maximum B/Y ratio for Germany – with a trend growth rate of, say, 1% - is (0.6 X [1% inflation + 1% output growth]), which is 1.2%, whereas for Ireland – with a trend growth rate of 5% - it is 3.6%. But, partly because of the strength of "fiscal drag" in the tax system and other influences, it is politically easier to control budget deficits in high-growth nations than in low-growth nations.

UK has maintained fiscal accountability of traditional European nation state

The key message of the fundamental rule of fiscal prudence is that deliberate increases in budget deficits are likely either to raise debt interest costs by more than the increase in the budget deficit or to increase inflation. Given that very low inflation is essential to the continued popularity of the euro to the citizens of Eurozone countries, an economically unsustainable course of action must also – in the end – be politically dangerous and unacceptable. The UK's abstention from the Eurozone has preserved the chain of fiscal accountability and the transparency of macroeconomic management found in traditional European nation states. Unless the Eurozone's leaders are able within the next few years to enforce genuine fiscal centralisation across the 12 member states, the UK's fiscal arrangements will look increasingly satisfactory by comparison.

Notes

(1) The author first proposed this simple rule in the late 1970s. It was developed in, for example, 'The analytical foundations of the Medium-Term Financial Strategy' in the May 1984 issue of the Institute for Fiscal Studies' journal, *Fiscal Studies*, republished in pp.65 - 77 of Tim Congdon *Reflections on Monetarism* (Aldershot:Edward Elgar 1992). The rule provides the intellectual rationale for the present government's "sustainable investment rule" (i.e., that the growth of public sector investment should not lead to an undue rise in the ratio of public debt to GDP).