COMMENT

Marco Buti[*]

1 The SGP: allegations[1]

The Stability and Growth Pact (hereafter, SGP) is the backbone of fiscal policy in EMU. As argued elsewhere (European Commission, 2000), the SGP's provisions, if tightly implemented, can help to correct two fiscal failures which have characterised budgetary policies in Europe in the past thirty years: high and persistent budget deficits which have led to ballooning public debt, and the tendency to run pro-cyclical policies especially in "good times". First, the "close to balance" rule would keep structural deficits down thereby gradually re-absorbing the stock of debt. Second, the "significant divergence" clause stipulates that budgetary positions should not depart consistently from the medium term target or from the path of adjustment towards it. To the extent that this clause is applied to cyclically-adjusted balances, it would prevent the typical relaxation of fiscal policies in periods of high growth, while letting automatic stabilisers play freely in periods of recession[2].

——————————

[2] However, if the "significant divergence" clause is applied to actual, rather than structural budget balances, the result would be exactly the opposite, namely a pro-cyclical bias of budget monitoring.

While the SGP's adequately reflects the imperative of preserving fiscal prudence in EMU, the literature has underlined a number of risks connected to its implementation. Three allegations have been levied against the SGP:

1. The SGP privileges fiscal discipline over fiscal stabilisation. Numerical rules on the deficit, by limiting the room for manoeuvre in the event of shocks, hamper fiscal flexibility, precisely when it is needed more. This leads to an under-supply of fiscal stabilisation, a phenomenon that is particularly worrying in EMU where macroeconomic mechanisms to tackle shocks are limited and microeconomic adjustment channels still largely underdeveloped.

2. The SGP, by focusing on year-by-year budget balances neglects the issue of long run sustainability linked to the ageing of populations. Countries may formally respect the SGP whilst actually accumulating underlying imbalances which are going to show up sometime down the line. The higher age-related spending in the longer run will lead to higher deficits or require painful adjustments in other parts of the budget. This disregard for long term sustainability issues is compounded by the accounting rules which, by not "rewarding" the pre-funding of future pension liabilities, may provide perverse incentives and hinder radical pension reforms.

3. Public investment will suffer under the SGP because of the close to balance rule. Such a rule, by not distinguishing between current and capital expenditure, is not consistent with the so-called "golden rule" of deficit financing according to which borrowing is allowed to finance projects whose return is spanned over many years. This may be detrimental for growth, especially in the case of catching up economies.

The papers included in this session touch upon one or more of these issues. The possible contradiction between discipline and stabilisation is discussed in the papers by Leeftink, and Lindh and Ohlson. The long run sustainability problem related to the ageing of population is tackled in the papers by Brunila, Tuukkanen, Lindh and Ohlson, and Cronin and McCoy. Finally , the implications of the SGP for catching up is analysed by Cronin and McCoy.

These three allegations against the SGP are briefly discussed in turn in the next three sections. The final section concludes.

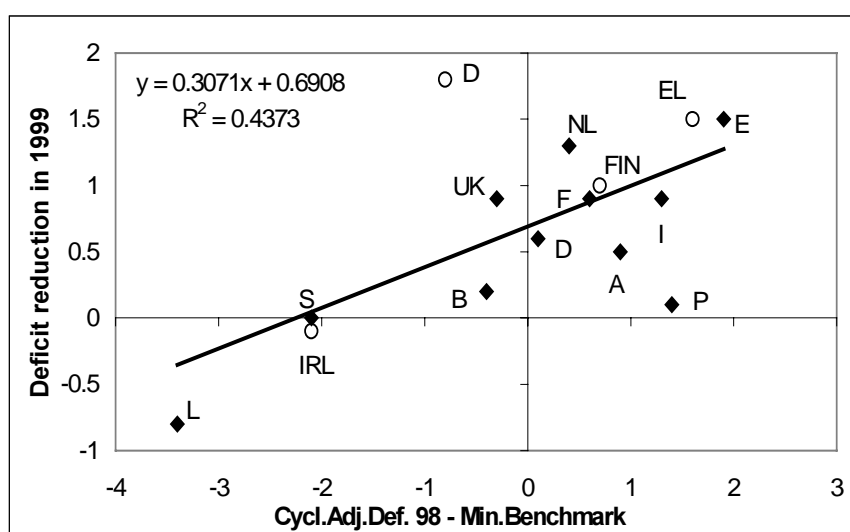## 2   Discipline and stabilisation: is there a trade off?

As established by the traditional Optimal Currency Areas literature, the role of fiscal policy is enhanced in a monetary union because member countries forsake national monetary and the exchange rate to smooth out cyclical fluctuations and tackle idiosyncratic shocks. Hence, any rule limiting the flexibility of fiscal policy may lead to an under-supply of stabilisation in EMU.

A recent strand of literature, however, suggests that there is no trade off between fiscal discipline and fiscal flexibility. On the contrary, sound budgetary positions in "normal" times may be important for the effective fiscal stabilisation in periods of cyclical slowdown. This conclusion is based on two related sets of considerations:

a) Fiscal authorities may have a higher room for manoeuvre in cyclical slowdowns even in the absence of formal limits on budget deficits. The use of fiscal policy (or lack thereof) could be taken as an indication of its perceived ex ante effectiveness in supporting demand. Buti et al. (1997) show that countries with low debt and deficits have in fact responded to such severe shocks via fiscal policy much more than countries with highly unbalanced public finances. Evidence of a positive interplay between fiscal discipline and fiscal stabilisation is also found in the paper by Leeftink who neatly summarises his findings: "The Stability Pact - if correctly implemented - may even stimulate stabilisation. The reason is that, with or without the Stability Pact, countries will be constrained by the intertemporal budget constraint. The more uncertainty exists about the sustainability of the budgetary position of a country, the less the room for manoeuvre a country will have for allowing the budget to act as a stabilisation devise".

b) Fiscal expansions may be less effective in boosting demand under conditions of "fiscal stress". According to this literature, the traditional Keynesian effects of fiscal policies may be reversed when public finances are perceived as being out of control. The

unsustainability threat arising from a fiscal expansion when public debt is of high or rapidly growing may imply substantial premia in interest rates to cover for explicit or implicit default risks (Sutherland, 1997). Empirical evidence in favour of non-Keynesian effects in the presence of high fiscal imbalances is found by Perotti (1999).

Graph 1. Required and actual budgetary adjustment

Negative Output Gap, 1999

Positive Output Gap, 1999

While budgetary discipline and stabilisation must not be irreconcilable, a constraint on fiscal stabilisation may arise during the transition to the "close to balance" targets where the closeness to the deficit threshold and the discretionary adjustment still to be accomplished put a constraint on budgetary stabilisation. This is illustrated in Graph 1, in which the change in the deficit in 1999 is pictured against the distance of the cyclically-adjusted budget in 1998 from the so-called "minimal benchmarks" calculated by the Commission (European Commission, 1999). The latter are the country-specific cyclically-adjusted budget

balances which, on the basis of the past business cycle history of the country, would provide a sufficient safety margin to withstand cyclical fluctuations without breaching the 3% ceiling.

As shown in the graph, there is a positive correlation between the two variables, indicating that *prima facie* the adjustment still to be accomplished may have been one of the factors shaping the fiscal strategies in the first year of the euro[3].

Indeed, the budget balance improved in countries with a negative output gap and in spite of the growth slowdown compared to the previous year. As argued in European Commission (2000), the confirmation of tight budgetary discipline enshrined in the first set of Stability and Convergence Programmes played a role in ensuring an accommodating monetary stance by the ECB in the first year of the euro.

All in all, in the "steady state", once the SGP medium term targets "close to balance or in surplus" will have been achieved, the 3% ceiling would no longer "bite" and may even enhance fiscal stabilisation thereby helping to bridge the gap between *actual* and *automatic* stabilisation. A tight implementation of the so-called "significant divergence" clause of the SGP (see, European Commission, 2000) would also correct the pro-cyclical bias in the reaction function of fiscal authorities[4]. To the extent that tightening in "bad times" was the other side of the medal of lax fiscal policies in "good times", the SGP would contribute to strengthen cyclical smoothing over the various phases of the business cycle.

_____

[3] Clearly, the reduction in the cyclically-adjusted deficit would have provided more telling evidence of such relation. However, as shown in European Commission (2000), a number of factors in 1999 (including the composition of growth) makes the calculations of cyclically-adjusted balances a particularly difficult task. Simply applying the standard budgetary sensitivities would lead to an overestimation of the discretionary adjustment that actually took place. By the same token, these factors may have spuriously improved the correlation shown in Graph 1.

[4] This pro-cyclical bias may explain the results of a number of papers (i.a. Mélitz, 2000, Barrell and Pina, 2000) which find that automatic stabilisers are rather small in European countries, and definitely smaller than those computed by international organisations. Such results are also supported by Leeftink who finds that the degree of *actual* stabilisation is lower than that of *automatic* stabilisation.

3   Ageing and the SGP

Should a long run safety margin be incorporated in the medium term target?

The SGP stipulates that countries should comply with the close to balance rule year by year with the aim of safeguarding the 3% Maastricht criterion. However, long term sustainability considerations have not been completely disregarded. First of all, the question has arisen as to whether a long run safety margin should be incorporated in the medium term target. In the 1998 Code of conduct on the practical implementation of the SGP, it was stated that long run sustainability issues are relevant in setting the medium term target (European Commission, 1999). The Council Opinions on the stability and convergence programmes reiterated the importance of preparing for the future burden on the budget of demographic developments. More generally, the report on economic policy coordination to the Helsinki European Council in December 1999, highlighted the need to take into account in a more systematic fashion the long term challenges of ageing populations in assessing national Stability and Convergence Programmes.

As stressed in an opinion in 1997 by the Monetary Committee, the prospective increases in pension and health expenditure can be partially offset by declining interest payments through a timely reduction in debt levels brought about by ambitious medium term targets. The contribution that sound public finances can make to pre-empting, at least partly, the budgetary implications of ageing via lower interest payments is illustrated in a simple setting in Annex 1.

Table 1 presents some illustrative calculations of "full offsetting" budget balance under different assumptions concerning the initial level of debt, the impact of ageing and nominal interest rate and growth rate. As to the effects of ageing, the variable a in the table indicates the expected impact by 2030. The overall effect over the 2000-30 period is computed by simply assuming a linear increase of spending over the period. All non-ageing related budgetary items are assumed to remain constant.

Inspection of the table shows that countries with high debt ratios, which have a lot of potential for interest savings, require a higher total deficit or a lower surplus to generate the interest savings needed to

Table 1. Pre-empting ageing: medium term budgetary targets
(% of GDP)

b \ a	2 %	4 %	6 %
60 %	-0.5 (-0.8)	1.4 (0.8)	3.3 (2.4)
80 %	-1.3 (-1.6)	0.6 (0.0)	2.5 (1.6)
100 %	-2.1 (-2.4)	-0.2 (-0.8)	1.7 (0.8)

$y + \pi = 4\%$; $i = 5\%$ (6%), T = 30

offset a given rise in age-related spending. For instance, if the expected increase in spending over the next 30 years is 4% points of GDP- as is the case of Belgium and Italy, according to Franco and Munzi (1997) - a broadly balanced budget (-0.2% of GDP) would be required if the initial stock of public debt is 100% of GDP, while a surplus of 1.4% of GDP is needed if the debt ratio is 60% of GDP. As is well known from debt arithmetic, however, these less ambitious budgetary targets do not imply that high debt countries have an "easier job". Quite the contrary: as shown in Annex 1, the primary surplus corresponding to the required overall budget balance is higher in the case of high debt countries. If the primary surplus is taken as a measure of the policy effort, pre-empting ageing requires a tougher adjustment in countries with higher initial debt. The same conclusions is attained if the discretionary policy effort is proxied by the "tax gap" or other similar indicators.

The calculations are sensitive to the assumptions on the interest rate-growth rate differential. In case the effective interest rate on government debt is set at 5% and the differential thus narrows to 1%, the budget target needs to be set at a more ambitious level to ensure that the reduction in interest payments makes enough room to deal with the budgetary consequences of ageing. However, as in the discussion above, the opposite holds if we look at the primary balance.

The above discussion shows that the achievement of ambitions fiscal targets would allow Member States, especially those with high debt ratios, to meet the worsening of the demographic situation after 2010 with smaller public debts and, consequently, lower interest payments. Whether EU member should factor in directly a "long run safety margin" in their medium term targets is however debatable. First of all, the **political feasibility** of front-loading is far from certain as it would imply a sizeable increase in historically high primary surpluses at least in an initial period[5]. Furthermore, fiscal and political feasibility does not necessarily imply the **economic and social desirability** of such a "pre-funding" strategy. On the one hand, the relief in terms of lower interest payments may allow a certain gradualism in implementing - politically unpopular - structural reforms, especially in the pension system. On the other hand, this shift in spending within the budget (less interest burden covering up for higher pension spending) may create a feeling of complacency, thereby delaying further the necessary structural measures[6]. Adding a long run safety margin in the medium term targets may also be questioned if one considers its implications for the macroeconomic fiscal stance (risk of deflationary fiscal impulse), the quality of public finances (higher current transfers, strong incentives to curtail further public investment or to increase taxation to create the extra-room for manoeuvre), the objective of raising participation rates (by curtailing early exits from the labour market via pre-pension schemes), and intergenerational equity (the current generations having to face much higher primary surpluses than future generations).

These considerations caution the idea of mechanically incorporating a supplementary fiscal adjustment into the medium term targets to pre-empt fully, via a lower interest burden, the budgetary

---

[5]   In a simple version of the Barro-Gordon model, Buti *et al.* (1998) show that in order to ensure political feasibility, the agreed upon speed of public debt towards the 60% of GDP target cannot be "too high".

[6]   More generally, requiring to maintain a fixed cyclically-adjusted position may discourage the implementation of more radical reforms of pension systems (such as those involving a greater role for funding). This is the case if the "double burden" on the current generation of moving from PAYG to funding involves a rise in spending during a transition period, which will have to be compensated to maintain a close-to-balance position.

consequences of ageing. In short, while ambitious targets help in reducing the fiscal fragility and create some room to accommodate the budgetary implications of ageing, they should not be regarded as a substitute for reforms tackling at source the causes of the budgetary imbalances. The necessity of structural reforms in welfare systems and measures to raise labour force participation to ensure the long term sustainability of public finances even in the case of ambitious fiscal targets is stressed in the paper by Brunila. As put forward by Tuukkanen, a mixed pension system would be adequate in withstanding the budgetary pressures of ageing, provided that the parameters of the first pillar are changed accordingly.

Does the SGP hinder the move to funding?

Another allegation against the SGP is that it may hinder radical pension reforms such as those involving a shift from PAYG systems to funding. Since, according to the national accounting rules, any transfer to entities outside general government is classified as expenditure, the SGP "likely deters MS (particularly those whose fiscal positions are already close to Maastricht and Pact thresholds) putting aside a regular contribution to pre-fund future … pension liabilities, so constituting a perverse incentive from a policy perspective" (Cronin and McCoy).

Whilst it is true that countries close to the 3% ceiling would find it difficult to divert social security contributions to a fund outside general government, the opposite holds in the case of budget surpluses due to buoyant economic growth. In such a case, transferring part of the "growth dividend" to a pension fund would reduce the budget surpluses in "good times", but help to reduce spending in the future (and thus deficit in "bad times") once the fund will start paying out pensions[7].

This "intertemporal shift" can be illustrated by going back to the simple calculations on the budgetary adjustment needed to pre-empt the budgetary consequences of ageing. Under a number of assumptions, the

_____

[7] In the case of a fund classified within general government, a pre-funding strategy may still be useful. Indeed, it may be argued that the main advantages of such a fund might be to secure structural surpluses arising in various social security funds and to avoid the improper use of automatic stabilisers during upswings.

budgetary positions computed in Table 1 ensure that the *overall* interest savings offset the *overall* rise in age-related spending over the period *0-T*. However, as shown in Graph 2, this is not true on a year by year basis.

Interest savings are higher in the first several years and lower in latter years. This is due to the fact that the fall in the interest burden is higher at the beginning of the period because of the higher stock of public debt. On the contrary, the budgetary effects of ageing are likely to show the opposite path. In the example pictured in Graph 2, in which, as in the calculations above, the increase in age-related spending is assumed to be linear, there is an improvement in the budget position until 2019 and a deterioration in subsequent years. If such deterioration is sizeable, the respect of close to balance rule may be called into questions[8]. Clearly, far-sighted policy makers could have an incentive to pre-fund pensions by allocating the interest saving in excess of the rise in spending to a fund so as to benefit from lower spending (and avoid the budget deterioration) down the line.

While the above analyses shows that the accounting rules of the SGP and the partial shift to funding may not be incompatible, a sudden fully-fledged move from PAYG to funding may be less easy to accommodate within the current fiscal framework. As pointed out by Tuukkanen, "the adoption of a funded system usually raises pension contributions significantly because both pensions currently being disbursed and future pensions must be funded". A way to spread the so-called "double burden" over present and future generations is through issuance of public debt. However, in view of the sheer size of the effect[9], not only the SGP, but the Maastricht criteria would have to be overhauled thereby calling into question the stability-oriented framework of EMU fiscal policy.

_____

[8]   Notice that, in reality, the effect on the budget balance would likely be stronger since most studies show that the demographic impact on the budget takes off slowly and accelerate after 2010.

[9]   See Boldrin et al.(1999) for a recent quantification.

Graph 2. Ageing impact and interest savings
(% of GDP)
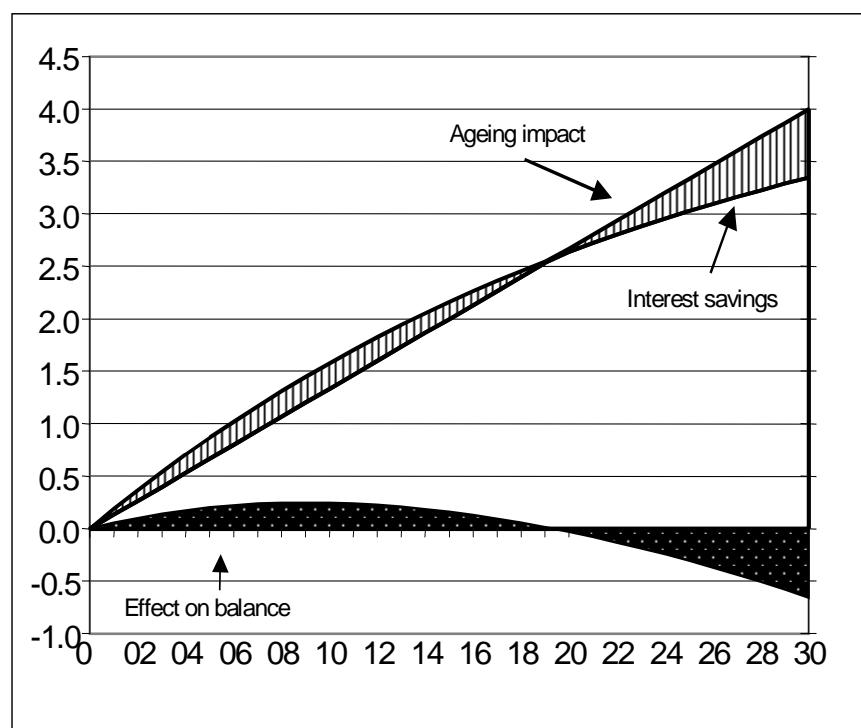
4 SGP and catching up

Is the SGP suited for an economy still in a catching up phase? As stressed by Cronin and McCoy, "an economy that has under-utilised or underdeveloped capital or deficient infrastructure may need to run larger budget deficits than allowed for under the SGP in order to move onto a higher growth path".

More generally, this allegation concerns the "difficult cohabitation" between the SGP and the so-called "golden rule" of deficit financing (Balassone and Franco, 1999). Under this rule, governments are only allowed to borrow in order to finance government investment. Thus, it is assumed under this rule that debt accumulated to finance investment spending can be serviced and repaid by the returns on the investment

project. These effects can also play indirectly to the extent that government investment fosters economic growth and employment, thus increasing the tax base and generating higher tax revenue under a given tax system.

However, the "golden rule" may not be an optimal policy guidepost for budgetary authorities. As pointed out in the literature[10], such a rule may introduce an unwelcome bias in favour of investment in infrastructure against investment in human capital; create incentives for governments to classify current expenditure as capital spending; hamper the conduct of stabilisation policies during recessions. Such potential shortcomings are important also in the case of catching up economies.

While the "golden rule" may not be an adequate alternative for the SGP, the latter may still be unduly constraining in the case of countries in a catching up phase. However, a distinction has to be made between countries lagging behind which need growth to accelerate in the next years, and countries well under way on the catching up process, which may expect growth to slow down in the future. For an economy belonging to the first group, a level of public investment higher than that allowed by a strict respect of the close-to-balance rule may be important to kick start the catching up process. However, the conclusion is less clear-cut in the case of an economy in the "second phase" of catching up such as Ireland and possibly the other low income countries in the EU.

The accounting consistency between public investment and the close to balance rule is illustrated in a simplified fashion in Annex 2. A "catching up compatible" time profile of public investment is a high level of public investment during the first phase of catching up followed by a gradual reduction of it towards a level prevailing in mature economies. Under the close to balance rule, a condition for this to be attained is a relatively low starting point of the debt ratio which would allow the "budgetary dividend" generated by the high growth to exceed the interest burden on public debt thereby making room for a high level of public investment. Actually this has been the experience of several European

_____

[10]   For a forceful criticism of the "golden rule" as a guide for budgetary behaviour, see Buiter (1998).

Graph 3. Public investment dynamics

$$\dot{\kappa} = 0, \text{ under } d* = 0 \rightarrow y = (i\pi b + \alpha\beta y*)/(\alpha\beta - ib)$$
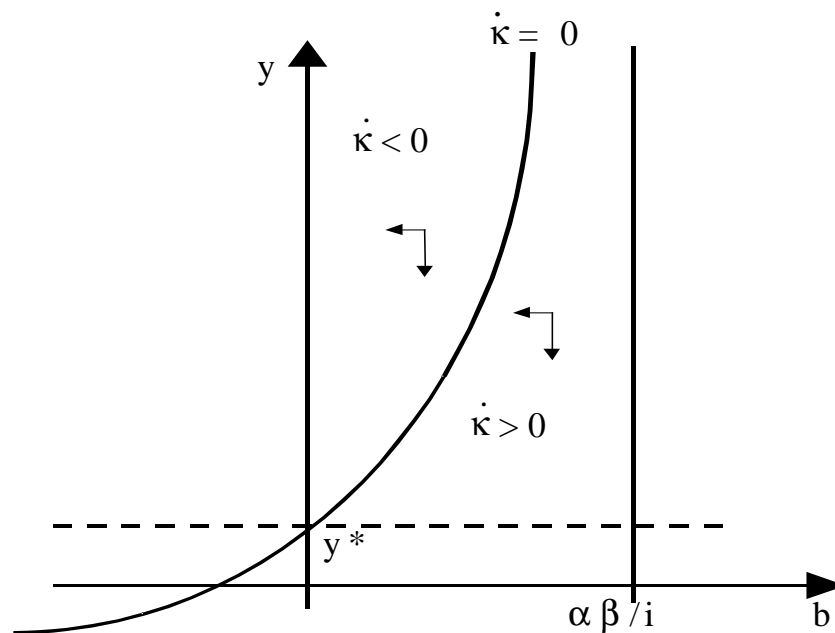
countries in the 1950s and 1960s, where high levels of public investment proved compatible with "close to balance" budget positions. Over time, as growth converges to a new, lower steady state, the surplus on the primary current account shrinks, thereby requiring a falling investment ratio to respect the medium term budget target.

The dynamics of public investment is presented in graph (3) where the $\dot{k} = 0$ locus gives the combination of the growth rate and the stock of debt which imply a stable investment ratio over the adjustment

process. Given the assumption of a balanced budget target, the economy will converge to *y=y** and *b=0*. As shown in the graph, the convergence towards the equilibrium can be from the right or from the left of $\dot{k} = 0$. While in the first case public investment increases over time from a low level, in the second case it follows a decreasing time path from a high initial level, consistently with a hump-shaped profile over the adjustment period.

5   Conclusions

This brief paper has argued that:

- There is no contradiction between fiscal discipline and stabilisation. On the contrary, sound budgetary positions in "normal" times are important to use of fiscal policy for stabilisation purposes in slowdowns.

- Sound public finances, by entailing a fall in the stock of debt reduce fiscal fragility and contributes to pre-empt, at least partly, the budgetary implications of ageing populations. However, fiscal prudence is not a substitute for structural reforms tackling at source the budgetary imbalances brought about by demographic pressures.

- The present accounting rules provide incentives to shift resources to a reserve fund during periods of cyclical upswing generating high surpluses or in the event of one-off revenue. However, the combination of the accounting rules and the close to balance target of the SGP may not provide incentives to pre-fund future pension liabilities in "normal" and "bad" times.

- There may be a problem of compatibility between the SGP and the level of public investment required by catching up economies. This possible contradiction is more likely to occur in the kick off phase of catching up. Instead, for "second phase" catching up countries the close-to-balance rule does not appear unduly constraining.

ANNEX 1

Pre-empting ageing

Let us call B the cumulated effect of the fall in debt service burden brought about by a fall in the stock of debt over the period 0-T:

$$B = i\int_0^T (b(0) - b(t))dt \tag{1}$$

where the symbols have the usual meaning. By substituting in (1) the expression for $b(t)$ from the government budget constraint and solving the integral, we obtain:

$$B = i\left[T - \frac{1}{y+\pi} + \frac{e^{-(y+\pi)T}}{y+\pi}\right]\left\{b(0) - \frac{\overline{d}}{y+\pi}\right\} \tag{2}$$

In the simulations, d is the budget deficit, and $y+\pi$ is rate of growth of nominal GDP. Nominal interest rate and GDP growth are assumed to be given.

Given A the estimated exogenous effect on the budget of the ageing of the population over the period 0-T, and setting $A = -B$, we can solve for the budget balance which would allow the overall budgetary effect of ageing to be offset by a reduction in the interest burden:

$$d = \frac{A(y+\pi)}{i\left[T - \dfrac{1 - e^{-(y+\pi)T}}{y+\pi}\right]} - b(0)(y+\pi) \tag{3}$$

Calculations of d under various assumptions on the value of the parameters are presented in Table 1.

While *d* in equation (3) is a negative function of *b(0)*, it is easy to show that a country with a higher (lower) stock of debt requires a higher (lower) primary surplus to offset the budgetary impact of ageing. This is shown in equation (4) which gives the primary surplus required to offset a rise in age-related spending of A over the 0-T period:

$$s = (r\text{-}y)\left\{b(0) - \frac{A}{i\left[T + \dfrac{1 - e^{(r-y)T}}{r - y}\right]}\right\} \qquad (4)$$

ANNEX 2

Catching up and the close to balance rule: an accounting exercise

Let us define d^* as the medium-term target compatible with the close to balance rule of the SGP:

$$d^* = c + k + ib \tag{5}$$

where c and k are, respectively, the current account and the capital account of the budget and ib is the interest burden. The nominal interest rate, i, is assumed to be exogenously given.

Buoyant economic growth has a favourable impact on the budget via lower spending and higher revenue. This effect is captured in equation (6):

$$c = c^* - \alpha(y - y^*) \tag{6}$$

where $y > y^*$ during the transition to the new steady state.

By substituting (6) in (5) and re-arranging, we obtain the expression of the public investment:

$$k = d^* - c^* + \alpha(y - y^*) - ib \tag{7}$$

Clearly, the higher the "growth dividend" and the lower the stock of debt, the higher will the public investment ratio.

It is assumed that GDP growth gradually converges to the new steady state:

$$\dot{y} = \beta(y^* - y) \tag{8}$$

The expression of public debt accumulation is the following:

$$\dot{b} = d^* - (y + \pi)b \tag{9}$$

Taking the derivative of (7) with respect to time, and after substitution of (8) and (9), we derive the dynamics of public investment of public investment during the transition to the new steady state:

$$\dot{k} = \alpha\beta(y*-y) - i\left[d*-(y+\pi)b\right] = \alpha\beta y * - i(d*-\pi b) + y(ib-\alpha\beta)$$

$$(10)$$

The first term on the right-hand side gives the reduction over time of the current account surplus due to the slowdown in growth. The second term is the fall in the interest burden brought about by a lower debt ratio. As the two terms have opposite signs, the net effect is ambiguous.

REFERENCES

Artis, M.J. and M. Buti (2000), "Close to Balance or in Surplus – A Policy Makers "Guide to the implementation of the Stability and Growth Pact", *Journal of Common Market Studies*, forthcoming.

Balassone, F. and D. Franco (2000), "Public Investment, the Stability Pact and the Golden Rule" *Fiscal Studies,* Vol. 21, No. 2, pp. 207-229.

Barrell, R. and A. Pina (2000), "How Important are Automatic Stabilizers in Europe?", *EUI Working Papers*, ECO, No. 2.

Boldrin, M., J.J. Dolado, J.F. Jimeno and F. Peracchi (1999), "The Future of Pensions in Europe", *Economic Policy*, No. 29.

Buiter, W. (1998), "Notes on 'A Code for Fiscal Stability'", CEPR Discussion Paper, No. 1831.

Buti, M., D. Franco and H. Ongena (1997), "Budgetary Policies during Recessions: Retrospective Application of the 'Stability and Growth Pact' to the Post-War Period", *Recherches Economiques de Louvain*, No. 63 (4), pp. 321-66.

_____(1998), "Fiscal Discipline and Flexibility in EMU: the Implementation of the Stability and Growth Pact", *Oxford Review of Economic Policy*, No. 14 (3), pp. 81-97.

European Commission (1999), "Budgetary Surveillance in EMU: the New Stability and Convergence Programmes", *European Economy*, Supplement A, No. 2/3.

_____ (2000), "Public Finances in EMU- 2000", *European Economy - Reports and Studies*, forthcoming.

Franco, D. and T. Munzi (1997), "Ageing and Fiscal Policies in the European Union", in *European Economy - Reports and Studies*, 4. Reprinted in M. Buti, D. Franco and L.R. Pench (eds.), *The Welfare State in Europe – Challenges and Reforms*, Edward Elgar, 1999.

Mélitz, J. (1997), "Some Cross-country Evidence about Debt, Deficits, and the Behaviour of Monetary and Fiscal Authorities", CEPR Discussion Paper, No. 1653.

Perotti, R. (1999), "Fiscal Policy in Good Times and Bad", *Quarterly Journal of Economics*, pp. 1399-436.

Sutherland, A. (1997), "Fiscal Crises and Aggregate Demand: Can High Public Debt Reverse the Effects of Fiscal Policy?", *Journal of Public Economics*, No. 65, pp. 147-62.