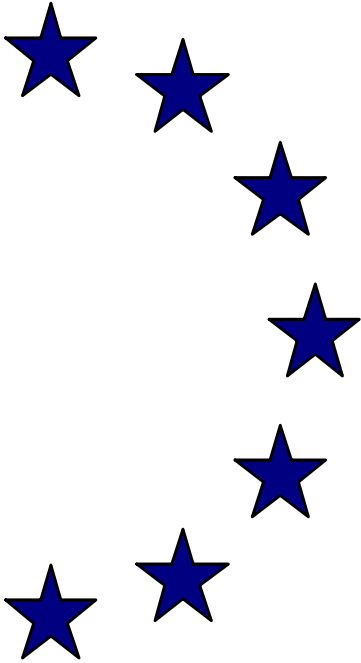


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**Improving fiscal policy in the EU:
the case for independent forecasts**

by

Lars Jonung and Martin Larch

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IMPROVING FISCAL POLICY IN THE EU: THE CASE FOR INDEPENDENT FORECASTS

Lars Jonung and Martin Larch

July 2004

Abstract: The evidence from several euro-area countries demonstrates the existence of a forecast bias in the budgetary process, which negatively affects fiscal performance. To remedy this bias, we suggest that forecasting should be assigned to an authority independent from the ministry of finance and the government, with the task of producing unbiased projections of growth and other variables crucial for the budgetary process. The ministry of finance should then be obliged to adopt these forecasts in the preparation of the official budget, thereby revealing *ex ante* its true preference concerning the size of the budget balance. The usefulness of our proposal is corroborated by the experience of a small number of EU Member States which already apply similar arrangements.

The forecasting authority should be designed in such a way as to give it strong incentives to produce unbiased forecasts. This could most easily be accomplished by giving it a high degree of independence, similar to that of the national central banks in the ECB-system and of the central banks in countries such as New Zealand, Sweden and the United Kingdom. The forecasting authority – like a modern central bank – should be protected by legislation from domestic political pressure. We also set our recommendation in a wider context by comparing it to recent proposals for fiscal policy reform in the EU. Regardless of what other option for fiscal reform is pursued, our proposal would serve as a constructive complement.

JEL classification: E6, F02 and H60.

Comments invited to Lars.Jonung@cec.eu.int and Martin.Larch@cec.eu.int

Please note: The views and opinions expressed here are those of the authors. They do not represent the views of DG ECFIN.

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IMPROVING FISCAL POLICY IN THE EU: THE CASE FOR INDEPENDENT FORECASTS

1. INTRODUCTION¹

How should the fiscal policy process of the Member States of the EU be designed? This question is presently the subject of lively discussion among policy-makers and economists alike. The debate has been fuelled by the recent controversy concerning the budgetary positions of Germany and France, which culminated in the ECOFIN decision of November 25, 2003. It has set off a flood of comments and proposals for re-interpreting, revising or modifying the Stability and Growth Pact (SGP), the legal framework for fiscal policy-making within the EU.²

However, the debate goes back much further in time. Ever since the decision to create a European monetary union, economists have debated the proper role and framework for fiscal policy-making within a monetary union where monetary policy is centralized in one institution while fiscal policy-making is decentralized to the governments of the Member States (though remaining subject to a common legal framework concerning criteria for domestic debt and deficits). This is a historically unique situation. Never before has a group of independent nation states handed over their monetary sovereignty to a central monetary authority, while maintaining fiscal sovereignty – that is the right to tax and spend – within the nation-state.³ In short, the fundamental question is: How and to what extent – if any – should fiscal policies be co-ordinated across the euro area?

Many of the proposals for reform advanced by economists are inspired by the rule-bound strategy for monetary policy, which currently represents the mainstream stabilization policy paradigm. It is embedded in the design of the ECB-system and in that of other independent central banks. According to the prevailing consensus within the economics profession, central banks should have a high degree of independence from the political system and be assigned an explicit target for inflation. In this way, the incentives for short-run political manipulations of the economy are minimized, while monetary policy-makers can focus on long-run objectives concerning price stability.

This policy framework is commonly regarded as successful where it is presently applied, such as Canada, New Zealand, Sweden, United Kingdom, and in the euro area. In short, monetary policy has been taken out of the political sphere – it has been depoliticized – and given to independent experts and bureaucrats to administer.

To what extent could this approach be carried over to fiscal policy-making? Can and should fiscal policy be made as rules-based as monetary policy at the expense of fiscal discretion? Several recommendations in this direction have recently been put forward.

¹ This paper has benefited from comments by Michael Artis, Robert Boije, Elena Flores, Heikki Oksanen and Jan Schmidt. Editorial help by Sophie Bland is gratefully acknowledged. Any remaining errors are the sole responsibility of the authors. The views and opinions expressed here are those of the authors. They do not represent the views of DG ECFIN.

² See for example Fatás et al. (2003) and Gros et al. (2004).

³ On this point see Jonung (2002).

Most are based on institutional reforms concerning the establishment of a new fiscal authority that is more or less independent of the elected government and the parliament.⁴ The power proposed for the new fiscal authority ranges from that of being an advisory council to a full-fledged fiscal policy-making body. The most far-reaching recommendation is to take the task of short-run stabilization of the domestic economy from the ministry of finance/the government and delegate it to a fiscal authority or a fiscal policy committee, which would be designed to be as independent from day-to-day politics as central banks are at present.⁵

Despite the apparent weaknesses of the current fiscal framework in the EU and the increasing number of mostly academic voices proposing a more or less complete retreat of politics from the field of fiscal policy, the time is probably not yet ripe for a full move towards an independent fiscal authority. Political resistance is likely to be high.

The purpose of this paper is to present a proposal for improving the fiscal policy process in the EU. We believe that our proposal strikes a compromise between the need for less politics in fiscal policy on the one hand and political feasibility on the other. Our aim is to reduce and even eliminate the forecast bias found in official budgetary projections of some large euro-area countries.

The use of biased official growth forecasts partly explains the dismal performance of fiscal consolidation that has been observed in recent years in the EU. Specifically, budgetary plans are recurrently built upon overoptimistic projections of macroeconomic variables to make the budget balance look better *ex ante*, and then, *ex post*, blaming the worse-than-expected outcome on bad luck or other circumstances. In this way, the bias concerning economic growth translates into a more expansionary fiscal policy than one based on unbiased estimates, and in turn into a faster accumulation of debt.

Our proposal to eliminate the forecast bias (more precisely the optimism bias) is to depoliticize the production of the economic forecasts underpinning budgetary plans by assigning the task of forecasting to an independent authority. This is clearly less far-reaching than the more radical reform recommendations that have recently been made, yet superior in terms of its political feasibility. It can be justified on the grounds that producing economic forecast is not the ‘core business’ of governments and, since it requires technical expertise, it may easily be left to non-political experts. This is confirmed by the fact that a number of EU Member States already use economic forecasts produced by independent authorities for budgetary policy framing.

The structure of the paper is as follows. In section 2 we describe the forecast biases in the present fiscal policy-making process. This represents the positive analysis that underlies the normative policy recommendations that follow in section 3. Next, in section 4, we set our recommendation in a wider context, comparing it to recent proposals for fiscal policy reform in the EU. Section 5 summarizes.

⁴ For a recent survey see for example Calmfors (2003).

⁵ See for example Fatás et al (2003), who propose a sustainability council, and Wren-Lewis (2002) who argues in favour of a fiscal regulator.

2. FORECAST BIASES IN THE PRESENT FISCAL POLICY MAKING PROCESS

The strategic role of economic forecasts in budgetary policy is a recurring theme in the fiscal policy literature. Analysing budgetary plans versus outcomes in the USA over the 1980s and 1990s, Auerbach (1994) shows that from a purely empirical point of view economic forecast errors consistently account for the deterioration in fiscal position over a relatively long period of time. In a political economy context, Alesina and Perotti (1996) briefly make reference to the common practice of adopting over-optimistic projections of macroeconomic variables with a view to improving the budget balance *ex ante* and then, *ex post*, blaming the outcome on bad luck. Analysing the accuracy of fiscal forecasts produced by international organisations, Artis and Marcellino (2001) acknowledge the key role of economic projections for fiscal policy outcomes, pointing out that poor forecasts underpinning budgetary plans could severely compromise existing fiscal frameworks.

In this section we turn to the experience in the EU, examining how economic forecasts underpinning budgetary plans in EU member countries affect their fiscal stance. We show that persistent optimism in projecting growth in the planning phase of the budget coupled with inertia in the execution of the budget translates into a significant deficit bias. This bias is not detected by the cyclically-adjusted primary budget balance to GDP ratio (henceforth referred to as CAPB) generally used to gauge the fiscal stance. Our conclusions draw heavily on the analysis of Larch and Salto (2003).

Larch and Salto (2003) clarify the link between forecast errors and the fiscal stance by examining the traditional reading of the CAPB, the single most important indicator used for gauging the behaviour of fiscal policy-makers. Conventionally, changes in the CAPB, as opposed to purely cyclical variation in the budget, are taken to signal deliberate or discretionary actions by fiscal authorities.⁶ However, as demonstrated below both analytically and empirically, this interpretation is misleading.

The accuracy of economic forecasts and the readiness to correct for forecast errors can have – and has had in the past – a significant impact on the fiscal stance on top of genuine discretionary policy measures. In particular, lower than officially projected economic growth rates coupled with no or little adjustment of non-cyclical expenditure in the execution of the budget lead to deterioration in the CAPB. Moreover, a systematic bias in the economic growth forecast generally translates into a deficit bias and, *ceteris paribus*, into a faster accumulation of debt.⁷

⁶ Prominent examples are the IMF in its *World Economic Outlook* and the OECD in its *Economic Outlook*, where both institutions regularly comment on fiscal positions in structural terms, associating changes in the cyclically-adjusted primary deficit with discretionary policy interventions. Similarly, in its annual report on public finances in the Economic and Monetary Union (EMU) and, more importantly, in assessing the stability programmes of the Member States under the provisions of the Stability and Growth Pact, the European Commission gauges the discretionary effort of fiscal policy by changes in the CAPB.

⁷ The CAPB is expressed in percent of potential GDP to show the medium-term orientation of fiscal policy. Hence, forecast errors of economic growth matter only to the extent that they affect potential output. However, since potential output is typically extracted from real GDP data, including short- and medium-term forecasts, it follows that any revision of real GDP will also affect the estimate of potential output and, in turn, the CAPB.

2.1. Forecast errors and the fiscal stance in theory

In this section we examine the mechanics of the CAPB. Specifically, we demonstrate that the behavioural assumption underlying the traditional reading of the indicator - according to which fiscal authorities fully control the fiscal stance – may distort the assessment of fiscal policy, especially as regards the role of budgetary forecasts.

Using a simple analytical framework in continuous time, the CAPB in period t can be written as a function of discretionary fiscal policy measures denoted as fp_t and potential output y_t^P , i.e.

$$(1) \quad capb_t(fp_t, y_t^P) = r_t^s(fp_t, y_t^P) - g_t^s(fp_t, y_t^P)$$

where r_t^s and g_t^s are the non-cyclical revenue and non-cyclical primary expenditure ratios, respectively, both expressed in percentage of potential GDP. The change in the CAPB is obtained by taking the total differential of (1):

$$(2) \quad dcapb_t = \left[\frac{\partial r_t^s}{\partial fp_t} - \frac{\partial g_t^s}{\partial fp_t} \right] dfp_t + \left(\frac{\partial r_t^s}{\partial y_t^P} y_t^P - \frac{\partial g_t^s}{\partial y_t^P} y_t^P \right) \frac{dy_t^P}{y_t^P}.$$

Noting that the two expressions in round brackets represent semi-elasticities, the notation can be simplified to give:

$$(3) \quad = \left[\frac{\partial r_t^s}{\partial fp_t} - \frac{\partial g_t^s}{\partial fp_t} \right] dfp_t + (\varepsilon_r^{y^P} - \varepsilon_g^{y^P}) \frac{dy_t^P}{y_t^P}.$$

Equation (3) essentially makes clear that in addition to the effect of discretionary fiscal policy, captured by the first term, changes in the CAPB will also depend on how non-cyclical revenues and primary expenditures are assumed to be linked to economic growth. In current practice, changes in the CAPB are taken to exclusively reflect discretionary fiscal policy, which can be true only if the CAPB is neutral with respect to underlying economic growth, i.e. $\varepsilon_r^{y^P} = \varepsilon_g^{y^P}$. This is a very radical and thus not generally valid proposition.

On the revenue side it is reasonable to assume that any variation in the underlying rate of growth will automatically translate into a corresponding variation in governments' receipts as, under unchanged fiscal policy, tax bases should bear a stable relationship to the level of economic activity. If this is the case, the elasticity remains the same from an *ex ante* and an *ex post* point of view, i.e. in planning and execution.

Turning to the expenditure side, things are less clear-cut. The existence of a stable relationship between non-cyclical expenditures and the level of underlying activity cannot be taken for granted, unlike for non-cyclical revenues. Admittedly, in the planning stage of the budget, the level of expenditures may generally be set in accord with projected revenues. However, any relationship between expenditure and economic activity that may hold *ex ante* will break down in the execution phase of the budget once inertia comes into play.

Any form of inertia on the side of the fiscal authorities – be it due to institutional hurdles, political constraints or simply lags – in the event of higher or lower than expected growth uncouples expenditure from the level of economic activity. In other words, an over- or underestimation of economic growth coupled with inertia in the execution of the budget will result in a deterioration or improvement in the CAPB compared to planned outcomes, even if fiscal authorities do not take any policy measures.

Taking into account the distinction between *ex ante* and *ex post*, that is planning and execution, and assuming that discretionary measures are implemented according to plans, equation (3) becomes

$$(4) \quad dcapb_t = \left[\frac{\partial r_t^s}{\partial p_t} - \frac{\partial g_t^s}{\partial p_t} \right] dp_t + (\varepsilon_r^{y^p} - \varepsilon_g^{y^p}) \left(\frac{dy_t^p}{y_t^p} - E_{t-1} \frac{dy_t^p}{y_t^p} \right) + (E_{t-1} \varepsilon_r^{y^p} - E_{t-1} \varepsilon_g^{y^p}) E_{t-1} \frac{dy_t^p}{y_t^p}.$$

To the extent that the neutrality assumption is maintained in the planning phase of the budget ($E_{t-1} \varepsilon_r^{y^p} = E_{t-1} \varepsilon_g^{y^p}$), the last term on the right-hand side can be taken to be zero.

However, from an *ex post* point of view, the observed change in the CAPB will not be invariant with respect to forecast errors whenever inertia comes into play, meaning that

$$E_{t-1} \varepsilon_r^{y^p} = \varepsilon_r^{y^p} \neq \varepsilon_g^{y^p} \quad \text{for} \quad \left(\frac{dy_t^p}{y_t^p} - E_{t-1} \frac{dy_t^p}{y_t^p} \right) \neq 0.$$

Thus, changes in the CAPB will generally not reflect discretionary fiscal policy measures only. They also include what Larch and Salto (2003) call the effect of passive fiscal policy, i.e. inaction in the event of lower or higher-than-projected growth. In particular, on account of the inertia and complexity generally found in the fiscal policy-making processes, it is safe to assume that contemporaneous corrections for growth surprises will generally be limited.⁸

Splitting changes in the CAPB into passive fiscal and discretionary fiscal policy does not make any difference to the actual outcome of the CAPB itself. An improvement or deterioration of the CAPB is purely factual. However, there are clear lessons to be learned from the story of how the change in the CAPB came about. In a framework of fiscal consolidation, for instance, a deterioration of the CAPB generally prompts the conclusion that the fiscal authorities should refrain from increasing expenditures or reducing taxes, while it might actually be more appropriate to ask for greater prudence in setting up budgetary plans or to flag the absence of prompt reactions to counter the effects of lower-than-projected economic growth.

The practical difficulty with passive fiscal policy is that its importance will generally depend on the degree of inertia prevailing in the budgetary process. Hence, to correctly extract the effect of passive policy from observed changes in the CAPB, we would have to know exactly if and how much the fiscal authorities react to unexpected variations in

⁸ The importance of inertia in economic policy-making has been extensively discussed. One starting point is the famous argument concerning “long and variable lags” in monetary policy by Milton Friedman (1959), later reviewed by Blinder and Solow (1972) with reference to fiscal policy. More recently, political economy type of explanations for inaction and delay has been surveyed by Drazen (2000). In close connection with the issue of budgetary procedures, Halleberg, Strauch and von Hagen (2001) provide empirical evidence for fiscal policy inertia in the event of negative economic shocks.

the economic outlook, while the reaction is likely to be different in each instance within and between countries.

However, it may be assumed that the fiscal authorities do not adjust expenditure plans when faced with growth surprises. This assumption of complete inertia may seem fairly radical but it will generally represent a reasonably good approximation in view of the long lags with which economic growth is measured, coupled with the slowness of the political process to designing, approving and implementing correcting measures within the fiscal year.

Assuming full inertia, any departure from projected GDP affects the CAPB by an amount equal to the primary non-cyclical expenditure-to-GDP ratio for each percentage point of lower-than-expected GDP. If the tax system is not proportional, we would have to add the effect coming from the revenue side of the budget, which would, however, be comparatively small.⁹

2.2. Do forecast errors matter in practice?

A straightforward way to test the practical bearing of forecast errors on the fiscal stance is to include them as a variable in regressions examining the empirical relevance of fiscal rules as in Bohn (1998), Ballabriga and Martinez-Mongay (2002) or Gali and Perotti (2002). The idea underlying these regressions is that, in analogy to the well known Taylor rule for monetary policy, the behaviour of fiscal policy may be captured by a relatively simple equation involving a few key variables. If forecast errors were relevant in practice, they should turn out to be significant in explaining the CAPB. In our case, using budgetary data for the four largest EU economies (Germany, France, the United Kingdom and Italy) for the 1987-2003 period, the following specification is adopted:

$$(5) \quad capb_t = \beta_1 + \beta_2 \left(E_{t-1} \frac{\Delta Y_t^P}{Y_t^P} - \frac{\Delta Y_t^P}{Y_t^P} \right) + \sum_{i=1}^n \beta_{3,i} d_{t-i} + \sum_{i=1}^m \beta_{4,i} b_{t-i} + e_t$$

where *capb* is the cyclically-adjusted primary budget balance, *d* government debt, *b* the actual budget balance, all in percent of GDP. The expression in round brackets measures the size of the error on the one-year-out forecast for potential output growth. A negative sign of the β_2 coefficient would signal that, in line with our analysis, an overestimation of growth coupled with inertia affects the CAPB.

Other than in Germany, the official macroeconomic scenario underpinning budgetary projections does not include an explicit forecast of potential output growth. However,

⁹ With full inertia on the expenditure side of the budget (i.e. the level of expenditure is taken to be fixed at the planned level), the effect of a growth surprise on the expenditure side is:

$$\frac{d \frac{E_{t-1} G_t}{y_t^P}}{dy_t^P} y_t^P \left(\frac{dy_t^P}{y_t^P} - E_{t-1} \frac{dy_t^P}{y_t^P} \right) = - \frac{E_{t-1} G_t}{y_t^P} \left(\frac{dy_t^P}{y_t^P} - E_{t-1} \frac{dy_t^P}{y_t^P} \right).$$

By contrast, the effect on the revenue side can be written as $\frac{dr_t^S}{dy_t^P} y_t^P \left(\frac{dy_t^P}{y_t^P} - E_{t-1} \frac{dy_t^P}{y_t^P} \right) = \varepsilon_r^{y^P} \left(\frac{dy_t^P}{y_t^P} - E_{t-1} \frac{dy_t^P}{y_t^P} \right)$, where

$\varepsilon_r^{y^P}$ will generally be close or equal to zero.

estimates were obtained from official forecasts for actual GDP using the Hodrick-Prescott (HP) filter.¹⁰ To ensure sufficiently robust estimates of potential output, our choice of countries was also dictated by the availability of official medium-term growth forecast. In Italy and the United Kingdom, the official macroeconomic forecast includes projections reaching beyond the year of the budget. In the case of France, the one-year-out forecast for economic growth was extended using a time series model before extracting the HP filter.

The results of our regression analysis presented in Table 1 support our assumption. The estimated values of the coefficient β_2 , capturing the effect of forecast errors, have a negative sign, implying that an optimistic prediction of potential growth affects the cyclically-adjusted fiscal position. Moreover, the coefficients of the other two explanatory variables, the debt-to-GDP ratio and the actual budget balance-to-GDP ratio, also have the expected sign. Due to the small number of observations (18 per country), test statistics are relatively poor when running the regression for each country individually. The estimated coefficients, especially those measuring the effect of prediction errors, are not uniformly significant across countries.¹¹ As expected, the estimation statistics improve considerably when the country data are pooled.

As the problem of inertia in the fiscal policy process is largely due to the political difficulty of changing spending commitments, the regression exercise is repeated by replacing the cyclically-adjusted primary balance with non-cyclical primary expenditure, in order to check the robustness of our finding. The results are reported in Table 2. The specification of equation (5) is slightly modified to account for the high degree of auto-correlation in the expenditure series. The lagged dependent variable is included in addition to the prediction error and the debt-to-GDP ratio. The role of the actual budget balance in explaining non-cyclical primary expenditure is not statistically significant and regressions containing these terms are not presented. As before, regression results are in line with what we expect, i.e. optimism regarding growth in the planning phase of the budget swells the non-cyclical expenditure-to-GDP ratio. The β_2 coefficients estimated in the country-specific equations have a positive sign and are significantly different from zero, except for the United Kingdom. The role of forecast errors in explaining the CAPB is confirmed in the pooled regression.

¹⁰ One-step-ahead forecasts of potential output growth were derived from annual budget plans for each year of the 1987-2004 period by applying the HP filter to the real GDP series including the official forecast and accounting for the end-point problem. These forecasts were then compared with “actual” potential output growth, estimated via the HP filter from the complete historical real GDP series starting in 1960, plus the April 2004 Consensus Forecast for 2004.

¹¹ In the case of Italy the negative sign of β_2 is obtained only after including a dummy for the first three years of the 1990s. At the time, the Italian government was forced to enact restrictive fiscal packages to counter the risk of insolvency in a period of general economic slowdown, the degree of which was generally underestimated in the planning phase of the budget. As a result, the budgetary effect of overestimating growth was masked by the strong fiscal consolidation. The risk of insolvency is highlighted by Corsetti and Roubini (1993) who carried out statistical tests providing strong evidence that Italy’s fiscal policy was not sustainable in the early 1990s.

2.3. Are forecasts biased?

If official growth forecasts were unbiased, the effect of passive fiscal policy on the fiscal stance, as measured by changes in the CAPB, would have to be accepted as the price of uncertainty. It would not make sense to blame fiscal authorities for not perfectly anticipating the future. Passive fiscal policy could even have a positive impact by adding to the operation of automatic stabilizers. However, a completely different conclusion would be warranted if official growth projections turned out to suffer from some sort of structural optimism, systematically overrating the underlying growth of the economy. In that case, the excuse of uncertainty would no longer apply. Passive fiscal policy would give rise to a deficit bias.

Following the by now conventional approach pioneered by Theil (1966), the accuracy of official forecasts is checked by regressing the prediction errors of potential output growth on a constant α

$$E_{t-1} \frac{\Delta Y_t^P}{Y_t^P} - \frac{\Delta Y_t^P}{Y_t^P} = \alpha + \varepsilon_t \quad \varepsilon_t \sim N(0, \sigma)$$

and testing the null hypothesis of unbiasedness $H_0 : \alpha = 0$.

The estimation results reported in Table 3 show a clear tendency to overestimate the growth rate of actual and, as a result, also of potential output, notably in Italy and Germany. In the case of Italy, the average bias is around 0.6 percentage points per year. Similarly, the official German projections on average overrate the underlying speed of the economy by around half a percentage point each year. While the forecasts are slightly more accurate in the case of France, they also appear to embody some kind of structural optimism.

Only the British Treasury seems to produce unbiased growth projections. The estimated average forecast error is smaller than one decimal point and is not significant at the 10% confidence level. This is all the more remarkable as the official forecast of the Treasury for the period $t+1$ is generally presented in March of year t , whereas in the case of Italy, Germany and France the official forecast is presented later in the year.

Von Hagen et al. (2004) also find a varying degree of accuracy in official growth forecasts presented in the Stability and Convergence Programmes. In line with our results, they reveal a statistically significant optimism bias over the 1991-2002 period for Germany, Italy, Greece, Luxembourg, Portugal and Sweden. In addition, on the basis of a qualitative analysis, von Hagen et al. (2004) conclude that countries with the most optimistic growth outlooks are also those with the largest slippages from budgetary targets.

Forni and Momigliano (2004) corroborate the optimism bias. Analysing the behaviour of fiscal authorities in OECD countries, they identify a systematic misjudgement of cyclical conditions made when fiscal policies have been decided, thereby creating an expansive effect on the budget.

To sum up, we have demonstrated that over-optimistic forecasts of growth do impact on fiscal policy outcomes and the interpretation of those outcomes. The forecast bias together with the benchmark assumption of full inertia discussed above gives a rough estimate of the average annual deficit bias ensuing from passive fiscal policy. In the case

of Germany and Italy the bias is around 0.2-0.3% of GDP per year, as compared with ‘only’ one decimal point in the case of France, making it more difficult to judge the fiscal stance in Germany and Italy from an *ex ante* point of view, i.e. prior to execution of the budget.¹²

More importantly, the bias has a measurable impact on the debt-to-GDP ratio in the medium term. For instance, over the past five years, since the beginning of EMU, the optimism bias has, *ceteris paribus*, added around one percentage point to the debt-to-GDP ratio in Germany and Italy, and roughly half a percentage point to that of France. Going back in time, to the beginning of the 1990s, the cumulative effect rises to more than 2 percentage points in the case of Germany and Italy.

3. THE CASE FOR INDEPENDENT FISCAL FORECASTS

In this section we enter the realm of normative economics, as we move from the analysis of the fiscal forecasting process to consider the political economy of fiscal policy-making and possible remedies for the bias we have found.

3.1. Why is there a forecast bias?

The calculations presented above demonstrate the existence of a systematic forecast bias concerning growth; more specifically the growth rate is consistently overstated. The question then arises: why does this systematic forecast error occur? The most likely explanation is found in political economy considerations. Our working hypothesis is that ministries of finance and governments have an incentive to paint a rosier picture of the future than warranted by the evidence. In this way they appear successful, they can downplay the need for tax increases or other unpopular measures like reductions in government spending, and they can fulfil election promises.

More generally, the optimism bias is part of the game that governments play in many countries. This interpretation is supported by the political economy literature, which suggests that parties in power are prone to describe the economic future in a more optimistic manner than opposition parties judging for example from the comprehensive survey of models explaining electoral cycles or delay and inaction in economic policy by Drazen (2000). For instance, a government facing political constraints – because of powerful vested interests, the public goods nature of the effects of fiscal policy or *ex ante* uncertainty about the private benefits of reform policies – has an incentive to be overly optimistic on economic growth in the process of planning the budget in order to play down the need for fiscal consolidation.

The propensity to be too optimistic, the optimism bias, is documented by various empirical studies of official forecasts. It holds for growth as well as for other variables such as the rate of inflation.¹³ On the basis of an empirical analysis, von Hagen et al. (2004) conclude that the form of fiscal governance is an important factor explaining the bias in GDP growth forecasts. Countries with a fragmented government structure appear

¹² Although derived in a totally different way, these estimates are very similar to those produced by Forni and Momigliano (2004). According to them, the misjudgement of cyclical conditions has an average yearly impact of 0.2 % of GDP on the budget in about 60 % of the OECD countries.

¹³ See for example for Sweden, Hansson and Jonung (1981).

to be particularly prone to base budget plans on overoptimistic growth assumptions and to exhibit a greater degree of inertia when faced with unexpected shocks. For the United States, Bretschneider et al. (1989) report how political goals distort official forecasts.

3.2. An independent forecasting authority

How can the optimism bias be reduced or even eliminated? Essentially, there are two options. The first one is to improve the methods of forecasting *within* the existing institutional framework. In the past, economists would most likely have suggested this solution, as they tended to ignore the political incentive structure in which official budgets are made. This approach rests on the view that policy-makers act as benevolent non-political planners aiming at maximizing social welfare. This view has met with increasing scepticism in recent decades.

Today, the standard method for reform propagated by economists is to find better institutions than the existing ones, more precisely, to modify the institutional framework so as to diminish the problems created by the incentive structures facing politicians. This philosophy underlies recent reforms aimed at establishing more independent central banks. In this spirit we recommend that the task of producing forecasts of economic growth and other variables crucial for the budgetary process be assigned to an authority independent of the ministry of finance and the government.

The authority's forecast should be produced on a regular basis and given to the ministry of finance as well as being made known to the parliament, the media and the general public for scrutiny and debate. The ministry of finance should be obliged to adopt the forecasts obtained in the planning of the official budget. The use of any other numbers should be prohibited by the legislation pertaining to the budget.

The incentive structure of the forecasting authority should be designed in such a way that the authority has strong incentives to produce unbiased forecasts. This could most easily be accomplished by giving it a high degree of independence similar to that of the national central banks in the ECB-system and of the central banks in countries such as New Zealand, Sweden and Great Britain. The head of the forecasting authority should be appointed solely on merits and not for political considerations. The terms of the appointment of the head of the forecasting authority could include a clause whereby major forecast errors or systematic forecast errors could have an immediate and negative impact on his or her salary. A similar idea was proposed by Walsh (1995) for heads of central banks. Other incentive-compatible schemes could also be applied.

A major advantage of the proposed forecasting authority over current arrangements is that it will be easier to track its performance, as its forecasts are made public. After a couple of years it will be evident how well the short-run forecasts have turned out. Clearly, the assessment can not be made on a year-by-year basis as even unbiased forecasters will generally be off-target. The assessment period should be reasonably long, say 5 years, to make a meaningful judgement about the average forecast error.

The forecasting authority should be obliged to comment in public on its forecasting performance on a regular basis – similar to the process of communication between independent central banks and the public and political bodies. This process of enforced feedback from forecast errors into the forecasting process will enable the authority to learn from its past forecast behaviour. In short, the forecasting authority will be made accountable for its forecasts.

It will in fact be easier to monitor the record of the forecasting authority than the performance of central banks as the goals of monetary policy are expressed in less precisely defined terms than that of the forecasting authority. Central banks have more leeway in the interpretation of their performance. For example, they can argue that their goal is expressed in the medium term and concerns the behaviour of the rate of inflation within a targeted interval – which gives many degrees of freedom in interpreting their actions. In contrast, the forecasting authority can be tracked simply using the point estimates (the forecasts) it has published.

Another advantage of an independent forecasting authority is that it will strengthen the working of a democratic society by making the budgetary process more transparent, thus raising the quality of public debate and ensuring the accountability of fiscal policy. In particular, the independent forecasting authority would significantly restrict the possibility of the fiscal authorities to systematically overestimate growth, and hence future revenues *ex ante*, and then to blame bad fiscal performance on other developments *ex post*. Fiscal authorities would essentially be obliged to reveal their true preference concerning the size of the budget balance.

The establishment of an independent forecasting agency should be politically feasible as it would be easy to incorporate into the present institutional framework of EU Member States where other types of independent bodies such as central banks already exist.

A basic challenge is to find ways of minimizing the influence of domestic political pressure upon the forecasting authority. One way would be to have an international organization in charge of the forecasting authority, appointing its management and its staff of experts and bureaucrats, financing its activities and monitoring its performance. Economists have suggested this approach in various cases as a way of isolating an organization from domestic politics, thus maintaining its independence and guaranteeing a high-quality performance.

EU Member States could be asked to use the forecasts made by the Commission. These forecasts have proved to be unbiased in the past.¹⁴ The quality of the Commission forecasts could be improved upon if the Commission were to form the centre of a pan-European forecasting network comprising national forecasting authorities across EU Member States.

On the other hand, this type of institutional framework may be viewed as a controversial step towards centralization of fiscal policy-making within the EU. However, this is an inaccurate interpretation. The discretionary powers to design fiscal policies would still be in the hands of domestic bodies. These bodies, however, would benefit from unbiased forecasts.

To sum up, an independent forecasting authority will be associated with several advantages compared to the current system where the forecasting is done within the ministry of finance or by bodies influenced by political considerations. These advantages are briefly listed in Table 4.

¹⁴ See Keereman (1999). In addition, von Hagen et al. (2004) provide evidence suggesting that the Commission forecasts actually encompass projections presented in the Stability and Convergence programmes.

3.3. Would an independent forecasting authority make a difference within the EU?

Finance Ministers of most EU Member States mostly rely on ‘in-house’ macroeconomic forecasts for their budgetary plans. There are, however, a few exceptions, notably the Netherlands, Belgium and Austria, which have independent agencies making official growth projections. The legal basis for producing the forecast to be used for the budget varies considerably across the three countries ranging from a gentleman’s agreement in the case of Austria to a formal obligation in the case of Belgium. As regards their legal status, these agencies are all formally independent but receive most of their funds from the government.

A rough and straightforward test for actual ‘independence’ is to check the accuracy of the agencies’ projections. The less they are subject to pressure from the *principle*, i.e. the less the government and the ministry of finance can or do not try to exploit the strategic lever of optimistic macro forecasts for budgetary purposes, the more likely “outside” projections would be to have no bias or to be less biased than ‘in-house’ projections.

The results of the accuracy check, presented in Table 5, clearly confirm this view. The forecasts produced by all the agencies covered have no statistically significant bias. Thus, we have strong reasons to expect that the establishment of independent bodies for forecasting across EU Member States will improve forecasting for budgetary purposes.¹⁵

As mentioned, even an independent forecaster will make forecast errors. Hence, the impact of growth surprises coupled with inertia in the execution of the budget will not be eliminated on a year-by-year basis. However, to the extent that forecasts turn out to be unbiased in the medium and long term, the independent forecasting agency will definitely enhance overall fiscal performance.

4. COMPARISONS WITH OTHER PROPOSALS FOR FISCAL POLICY REFORM

The decision by the ECOFIN Council of November 25, 2003, which effectively suspended the SGP procedures, is the most recent episode of a ‘slow death by a thousand cuts’. The debate about the SGP had escalated well before this event. A whole industry of ‘SGP-therapists’ has sprung up, producing reform proposals ranging from minor suggestions on how to improve the existing fiscal framework to recommendations for completely new institutional arrangements. We will briefly review some of these proposals in order to compare them with our recommendations.

4.1. Reforming the Stability and Growth Pact: A brief overview

In Table 6 we summarize in a schematic, non-exhaustive manner a number of recent reform proposals concerning fiscal policy-making in the EU. The proposals are arranged according to whether they advocate new institutions or new procedures, and whether they favour a domestic or an international approach. Thus we arrive at a four-field system. We are aware that the proposals concerning the SGP can be analysed in alternative ways (for

¹⁵ In a study of the characteristics of state government revenues in the United States, Bretschneider et al. (1989) demonstrate that “forecast accuracy can be increased by having independent executive and legislative forecast agencies that have cooperative working relationships”.

example the proposals can be organized according to what is the prime goal of fiscal policy) but for our purpose Table 6 serves us well.

The more radical proposals, mainly launched in the wake of the increasing stress within the SGP framework over the past two years, tend to cluster in the lower part of Table 6 (quadrants III and IV). They build upon the creation of completely new independent fiscal policy institutions, inspired by the philosophy underlying independent central banks. Here we find proposals such as those of Wyplosz (2002), Calmfors (2003) and von Hagen (2003). Following the general notion of independent fiscal policy institutions advocated by Ball (1997) and Blinder (1997), the idea common to all of them is that implementation and enforcement of fiscal targets should be less partisan. Different points of view prevail as to whether the institution should operate on the domestic or the international level.

A second group of proposals (quadrant II) advocates changes of rules or procedures *within* the existing set of international institutions. Casella (2001) argues that the Commission and the Council should determine only the overall size of the EU budget balance and issue deficit permits that Member States can buy and sell. Other authors highlight the difficulties which ensue from the attempt to ensure long-term sustainability of public finances by imposing annual deficit targets. The suggested alternative is to adopt fiscal rules that take account of medium- to long-term developments.

The Debt Sustainability Pact by Pisani-Ferri (2002), the permanent balance by Buiter and Grafe (2003) and the variant of the Golden Rule suggested by Blanchard and Giavazzi (2003) are prominent examples. Eichengreen (2003) rejects the usefulness of numerical thresholds for the deficit or the debt arguing that the EU should focus on structural reforms through the use of an index of institutional reform.

Another group of proposals (quadrant I) essentially advocates improvements in the national budgetary processes as a complement to the existing international fiscal framework in Europe. These less radical proposals were put forward for instance by von Hagen (2002) and by Mills and Quinet (2001) at a time when the stress on the SGP was relatively mild.

Table 6 presents a veritable *smörgåsbord* of proposals, which begs the question: how is it possible that prominent economists hold such divergent views on the appropriate fiscal policy process in the EU? We suggest the following answer.

First of all, there is presently no common agreement concerning the proper goals and instruments for fiscal policy, the likely effects of fiscal policies and the institutions for fiscal policy-making, as there was in the heyday of the Keynesian fiscal policy paradigm in the 1960s and 1970s. A number of the proposals focus on fiscal sustainability, others on economic stabilisation and some on economic growth. Thus, the economics profession is not united behind one single model for fiscal policy.

Second, economists are facing a new scenario, namely that of designing fiscal policy for a monetary union where fiscal policy-making is decentralized to the members of the union whereas monetary policy is centralized in one common central bank. Framing

stabilization policies in the euro area actually represent a unique challenge different from that arising in the case of any other monetary union in history.¹⁶

In sharp contrast to this picture of diversity in opinion about fiscal policy-making, there is currently considerable conformity of views concerning the model for monetary policy. No major monetary economist questions the idea of an independent central bank with the goal of price stability. As long as this consensus remains strong, the economics profession will not challenge the ECB-system – in a way similar to the present critique of the SGP.¹⁷

4.2. Where does the independent forecasting authority fit in?

Where does our proposal for an independent forecasting authority fit among the other policy recommendations in Table 6? In fact, it is not an alternative to the proposals in Table 6 but rather a complement to all of them. An independent forecasting institution would be an important building block of any proposal for whatever fiscal framework one may favour, on either a domestic or international level. The importance of high-quality forecasts derives from the very nature of the budgetary process. As confirmed by the empirical results presented in section 2, budgetary plans coupled with a high degree of inertia essentially set the course for the actual fiscal outcome. Consequently, regardless of the framework one wants to build for the budgetary process to ensure specific objectives, unbiased forecasts – presumably produced by an independent authority – will always represent an improvement either in terms of fiscal performance or at least in terms of the accountability of discretionary fiscal policy.

The lack of bias in forecasts assumes additional importance for proposals, such as the Permanent Balance suggested by Buiters and Grafe (2003), where the focus is on medium-term developments rather than on annual targets. In those cases unbiased and possibly prudent medium-term projections of potential output will be crucial as the assessment of fiscal policy will abstract from developments during the calendar year. Any optimism will accumulate over the years and render corrections more difficult or painful.

5. SUMMARY

Empirical evidence demonstrates the existence of a forecast bias in the budgetary process of several large euro-area countries. This forecast bias negatively affects the fiscal policy-making process. To remedy this bias in the present process of fiscal policy-making, we suggest the establishment of an independent forecasting authority, i.e. independent of the ministry of finance and the government, with the sole task of producing forecasts of growth and of other variables crucial for the budgetary process. The importance and usefulness of our proposal is corroborated by the experience of a small number of Member States which already apply similar arrangements.

¹⁶ Fiscally independent countries have in the past formed monetary unions with a common currency, such as the Scandinavian union. See Jonung (2002). However, fiscal policy-making during peacetime conditions was not an issue prior to the Keynesian revolution.

¹⁷ The importance of a common policy paradigm for the stability of the euro area is stressed in Jonung (2002).

The forecasts of this authority should be produced on a regular basis and given to the ministry of finance as well as being made known to the parliament, the media and the general public for scrutiny and debate. The ministry of finance should be forced to use them in the preparation of the official budget. The use of any other numbers should be prohibited by the legislation pertaining to the budget process. Without the strategic use of economic forecasts, fiscal authorities would essentially be obliged to reveal their true preference concerning the size of the budget balance already in the planning phase.

The incentive structure of the forecasting authority should be designed to foster the production of unbiased forecasts. This could most easily be accomplished by giving it a high degree of independence, similar to that of the national central banks in the ECB-system and of the central banks in countries such as New Zealand, Sweden and United Kingdom. The head of the forecasting authority should be appointed solely on professional non-political merits. In short, the forecasting authority should be run by experts – protected by legislation from domestic political pressure. It should be open, transparent and accountable for its forecasts.

Another way to reduce dependence on national politics would be to shift the task of economic forecasting to an international institution. The European Commission is a possible candidate as its macroeconomic forecasts so far have a good track record, especially compared to those of the Member States.

We also set our recommendation for independent economic forecasts in a wider context, comparing it to recent proposals for fiscal policy reform in the EU. Here we demonstrate that regardless of which, if any, other options for reform are selected, our proposal would be a constructive complement. It also has the advantage of being a fairly straightforward and an inexpensive way of improving the fiscal process compared to other proposals.

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Table 1
The response of the primary cyclically-adjusted budget balance to prediction errors of potential growth

Country-specific regressions										
	Prediction error t		Government debt t-1		Budget balance t-1		Budget balance t-2		Dummy (‘91-‘93)	
	beta 2		beta 3		beta 4.1		beta 4.2			
	coeff.	p value	coeff.	p value	coeff.	p value	coeff.	p value	coeff.	p value
Germany	-2.59	(0.01)	0.13	(0.01)	0.15	(0.56)				
France	-1.23	(0.05)	0.02	(0.16)	0.78	(0.00)	-0.48	(0.05)		
Italy	-0.63	(0.40)	0.21	(0.00)	0.26	(0.00)			2.44	(0.00)
United Kingdom	-0.22	(0.82)	0.24	(0.00)	0.68	(0.00)				

Note: No. of obs. 18

Pooled regression for D, F, I, UK											
	Prediction error t		Government debt t-1		Budget balance t-1		Budget balance t-2		Dummy (‘91-‘93)		Fixed effects
	beta 2		beta 3		beta 4.1		beta 4.2				
	coeff.	p value	coeff.	p value	coeff.	p value	coeff.	p value	coeff.	p value	
	-1.21	(0.00)	0.09	(0.00)	0.71	(0.00)	-0.23	(0.03)			
Germany									-	-	-2.37
France									-	-	-2.67
Italy									2.87	(0.00)	-4.13
United Kingdom									-	-	-2.16

Note: No. of obs. 72

Table 2
The response of the non-cyclical primary expenditure to prediction errors of potential growth

Country-specific regressions						
	Cyclically-		Cyclically-		Government debt t-1	
	Prediction error t		adjusted primary		Government debt t-1	
	expenditure t-1		expenditure t-1			
	beta 2		beta 3		beta 4	
	coeff.	p value	coeff.	p value	coeff.	p value
Germany	2.1	(0.00)	0.67	(0.00)	-0.07	(0.06)
France	1.28	(0.03)	1.19	(0.00)	-0.01	(0.62)
Italy	0.75	(0.24)	0.61	(0.00)	-0.03	(0.09)
United Kingdom	-0.73	(0.45)	0.72	(0.00)	-0.21	(0.00)

Note: No. of obs. 18

Pooled regression for D, F, I, UK							
	Cyclically-		Cyclically-		Government debt t-1		Fixed effects
	Prediction error t		adjusted primary		Government debt t-1		
	expenditure t-1		expenditure t-1				
	beta 2		beta 3		beta 4		
	coeff.	p value	coeff.	p value	coeff.	p value	
	0.83	(0.00)	0.78	(0.00)	-0.03	(0.00)	
Germany							11.26
France							12.65
Italy							12.67
United Kingdom							10.03

Note: No. of obs. 72

Table 3

**Accuracy of potential and actual output growth forecasts underpinning public finance projections
1987-2004**

Country	Source of official forecast	Date of release	potential output		actual output	
			average error on one-year- ahead forecast	RMSE	average error on one-year- ahead forecast	RMSE
Germany	Finanzbericht	End of August	0.52*	0.71	0.61*	1.91
France	Projet de loi de finances	End of September/beginning of October	0.24*	0.45	0.42*	1.45
Italy	Documento di programmazione economico- finanziaria (DPEF)	End of June/beginning of July	0.59*	0.66	0.76*	1.39
UK	Financial Statement and Budget Report	End of March	0.01	0.3	-0.04	1.29

* Significantly different from 0 at 10%

Table 4

Perceived advantages of an independent forecasting authority	
1) Improved forecasts	An independent forecasting authority improves upon the fiscal process by producing unbiased forecasts or at least less biased forecasts than presently is the case in many EU Member States.
2) Improved transparency and democratic accountability	An independent forecasting authority will make the budgetary process more transparent and thus make the democratic process work better.
3) Low set-up costs	An independent forecasting authority can be set up quickly at fairly low cost.
4) Improved international cooperation	An independent forecasting authority will facilitate communication and exchange of ideas between national fiscal policy-making bodies and DG ECFIN, OECD, IMF and ECB.
5) Compatibility with institutional status quo	There are no major difficulties to incorporate the forecasting authority in the existing institutional framework. It will not require any major changes in the body of legislation, nor will it be difficult to incorporate it within the present institutional framework of EU Member States.
6) Delegation of technical tasks	Producing forecasts is not the 'core business' of the Government.

Note: The independent forecasting authority can be established and run either as a domestic institution or as an international organisation.

Table 5

Accuracy of independent GDP growth forecasts underpinning public finance projections

Country	Independent Forecaster	Date of release	Real GDP growth			
			1987-2003		1994-2003	
			average error on one-year-ahead forecast	RMSE	average error on one-year-ahead forecast	RMSE
Belgium	Bureau fédéral du Plan (BFP)	July/September			0.30	1.23
The Netherlands	Centraal Planbureau (CPB)	September	-0.18	1.41		
Austria	Wirtschaftsforschungsinstitut (WIFO)	September	-0.10	1.24		

* Significantly different from 0 at 10%

Table 6
Proposals for reform of EU fiscal policy-making.
A schematic representation.

	Domestic	International
Changes in procedures and rules	<p>(I)</p> <p style="padding-left: 40px;">Expenditure Rules: Mills and Quinet (2001)</p> <p style="padding-left: 40px;">Improving National Budgetary Process: von Hagen (2002)</p>	<p>(II)</p> <p style="padding-left: 40px;">Debt Stability Pact: Pisani-Ferry (2002)</p> <p style="padding-left: 40px;">Golden Rule: Blanchard and Giavazzi (2003)</p> <p style="padding-left: 40px;">Permanent Balance: Buiters and Grafe (2003)</p> <p style="padding-left: 40px;">Tradeable Deficit Permits: Casella (2001)</p> <p style="padding-left: 40px;">Index of Institutional Reforms: Eichengreen (2003)</p> <p style="padding-left: 40px;">Quality of Fiscal Policy: Beetsma and Debrun (2003)</p>
Changes in institutions	<p>(III)</p> <p style="padding-left: 40px;">Fiscal Policy Committee: Wyplosz (2002) Calmfors (2003)</p> <p style="padding-left: 40px;">Fiscal Regulator: Wren-Lewis (2002)</p>	<p>(IV)</p> <p style="padding-left: 40px;">Sustainability Council: von Hagen (2003)</p>

Note: The table covers a small yet, in our view, representative set of proposals for reforming the Stability and Growth Pact.