HOW CREDIBLE ARE MULTIANNUAL BUDGETARY PLANS IN THE EU?

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We investigate the track record of multiannual budgetary plans of EU Member States formulated in the Stability and Convergence Programmes and updates. The study is based on the analysis of an original database summarising the main macroeconomic and budgetary variables projected by the Member States in their Programmes under the original SGP. Results show that the failure to achieve the projected reductions in the general government deficit reflects primarily difficulties to adhere to expenditure plans in nominal terms. This does not seem to be due to particularly unfavourable macroeconomic developments, but rather to the difficulties of EU countries to implement the reforms which would have been necessary to respect the ambitious expenditure targets. On the revenue side, negative growth surprises have been relevant, but the effect is less important. Overall, conclusions point to a need for strengthening expenditure control mechanisms in most of the EU Member States.

1. Introduction

Over the years, the process of fiscal surveillance in the EU has provided a wealth of data on the short- to medium-term budgetary plans formulated by the EU countries. It is today well-known that there has been a divergence between budgetary commitments taken by Member States in their Stability and Convergence Programme (SP-CP) and implementation, so that the planned date for achieving the objective laid down in the original Stability and Growth Pact (SGP) of a medium-term budgetary position of "close-to-balance or in surplus" became a moving target (European Commission, 2002). Several attempts have been made to explain the divergence between plans and outcomes, focusing mostly on the role of the cycle and national budgetary institutions as explanatory factors. Strauch *et al.* (2004) have linked forecast biases for the budget balance to the cyclical position and differences in forms of fiscal governance across countries. Jonung and Larch (2004) have pointed to the role of optimistic growth forecast in explaining budgetary slippages – and hence made the case for delegating the preparation of macroeconomic forecasts underlying budgetary projections to independent institutions. European Commission (2005) showed that the difficulties to adhere to government balance objectives set in the SP-CPs were associated to the inability to achieve the projected decline in the government expenditure-to-GDP ratio.

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The existing literature has not yet addressed a crucial question: which part of the budgetary slippages can be attributed to a lack of implementation of planned measures and which part is due to forecast biases in economic growth.[1] This paper intends to go a step forward in the analysis of the sources of budgetary slippages. To this aim, we constructed a database summarising the main variables projected by the Member States in their SP-CP under the original SGP, *i.e.* from 1998 until 2007. These programmes have a medium-term perspective, so that programmes submitted in year t contain projections for the years $t + 1$, $t + 2$, $t + 3$.[2] Our database contains figures on the macroeconomic assumptions (nominal and real GDP growth) underlying the projections, and on the expenditure plans and outcomes expressed in terms of percentage of GDP, but also in nominal terms. This allows to assess the reasons for the failure to respect the budgetary targets.

The medium-term focus of the analysis also allows to highlight some structural patterns in fiscal behaviour that are less visible in year-to-year developments. It permits to assess whether the expected benefits from the implementation of multiannual budgetary frameworks, *i.e.* allowing compensation across years of possible budgetary slippage or overspending in a given year, did effectively materialise in the EU. The study also looks at the performance of individual Member States, and shows that there are considerable differences across countries as to the size and origins of the deviations from initial budgetary plans. The remainder of this paper is organised as follows. Section 2 briefly summarises the role of the SP-CP in the process of EU fiscal surveillance. Section 3 shows that Member States have typically planned expenditure-based consolidations in their SP-CP. Section 4 focuses on the magnitude and decomposition of the budgetary slippage (*i.e.* the difference between plans and outcomes). Section 5 extends the analysis to individual countries. Section 6 concludes.

2. What are Stability and Convergence Programmes?

In order to ensure that countries achieve or maintain sustainable budgetary positions, and to avoid the occurrence of excessive deficits, the Stability and Growth Pact (SGP) follows a strategy based on preventive and corrective elements. The corrective part consists of the excessive deficit procedure, governed by Article 104 of the Maastricht Treaty. The preventive arm of the Pact, based on Article 99 of the Treaty, is codified in Council Regulation (EC) No 1466/97 as amended by Council Regulation (EC) No 1055/05. This Regulation stipulates that EU Member States have to submit to the Council and the Commission Stability or Convergence

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1 Note that the usual approach in research on the link between budgetary institutions and budgetary outcomes is to start the analysis from the perspective of a particular institution (e.g. forms of fiscal governance, expenditure rules, independent growth forecast, etc.) and then to demonstrate that this particular institution matters for fiscal outcomes. In this paper, we take the opposite approach: we first investigate the main sources of budgetary slippage, and then ask which type of institution could help to address the problem.

2 Some programmes also provide data for the year $t + 4$.

Programmes (and annual updates), in which they set out their national medium-term budgetary strategy and objectives. Member States of the euro area submit (updated) Stability Programmes; Member States outside the euro area submit (updated) Convergence Programmes. Such Programmes have been prepared by Member States for the first time in 1998 and have been updated annually. The SGP foresees that the Council has to deliver an Opinion on these Programmes, on the basis of a recommendation from the Commission and after consultation of the Economic and Financial Committee.

The original SGP, which was in force up to the 2005 reform (the revised SGP entered into force in July 2005), stated that Member States should target in their SP-CP the attainment of a budgetary position close to balance or in surplus. This was notably intended to enable Member States to respect the 3 per cent of GDP ceiling in all circumstances, apart from unusually severe economic downturns or other exceptional conditions, and to ensure a rapid decline in debt ratios. In practice, Stability and Convergence Programmes under the original Pact presented information on the adjustment path towards a budgetary position close-to-balance or in surplus and the expected path of the general government debt ratio. They also provided information on the main assumptions about expected economic developments (growth, employment, inflation and other important economic variables) and a description of budgetary and other economic policy measures being taken and/or proposed to achieve the objectives of the Programme.[3]

3. Stability and Convergence Programme have typically planned expenditure-based fiscal consolidations

Figure 1 overleaf illustrates the developments in the general government balance in the EU-15 as well as the budgetary projections for the successive SP-CP updates (the dotted lines). The first vintage was submitted in December 1998 and included budgetary projections for the period 1999-2001; the 8th vintage, submitted in December 2005, covered the period 2006-08. This figure shows that SP-CP have on average projected a convergence towards the achievement of a budgetary position of close to balance or in surplus. It also shows that, due to consistent sizeable deviations from planned adjustment paths, the date at which the target was to be achieved was repeatedly postponed. In subsequent Stability Programmes, the adjustment path gradually shifted and on average no progress was made.[4]

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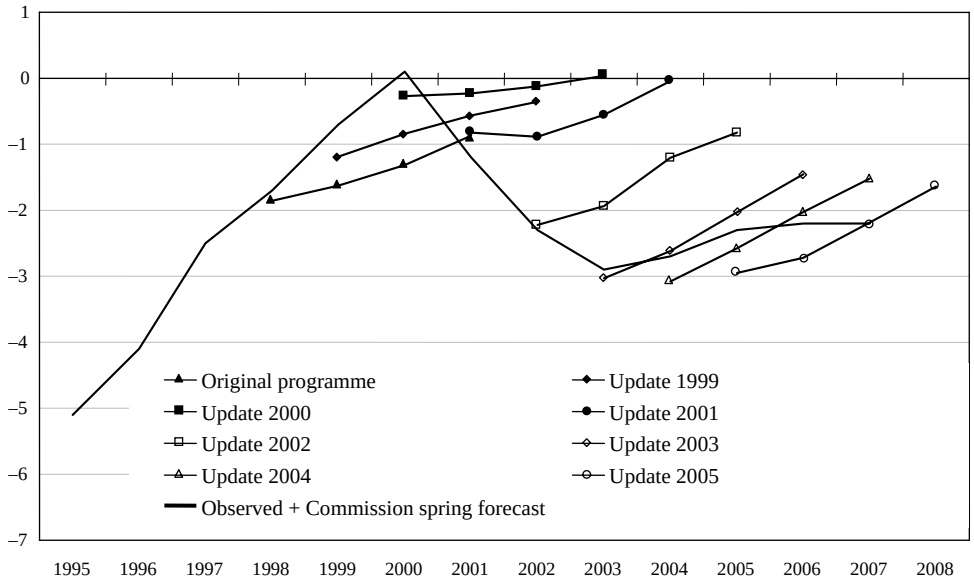
[3] Convergence Programmes also present the medium-term monetary policy objectives and the relationship of those objectives to price and exchange rate Stability.

[4] The disappointing results of the preventive arm of the Stability and Growth Pact over the period 1998-2004 was one of the motivations for the reform of the Pact of March 2005. This reform introduced several changes to the preventive arm of the pact, with the aim of improving its economic rationale. Notably medium-term budgetary objectives (MTOs) were differentiated for all countries taking into account the specificities of individual Member States and the introduction of provisions designed to ensure economically sound adjustment paths towards the MTOs and a better adherence to these paths (minimal fiscal effort of 0.5 per cent in structural terms, commitment to achieve larger effort in good economic

(continues)

Figure 1

Medium-term Budgetary Plans for the General Government Balance in the Stability and Convergence Programmes Weighted Average for the EU-15 Member States Considered
(percent of GDP)



Source: SP-CP and European Commission, Ameco Database.

In this section, we look at the budgetary projections of Member States in their respective Stability and Convergence Programmes. The database covers all EU-15 Member States, except for Luxembourg (problems of data availability) and the UK that could not be included in the analysis given that its yearly budgetary cycle differs from that of the rest of the EU. In theory, the database could therefore consist of 312 observations for every variable, *i.e.* 13 countries times 8 Programmes times three-year time horizon. In practice, however, there are 277 observations in total. This is due to the fact that some programmes do not include all the variables necessary for the analysis. All in all, there are 103 observations for the budgetary plans of Member States for the year $t + 1$, 101 for $t + 2$ and 73 for $t + 3$.[5]

Table 1 opposite shows the "average" medium term budgetary plans formulated by EU Member States for the main budgetary aggregates, *i.e.* the budget

times and possibility to do less in bad times, possibility to deviate from the adjustment path in case of the implementation of major structural reforms).

[5] A general caveat of the study is that the period under investigation is relatively short. The findings should therefore not be given a general interpretation beyond the period under investigation.

Table 1

Magnitude and Composition of the Budgetary Adjustment Planned by Member States in their Stability and Convergence Programmes Unweighted Averages over the Period 1998-2005

All Member States and Programmes

Percentage point of GDP	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Planned change in the government balance ratio	0.2 (0.15) (0.0; 0.3)	0.5 (0.2; 0.7)	0.8 (0.5; 1.1)
Planned change in the expenditure ratio	–0.5 (–0.7; –0.4)	–1.2 (–1.4; –1.0)	–1.9 (–2.2; –1.6)
Planned change in the revenue ratio	–0.4 (–0.6; –0.2)	–0.8 (–1.0; –0.5)	–1.1 (–1.4; –0.8)

Only Member States in Deficit (Starting Point for the Deficit above 2% of GDP)

Percentage point of GDP	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Planned change in the government balance ratio	0.5 (0.3; 0.7)	1.1 (0.8; 1.5)	1.6 (1.3; 1.9)
Planned change in the expenditure ratio	–0.6 (–0.9; –0.4)	–1.4 (–1.7;–1.2)	–2.2 (–2.6; –1.8)
Planned change in the revenue ratio	–0.1 (–0.3; 0.1)	–0.3 (–0.6; 0.0)	–0.6 (–0.9; –0.3)

Note: figures reported are unweighted averages for all Member States for which data were available. The figures in brackets are 95 per cent confidence intervals around the averages.

Source: SC-CP and European Commission, Ameco Database.

balance, revenue and expenditure to GDP ratios. In order to neutralise base effects and the influence of statistical revisions, the analysis focuses on the projected *changes* in the budgetary aggregates over different time-horizons ($T - T+1$; $T - T+2$; $T - T+3$). The first part of the Table covers all Member States; the second part shows the data for the subgroup of countries that recorded significant budget deficits at the moment of the projections (general government deficit estimated above 2 per cent of GDP in the year of submission of the programme), considering that the starting point of a deficit and the impact of the EU fiscal rules may have implied a different budgetary pattern. The figures in brackets report the 95 per cent confidence intervals around the averages.

The data show that Member States have on average projected in their Stability and Convergence Programmes an improvement in the general government balance by about ¼ per cent of GDP per year until year $t + 3$. As expected, Member

States with large initial deficits have projected larger reductions in the deficit, of the order of ½ per cent of GDP per year. As regards the composition of the adjustment, countries have typically planned expenditure-based fiscal consolidations. On average, Member States have projected a decline in the expenditure-to-GDP ratio of about 0.6 percentage point per year. The budgetary margins thus generated have been planned to be allocated to an improvement in the government balance and a reduction in the government revenue-to-GDP ratio. Member States with high initial deficits have on average planned comparable reductions in the expenditure-to-GDP ratio than those with small initial deficits, but have allocated a smaller proportion of the margins thus created to tax cuts. Incidentally, only in about 10 per cent of cases the projected improvement for the budget balance was also planned to be achieved through an increase in the revenue ratio.

When looking at the 95 per cent confidence intervals around the average planned budgetary adjustment (*i.e.* the figures in brackets in Table 1), it can be remarked that there is a relatively large stability in the plans formulated by different Member States since 1998.[6] A more detailed analysis – figures are not reported here – shows that projections submitted in the original programmes or the first update were very similar to those submitted at the end of the period considered.

Another interesting message is that there is a tendency to backload the reduction in the deficit. The adjustment planned in the year $t + 1$, which is the year covered by the Budget Law, has on average been somewhat lower than that planned in the subsequent years, which are part of a generally less binding medium-term projection. This tendency seems to be less pronounced for Member States with relatively high deficits in the year of submission of the programme. This may reflect the fact that some of these Member States have faced excessive deficit procedures and were therefore subject to the obligation to bring their government deficit below 3 per cent of GDP within short deadlines. Finally, it appears that Member States have based their SP-CP on relatively ambitious macroeconomic assumptions. On average, growth was projected to average 2.75 per cent over the horizon of the SP-CPs, significantly higher than the average of the 90s (over the period 1991-2000, average yearly growth in EU-15 was 2.2 per cent).

Overall, Member States have generally planned "textbook-type" fiscal consolidations, based on large decreases in the expenditure-to-GDP ratios. Economic literature suggests that fiscal consolidations based on expenditure cuts, as compared to those based on revenue increases, are more likely to be permanent and to have medium-term expansionary effects (see for example Alesina and Ardagna, 1998). It can be noted at this stage that, while curbing the expenditure dynamics in the short run can be achieved through the implementation of selective cost-saving

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[6] The 95 per cent confidence interval is calculated as a two-sided interval around the mean given that (at least theoretically) the forecast errors can be positive as well as negative: $\bar{x} \pm 1.96\left(\frac{\sigma}{\sqrt{n}}\right)$ where $\bar{x}$ is the average expenditure error, σ is the standard deviation and n the number of observations.

Table 2

Main Budgetary Aggregates, EU-15, General Government Sector (GG), 1998-2005
(percent of GDP)

	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Total GG expenditure	47.6	47.1	45.1	46.6	47.0	47.8	47.3	47.5
Total GG revenues	45.9	46.4	46.1	45.4	44.7	44.8	44.6	45.2
Net borrowing (–)	–1.7	–0.7	–0.3	–1.2	–2.2	–2.9	–2.6	–2.3

Source: European Commission, Ameco. Data exclude revenues associated with the sale of UMTS licenses.

measures, ensuring a lasting slowdown appears difficult without the implementation of ambitious reforms conducive, for instance, to permanent efficiency gains in the public sector.[7] It could also be noted that the Commission and the Council have repeatedly stressed in their assessments and opinions on Stability and Convergence Programmes the lack of sufficiently detailed information on the measures envisaged to respect the targets laid down by Member States in their Programmes.

4. Why were the objectives missed?

4.1 A first look at the data

Table 2 shows the developments of the ratio of general government expenditure, revenue and balance to GDP for the EU-15 as a whole over the period considered. Contrasting with the large decreases projected in the Stability and Convergence Programmes, the share of expenditure over GDP has overall remained remarkably stable over the last 8 years in the EU-15. The decline in the revenue ratio has been less pronounced than expected. This preliminary look at the data suggests that a part of the difficulties to adhere to budget balance targets set in the Programmes reflects the inability to cut government expenditure in line with initial plans.

Table 3 provides elements on the reasons for the difficulties to stick to budgetary plans formulated in the SP-CPs. The first line of the table reports the difference between the projected and observed change in the government balance-to-GDP ratio. The second and third lines report the difference between the projected and observed changes in the ratios of general government expenditure and revenue to GDP. The data confirm that the main source for the failure to achieve the envisaged improvement in the general government balance is the inability to achieve the targeted decline in the expenditure-to-GDP ratio. While Member States had on

[7] Hauptmeier *et al.* (2006) find that expenditure retrenchment is typically associated with comprehensive reform packages including improvements in institutions as well as structural and macroeconomic reforms.

Table 3

Decomposition of the Gap between the Planned and Observed Change in the General Government Deficit, Expenditure and Revenue Ratios Unweighted Averages over the Period 1998-2005
(percent of GDP)

All Member States and Programmes

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Gap between the planned and observed change in the balance-to-GDP ratio	–0.1 (–0.4; 0.2)	–0.4 (–0.8; 0.0)	–1.1 (–1.7; –0.4)
Gap between the planned and observed change in the expenditure-to-GDP ratio	–0.4 (–0.6; –0.1)	–0.8 (–1.1; –0.5)	–1.6 (–2.0; –1.0)
Gap between the planned and observed change in the revenue-to-GDP ratio	0.2 (0.0; 0.5)	0.4 (0.0; 0.7)	0.5 (0.1; 0.9)

Only Member States in Deficit (Starting Point for the Deficit above 2% of GDP)

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Gap between the planned and observed change in the balance-to-GDP ratio	–0.2 (–0.6; 0.2)	–0.8 (–1.4; –0.2)	–1.7 (–2.6; –0.7)
Gap between the planned and observed change in the expenditure-to-GDP ratio	–0.5 (–0.8; –0.1)	–1.3 (–1.9; –0.7)	–2.3 (–3.2; –1.3)
Gap between the planned and observed change in the revenue-to-GDP ratio	0.3 (0.0; 0.6)	0.5 (0.0; 1.0)	0.6 (–0.2; 1.4)

Note: Figures reported are unweighted averages for all Member States for which data were available. The figures in brackets are 95 per cent confidence intervals around the averages.

Source: calculations by the authors on the basis of SC-CP and European Commission, Ameco Database.

average projected a decline in the expenditure-to-GDP ratio by about 2.0 percentage points of GDP over a 3-year horizon, less than one-fourth of the targeted reduction has actually been observed. The discrepancy between the projected and observed change in the expenditure-to-GDP ratio has moreover had a tendency to increase steadily with the time-horizon considered. The difficulties to achieve the envisaged reductions in the expenditure-to-GDP ratio seem even more pronounced for the group of high deficit countries.

Table 4

Differences between Projected and Observed Real and Nominal GDP Growth
Unweighted Averages over the Period 1998-2005
(percent of GDP)

All Member States and Programmes

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Cumulated shortfall in real GDP growth	–0.2 (–0.5; 0.1)	–0.6 (–1.2; 0.0)	–1.5 (–2.6; –0.6)
Cumulated shortfall in nominal GDP growth	0.1 (–0.3; 0.5)	0.1 (–0.6; 0.9)	0.0 (–1.5; 1.5)
Cumulated shortfall in real GDP growth (excl. IE, SP, GR)	–0.4 (–0.8; –0.1)	–1.0 (–1.6; –0.3)	–2.3 (–3.4; –1.2)
Cumulated shortfall in nominal GDP growth (excl. IE, SP, GR)	–0.2 (–0.6; 0.1)	–0.6 (–1.3; 0.1)	–1.6 (–2.8; –0.4)

Only Member States in Deficit (Starting Point for the Deficit above 2% of GDP)

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Cumulated shortfall in real GDP growth	–0.6 (–1.1; –0.1)	–1.5 (–2.4; –0.6)	–3.1 (–4.9; –1.3)

Note: figures reported are unweighted averages for all Member States for which data were available. The figures in brackets are 95 per cent confidence intervals around the averages.

Source: calculations by the authors on the basis of SC-CP and European Commission, Ameco Database.

Interestingly, developments in the ratio of general government revenue to GDP have on average limited the consequences of the failure to achieve the reductions in the expenditure ratio for the developments in the general government balance. The declines in the revenue-to-GDP ratios have, on average over the three-year periods considered, been about half of what was initially planned.

Table 4 below reports the average cumulated differences between the projected and observed changes in real and nominal GDP growth, for the whole sample and for countries with high initial deficits. The table shows that real GDP growth has on average been significantly overestimated, especially for the latest years covered by the programmes. Interestingly, the negative surprises concerning real GDP growth forecasts were more pronounced for Member States with high initial deficits than for the other Member States. Another remarkable element is that inflation, measured as the change in the GDP deflator, was significantly underestimated, notably in some high-growth Member States.

4.2 Decomposing the shortfall: negative growth surprises versus higher-than-planned expenditure

In this section, we investigate the reasons for the non-achievement of the projected decline in the general government balance in more detail. We focus on the causes behind the failure to achieve the projected reductions in the expenditure-to-GDP ratio, for which our database allows us to present new elements. We then say a word on developments in the revenue-to-GDP ratio for which conclusions are more tentative due to a lack of information on the tax policy measures implemented by the governments over the period considered.

A failure to achieve a planned reduction in the expenditure-to-GDP ratio can result from two effects. Firstly, it can be due to the fact that expenditure in nominal terms was higher than planned (the numerator effect). Secondly, it can be the result of a shortfall in nominal GDP growth. In this case, the expenditure ratio turns out to be higher than expected even if expenditure targets in nominal terms (in level) are fully adhered to (the denominator effect). Policy recommendations for ensuring the adherence to plans formulated in the SP-CP may differ depending on the underlying source of slippage.[8] In order to examine the extent to which the failure to achieve the planned reduction in the expenditure-to-GDP ratio is due to developments in nominal expenditure or to a growth shortfall, the following decomposition is made, with B the general government balance, G nominal general government expenditure, R nominal revenues and Y nominal GDP. Subscript t is for time measured in years and n for planning horizon ($n = 0\ldots3$):

$$\left(\frac{B_{t+n}}{Y_{t+n}}-\frac{B_t}{Y_t}\right)=\left(\frac{R_{t+n}}{Y_{t+n}}-\frac{R_t}{Y_t}\right)-\left(\frac{G_{t+n}}{Y_{t+n}}-\frac{G_t}{Y_t}\right) \tag{1}$$

The second term on the right hand side of the equation, corresponding to the change in the expenditure ratio, is decomposed as follows:[9]

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[8] The political economy literature has provided explanations for both sources of budgetary slippages. A comprehensive review of this literature is outside the scope of this paper, but still we would like to recall a few possible explanations that fit with the distinction presented here. A lack of implementation of planned expenditure cuts may be explained by resistance from special interest groups, political inaction due to conflicts of interest inside the cabinet, or to common pool problems in which individual spending ministers fail to internalise the costs for the taxpaying population at large. Regarding the role of growth assumptions, Milesi-Feretti and Moriyama (2004) argued that opportunistic governments may try to avoid the costs of improving budgetary positions by using more favourable growth assumptions. Corrective measures can then be avoided *ex ante* due to a favourable denominator-effect of GDP growth, while ex post the expenditure to GDP ratio will turn out to be higher than expected as growth turns out to be lower than forecasted. The resulting deficit bias is then usually blamed on bad luck, even if it results from a forecast bias in growth projections.

[9] The formula is derived as follows:

$$\frac{G_{t+n}}{Y_{t+n}}-\frac{G_t}{Y_t}=\frac{G_{t+n}Y_t-G_tY_{t+n}}{Y_{t+n}Y_t}=\frac{G_{t+n}Y_t-G_tY_{t+n}+G_tY_t-G_tY_t}{Y_{t+n}Y_t}=$$
$$\frac{(G_{t+n}-G_t)Y_t+G_tY_t-G_tY_{t+n}}{Y_{t+n}Y_t}=\frac{G_{t+n}-G_t}{Y_{t+n}}-\frac{G_t(Y_{t+n}-Y_t)}{Y_{t+n}Y_t}$$

$$\left(\frac{G_{t+n}}{Y_{t+n}}-\frac{G_t}{Y_t}\right)=\left(\frac{G_{t+n}-G_t}{Y_{t+n}}\right)-\left(\frac{G_t}{Y_{t+n}}\right)\left(\frac{Y_{t+n}-Y_t}{Y_t}\right) \quad (2)$$

The first term on the right hand side of (2) represents the increase in nominal expenditure between year t and year $t + n$, expressed as a percent of the observed nominal GDP at the end of the period considered. The second term is the denominator effect on the government expenditure ratio. By applying the same decomposition to budgetary plans, expressed as a percentage of the observed GDP at the end of the period, the failure to respect plans can be attributed to both sources of slippage.[10]

The message emerging from the data is that the failure to achieve the planned decline in the expenditure-to-GDP ratio is mostly due to the inability to reach nominal expenditure targets. Over a three-year horizon, this effect explains the discrepancy between the planned and observed change in the expenditure-to-GDP ratio. The "denominator" effect of lower-than-projected nominal growth is particularly relevant for Member States with high initial deficits,[11] but smaller than the contribution of developments in nominal expenditure. Given that negative growth surprises have often been mentioned as the main explanatory variable for the failure to implement fiscal policy according to plans (*i.e.* blaming the outcome on bad luck), this can be seen as a remarkable result.

The results above constitute *prima facie* evidence that the failure by Member States to achieve the envisaged budgetary consolidation reflects difficulties to control general government expenditure. Although government expenditure is largely under the control of the government, it should be taken into account in the analysis that developments in nominal general government expenditure can be affected by macroeconomic developments (outside the control of the government): lower-than-expected real GDP growth generally triggers larger increases in cyclically-sensitive expenditure items (e.g. unemployment and some categories of social benefits); higher interest rates imply, *ceteris paribus*, a larger increase in interest payments; finally, higher-than-expected inflation can be expected to put pressure on nominal expenditure, since in most Member States social benefits and wages of public employees are indexed on prices.

Our database allows to control, albeit in an imperfect way, for these factors. First, it contains data on projected and observed interest payments. We can therefore calculate the contribution of unforeseen developments in interest payments to the

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[10] It should be noted that expenditure slippages reported in Tables 5 to 9 are an approximation. This results from the fact that subtracting data for plans and outcomes requires that they are expressed in terms of a common denominator, *i.e.* observed GDP for *t+n* for both plans and outcomes. The approximation reflects that the decomposition of the change in the planned expenditure ratio according to (1) and (2) uses planned GDP for *t+n* in the numerator. Overall differences are relatively small and do not affect the conclusions of the analysis.

[11] This is in line with Table 4 that shows that the growth shortfall has been higher for Member States with high initial deficits.

Table 5

Decomposition of Slippages in Expenditure
Unweighted Averages over the Period 1998-2005
(percent of GDP)

All Member States and Programmes

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Gap between the planned and observed change in the expenditure-to-GDP ratio	–0.4 (–0.6; –0.1)	–0.8 (–1.1; –0.5)	–1.6 (–2.0; –1.0)
Effect of larger-than-planned increase in nominal expenditure	–0.4 (–0.7; –0.2)	–1.0 (–1.3; –0.7)	–1.5 (–2.2; –1.0)
Denominator effect	0.0 (–0.2; 0.2)	0.0 (–0.3; 0.4)	–0.1 (–0.7; 0.6)

Only Member States in Deficit (Starting Point for the Deficit above 2% of GDP)

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Gap between the planned and observed change in the expenditure-to-GDP ratio	–0.5 (–0.8; –0.1)	–1.3 (–1.9; –0.7)	–2.3 (–3.2; –1.3)
Effect of larger-than-planned increase in nominal expenditure	–0.3 (–0.6; –0.1)	–1.0 (–1.5; –0.4)	–1.3 (–2.4; –0.3)
Denominator effect	–0.3 (–0.5; –0.1)	–0.6 (–0.8; 0.5)	–1.2 (–2.3; –0.2)

Note: figures do not add up due to rounding and to the fact that the decomposition of the change in the planned expenditure ratio according to equations (1) and (2) uses planned GDP for $t + n$ in the numerator.

Source: calculations by the Authors on the basis of SC-CP and European Commission, Ameco Database.

discrepancy between the planned and observed change in nominal expenditure. Second, it contains information on projected and observed real GDP growth. Using the standard budgetary semi-elasticity of government expenditure to the cycle, it is possible to calculate a proxy for the effect of real GDP growth shortfalls on government expenditure.[12] Third, since our database contains information on the

[12] In the calculation, we are using the sensitivity of government expenditure to cyclical fluctuations, which is used by the Commission for the calculation of the cyclical component of the general government budget balance. The cyclically-adjusted balance (CAB) is obtained by subtracting the cyclical component from

(continues)

Table 6

Further Decomposing Slippages in Nominal Expenditure
Unweighted Averages over the Period 1998-2007
(percent of GDP)
All Member States and Programmes

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Effect of larger-than-planned increase in nominal expenditure	–0.4 (–0.7; –0.2)	–1.0 (–1.3; –0.7)	–1.5 (–2.2; –1.0)
(1) Contribution of lower-than-expected interest payments	0.1 (0.0; 0.1)	0.1 (0.0; 0.2)	0.2 (0.1; 0.3)
(2) Contribution of lower-than-expected real GDP growth	0.0 (–0.1; 0.1)	0.0 (–0.1; 0.1)	–0.1 (–0.2; 0.0)
(3) Contribution of higher-than-expected inflation (full indexation)	–0.1 (–0.2; 0.0)	–0.3 (–0.4; –0.2)	–0.5 (–0.7; –0.2)
P.m. shortfall in the deficit-to-GDP ratio	–0.1 (–0.4; 0.2)	–0.4 (–0.8; 0.0)	–1.0 (–1.7; –0.4)

Note: figures reported are unweighted averages for all Member States for which data were available. The figures in brackets are 95 per cent confidence intervals around the averages.

Source: calculations by the authors on the basis of SC-CP and European Commission, Ameco Database (see footnote 1).

planned and observed changes in GDP deflators, it is possible to estimate the possible contribution of unexpected changes in prices for developments in general government expenditure. In this respect, we make the assumption of a full (and immediate) indexation of government expenditure on prices.

The results of the analysis are summarised in Table 6 above. As expected, they show that developments in interest expenditure have contributed to a lower-than-planned increase in general government expenditure, and therefore to

the budget balance to GDP ratio. The calculation of the cyclical component requires a measure of the link between the budget and the cyclical position of the economy. This measure is referred to as a "budgetary sensitivity" parameter. It provides a proxy of the effect on the budget associated of a given change in *cyclical* conditions, as measured by the output gap. The budget sensitivity is given by the difference between the sensitivities of revenues and of expenditures. Note that in our calculation, we apply the budgetary sensitivity of expenditure not to an indicator measuring the cyclical position of the economy (the output gap), but to a shortfall in real GDP growth. We therefore implicitly make the assumption that a shortfall in real GDP growth does not affect potential growth. Although experience has shown that potential growth is sensitive to actual growth developments, we considered that our calculation could still be considered a reasonable proxy of the effect of growth surprises on nominal expenditure.

limit the discrepancy between planned and observed increases in nominal expenditure. The two other factors play in the opposite direction. The contribution of negative real GDP growth surprises is marginal, reflecting the low sensitivity of government expenditure to cyclical developments (about 0.1 on average in the EU). The contribution of inflation is slightly more important (this partly reflects the assumption of a full and immediate indexation of expenditure on prices). On average over a three-year horizon and in the countries considered, the discrepancy between planned and observed increases in nominal expenditure would have been about 15 per cent larger without the decline in interest expenditure. It could have been about 5 per cent lower if macroeconomic developments had been in line with plans, and, assuming full and immediate indexation of government expenditure on prices, about one quarter lower if inflation developments had been in line with plans.

Overall, the analysis confirms that the failure to adhere to expenditure plans in nominal terms does not reflect the impact particularly unfavourable economic developments (interest rates, growth and inflation).

As regards developments in the general government revenue ratio, the basic result that slippages are smaller than those observed on the expenditure side is consistent with the fact that the elasticity of government revenue to output is generally estimated to be close to one. Hence, surprises in the development in economic growth translate into proportionate changes in revenues, so that the ratio is unaffected.

Against this background, the fact that the decline in the revenue-to-GDP ratio was on average lower-than-projected over the periods covered by the Stability and Convergence Programmes (½ percentage point of GDP over a three-year horizon instead of a planned decline by 1 percentage point) calls for an explanation. The higher-than-expected inflation probably played a role in stimulating government revenues (reflecting the progressivity of tax systems). However, it cannot explain that general government revenue in nominal terms increased broadly in line with plans despite the important shortfall in nominal GDP growth. Another reason may be that the failure to bring down expenditure in line with plans partly spills over to the revenue side even if tax rates remain constant. This effect may occur given that lower government expenditure implies lower revenues, e.g. given that lower government wages imply lower revenues from the income tax or given that lower government consumptions implies lower VAT revenue. Finally, although we cannot be fully conclusive on the reasons for such developments due to a lack of data on the tax policy measures implemented by the governments over the period considered, our preferred explanation is that since there were difficulties with the achievement of expenditure objectives, tax rates were not allowed to decline as planned.[13]

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[13] Other possible explanations are that the composition of GDP growth was more favourable than expected (tax-rich components grew faster than others) and that elasticities of tax revenues to their basis were higher than anticipated.

4.3 Main conclusions

The following conclusions can be made from the previous analysis:

- In their SP-CP, Member States have generally planned standard "textbook type" fiscal consolidations, based on large decreases in the expenditure-to-GDP ratios. A large part of the budgetary margins thus created were planned to be allocated to a reduction in the tax burden.
- The planned reductions in the deficit were not achieved. This reflects the difficulties of Member States to adhere to their medium-term expenditure plans, in nominal terms.[14] These difficulties are not due to particularly unfavourable economic developments.
- The gap between deficit and expenditure projections and outcomes widened with the time horizon considered. One of the main advantages to place fiscal policy in a medium-term perspective, *i.e.* to ensure compensation over the medium-term of possible slippages or overspending in a given year, did not materialise in the EU.
- The fact that real GDP growth was projected too high contributed to a widening of the gap between budgetary plans and outcomes. The tendency to overestimate real GDP growth has been more pronounced in Member States with high initial deficits. The discrepancy between projected and observed increases in nominal GDP is much lower than that observed for real GDP, due to a significant underestimation of inflation in the Programmes.
- There is evidence that the ambitious tax reductions programmes embedded in the Stability and Convergence Programmes were not (fully) implemented. This contributed to limit the gap between the planned and observed changes in the government deficit ratio.

5. Country-specific analysis

5.1 Planned and observed changes in the main budgetary aggregates

In this section, we extend the analysis to individual countries. Table 7 below provides a comparison, for a number of EU-15 countries, between the average projected change in the main budgetary aggregates over a three-year horizon and the outcome over the same period.[15] The focus is on the medium-term (*i.e.* T+3) in order to highlight trends that could be less visible when monitoring budgetary developments on a year-by-year basis. The table shows that the discrepancy between the average planned and observed change in the government balance to GDP ratio was particularly large in Germany, Portugal, Italy, Greece and France. All these

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[14] It can be estimated that, despite the shortfall in growth, if nominal expenditure targets had been met (over a three-year horizon), the targeted improvement in the deficit ratios would have been respected.

[15] Apart from Luxembourg and the UK, Ireland and the Netherlands could also not be included due to a lack of detailed data on expenditure plans in some SP-CP updates.

Member States are currently subject to an excessive deficit procedure.[16] The gap is more limited for Finland, Belgium and Austria. Spain and Denmark on average respected the planned reductions in the deficit, or even did slightly better.

Box 1
Stability and Convergence Programmes before and after the 2005 reform

The disappointing results of the preventive arm of the Stability and Growth Pact over the period 1998-2004 were one of the motivations for the reform of the Pact of March 2005. This reform strengthened the preventive arm of the pact (see Commission (2005) for details on the reform). This box, prepared by Diana González Hernández (stagiaire in the DG Ecfin of the European Commission), assesses whether the reform had an influence on the typical medium-term budgetary plans formulated by Member States in their Stability and Convergence Programmes. The table below summarises the budgetary plans of 13 countries of the former EU-15 (the UK and Luxembourg are not included due to data availability) before and after the reform. In general, it seems that the reform of the SGP did not change the size or the structure of the fiscal consolidation. There seems however to be an evolution towards more reasonable objectives regarding expenditure restraint and more realistic macroeconomic forecasts. When going into the detail, the following conclusions emerge:

- First, it seems that the size of the fiscal consolidation, measured as the change in the general government deficit over a three-year period has remained the same since the reform (a 0.8-0.9 cumulated improvement). In terms of the composition of the planned adjustment, there is little change compared to the years before the reform. The envisaged deficit reduction is still based on a planned decline of the expenditure-to-GDP ratio. Interestingly, however, the planned decline in the expenditure ratio is less pronounced in the recent update than it used to be in the past. About one-third of the budgetary margins thus created are foreseen to be allocated to tax cuts, which is a lower proportion than before the reform.
- Second, there seems to be a tendency to base budgetary projections on more cautious macroeconomic scenarios. The average planned annual real GDP growth has moved from about 2¾ per cent under the original SGP to about 2.5 per cent under the revised SGP. This remark applies to all the time horizons considered.

[16] The gap is also relatively large for Sweden and Ireland. Note however that the Convergence Programmes of Sweden and Ireland had, on average, a starting point for the general government balance equivalent to a *surplus* of respectively 2.5 and 2.8 per cent of GDP. Average starting points for Germany, Greece, France, Italy and Portugal were *deficits* of respectively 2.5, 1.2, 2.4, 1.9 and 2.3 per cent of GDP.

Table 1

Magnitude and Composition of the Budgetary Adjustment Planned by Member States in their Stability and Convergence Programmes

(unweighted averages; percent of GDP)

Original SGP

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Planned change in the government balance ratio	0.2	0.5	0.8
Planned change in the expenditure ratio	–0.5	–1.2	–1.9
Planned change in the revenue ratio	–0.4	–0.8	–1.1
Planned change in real GDP	2.8	5.8	9.0

Revised SGP

	***T* – *T*+1**	***T* – *T*+2**	***T* – *T*+3**
Planned change in the government balance ratio	0.2	0.4	0.8
Planned change in the expenditure ratio	–0.3	–0.7	–1.2
Planned change in the revenue ratio	–0.1	–0.3	–0.4
Planned change in real GDP	2.5	5.1	7.8

Source: calculations by the authors on the basis of SC-CPs.

The largest discrepancies between the projected and observed changes in the expenditure-to-GDP ratios were recorded in Portugal, France, Italy and Germany. As regards developments in the revenue-to-GDP ratios, large surprises were observed in Finland, Portugal, Belgium and Greece. In the first three countries, developments in the revenue-to-GDP ratio compared to plans contributed to positive surprises on the deficit ratio. In the case of Greece, the average decline in the revenue-to-GDP ratio was more pronounced than expected. Note that our database does not allow to assess whether the unexpected developments on the revenue side reflected the effect of the composition of growth, fluctuations in tax elasticities or policy measures.

Table 7

Planned and Observed Changes in the Main Budgetary Aggregates over a 3-Year Horizon – Average over the Period 1998-2005
(percent of GDP)

Country	Projected change in the GG balance ratio	Observed change in the GG balance ratio	Difference between the projected and observed change in the balance ratio	Difference between the projected and observed change in the expenditure to GDP ratio	Difference between the projected and observed change in the revenue to GDP ratio
Portugal	1.4	–0.9	–2.3	–3.4	1.1
France	1.2	–0.6	–1.8	–2.6	0.7
Italy	1.6	–0.7	–2.3	–2.3	0.1
Germany	1.6	–0.8	–2.4	–2.2	–0.1
Finland	–0.1	–0.5	–0.4	–1.5	1.2
Sweden	0.2	–1.2	–1.4	–1.3	–0.1
Belgium	0.5	0.1	–0.4	–1.2	0.9
Greece	1.7	–0.4	–2.0	–0.4	–1.6
Austria	0.4	0.2	–0.1	–0.4	0.2
Denmark	0.3	0.8	0.4	–0.4	0.8
Spain	0.6	1.1	0.5	–0.2	0.7

Source: calculations by the authors on the basis of SC-CP and European Commission, Ameco Database.

5.2 Decomposing expenditure slippages: individual countries

Table 8 provides the decomposition of expenditure slippages (the method is the same as that followed in section 4.2) for countries for which sufficient data are available. As seen above, large discrepancies between the projected and observed changes in the expenditure-to-GDP ratios were recorded in Portugal, France, Italy, and Germany.[17]

The underlying causes differ, however. For France, Italy and to a lesser extent for Portugal most of the slippage can be attributed to slippages in nominal

[17] It should be noted that most of the stability programmes as submitted by Italy contain a line with unspecified "future measure effects", which are not attributed to developments on the revenue or expenditure side of the budget. For the purposes of this paper, it was assumed that such measures are equally divided between revenues and expenditure.

Table 8

Decomposition of Expenditure Slippages for Individual Countries over a 3-Year Horizon
Average over the Period 1998-2005
(percent of GDP)

Country	Difference between the planned and observed change in the expenditure to GDP ratio	Contribution of a higher (–) or lower (+) than planned increase in nominal expenditure	Effect of lower or higher real GDP growth (country-specific expenditure sensitivity)	Possible effect of higher (+) or lower (–) than expected inflation (assuming full indexation)	Contribution of a higher (–) or lower (+) than planned increase in interest expenditure	Denominator effect (impact of the surprise in nominal growth on the expenditure ratio)
Portugal	–3.4	–1.8	–0.2	–0.5	0.1	–1.6
France	–2.6	–2.2	–0.2	–0.4	0.1	–0.5
Italy	–2.3	–1.5	–0.2	–1.1	0.4	–1.0
Germany	–2.2	0.1	–0.1	0.7	0.3	–2.3
Finland	–1.5	–1.3	–0.0	0.2	0.2	–0.4
Sweden	–1.3	–1.5	0.1	0.4	0.4	0.0
Belgium	–1.2	–1.4	–0.1	–0.4	0.3	0.0
Greece	–0.4	–2.1	0.0	–0.9	0.1	1.5
Austria	–0.4	0.0	0.0	–0.3	0.1	–0.5
Denmark	–0.4	–0.6	–0.2	–0.3	0.1	–0.1
Spain	–0.2	–2.4	0.0	–1.6	0.5	2.4

Source: calculations by the authors on the basis of SC-CP and European Commission, Ameco Database.

expenditure. In Germany the slippage in nominal expenditure is limited and the contribution of growth lower-than-projected is the dominant factor. To the extent that this reflects genuine negative growth surprises instead of projections that have been deliberately optimistic (see next paragraph), these data suggest that the budgetary problems are more directly linked to the weak economic situation of the last years than in the other Member States.

A key question is therefore why growth turned out to be lower than projected and whether growth forecasts were really over-optimistic. Note also the large slippage in nominal expenditure observed in Greece and Spain. In these two countries, higher-than-expected economic growth has partly compensated slippages in nominal expenditure (which, to some extent, can be explained by higher-than-expected inflation). A key question is how these two countries will perform in case their economy would slow down.[18]

5.3 Analysing the growth shortfall: negative growth surprises versus deliberately optimistic projections

If official growth forecasts were unbiased (*i.e.* on average the projection does not differ from the observed value), the effect of over- or under-estimating economic growth on the budget balance target would have to be accepted as the price of uncertainty. However, a different conclusion would be warranted if official growth forecasts suffer from some sort of structural optimism, systematically overrating the underlying rate of the economy. Recent analysis on the role of growth forecasts over the period 1987-2003 shows a forecast bias in three out of four large EU Member States and a significant negative impact on budgetary outcomes (Larch and Salto, 2003). The findings in this note tend to confirm the view that unbiased growth forecasts matter, even if they have not been the dominant source of budgetary slippage. A specific aspect of the period under consideration (1998-2005) is that, since 2000, growth has genuinely been lower than expected. In order to shed some light on the extent to which growth forecast have been *deliberately* optimistic, we therefore use the European Commission Autumn 2005 Forecast as a benchmark for comparing growth forecasts in the SP-CP. In doing so, we rely on Keereman (1999) who showed that the Autumn Forecasts are unbiased.

Results for average yearly growth rates for the years $T + 1$ and $T + 2$[19] are reported in Table 9. They confirm that the difference between realised and planned average yearly growth is statistically significant for the sample as a whole. Regarding individual countries, growth lower than planned is statistically significant for Italy, Portugal and Germany, while Spain benefited from higher-than-projected growth. A more diversified picture emerges when national projections are compared

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[18] It can also be noted that Austria is the only country that has compensated a shortfall in economic growth by a lower than projected increase in nominal expenditure.

[19] The focus is here on years $T + 1$ and $T + 2$, and not on $T + 3$ as previously, given that the Commission forecasts do not cover year $T + 3$.

Table 9

Negative Growth Surprises or Deliberately Optimistic Projections?

Country	SP–CP (1)	Autumn 2005 Forecasts (2)	Realised (3)	(2)–(1)	(3)–(1)
IT	2.6	2.2	1.3	–0.4***	–1.3***
PT	2.7	2.5	1.4	–0.2**	–1.2**
EL	4.1	3.9	4.1	–0.2**	0.0
ES	3.2	3.2	3.6	0.0	0.4*
FR	2.5	2.5	2.1	0.0	–0.4
DE	2.1	2.2	1.2	0.1	–0.9**
AT	2.3	2.4	1.9	0.1	–0.4
BE	2.4	2.5	2.0	0.2	–0.3
SE	2.5	2.7	2.7	0.2	0.1
DK	1.9	2.1	1.7	0.2**	–0.3
FI	3.0	3.2	2.8	0.2	–0.2
UK	2.4	2.7	2.7	0.2	0.3
NL	2.2	2.5	1.5	0.3	–0.7
IE	5.6	6.0	6.3	0.4	0.7
Average	2.8	2.9	2.5	0.1*	–0.3***

Note: the comparison is for average yearly real growth rates for $t + 1$ and $t + 2$.
*, **, *** indicate statistical significance at 10, 5 and 1 per cent level.
The last projections that could be included are those of 2003 for 2004 and 2005. As a result, there are 12 observations for individual countries and 168 observations in total.

Source: SC-CP, Autumn Forecasts and Ameco.

with those of the Commission autumn forecasts. Regarding the sample as a whole, the autumn Forecasts show slightly *higher* real growth forecasts than the Programmes (2.9 versus 2.8 per cent). For several countries (e.g. BE, DK, FI, NL) growth turned out to be lower than projected, even though the national projections in the SP-CP had been more *cautious* than those of the Commission (although the

difference is not statistically significant).[20] At the same time, there are two countries (Italy and Portugal) for which growth was lower than projected in the SP-CP *and* for which growth projections have been significantly more optimistic than those of the Commission. Given that growth lower than projected explains a large part of the budgetary slippages for these countries (Table 6), we conclude that the need for improving the checks and balances in the process of producing the forecasts is particularly strong for these countries.[21]

6. Conclusions

This paper analyses the track record of multi-annual budgetary plans of the SP-CP. Its main finding is that the divergence between budgetary plans and outcomes can largely be explained by the fact that planned ambitious restraint in *nominal* general government expenditure has not been implemented, thereby also limiting the scope for implementing planned tax cuts. This analysis calls for the setting by Member States of realistic targets for developments in general government expenditure and a more detailed specification (ex ante) of the measures and reforms envisaged to attain the objectives. It also calls for the implementation of effective and consistent systems of medium-term expenditure management in most Member States. At the same time, results also confirm the relevance of forecast errors in the growth rate for explaining budgetary slippages, although the effect is smaller than the former effect. We find evidence of deliberately optimistic projections for some countries. We hope that our analysis contributes to the development of fiscal surveillance in the preventive arm of the pact, which has recently been given more economic rationale with the 2005 reform of the Stability and Growth Pact.

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[20] Results are consistent with the existence of an independent forecasting institute in Austria, Belgium and the Netherlands and a tradition of cautious forecasting in the Nordics (see European Commission, 2005, for an overview of the characteristics of forecasting institutions in EU Member States).

[21] As indicated in Box 1, there seems to be a tendency to use more cautious macroeconomic scenario's in the latest round of Stability and Convergence Programmes.

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