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Buti, Marco; van den Noord, P.J.

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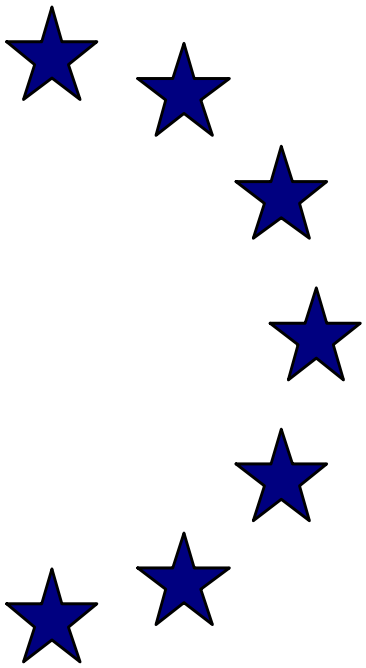

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Fiscal policy in EMU:
Rules, discretion and political incentives

by

Marco Buti and Paul van den Noord (*)
Directorate-General for Economic and Financial Affairs

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Correspondence: Marco.Buti@cec.eu.int; Paul.VANDENNOORD@oecd.org

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Abstract

The fiscal philosophy of EMU's budgetary rules is to bring deficits close to balance and then let automatic stabilisers play freely. Given the large tax and benefit systems in Europe, relying mainly on automatic stabilisation would allow a relatively high degree of cyclical smoothing while avoiding the typical pitfalls of fiscal activism. While this is, in most circumstances, good economic policy, it is evidently not regarded as good politics. The current difficulties of EMU's fiscal policy framework have little to do with its alleged fault lines and much to do with the resurgence of electoral budget cycles amid a weak system of incentives to abide by the agreed rules.

JEL CLASSIFICATION : E61, H3, H6

1. Introduction

Europe's Economic and Monetary Union (EMU) is based on an original arrangement of public finance relations between member countries: fiscal policy remains decentralised, but is subject to rules which are meant to combine discipline and flexibility. The Stability and Growth Pact (SGP), which complements and tightens the fiscal provisions laid down in the Maastricht Treaty, is the backbone of fiscal discipline in EMU.

The SGP is widely viewed as the most stringent "commitment technology" ever adopted by sovereign governments on a voluntary basis in the attempt to establish and maintain sound public finances. The fiscal rules of EMU are based on a simple predicament: government should reduce budget deficits to close to balance and then let automatic stabilisers play freely. The SGP, if applied according to its letter and spirit, will have important implications for the behaviour of budgetary authorities in both the short term (cyclical stabilisation, policy co-ordination) and long term (sustainability of public finances).

The experience of the early years of EMU has, however, been disappointing. While several euro area countries continued the fiscal retrenchment, even moving into surplus, the three largest members — Germany, France and Italy — and Portugal remain trapped in high deficits. It is fair to assume that these countries (and some others as well) would have faired worse had there not been the SGP. The SGP has institutionalised the reporting of multi-annual fiscal trajectories and enhanced transparency, awareness of longer-term fiscal issues and peer pressure. Even so, the failure of fiscal co-ordination in EMU is blatant. The eventual demise of the Commission recommendations for correcting the excessive deficits by France and Germany in Autumn 2003 calls into question the political willingness of countries to adhere to the prior-agreed fiscal rules.

A large number of observers ascribe such failure to alleged inconsistencies of the Pact: the SGP is not abided by because its "numerology" makes no sense. We do not buy that line of argument. EMU's fiscal rules have been applied flexibly and the skeleton of the Pact has been increasingly covered with sensible economic flesh. Putting the emphasis on automatic stabilisers rather than discretionary fiscal policy is sound policy advice. If the ensuing cyclical smoothing would be considered too small, instead of relapsing into fiscal activism, it would be helpful if governments sought ways to improve the effectiveness of the automatic

stabilisers. As it stands, automatic stabilisers are often the by-product of tax and benefit systems designed in the pursuit of allocation and redistribution objectives. Broadening the set of policy objectives pursued by tax and benefit systems to include macroeconomic stabilisation objectives may be welfare-enhancing.

Unfortunately, even if automatic stabilisers can be made more effective in a technical sense, their *de facto* effectiveness is undermined if political economy motives prevented them from working symmetrically over the cycle. If fiscal windfalls in good times are wholly or partly handed out to the electorate, fiscal policy will fail to smooth the business cycle and precious opportunities to build up a war chest against the looming ageing challenge will be missed. With the creation of EMU the carrot of EMU entry has been eaten while there are hardly any sticks left to force governments to live up to the rules, except for the Excessive Deficit Procedure (EDP) which, although essential, kicks in when harm is already done. The "preventive" part of the SGP has proven very weak.

Here are the roots of the current difficulties of the SGP which has little to do with its intrinsic "quality" and much to do with a weak system of incentives for resisting a politically motivated fiscal behaviour.

The present paper provides a broad review of these issues, based on findings in the literature and our own recent analytical work. Section 2 presents a bird's eye view of the history of the downfall of fiscal discretion in favour of fiscal rules and how this has shaped fiscal co-ordination in EMU. Section 3 develops a broader view on automatic stabilisers, including supply side aspects that affect their stabilisation properties in the face of asymmetric shocks. The latter cannot be dealt with by a one-size-fits-all monetary policy, so automatic stabilisers are essential and we draw conclusions on how automatic stabilisers could be strengthened in this regard. Section 4 examines to what extent political incentives have affected fiscal behaviour in EMU to date and how these incentives could be stemmed in the future. Section 5 concludes.

2. The rise and fall of fiscal activism

2.1 Fiscal policy in macroeconomics: a bird's-eye view

Economics is a science that moves in cycles. There is probably no better example of this than fiscal policy which has been falling into disfavour and re-emerging from its ashes almost every decade since the Second World War.[1]

Fiscal policy gained prominence after the 1950s and 60s as a tool for demand management as it was seen as more effective than monetary policy. According to the standard Keynesian textbook model, in a closed economy, its effectiveness depends on the relative slope of the IS and LM curves. The extreme case is that of the so-called liquidity trap where any additional supply of money fails to put downward pressure on interest rates and monetary policy becomes completely ineffective. Hence fiscal policy remains the only instrument to prop up economic activity. The traditional Keynesian model largely ignored the opposite case, that of fiscal policy ineffectiveness. While crowding-out effects were early recognised, full ineffectiveness was seen, until the mid-1970s, as a mere theoretical *curiosum*.

The literature in the early 1970s highlighted the different effects in the short run and the long run of fiscal policy. The seminal contribution of Blinder and Solow (1973) shows that "pure" fiscal policy (i.e. a bond-financed increase in the budget deficit) can be more effective in the long run than money-financed fiscal policy. The reason is that the interest payments on public debt add to the expansionary boost of the initial deficit rise and result in a higher long-term multiplier. However, the authors point out that, if both tax rates and government spending were exogenously fixed (i.e. in modern jargon, if the government behaviour is non-Ricardian), a bond-financed fiscal policy can lead to instability, a result that, re-framed within a different theoretical context, has given rise to a vast literature (see below).

In an open economy, the classic Mundell-Fleming model shows that the effectiveness of fiscal policy depends on the exchange rate regime. In the limited case of a small economy with perfect capital mobility, fiscal policy is shown to be completely ineffective in a flexible exchange rate regime while its effectiveness is maximal under fixed exchange rates.

The Mundell-Fleming framework enables the neat analysis of the effects of national fiscal policies within a multi-country currency area. A monetary union can be thought of as

[1] This section draws heavily on Buti (2003).

combining fixed exchange rates within the area and flexible exchange rates vis-à-vis the rest of the world. This implies that national fiscal policy may be of the beggar-thy-neighbour type: if directed to the purchase of goods and services produced domestically, government spending can be very effective at the national level, but, by leading to an appreciation of the common exchange rate, it also crowds out exports of other countries in the currency area to the rest of the world. If the currency area is small in the world market, in order to keep the money market in balance, the rise in output in the country enacting the fiscal expansion has to go hand in hand with an output decline in the rest of the currency area. As in the case of the original Mundell-Fleming model, such stark results may not hold if the currency union is large and hence it can influence world interest rates.

Since the mid-1970s, however, the role of fiscal policy as a stabilisation tool started to be increasingly questioned.

If one introduces the intertemporal budget constraints for households and the government, fiscal policy may not be effective in affecting national saving and consumption. As Barro shows in his seminal paper (Barro, 1974), since public debt has to be re-paid at some point in the future, forward-looking consumers anticipate the higher taxes and offset the expansionary fiscal stance by increasing private savings (dubbed Ricardian equivalence). In parallel, the New Classical Macroeconomics called into question the effectiveness of monetary policy which could only influence output to the extent that it deceives economic agents via surprise inflation.

Although the complete ineffectiveness of fiscal policy holds only under very restrictive assumptions, the intellectual seeds for the demise of macroeconomic policy as a stabilisation tool were sown. Real business cycle theory closed the loop: if the business cycle is an equilibrium response to supply side shocks, fiscal policy is unnecessary and may even be damaging being itself a source of shocks.

Whereas, in this view, fiscal policy cannot and should not attempt to stabilise real variables, it affects nominal variables. The "unpleasant monetarist arithmetic" of Sargent and Wallace (1981) uncovered the fiscal roots of inflation. Persistent fiscal imbalances put pressure on the central bank to finance the government budget deficits. Using current terminology, if economic agents are not Ricardian (*i.e.* there is a violation of the solvency constraint), tight

money now gives rise to higher inflation in the future. Under rational expectations, tight money now would actually give rise to higher inflation now!

As recalled by Blinder (2002), the precursor of Sargent-Wallace's unpleasant arithmetic was the seminal model by Blinder and Solow (1973) referred to above which, under static expectations and fixed prices, showed that the economy can be unstable in the event of a bond-financed fiscal expansion. Bond financing can be viewed as adherence to monetarism, because the central bank sticks to its money supply target regardless of the deficit. If the expansionary fiscal policy leads to spiralling public debt and there is fiscal leadership (that is, in the game of chicken, fiscal authorities do not change their budgetary plans), monetary authorities will eventually have to step in and monetise the debt.

Fifteen years later, the unpleasant arithmetic has been taken beyond its original monetarist roots. The Fiscal Theory of the Price Level (FTPL) argues that a commitment of the central bank not to monetise public debt may not be sufficient. Despite this commitment, inflation may still rise if the fiscal authority credibly maintains a spending policy that would imply a violation of its intertemporal budget constraint. If so, not the central bank, but households' optimisation moves the price level, breaking Ricardian equivalence.

However, even those refusing full Ricardian equivalence, recognised that an active fiscal policy to fine tune the cycle was doomed to fail, given the political and institutional constraints on fiscal policy making. In the end, a fiscal policy focussing on intertemporal sustainability and some form of tax smoothing (Barro, 1979) gathered a large consensus amongst academic economists: New Classical macroeconomists and real business cycle theorists emphasised the benefits of avoiding an excessive volatility of tax rates associated with a strict balanced budget rule; moderate (and New) Keynesians put the emphasis on the smoothing effectiveness of automatic stabilisers which are immune to the typical pitfalls of discretionary fiscal policy (model uncertainty, risks of pro-cyclical behaviour due to implementation delays, irreversibility of spending decisions, etc.).

2.2 Does a monetary union require fiscal constraints? Theoretical underpinning of the "Brussels-Frankfurt" consensus

The EMU is unique: it is a currency area of sovereign countries retaining a large degree of fiscal autonomy, with a single monetary authority managing monetary policy for the whole zone.

EMU is built on strong fiscal discipline foundations. The budgetary autonomy of EMU's members is subject to the numerical constraints of the Maastricht Treaty and the SGP. The Treaty sets rules on budget deficits and debt as a requirement for joining the single currency. It prescribes that budget deficits should not exceed 3% of GDP, unless exceptional circumstances occur, and, even in this case the excess should remain limited and temporary. Public debt should not exceed 60% of GDP or, if this is the case, it should be maintained on a downward trend.

While the numerical parameters of the Maastricht Treaty were seen as a screening device to select the members of the euro area, the goal of the SGP was to make fiscal discipline a permanent feature of EMU. The SGP, which was adopted by the European Council in Amsterdam in June 1997, requires that national budgets should be "close to balance or in surplus" in normal times so as to create sufficient room for manoeuvre in bad times to let automatic stabilisers play fully without exceeding the 3% of GDP deficit ceiling.

EMU is commonly seen as a regime of monetary leadership where fiscal policy is to support the central bank in its task to keep inflation in check. The European Council Resolution which accompanies the Pact "underlines the importance of safeguarding sound government finances as a means to strengthening the conditions for price stability and for strong sustainable growth conducive to employment creation. It is also necessary to ensure that national budgetary policies support stability oriented monetary policies".

What has been dubbed the "Brussels-Frankfurt consensus" (Sapir et al., 2003) sees sound public finances as necessary both to prevent imbalances in the policy mix, which negatively affect the variability of output and inflation, and also to contribute to national savings thus helping foster private investment and ultimately growth. The beneficial effect is magnified as low deficits and debt, by entailing a low interest burden, create the room for higher public investment, "productive" public spending and a low tax burden. Prudent fiscal policies avoid policy-induced

shocks and their unfavourable impact on economic fluctuations while ensuring a larger room for manoeuvre to address other disturbances which increase cyclical instability.

The design of the fiscal policy architecture of EMU has been influenced by the debate in the 1970s and 1980s. A rule-based fiscal policy came to be regarded as a way to ensure monetary leadership. In order to avoid Sargent-Wallace's unpleasant arithmetic, a particular emphasis was put on the need to ensure budgetary discipline. As a central banker – though not of one of the countries belonging to the euro area – put it, "(c)entral banks are often accused of being obsessed with inflation. This is untrue. If they are obsessed with anything, it is with fiscal policy" (King, 1995: 171).

The potential influences of fiscal behaviour on monetary policy have certainly been a major factor behind the Maastricht fiscal constraints and the SGP. However, the policy spillovers in a currency area are multiple and play in different directions: fiscal policy affects monetary policy, but the reverse is also true.

In a monetary union, independent fiscal authorities only partly internalise the constraints on monetary policy arising from their choices. In a two-period model of a monetary union, Beetsma and Uhlig (1999) show that myopic governments who know that they may be replaced at the beginning of the second period issue more debt than a social planner would do.[2] This would constrain monetary policy in the second period. This effect is magnified in a monetary union because the adverse impact on the common monetary policy is diluted. As a result, the incentive to restrain public debt accumulation is reduced and we end up with an overburdened monetary policy. Hence, a pact limiting public debt accumulation increases welfare in a monetary union.

The desirability of imposing fiscal constraints crucially depends on the ability of the single monetary authority to commit to its future policies. If the central bank is "strong", fiscal constraints are damaging because they limit the room for manoeuvre by fiscal authorities in responding to shocks. If shocks are highly correlated across countries and the central bank is strongly committed to price stability, then a fiscally constrained monetary union is superior over a regime with multiple currencies. Instead, under idiosyncratic shocks, moving to a fiscally-constrained monetary union would be welfare-reducing: "if the set of policy instruments open to fiscal authorities is sufficiently restricted, then monetary union may not

[2] See also Uhlig (2003).

increase welfare. Despite having commitment power, the central bank lacks the tools to stabilise in the presence of country specific shocks that are not perfectly correlated." (Cooper and Kempf, 2000: 27).

However, the effectiveness of the central bank's commitment depends on the behaviour of budgetary authorities. An extreme case of "commitment impossibility" is developed by the FTPL which highlights that, if fiscal policy does not ensure solvency at every price level, monetary policy will lose grip on the determination of the price level. In order to ensure stability, fiscal policy has to react sufficiently strongly to a rise in the interest rate in the event of inflationary pressures by increasing the primary surplus. In other words, monetary policy aimed at keeping inflation in check - as the ECB is mandated to do - has to go hand in hand with a fiscal policy obeying a solvency constraint[3].

Although FTPL implies that fiscal discipline is necessary for a smooth functioning of EMU, once it is applied to the EMU institutional set up, however, different conclusions are drawn. While Sims (1999) considers EMU's fiscal rules insufficient to rule out FTPL's doom scenario, Canzoneri and Diba (2001) conclude that such rules appear far too strict from the point of view of guaranteeing fiscal solvency. The latter authors, in particular, call for a shift in attention from actual to cyclically-adjusted budget balances in assessing the compliance of EMU members with budgetary prudence so as not to hamper fiscal stabilisation.

In a game theoretic framework, Dixit and Lambertini (see Dixit and Lambertini (2001), and Dixit (2001)) assume that monetary and fiscal authorities minimise a quadratic loss function in inflation and output, but final targets and the weight attributed to them vary (typically the central bank is assumed to be more inflation-conservative). These authors conclude that fiscal discretion "destroys monetary commitment" and, as such, may justify rules imposed on budgetary behaviour. If final targets differ (e.g. the central bank is an inflation hawk and the fiscal authority aims at pushing output beyond its structural level), a race between monetary and fiscal policy would lead to equilibrium levels of output and inflation far away from the preferred choices[4].

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[3] The FTPL has caused a heated controversy. For a forceful criticism, see Buiter (1999). For a reply, see Woodford (2001).

[4] A precursor of these recent models is Blinder (1982) who shows that, if monetary and fiscal authorities have different objectives, separation of monetary and fiscal policies will give rise to an unbalanced policy mix with excessively tight money and lax fiscal policy.

In summary, imposing budgetary constraints may bring benefits since, faced with independent fiscal authorities, monetary policy would not be able to commit. This conclusion is "consistent with the view that the framers of the treaty thought that it is extremely difficult to commit monetary policy and therefore wisely included debt constraints as an integral part of the treaty" (Chari and Kehoe, 1998: 2).

2.3 Designing fiscal rules in a supranational context

Once it has been established that some sort of discipline device is needed in a monetary union of sovereign countries, the specific form of such fiscal rule has to be developed. Several recent papers have put forward criteria for assessing the "quality" of a good fiscal rule. Buti et al. (2003) have analysed the "quality" of EU fiscal rules in terms of the criteria identified by Kopits and Symansky (1998) and Inman (1996) for the design, implementation and enforcement of a fiscal rule.[5]

According to Kopits and Symansky, a good fiscal rule should be well-designed (clearly defined, simple, transparent, consistent and flexible), allow effective implementation (by entailing ex ante and ex post compliance and efficient monitoring) and be enforceable (in terms of decision, amendment and sanctions).

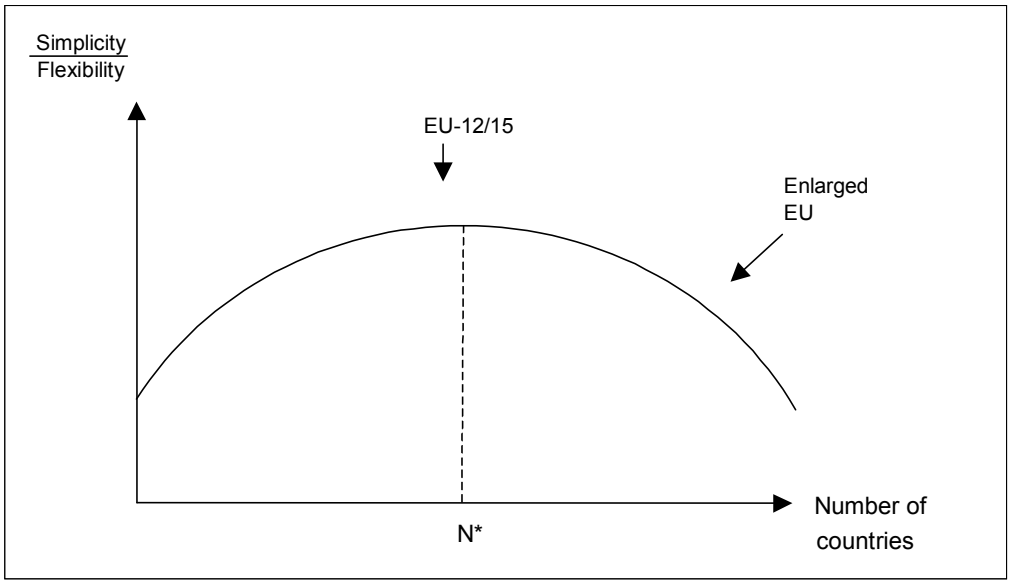
The above-mentioned criteria were developed for assessing the quality of domestic fiscal rules. The supranational character of EU rules clearly affects their design and implementation in at least two respects. *First*, national sovereignty and subsidiarity concerns had to be respected. This implies that the rules had to be as neutral as possible vis-à-vis the countries' social preferences which are quite heterogeneous in the EU. This prevented, for instance, the adoption of rules which, explicitly or implicitly, entail a choice of the role and size of the public sector in the economy. *Second*, there are trade-offs between the various criteria, namely between simplicity and flexibility, between simplicity and adequacy, and between flexibility and enforceability. These trade-offs are influenced by the multinational nature of the rules, but in different directions. On the one hand, there may be a preference for simplicity and transparency over flexibility to allow peer pressure, central monitoring and prevent moral hazard. On the other hand, a multiplicity of countries

[5] For a different set of criteria, and different conclusions, see Buiter (2003).

increases heterogeneity and dispersion of preferences with the consequence that a one-size-fits-all fiscal rule is likely to be sub-optimal.

This reasoning is exemplified in Figure 1 which shows a hump-shaped relationship between simplicity/flexibility and the number of participants: the preference for simple rules increases with the participants but only up to a point (*N** in Figure 1) beyond which the need to take into account country-specific situations would make a very simple rule sub-optimal.

Figure 1. Fiscal rules: simplicity versus flexibility



Source: Buti, Eijffinger and Franco (2003)

Given the stylised nature of the analysis, the specific position of the EU on the hump-shaped curve in the figure is obviously highly judgmental. We believe that, if the potential for country diversification embodied in the current rules is fully exploited, the existing degree of simplicity versus flexibility appears broadly appropriate for present EU members. However, it remains to be seen whether this will hold also in an enlarged EU where the need for flexibility may increase.

According to Inman (1996), for a fiscal rule to be effective there must be *ex post, not ex ante, deficit accounting;* it should not be *overridden or temporarily suspended* by a simple majority vote of the legislature; it should be *enforced* by an open and politically independent, not partisan, authority; there must be *open access* to allow all potentially

affected parties to point to a violation of the fiscal rules; when the fiscal rule is violated, there must be significant *sanctions*, and, finally, *amendment* of the rules must be costly.

Again, looking at the EU fiscal rules via Inman's criteria, their multinational character comes to play a role. Typically, ex post timing for review is particularly important in a supra-national context, given the higher risks of moral hazard and the higher difficulty in monitoring ex ante policy announcements. Ensuring open access is considerably more complicated when many countries are involved. While the sanctions under the SGP are nominally high, their actual implementation remains under question because of the political difficulty of imposing sanctions between sovereign countries. This is, of course, a consequence of the lack of a federal government with sanctioning powers. According to this view, in a multi-country set of rules, one is forced to rely on the reputational effects of the 'early warnings' and excessive deficit positions.[6] The heated controversies in Autumn 2003 over the enforcement of the SGP commitment to France and Germany and the eventual turning down by the Council of the Commission recommendations lend strong support to such sceptical view.

As to enforcement, a parallel can be drawn here between the ECB and national central banks in the pre-EMU period. An independent ECB, facing dispersed fiscal authorities having different interest, is in a stronger position to fend off political pressures than national monetary authorities, notwithstanding their formal independence (see e.g. Beetsma and Bovenberg, 1998). Similarly, an independent fiscal enforcer would have a considerably stronger power in the case of supra-national rules. This may explain why partisan enforcement is a feature of the EU fiscal rules.[7]

As to the costliness of amendment, the experience of several countries in the post-war period points to frequent changes of national fiscal rules. However, given the political complications involved in (re-)negotiating binding agreements, high costs of amending the rules is a natural feature of multinational arrangements such as the EU fiscal rules. Awareness of such costs is

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6 Reputation effects were perceived as being quite high in the case of the early-warning episode of Germany at the beginning of 2002. On the contrary, such moves may actually galvanise public opinion against "Brussels" and have the opposite political effects. This was arguably the case when a recommendation for violating the BEPG's recommendation on avoiding a pro-cyclical policy was addressed to Ireland in spring 2001.

7 The initial proposal for a Stability Pact by the then German finance minister Theo Waigel foresaw the application of automatic sanctions in the event of a deficit exceeding the 3% of GDP ceiling. However, this proposal encountered fierce resistance and was ultimately rejected also on legal grounds.

behind the ritual declarations of support of the Pact even by the most blatant fiscal delinquents.

3. Good economic policy: let automatic stabilisers play freely

3.1 Fiscal activism versus automatic stabilisation

While the potential usefulness of fiscal stabilisation is being re-considered, the "heritage" of the debate in the 1980s casts a strong scepticism over the use of discretionary fiscal action to fine tune the economy. Political economy arguments and institutional constraints also militate against using fiscal policy to fine-tune the business cycle (European Commission, 2002). Therefore, the overall set of fiscal rules in EMU relies on the working of automatic stabilisers (i.e. the cyclically induced changes in taxes and expenditures) as the main tool for fiscal stabilisation once member countries have achieved their medium-term fiscal positions of "close to balance or in surplus" according to the SGP. Adhering to the medium-term budgetary target allows enough breathing space for the automatic stabilisers to work freely without breaching the 3% of GDP deficit threshold. While exceptions to this rule can be envisaged, the underlying policy behaviour is more akin to "tax smoothing" than to active fiscal management. Moreover, this non-discretionary approach should, at least in principle, guarantee that the behaviour of the actual budget balance is always counter-cyclical and hence, contributes to economic stability.

Considering the criticisms raised against fiscal activism, rule-based fiscal policy relying on the working of automatic stabilisers provides clearly several advantages. State-contingent tax revenues and expenditures (basically unemployment related expenditure) cushion economic fluctuations practically with no information and implementation lags. Moreover, the impact lag of automatic stabilisers is generally considered to be relatively short. In principle, if automatic stabilisers are allowed to operate symmetrically over the cycle, they do not contribute to structural deterioration in budgetary positions.

Once it is recognised that using discretionary fiscal policy should be the exception rather than the rule in EMU, crucial questions arise from the point of view of stabilisation. Is the size of current automatic stabilisers sufficient? Would the sole working of automatic stabilisers produce an appropriate fiscal stance both at the national and euro area level given the single monetary policy? Are automatic stabilisers always stabilising?

The SGP "philosophy" is that of tax smoothing: after having attained their medium term target, countries should let automatic stabilisers play freely. Automatic stabilisers are the "natural" means to dampen variations in economic activity. However, at the national level, the need for active fiscal policy cannot be ruled out altogether because countries, especially small ones, may face a monetary stance which is not appropriate to their needs.

Clearly, in the light of the widely accepted criticisms (timing problems, irreversibility, model uncertainty, etc.), the use of discretionary fiscal policy for stabilisation purposes should be confined only to exceptional situations: deep recessions, serious risk of overheating and accelerating inflation. As pointed out above, policy failures increasing the swings rather than dampening them have been frequent in the past. Since wrong measures and wrong timing cannot be excluded in the future due to long lags in decision making and a high degree of uncertainty as regards the nature of shocks hitting the economy, discretionary fiscal policy should be used sparingly for stabilisation purposes: fiscal activism to fine-tune economic activity belongs to the past and should not be revived in EMU. Even in the exceptional cases in which discretionary policy can be envisaged, its channels of transmission (on the demand as well as on the supply side) should be carefully considered: measures tackling specific bottlenecks at the microeconomic level may be more important than general policies working through current disposable income. Examples include moderate wage setting in the public sector in the case of wage-push inflation, or phasing out of tax reliefs in dwelling in the case of a real estate bubble.

The fact that fiscal policy works both through demand and supply channels has a bearing on its role and effectiveness in responding to different types of shocks. This holds not only in the case of automatic stabilisers, but also in the case of discretionary fiscal policy. Of course, in reality it is often difficult to identify the type of shock hitting the economy and whether it is temporary or permanent without a considerable delay and in most cases, shocks have a demand as well as a supply dimension. Conceptually, however, this distinction is useful. Before examining the empirical importance of automatic stabilisers, we elaborate this issue in the next two subsections.

3.2 The simple economics of automatic stabilisation

The effect of automatic stabilisers on output and inflation under different types of shocks can be explored through a simple aggregate demand/supply model of a country in a monetary union[8]:

(1) $y^d = \phi_1 d - \phi_2 (i - \pi^e) - \phi_3 \pi - \phi_4 y + \varepsilon_d$

(2) $y^s = \omega(\pi - \pi^e) + \varepsilon_s$

Equation (1) is an IS-type schedule where aggregate demand, y^d, depends on the budget deficit as a share of GDP, d, the real interest rate $(i - \pi^e)$ and a temporary demand shock, ε_d. The external current account also affects output. In order to keep the model simple, we are not modelling explicitly the feedback effect on the domestic economy from the rest of the monetary union. Hence the external account depends only on y (absorption effect) and π (competitiveness effect). Equation (2) is a Lucas-Phillips supply function where aggregate supply, y^s, depends on the inflation expectation error, π-π^e, and a supply shock, ε_s, which can be temporary or permanent. All variables are expressed as changes from baseline.

By positing that fiscal authorities pursue a neutral discretionary policy and simply let automatic stabilisers play freely, the budget deficit is reduced to its cyclical component:

(3) $d = -ty$

where the automatic stabilisers are captured by the sensitivity parameter t which, in most estimates, is close to the tax to GDP ratio. This formulation allows condensing the complex working of automatic stabilisers via both sides of the budget into a single parameter. As we will show below, while convenient for the theoretical analysis, equation (3) does not capture the different impact of various budget items on the deficit which are important in empirical assessment.

It is assumed that monetary authorities set the interest rate i according to a simple Taylor rule:

(4) $i = \lambda (\pi + \beta y)$

[8] See Brunila, Buti and in't Veld (2003).

where β is the relative preference of monetary authorities between output and inflation. The parameter λ indicates the degree of "activism" of monetary policy. In this setting, it captures essentially the degree to which the individual economy in a monetary union affects the average variables of the area. Hence, a larger economy will have a larger effect on the decision making of the single central bank, thereby implying a higher λ. It is assumed that the equilibrium level of the interest rate (not shown here) ensures that inflation is on target in the medium run (i.e. when shocks are zero). [9]

Under these behavioural rules, the model can be solved for *y* and π:

$$(5) \qquad y = \frac{1}{\mu}\left[\omega\varepsilon_d + (\phi_2 + \phi_4)\varepsilon_s\right]$$

$$(6) \qquad \pi = \frac{1}{\mu}\left[\varepsilon_d - \omega(1 + \phi_1 t + \phi_3 + \beta\phi_2)\varepsilon_s\right]$$

where $\mu = \omega(1 + t\phi_1 + \phi_3) + \phi_2(\lambda + \beta\omega) + \phi_4$

Clearly, a higher *t* helps stabilising both output and inflation in the case of a temporary demand shock. Higher openness of the economy (that is higher ϕ_3 and ϕ_4) and a lower ω (that is a steeper supply function) also help to smooth demand shocks.

In the case of a *temporary* supply shock (that is a supply shock that does not affect potential output), equations (5) and (6) show that strong automatic stabilisers reduce the output variability, but imply a higher deviation of π from target.

If the supply shock is *permanent* (that is potential output changes by the size of the shock ε_s), the expression of the "new" output gap can be derived from (5) and is the following:

$$(7) \qquad y - \varepsilon_s = -\frac{\varepsilon_s}{\mu}\left[\omega(1 + t\phi_1 + \phi_3) + \phi_2\beta\omega\right]$$

$$(8) \qquad \pi = \frac{\varepsilon_s}{\mu\omega}\left[\omega(1 + t\phi_1 + \phi_3) + \phi_2\beta\omega\right]$$

9. Since shocks -- regardless of whether they are symmetric or country-specific -- are serially uncorrelated with zero average, this implies that π^e=0

A higher value of t increases the gap around the new potential output and, as a consequence, is both inflation- and output-destabilising. Notice also that, if inflation is the only concern of the central bank, perfect inflation stabilisation ($\pi=\pi^*$ at each point in time) implies also perfect output stabilisation in the event of a permanent supply shock (that is output jumps from the old to the new potential level).

For the time being the degree of automatic stabilisation has been taken as given. This is a reasonable assumption since automatic stabilisers are usually the ex post outcome of social preferences over efficiency and equity. However, in EMU, given the higher responsibility of fiscal policy for smoothing country-specific shocks, the degree of cyclical stabilisation of the latter may progressively enter as an autonomous concern in the design of tax and welfare systems.

While it is reasonable to assume that fiscal authorities would like to extract the largest possible degree of stabilisation, under EMU's budgetary rules, the cyclical swings in the budget deficit cannot be excessively large without risking violating the 3% of GDP deficit ceiling. Governments may also dislike very large budgetary surpluses in good times.

On the basis of these considerations, the loss function of fiscal authorities can be written as follows:

$$(9) \qquad L = d^2 + \delta y^2$$

where δ is the relative preference for output versus deficit stabilisation. This formulation of the loss function is very convenient, allowing to derive a simple expression of the optimal t. By minimising L with respect to t gives :

$$(10) \qquad t^* = \frac{\delta\omega\phi_1}{\omega(1+\phi_3)+\phi_2(\lambda+\beta\omega)+\phi_4}$$

As one could have expected, the higher the preference for stabilising output, the larger t^*. A small country (being characterised by a small λ), by benefiting less from the stabilisation ensured by monetary authorities, will choose larger automatic stabilisers. This effect,

however, tends to be compensated by the larger stabilisation derived by a more open economy via foreign trade[10].

Notice also that, somewhat counter-intuitively, the higher the effectiveness of fiscal policy (that is the higher ϕ_1), the larger t^*. The reason is that, via the feedback effect on the budget, the more powerful impact on demand helps to keep down the cyclical component of the budget balance. Hence it reduces the deviation from target, which provides an incentive to choose a higher t.

3.3 Supply side channels of automatic stabilisation

While the traditional view of automatic stabilisers focuses on their impact via demand, in a number of recent papers we have stressed the potential adverse supply side effects of automatic stabilisers also on short term cyclical stabilisation.

Buti and van den Noord (2003) and Buti et al. (2003) analyse the interplay between market flexibility and cyclical stabilisation by extending the above model to capture the supply side effects of automatic stabilisers. Their main innovation is the assumption that the slope of output supply positively depends on the tax rate. This is compatible with a unionised labour market with a relatively high degree of wage rigidity and a progressive tax system.

The authors show that, if in an imperfect labour market workers pass through the cyclical variations in their tax burden at least partly onto employers (i.e. there is so-called "real wage resistance"), the steepness of the upward sloping wage formation curve depends on the tax burden. This leads to the following amended aggregate supply function:

$$(11) \qquad y = (1 - \gamma\xi t)\omega\left(\pi - \pi^e\right) + \varepsilon_s$$

where ξ represents the overall degree of progressivity/redistribution of the tax and welfare system and ω is a constant, positive parameter. Hence, if there is some degree of wage resistance (*i.e.* γ is positive), the reaction of output to an inflation surprise is smaller the larger the value of t. In other words, in countries with bigger governments and higher taxes, a value

[10] However, a strand of literature points to the fact that more open economies, being affected by larger external shocks, tend to have larger governments (for a survey of the literature, see Martinez Mongay, 2002).

of inflation larger (smaller) than expected will lead to a smaller (larger) reaction of output, which corresponds to a steeper supply function in the output-inflation space. The intuition for this result is clear. Take the case of a positive inflation surprise: as employers demand more labour to increase production, they will have to pay higher wages to cover not only for the higher prices but also on account of the fact that the real reservation wage moves up as taxes increase progressively an means-tests kink in; this tends to limit the rise in production. To be consistent we also reformulated the fiscal policy rule (see equation 3) which now reads:

(12) $d = -\xi t y$

The standard model which neglects the effect of taxes on supply predicts that automatic stabilisers stabilise output and inflation in the event of demand shocks and stabilise output, but destabilise inflation under supply shocks. However, once we take supply side effects into account, this conclusion may change for different tax burdens *t*. In particular, when *t* exceeds a certain critical threshold, the stabilisation properties of automatic stabilisers change.

In the event of a supply shock, as in the traditional model, the higher the tax rate, the further away inflation shifts following the shock. However, unlike the traditional model, in a country with a tax rate beyond the critical value, output moves further away from the initial equilibrium than in a country with a lower tax rate. In the event of a demand shock, while output is always closer to potential the higher the level of *t*, beyond *t*'s critical value, a further increase in taxes is inflation destabilising.

In the simple model above, the critical level of the tax rate, call it *t***, can be analytically derived. Its expression is the following :

(13) $t^{**} = \dfrac{\phi_1 - (1 + \phi_2 \lambda \beta + \phi_4)\gamma}{2\phi_1 \gamma \xi}$

The threshold level of taxation beyond which automatic stabilisers may lead to perverse outcomes depends, *inter alia*, on the preferences of the central bank over inflation and output (β): a central bank caring essentially about price stability will choke off the perverse supply effects of automatic stabilisers and this will, in turn, reduce the incentives for tax reforms aimed at lowering the tax burden. *t*** depends on the openness of the economy: the more open the economy, the lower will be the fiscal demand multiplier and therefore the steeper will be the supply curve relative to the demand curve for a given tax burden. Therefore, open

economies are more likely to face adverse fiscal stabilisation properties in the face of a supply shock than relatively closed economies for a given level of taxation (and progressivity).

The typical tax burden in EMU countries is in the range of 40 to 50 per cent of GDP. Is this exceeding the optimal level and would a reduction in the fiscal size thus work out favourably for stabilisation? Is it empirically possible or even likely that the tax burden exceeds the critical tax burden?

On the basis of a reasonable values of the parameters, Buti and van den Noord (2003a) find that $t^{**} = 0.4$ for large euro area countries which suggests that for countries in the upper end of the range the tax burden would be sub-optimal. This implies that a country with an initial tax burden of 50 per cent who would cut it by 10 percentage points realises a slight improvement in the output stabilisation properties after an adverse supply shock. For smaller, more open economies, t^{**} may fall into a range of 0.2 to 0.3. Under those conditions reducing the size of government would improve fiscal stabilisation. Hence, small open economies in the EMU are thus facing stronger incentives to reform their tax systems than the relatively closed ones.

To sum up, automatic stabilisers affect output and inflation in the short run not only through the demand channel but also via the supply channel. This combined effect may result in destabilisation rather stabilisation of output and inflation in the case of supply shocks and destabilisation rather than stabilisation of inflation in the case of demand shocks, if the tax burden is high. Hence there may not be a trade-off between automatic stabilisation and alternative adjustment mechanisms (*i.e.* market flexibility) as is often proclaimed, especially in cases where the starting point is an economy with a large government sector and if that economy is also relatively open. This is encouraging for countries with high tax burdens that are considering a reduction in the size of the public sector.

3.4 How large are automatic stabilisers in Europe?

In general, automatic stabilisers tend to increase with the size of the government sector, the progressivity of the tax system, the relative share of taxation of cyclically-sensitive tax bases, the generosity of unemployment benefit systems, the sensitivity of unemployment to fluctuations in output and the overall size of the public sector. Among country-specific

factors, the openness of the economy and the flexibility of the labour, product and financial markets have a significant impact on the smoothing capacity of automatic stabilisers. According to estimates by the OECD and the European Commission, the budget sensitivity to the output gap is around 0.5 in the euro area. This implies that if the output gap changes by 1% point, the budget balance as a share of GDP is expected to change by ½ point. There are, however, noticeable differences between euro area members: from 0.3 in Austria and Portugal to 0.7-0.8 in Belgium, Finland and the Netherlands[11].

These estimates of automatic stabilisers are by no means uncontroversial. A number of recent studies point to substantially smaller swings of the budget balance to changes in economic activity.[12]

However, the findings of these studies are not necessarily in contradiction with the estimates reported above. While there is a wide consensus that the total degree of fiscal stabilisation is relatively low in euro area countries, the main difference between these studies relates to the boundaries between automatic stabilisation and discretionary policy. Analyses relying on mainstream estimates find that discretionary policies have frequently been pro-cyclical in the past two decades[13].

What cyclical smoothing can be expected form "pure" automatic stabilisation? Table 1 presents the results of analyses with three leading macroeconometric models: QUEST of the European Commission (European Commission, 2001); INTERLINK of the OECD (van den Noord, 2000) and NiGEM of the National Institute of Economic and Social Research (Barrell and Pina, 2000).

The simulations of the European Commission suggest that the degree of smoothing provided by automatic stabilisers vary significantly under various types of shocks and across countries. The highest degree of stabilisation is provided under a shock to private consumption – which is very "tax-rich" - and the lowest under an investment shock. Automatic stabilisation proved to be most effective in Germany, Finland and Sweden, whereas the lowest degree of

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11 Van den Noord (2000) shows that these estimates imply a certain reduction in the size of automatic stabilisers over time. This may reflect the reforms in the recent past which trimmed the generosity of the welfare state and lowered the progressivity of tax systems.

12 See, e.g. Mélitz (2002), Wyplosz (1999) and Barrell and Dury ((2001).

13 See, e.g. Fatàs and Mihov (2002), and Brunila and Martinez Mongay (2002).

stabilisation was obtained in Belgium, Greece, France and the UK. Under supply shocks the smoothing effectiveness was relatively low, with much less cross-country variance.

The OECD simulations do not distinguish between the types of shocks and are therefore not directly comparable to the European Commission simulations. Nevertheless, the OECD finds on average, a similar smoothing effectiveness, between 25 and 30% for the euro area. The ranking across countries is however somewhat different. Finland and the Netherlands, with their large budgetary automatic stabilisers, obtain the highest degree of output stabilisation, while the degree of stabilisation is significantly lower in Austria, France, Greece and Spain.

The analysis with NiGEM points to considerably smaller effects: in the range of 5 to 18%, with the euro area at 11%. Germany shows the highest dampening effects while, surprisingly, Finland features one of the lowest (just 7%). The lower stabilising effect appears to be due to a cyclical sensitivity of the budget to economic activity lower than normally estimated. Like in the European Commission simulations automatic stabilisers are less effective in smoothing supply shocks than demand shocks.

Table 1 Degree of stabilisation provided by automatic stabilisers (%)

	QUEST[(1)] Demand shock	**QUEST[(2)] Supply shock**	**INTERLINK[(3)]**	**NiGEM[(4)]**
B	6-19	2	22	5
D	8-28	7	31	18
EL	8-35	4	14	-
E	6-28	3	17	13
F	10-38	6	14	7
IRL	3-13	1	10	7
I	10-29	10	23	5
NL	5-21	3	36	6
A	6-21	6	7	12
P	6-30	5	-	10
FIN	6-31	1	58	7
Euro area			-	11
DK	8-28	7	-	-
S	6-27	10	26	-
UK	7-22	10	30	-

(1) Reduction in output change in the first-year following a demand shock of 1% of GDP
(2) Reduction in output change in the first-year following a supply shock of 1% of GDP
(3) 1- RMSD (Root mean square deviations) of the output gap in the 1990s
(4) 1- RMSD of GDP growth

Two broad conclusions can be drawn from the previous analysis. First, a fundamental factor affecting the role of fiscal stabilisation is the nature of economic shocks prevailing in EMU: if supply-related shocks, especially if long-lasting, tend to prevail, structural adjustment rather

than cyclical stabilisation (no matter whether automatic or discretionary) will be required. Indeed, “too much” stabilisation may be harmful to the extent that it may slow down further an already sluggish structural change. Hence, to the extent that it reflects the response to supply-side shocks, the lower stabilisation effect shown by the NiGEM simulations may actually be a good thing.

Second, the impact of automatic fiscal stabilisers may, at varying degrees, be reinforced by other mechanisms that operate to smooth the business cycle. For example, the behaviour of imports is sensitive to short-term fluctuations in aggregate demand and therefore helps to stabilise variations in economic activity. Reactions in financial markets to cyclical developments should also reinforce the fiscal stabilisation mechanisms. Finally, cyclical variations in labour productivity prevent sharp swings in the demand for labour and thus help to stabilise unemployment.

3.5 A health warning: beware of the risks of automatic stabilisation

While we prefer automatic stabilisers over discretionary policy, the policy prescription "let stabilisers play freely" is, finally, not wholly devoid of risks:

- Governments may treat changes in budget positions that have structural roots as if they were the result of automatic stabilisers, or *vice versa.* This is to misjudge the underlying fiscal situation and may lead to inappropriate policies. Once evidence suggests that changes affecting the level or the growth rate of potential output have occurred, fiscal policies should be reviewed and, where necessary, adjusted. Otherwise, fiscal policy may be set on an unsustainable course. Improving the analytical tools available to governments to gauge the economy’s potential and the structural fiscal position thus appears to be important for future policy making.

- A related risk arises from the fact that automatic fiscal stabilisers respond to structural changes in the economic situation as well as to cyclical developments. Consequently, if the economy’s growth potential declines, and this is not appreciated

by the government in a timely fashion, the operation of automatic fiscal stabilisers is likely to undermine public finance positions that might otherwise have been sound.[14]

- A third risk arises from the fact that automatic fiscal stabilisation results from the operation of tax and benefit systems that primarily serve other objectives such as income security and redistribution. Automatic fiscal stabilisation is often created by mechanisms that allow people and businesses affected by changing economic circumstances to delay their adjustment to change. Such mechanisms include the functioning of social security systems, labour market institutions and many parts of tax systems whose effects on incentives have been analysed in detail in the various OECD *Jobs Strategy* publications -- see for example the most recent publication in this series, OECD (1999). When a future economic shock requires a major reallocation of resources, the role of automatic fiscal stabilisers should at best be one of temporarily easing the pain, to allow time for the necessary adjustments to take place - not to postpone these adjustments indefinitely.

4. Good economic policy: compatible with elections?

4.1 From pre- to post-EMU: a failed transition

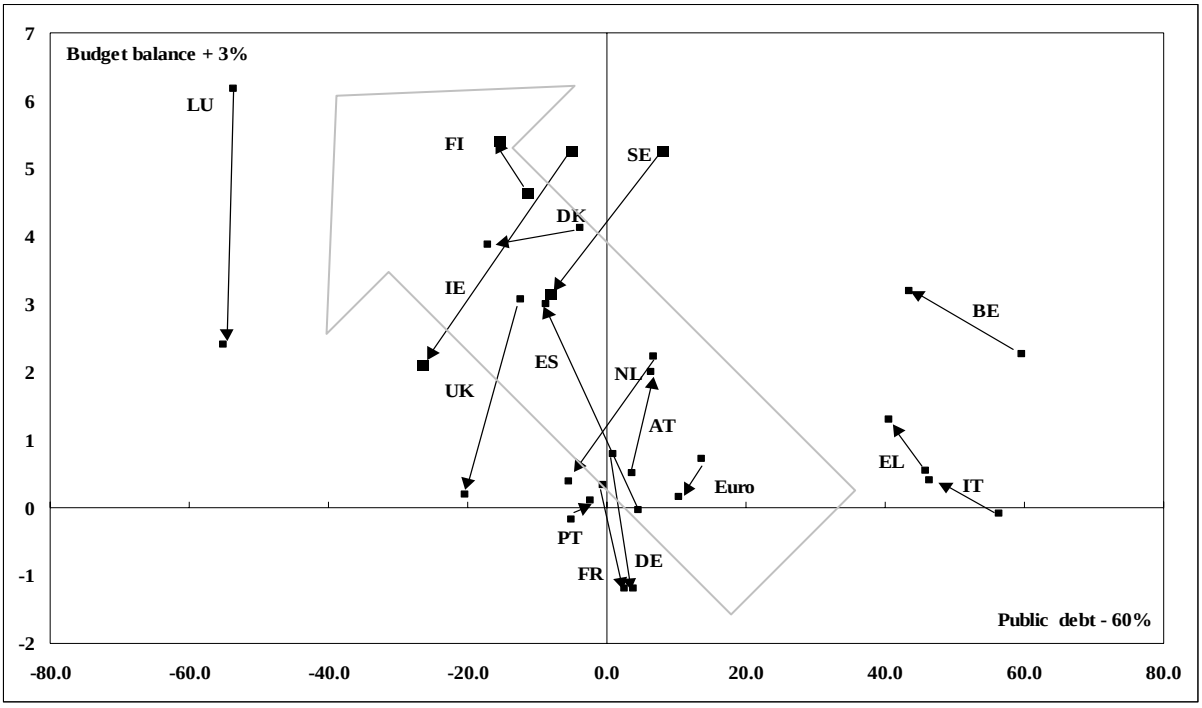
Most euro area countries entered stage three of EMU with budget deficits close to the 3% of GDP threshold and with a the stock of public debt above the reference value of 60% of GDP. The determination of countries to continue the fiscal retrenchment in the early years of EMU came to be regarded as a test of whether EMU had brought about a genuine regime change and a clear political commitment a the stability-oriented macroeconomic policy. Have euro area members lived up to such commitment?

Figure 2 shows the progress – or lack thereof - towards lower public deficits and debts made during the initial years of EMU. It shows, for each country, on the horizontal axis the difference between the stock of public debt as a share of GDP and the 60% Maastricht reference value, and on the vertical axis the difference between the budget balance and the 3% deficit ceiling. For both variables, the situation in 1998 and 2003 is pictured. While a number

[14] See, e.g. Larch and Salto (2003).

of countries managed to move further away from the deficit threshold between 1998 and 2003 and achieved a reduction in public debt, the chart clearly shows that overall no progress has been accomplished on the way to budgetary consolidation. Indeed, if one nets out the automatic effects of growth on the budget (implying a move towards north-east in the chart), countries in average relaxed their retrenchment efforts. In particular the three largest countries of the euro area – Germany, France, Italy – as well as Portugal – which has been the first country to have exceeded the 3% of GDP deficit limit in 2001– did not behave according to the spirit (and the letter) of the SGP. Germany and France entered into excessive deficits in 2002 and, in 2004, are expected to have deficits above 3% of GDP for the third year in a row.

Figure 2 Budgetary room for manoeuvre, 2003-1998



Note: The big arrow shows the desired direction of change

Source: Commission services

Do these developments signal a delay in the transition to broadly balanced budget caused by lower-than-expected growth or a more fundamental problem with the "political incentives" under the SGP? Several elements point towards the second type of explanation. In particular, as argued by Buti and Giudice (2002), different political incentives played a crucial role in the different fiscal behaviour pre- and post-1999.

Maastricht undoubtedly played a major role in the fiscal turnaround in the 1990s and came to be regarded as a binding constraint in the public opinion in many EU countries.

While a full interpretation of the success of Maastricht is beyond the scope of the present paper, a number of key factors which have characterised this process can be identified. In our view, the main ingredients of Maastricht's success were the following:

- *Public visibility*: The objective of meeting the Maastricht convergence criteria became the centrepiece of government strategies in many EU countries. Public visibility was greatly facilitated by the simplicity of the 3% of GDP deficit criterion which provided a clear signpost for economic policies regardless of the government political colour, especially in countries which entered the 1990s with very high deficits and looming unsustainability threats. High visibility, together with easy monitoring, was also one of the reasons for preferring numerical targets over national procedural rules.

- *Clear structure of incentives*. Reward and penalty linked with the Maastricht public finance requirements were very clearly laid out. Politically, meeting the convergence criteria would allow budgetary laggards to join the virtuous countries in the new policy regime, while failing to comply carried the penalty of exclusion from the euro area. This was considered too hard a political sanction especially for countries traditionally at the forefront of the process of European integration.

- *Political ownership*. The whole debate on the fiscal requirements of EMU reflected Germany's concern with fiscal discipline: both the Maastricht fiscal criteria and the SGP clearly bear Germany's fingerprints. Strong macroeconomic stability came to be regarded as an essential pre-condition for Germany to accept merging monetary sovereignty into a single currency.

- *Constraining calendar*. The Treaty set very clear deadlines for moving to the final stage of EMU. Countries willing to join with the first wave, had no choice but to make the required consolidation effort to meet the convergence requirements.

- *Effective monitoring*. The simplicity and the (largely) unambiguous definition of the fiscal requirements – especially that concerning the budget deficit - allowed an effective monitoring on the part of the European Commission which played the role of external

agent commonly entrusted with the correct interpretation and implementation of the Treaty criteria.

If this interpretation of the political economy of Maastricht is correct, one may ask to what extent the post-1999 regime – once EMU were officially launched – differs from the run up to EMU.

Clearly, the binding nature of most factors has been reduced with the introduction of the euro. Relative to a simple deficit ceiling, the close-to-balance rule enjoys lower political visibility. The structure of incentives has changed with the move to a single currency: the market incentives have been reduced with the convergence of interest rates and the carrot of entry has been eaten while the stick of exclusion has been replaced by the threat of uncertain and delayed pecuniary sanctions. Most importantly, the political ownership of the fiscal rules seems to be shifting towards smaller countries with sound public finances which, although numerous, have a relatively small weight in the euro area. It is fair to recognise that this shift has weakened the enforceability of the rules, especially vis à vis large countries.[15]

4.2 Yes, elections do matter

From the outset there has been a concern that the SGP would not be strong enough to prevent politically-motivated fiscal policies. The experience in EMU to date lends support to this criticism. Overall, unlike the experience in the run-up to EMU, fiscal policies have had an expansionary bias and this may be related to the elections cycle.

In this section, we attempt to shed light on this issue. Our analysis is nested into the literature on politically-motivate policies, which is vast. It started off with the seminal contributions by Nordhaus and Hibbs in the mid-1970s on political business cycle and was revived in the early 1990s by Alesina and others in models which incorporated political incentives with rational expectations (for a survey see, Drazen, 2000). A strand of the literature has also analysed electoral budget cycles, with models of opportunistic electoral cycles (Rogoff and Sibert, 1988) and electoral accountability (Ferejohn, 1986). More recently, the new literature on

[15] An example of the shifting political ownership is the refusal on the part of the Council to endorse an "early warning" recommendation to Germany and Portugal put forward by the Commission at the beginning of 2002. See European Commission (2002).

"political economics" has analysed the impact of different features of political systems on the running of fiscal policy (see Persson and Tabellini, 2002a and 2002b). The individual country model of opportunistic or partisan behaviour has been extended by Sapir and Sekkat (1999) to allow for cross-country spillovers.

In essence, the predictions of the theoretical literature on fiscal behaviour in relation to elections can be summarised as follow: (1) opportunistic behaviour implies fiscal policy manipulations before the elections; (2) uncertainty about the electoral outcome and the degree of polarisation induce governments to undertake short-sighted policies; (3) most models predict tax cuts before elections while the implications for spending is less clear-cut; (4) electoral rules shape fiscal behaviour, with majoritarian elections leading to larger fiscal activism focussed on targeted programmes aimed at shifting votes in marginal districts, while proportional elections lead to increase of broad-based programmes. Recent empirical work has found support, though not unequivocal, for these predictions (see *i.e.* Persson and Tabellini, 2002a and 2002b, Milesi-Ferretti, Perotti and Rostagno, 2002).

The literature predicts tax cuts before elections while the implications for spending are less clear-cut but generally point to spending hikes during the election year. Our own empirical work covering the first four years of EMU (Buti and Van den Noord, 2003b) confirmed this prediction. Whereas in non-election years there had been a small bias towards tax increases, there was a clear tendency towards tax cuts in the years preceding regular elections (or in years when elections were unexpectedly advanced by a political crisis). One way to interpret this finding is that in "normal" years governments build up a "war chest" through tax increases, and then go into the elections with subsequent tax cuts. The pattern for discretionary expenditure is less clear-cut, but on average expenditure hikes have been larger in regular election years than in other years. In any event, fiscal buffers had been too small in some countries, with the result that fiscal positions had approached or exceeded the 3 per cent of GDP deficit ceiling as soon as the economy slowed down.

Table 2. Elections in Euro area countries 1999-2002

	1999	2000	2001	2002	2003
Austria	General elections	-	-	Early general elections	-
Belgium	General elections	-	-	Pre-election year	General elections
Finland	General elections	-	-	Pre-election year	General elections
France	-	-	Pre-election year	General elections	-
Germany	-	-	Pre-election year	General elections	-
Greece	Pre-election year	General elections	-	-	Pre-election year
Ireland	-	-	Pre-election year	General elections	-
Italy	-	Pre-election year	General elections	-	-
Netherlands	-	-	Pre-election year	General elections	Early general elections
Portugal	General elections	-	-	Early general elections	-
Spain	Pre-election year	General elections	-	-	Pre-election year
Number of election years	4	2	1	4	2
Number of early or pre-election years	2	1	4	4	3

Now being five years into EMU, we are tempted to update this work and carry out a simple econometric investigation of electoral manipulation of fiscal policy over this period. Given the relatively large number of electoral episodes in the period 1999-2003 — all countries had either general elections as part of the regular electoral cycle, or early elections prompted by political crises, see Table 2 — we can now provide some further evidence on incentives for politically motivated fiscal policies. Note that 2002 has been particularly busy for the joint electorate in the euro area, with general elections (of which two were held early) in six countries and run-ups to elections next year in two countries.

In order to explore the behaviour of fiscal policy in EMU we constructed an indicator of discretionary fiscal policy — dubbed *DP* — which we have now updated to include 2003 (our earlier investigation covered the period 1999-2002). The indicator decomposes the primary fiscal balance into two components, a part that is consistent with a neutral stance of fiscal policy and the remainder that is attributable to fiscal stimulus or contraction. A neutral fiscal stance is defined as a policy in which primary expenditure grows in line with trend GDP plus the inflation target, and tax revenue grows in line with the actual nominal GDP (taking into account also the impact of tax progression built into the tax code). If in setting the budget a government adopts such rule, it can be said that it adopts a "neutral" policy.[16] Any deviation from there is considered "discretionary", which is captured by *DP*.

Formally, the indicator of discretionary policy *DP* is written as follows:

[16] For a similar approach, see Larch and Salto (2003).

$$(14) \quad DP_t = \frac{\left(g_{t-1}\tilde{g}_t - \tau_{t-1}\tilde{\tau}_t\right) + g_{t-1}\varepsilon_G(y_t^e - y_t^*) + g_{t-1}(\pi_t^e - \pi^{ECB})}{1 + y_t + \pi_t}$$

where y_t is growth of real GDP, π_t is inflation, y^*_t is trend growth, π^{ECB} is the inflation target of the ECB, y_t^e is the expected GDP growth, π_t^e is the expected inflation rate, g_t is the ratio between primary expenditure and GDP, ε_G is the long-run income elasticity of public expenditure. Finally, $\tilde{g}_t$ and $\tilde{\tau}_t$ are a measure of discretionary expenditure and revenue, respectively; a positive value of the former and a negative value of the latter denote expansionary policies (and *vice versa*). According to this equation discretionary fiscal policy can be broken down into three components:

- "Genuine" or overt discretionary policy, which captures the impact of explicit discretionary fiscal policy on the primary balance, *i.e.* the component that is expected to be funded through debt rather than through windfalls stemming from the projected growth or inflation "dividend" (see below). This component is then split between genuine discretionary expenditure changes (labelled $\tilde{g}_t$) and genuine discretionary tax changes (labelled $\tilde{\tau}_t$) appropriately weighted to compute their impact on the budget deficit.

- A projected "growth dividend" which, if positive ($y^e > y^*$), can be used by the government to fund extra expenditure.

- A projected "inflation dividend" which, if positive ($\pi^e > \pi^{ECB}$), can also be used for expenditure hikes.

Closer inspection of equation (14) shows that the same three-pronged breakdown can be applied both to the primary deficit and to expenditure, but not to revenues for which the growth and inflation dividends are zero by definition. The reason is that we associate "neutral" revenue with the actual (as opposed to the structural) evolution of the tax base.

In the calculations the expected variables for a given year are those projected in the country's stability programme prepared in the previous year. For trend growth, the OECD estimates published in the *Economic Outlook 73* that were published early- 2003 have been used. As to π^{ECB}, we used 1½ per cent which is consistent with the ECB's reference value for money

growth.[17] To compute neutral (non-discretionary) expenditure growth we adopted a unit elasticity for expenditure to trend output, hence like in Von Hagen (2002) ε_G is set equal to one. The neutral increase in tax revenue is computed by multiplying the tax revenue in the previous year with actual nominal output growth and the average tax elasticities reported in Van den Noord (2000).[18]

This indicator provides a different picture of discretionary policy compared to the change in the cyclically-adjusted primary balance (*ΔCAPB*). This indicator of the fiscal stance (see, *e.g.* European Commission, 2002, and Van den Noord, 2000) is usually taken as a gauge of the impact of fiscal policy on economic activity. By contrast, *DP* aims to capture the discretionary behaviour of the fiscal authorities against a benchmark of "unchanged policy". If nominal GDP growth collapses unexpectedly, the non-discretionary component of the expenditure ratio automatically increases because the allocation of resources is set on the basis of expected GDP growth. This is implicitly treated as discretionary in the fiscal stance measured *ΔCAPB*. Moreover, unlike the *ΔCAPB*, the indicator captures the effect of inflation. Note also that the CAPB actually assumes that $\varepsilon_G<0$ to reflect the counter-cyclical behaviour of unemployment-related expenditure whereas DP assumes that $\varepsilon_G = 1$.[19] The *DP* therefore tends to be more "generous" with governments than the CAPB in the sense that the amount of expenditure growth that would be considered to be "neutral" is generally larger.

The results of our calculations for *DP* are presented in Table 3. A positive (negative) entry indicates a discretionary loosening (tightening). The numbers suggest that, on average for the area as a whole, fiscal policy has become easier in the course of the 1999-2002 period with some retrenchment in 2003.[20] Indeed, whereas in the first two sets of programmes there was a

17. The implicit assumption is that governments adopt the ECB target as their benchmark for "equilibrium" rate of inflation, which may or may not be true, but any other assumption risks introducing an arbitrary element. It may be argued also that the ECB has moved to a somewhat higher inflation target, close to 2 per cent, following its strategy review in May 2003. However, this change was introduced after the latest batch of stability programmes and therefore cannot have influenced governments' behaviour in the period covered here. In any event, the results are relatively robust with respect to the inflation assumption.

18. The estimated cyclical sensitivity of tax revenues reflects the historical "average" cyclical responsiveness of these revenues. Actual year-to-year behaviour may be more erratic as specific tax bases may behave atypically over the cycle. An important factor leading to disturbances in the tax elasticities is the rise and fall of equity prices, see for example Eschenbach and Schuknecht (2002).

19. In *DP* the expenditure elasticity is with respect to potential output and refers to the long-run trend, whereas in the CAPB it is with respect to actual output and refers to the cycle.

20. Note that the numbers presented are excluding receipts from UMTS licences, which were substantial in some countries in notably 2000 and 2001. However, the numbers are not corrected for the impact of

tightening bias, this turned into an easing bias in the next two vintages.[21] Interestingly, this is true also for the "genuine" discretionary component, suggesting that governments have indeed become less concerned with deficit financing and deliberately relaxed budget discipline in 2001 and 2002 beyond the "unchanged policy" rule. The fiscal loosening started in the year 2000 in a number of countries and notably in Italy and Portugal, two of the countries currently trapped in high deficits. The projected growth dividend is positive in 1999-2001 and – not surprisingly – negative thereafter. The inflation dividend is always positive, but small.

The lower panel of Table 3 shows the breakdown of discretionary policy between expenditure and revenue. As the growth and inflation dividends only affect expenditure, they can be subtracted from the total discretionary spending to compute its "genuine" component (see the formula above). The picture that emerges is mixed. The growth and inflation dividends "swell" discretionary spending while genuine spending remained tight. The large loosening in 2001 and 2002 came from the revenue side which reversed a sizeable increase in the previous years. The growth and inflation dividends continued to boost discretionary expenditure in 2003, but discretionary revenue growth turned practically neutral, *i.e.* discretionary tax cuts ceased.

An interesting question is to what extent this behaviour can be related to the election cycle, the business cycle, or both. The electoral cycle will work through the three channels of discretionary policy identified above (genuine discretionary policy, growth dividend and inflation dividend). But their relative importance may change according to the type of electoral calendar. A priori we expect the genuine *DP* to show an easing policy stance in pre-election years (except if the elections are not anticipated) and in election years. The literature predicts that tax cuts should be observed in the run up to elections and expenditure hikes in the election years themselves. In principle, one could also expect a positive impact of the business cycle justified by incumbents taking advantage of a looser budget constraint to raise their chances of re-election.

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securitisations which in some countries have been used to mask underlying fiscal easing. As a result, the true easing may have been larger than shown here.

21. The tightening bias in 1999 and 2000 (including in Germany and France) may seem surprising in view of the quite different results reported elsewhere based on the CAPB. This different assessment stems mainly from the fact that the DP treats tax windfalls in boom years as "neutral", whereas CAPB treats these as cyclical, which after adjustment appears as fiscal easing.

Table 3. Indicator of Discretionary Fiscal Policy

Contribution to deficit, per cent of GDP

	Discretionary policy					"Neutral" primary deficit					Actual primary deficit				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Austria	-0.8	-0.9	-3.2	-0.2	0.0	-0.1	-0.3	0.1	-2.0	-1.4	-0.8	-1.2	-3.2	-2.2	-1.4
Belgium	0.9	0.2	-0.3	0.5	0.5	-7.0	-6.8	-6.1	-6.2	-5.7	-6.2	-6.6	-6.4	-5.7	-5.2
Finland	-1.0	-2.2	2.2	0.6	1.5	-2.6	-5.8	-8.0	-5.4	-4.7	-3.6	-8.0	-5.8	-4.8	-3.2
France	-1.3	-0.4	-0.4	0.9	-0.7	0.2	-0.9	-0.7	-0.4	1.5	-1.1	-1.4	-1.1	0.5	0.8
Germany	-0.7	0.1	1.1	0.4	-0.8	-0.9	-1.6	-1.1	0.4	1.5	-1.6	-1.5	0.0	0.8	0.8
Greece	1.0	1.8	2.2	1.5	1.1	-6.4	-6.9	-6.6	-5.8	-5.4	-5.4	-5.1	-4.4	-4.3	-4.3
Ireland	1.7	-1.2	3.6	2.3	-0.1	-5.2	-4.2	-5.4	-2.0	0.7	-3.5	-5.4	-1.8	0.2	0.6
Italy	0.2	0.8	1.3	0.3	0.8	-4.6	-5.0	-4.5	-3.1	-3.0	-4.4	-4.1	-3.3	-2.9	-2.2
Netherlands	-0.9	0.6	2.6	1.0	0.6	-3.6	-5.4	-5.4	-2.5	-1.3	-4.5	-4.7	-2.8	-1.5	-0.7
Portugal	0.1	0.5	1.2	-1.4	0.3	-0.4	-0.5	-0.1	1.1	-0.1	-0.4	0.0	1.1	-0.4	0.1
Spain	0.0	1.1	0.2	0.8	0.7	-2.2	-3.2	-2.9	-3.4	-2.9	-2.2	-2.1	-2.7	-2.6	-2.2
Weighted average	-0.5	0.2	0.7	0.5	0.0	-2.1	-2.9	-2.5	-1.6	-0.7	-2.5	-2.6	-1.8	-1.0	-0.7
Unweighted average	-0.1	0.0	1.0	0.6	0.4	-3.0	-3.7	-3.7	-2.7	-1.9	-3.1	-3.6	-2.8	-2.1	-1.5

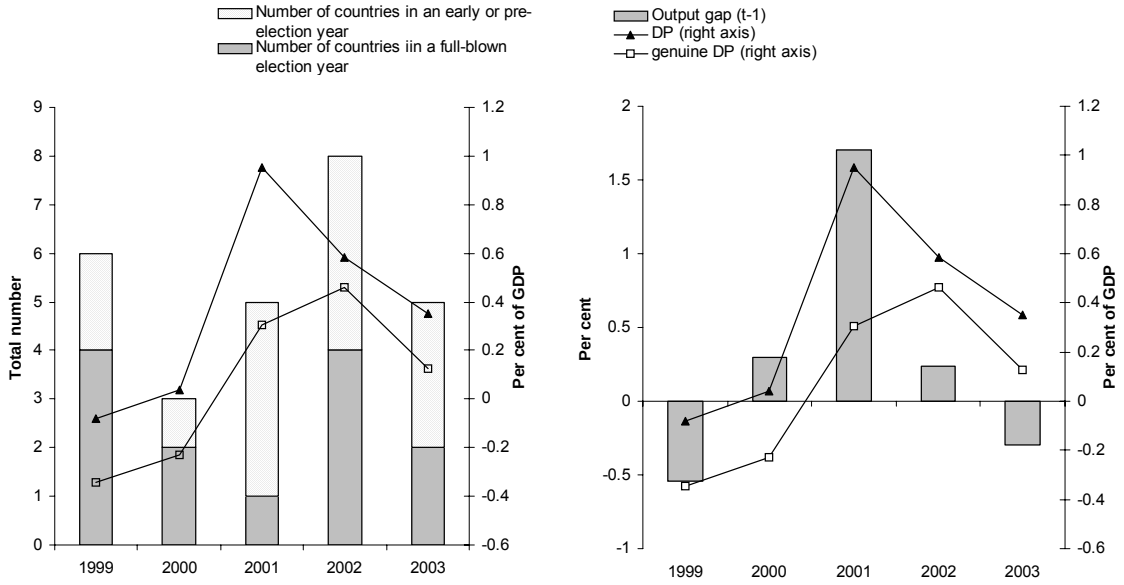
	"genuine" discretionary policy					Projected "growth dividend"					Projected "inflation dividend"				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Austria	-0.8	-0.6	-3.4	0.0	0.2	0.2	0.0	0.1	-0.5	-0.3	-0.2	-0.3	0.1	0.3	0.0
Belgium	0.8	0.3	-0.2	0.5	0.4	0.1	0.1	0.0	-0.3	0.0	0.0	-0.2	-0.1	0.3	0.0
Finland	-1.6	-2.8	1.8	1.2	1.5	0.4	0.5	0.6	-0.5	0.1	0.2	0.0	-0.1	-0.2	-0.1
France	-1.4	-0.8	-0.7	0.6	-0.8	0.2	0.4	0.5	0.2	0.1	-0.1	0.0	-0.1	0.1	0.0
Germany	-0.7	-0.2	0.6	0.6	-0.8	0.2	0.5	0.5	-0.3	0.0	-0.2	-0.2	0.0	0.0	0.0
Greece	0.4	1.3	1.2	0.8	0.5	0.2	0.3	0.8	0.2	0.1	0.3	0.2	0.3	0.5	0.6
Ireland	1.7	-1.8	2.4	2.2	-0.1	-0.3	0.2	0.5	-0.6	-0.6	0.3	0.4	0.8	0.6	0.6
Italy	-0.3	0.7	0.5	-0.3	0.4	0.3	0.1	0.4	0.2	0.2	0.2	0.1	0.4	0.4	0.2
Netherlands	-1.2	0.5	1.2	0.8	0.2	0.0	-0.2	0.5	-0.6	-0.6	0.3	0.4	0.9	0.7	0.9
Portugal	-0.3	0.2	0.3	-2.0	-0.4	0.1	0.0	0.1	-0.2	-0.1	0.3	0.3	0.8	0.7	0.7
Spain	-0.4	0.8	-0.2	0.5	0.2	0.3	0.2	0.2	-0.1	0.1	0.1	0.2	0.3	0.4	0.4
Weighted average	-0.7	0.0	0.1	0.4	-0.2	0.2	0.3	0.4	-0.1	0.0	0.0	0.0	0.1	0.2	0.2
Unweighted average	-0.3	-0.2	0.3	0.5	0.1	0.1	0.2	0.4	-0.2	-0.1	0.1	0.1	0.3	0.4	0.3

	"Genuine" discretionary expenditure					Discretionary expenditure					Discretionary revenue				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Austria	-0.3	-0.8	-1.6	-0.6	0.4	-0.3	-1.1	-1.4	-0.8	0.1	0.5	-0.2	1.8	-0.6	0.1
Belgium	0.1	0.2	-0.2	0.9	0.0	0.2	0.1	-0.3	0.9	0.0	-0.7	-0.1	0.1	0.4	-0.4
Finland	-1.6	-1.6	-0.3	0.7	0.5	-1.0	-1.0	0.1	0.1	0.6	0.0	1.2	-2.1	-0.5	-0.9
France	-0.2	-0.7	-0.2	0.1	-0.1	-0.1	-0.3	0.2	0.6	0.0	1.2	0.1	0.6	-0.3	0.7
Germany	-0.1	-0.6	-1.0	0.1	-0.1	-0.1	-0.3	-0.4	-0.1	-0.1	0.6	-0.4	-1.5	-0.5	0.7
Greece	1.2	2.5	-0.5	0.0	-0.1	1.8	3.1	0.6	0.8	0.6	0.8	1.3	-1.6	-0.8	-0.6
Ireland	2.2	-1.0	1.5	2.0	0.1	2.2	-0.4	2.7	2.0	0.1	0.5	0.8	-0.9	-0.2	0.2
Italy	0.1	0.1	0.4	-1.0	-0.4	0.6	0.2	1.1	-0.5	0.0	0.4	-0.6	-0.1	-0.8	-0.7
Netherlands	0.2	0.5	0.4	0.6	0.1	0.4	0.7	1.8	0.8	0.5	1.3	0.0	-0.8	-0.2	0.0
Portugal	1.6	1.0	0.2	-0.4	-0.1	1.9	1.3	1.2	0.1	0.6	1.9	0.9	-0.1	1.5	0.3
Spain	0.2	0.9	-0.2	0.5	0.0	0.7	1.2	0.2	0.8	0.5	0.7	0.1	0.0	0.0	-0.2
Weighted average	0.1	-0.2	-0.3	0.0	-0.1	0.3	0.1	0.3	0.2	0.1	0.7	-0.1	-0.4	-0.4	0.1
Unweighted average	0.3	0.0	-0.1	0.3	0.0	0.6	0.3	0.5	0.4	0.3	0.7	0.3	-0.4	-0.2	-0.1

Source: Stability Programmes, OECD Economic Outlook No. 73, Paris, 2003 and authors' own calculations

The left panel of Figure 3 depicts the evolution of (the un-weighted average of) *DP* and *genuine DP* over time against the number of countries that are in a full-blown, early- or pre-election year. It suggests that in the immediate aftermath of the start of EMU in 1999 budgets were still relatively tight despite a busy electoral calendar. However, subsequently the discretionary policy stance moved in line with the electoral cycle. As more countries called their electorates to the polls in 2001 and 2002, discretionary policy eased (*DP* increased) and as the electoral calendar waned in 2003, policy became less easy. The close correlation between the *genuine DP* and the electoral cycle is particularly striking.

Figure 3. The election cycle, the output gap and discretionary fiscal policy



Source: Stability Programmes, OECD Economic Outlook No. 73, 2003 and authors' own calculations

We also observe a close correlation between the discretionary fiscal stance and the cyclical positions of countries' economies (gauged by the output gap) in the previous year, *i.e.* in the year in which the stability programmes were drawn up (see the right panel of Figure 3). The correlation is strongest between the total (as opposed to the genuine) *DP*, as might be expected since a stability programme drawn up in a boom year is likely to rely on some growth and inflation dividend while putting less emphasis on genuine discretionary easing. These findings suggest that the stance of discretionary policy in the early ears of EMU has indeed behaved pro-cyclically. So, one would expect to find a particularly easy stance of fiscal policy in a period with a busy electoral calendar in the immediate aftermath of an economic upswing. The 2001-02 period largely qualifies for this characterisation.

We have examined these relationships more closely through some elementary regression analysis. We run the following regression equation:

$$DP_t = \alpha_1 (DEF_{t-1} - DEF^*_{t-1}) + \alpha_2 GAP_{t-1} + \alpha_3 PEE_t + \alpha_4 FBE_t + \\ + \alpha_5 \max(GAP_{t-1} \times PEE_t, 0) + \alpha_6 \max(GAP_{t-1} \times FBE_t, 0) + \sum_i \beta_i \times DUMC_{i,t} + u_t \quad (15)$$

The rationale for this equation and the meaning of the mnemonics are as follows:

- The first explanatory variable $DEF_{t-1} - DEF^*_{t-1}$ denotes the *deficit gap*, which is the gap between the actual deficit from which the programme jumps off, *i.e.* the lagged deficit, and the deficit target embodied in the running stability programme (for which we take the projected deficit for the end-year of the programme).[22] This variable thus measures the required consolidation effort implied by the country's stability programme. The larger this required effort, the tighter discretionary policy will be; the sign of the regression coefficient should be negative.[23]

- The second explanatory variable is the *output gap*, lagged by one period GAP_{t-1}. This is included to capture the impact of the cycle on *DP* through discretionary policy. A negative sign will emerge if the fiscal impulse is counter-cyclical and the reverse if it is pro-cyclical.

- To gauge where the country stands in its electoral cycle and the degree to which this affects discretionary policy we have included two *dummy variables* PEE_t and FBE_t. $PEE_t = 1$ in a pre- or early election year and zero otherwise and $FBE_t = 1$ in a full-blown election year and zero otherwise.

- We also want to test whether the impact of the electoral cycle on *DP interacts* with the business cycle. The interaction is captured by two explanatory variables that are the respective products of the election dummies and the lagged output gap, but only

22 . All variables are expressed as a percentage of GDP.

23 . Favero (2003) uses the difference between the primary surplus and the debt-stabilising primary surplus as an explanatory variable, in line with Ballabriga and Martinez Mongay (2003). To the extent the deficit target in the stability programmes reflect the required debt-stabilising surplus, their approach is similar to ours.

positive observations of the gap are included. This will tell us whether not only the level of *DP* but also the way it responds to the cycle is affected by electoral motives.

- Since we are doing a pooled time-series cross-country regression we have included *country dummies*, labelled $DUMC_i$ to capture systematic cross-country differences in fiscal behaviour, to the extent this is not already captured by our other explanatory variables. These take the value 1 for the *i*th country and are zero otherwise.

As usual u_t denotes the normally-distributed residual. The total number of observations is 55, i.e. 11 countries times 5 years, of which 28 for the non-election years, 14 for both the pre- or early elections years and 13 for the full-blown election years. The method used is ordinary least squares. The equation is estimated not only for the total *DP* but also for its components (*i.e.* discretionary expenditure, "genuine" discretionary expenditure, discretionary revenue, "genuine" discretionary fiscal policy and the growth and inflation dividends).[24]

Our findings are reported in Table 4. From the regressions the following can be inferred:

- *DP* is cut by roughly ½ a percentage point, split equally across discretionary expenditure and discretionary revenues for every percentage-point deficit gap (or required consolidation). This suggests that the stability programmes have been effective in prompting governments to consolidate their budgets, and to frontload this effort (half of the consolidation effort is concentrated in the first year of the programmes). We call this the underlying consolidation effort.

- In full-blown election years, however, the underlying consolidation effort is offset by an easing of the fiscal stance by around a ½ percentage point in the form of an expenditure hike. This is irrespective of the cyclical position of the economy. This finding is in line with the prediction in the literature.

- In pre- or early election years the underlying consolidation effort is offset by an easing of the stance by around a ½ percentage point for every percentage-point of the output gap, for two-thirds through expenditure and for one-third through tax cuts. This is also broadly consistent with the literature, except that we find evidence of an

24. We have omitted an autoregressive term to avoid losing a highly valuable one-fifth of the number of observations. However, once a new vintage of stability programmes becomes available this would be a potentially useful extension of the model.

interaction with the output gap, *i.e.* politically-motivated fiscal easing is stronger in upswings.

- The fact that α_2 is negative in the equations for discretionary expenditure and genuine discretionary expenditure suggests that governments tend to pursue classic anti-cyclical discretionary spending policies in addition to or offsetting (it depends on the cyclical position of the economy) the discretionary policies prompted by the deficit target in the stability programmes and the political cycle.

- The coefficients of the country dummies suggest that six countries (Greece, Ireland, Italy, the Netherlands, Portugal and Spain), notwithstanding their significant progress in fiscal consolidation in nominal terms, systematically pursue an easier discretionary fiscal policy than their peers, funded to some extent by an inflation dividend. This is not surprising since these are the countries with the highest inflation rates.

The results confirm the predicted behaviour: in pre-election years, early election years and full-blown election years there is a bias towards easing discretionary fiscal policy. One way to interpret the results is in terms of the political dynamics. In election off-years governments may want to build up a "war chest" which shows up as tight fiscal policy, and then go into the election year with a subsequent easing of fiscal policy. The problem of course is that not sufficient safety margin has been created in a number of countries, with the result that some of them dangerously approached or exceeded the 3 per cent of GDP deficit ceiling as soon as the economy slowed down.

Our results are consistent with the findings of von Hagen (2002) who uses a similar indicator of discretionary fiscal policy, but focuses only on pre-elections years and does not distinguish between expenditure and revenue changes. He finds that the expansionary stance in the 1998-2001 period for years preceding the election has been twice as large as that in other years. They are consistent with Buti (2002) who uses the change in the cyclically adjusted primary balance as a measure of discretionary policy. He compares, for each year since 1999, the target for the cyclically-adjusted budget balance in the national stability programmes submitted two years earlier with the out-turn for the same year. His conclusion is that, while most countries missed their targets, deviations from target appear larger and more systematic in elections years.

In sum, our analysis suggests that the electoral budget cycle is alive and well in EMU. Electoral manipulation of fiscal policy in EU countries has not been curbed by EMU's fiscal policy rules.

Table 4 Regression results[a]

	Explanatory variables						Country dummies													
	DEF_{t-1} - DEF^*_{t-1} (α1)	GAP_{t-1} (α2)	PEE_t (α3)	FBE_t (α4)	max (PEE_t x $GAP_{t-1,0}$) (α5)	max (FBE_t x $GAP_{t-1,0}$) (α6)	AUT (β1)	BEL (β2)	FIN (β3)	FRA (β4)	GER (β5)	GRE (β6)	IRE (β7)	ITA (β8)	NET (β9)	POR (β10)	SPA (β11)	*R2*	*R2 adj.*	*F-statistic*[c]
Discretionary expenditure	**-0.28**	**-0.23**	-0.17	**0.41**	**0.45**	0.20	**-0.50**	0.10	**-0.43**	0.31	-0.02	**1.71**	**1.31**	**0.66**	**0.67**	**1.89**	**0.85**	***0.77***	***0.68***	***7.64***
t-statistic[b]	***-3.96***	***-3.34***	*-0.85*	***1.97***	***4.35***	*1.65*	***-2.00***	*0.39*	***-1.67***	*1.07*	*-0.07*	***5.54***	***3.67***	***2.32***	***2.54***	***5.53***	***3.15***			
Genuine discretionary expenditure	**-0.33**	**-0.25**	-0.05	**0.43**	**0.25**	0.21	-0.38	0.09	**-0.69**	0.14	-0.07	**1.05**	**1.23**	0.23	0.27	**1.49**	0.43	***0.61***	***0.45***	***3.55***
t-statistic[b]	***-3.77***	***-2.98***	*-0.19*	***1.73***	***1.95***	*1.46*	*-1.24*	*0.29*	***-2.21***	*0.39*	*-0.21*	***2.80***	***2.84***	*0.66*	*0.85*	***3.59***	*1.32*			
Discretionary revenue	**0.23**	-0.10	0.01	0.06	-0.16	0.00	0.22	-0.34	-0.32	0.06	-0.60	**-0.84**	**0.89**	**-0.93**	0.44	0.31	-0.25	*0.41*	*0.16*	*1.53*
t-statistic[b]	***2.25***	*-1.04*	*0.03*	*0.20*	*-1.05*	*-0.03*	*0.60*	*-0.91*	*-0.86*	*0.13*	*-1.57*	***-1.89***	***1.72***	***-2.27***	*1.15*	*0.63*	*-0.64*			
Total discretionary policy	**-0.52**	-0.13	-0.18	0.35	**0.61**	0.20	**-0.72**	0.44	-0.11	0.25	0.58	**2.55**	0.42	**1.59**	0.23	**1.58**	**1.10**	***0.69***	***0.56***	***5.05***
t-statistic[b]	***-4.70***	*-1.20*	*-0.58*	*1.10*	***3.82***	*1.10*	***-1.87***	*1.11*	*-0.27*	*0.57*	*1.43*	***5.39***	*0.77*	***3.66***	*0.57*	***3.01***	***2.65***			
Genuine discretionary policy	**-0.56**	-0.14	-0.05	0.38	**0.40**	0.22	-0.60	0.42	-0.37	0.11	0.53	**1.89**	0.32	**1.15**	-0.17	**1.17**	**0.68**	***0.62***	***0.45***	***3.58***
t-statistic[b]	***-4.91***	*-1.30*	*-0.16*	*1.17*	***2.42***	*1.14*	*-1.51*	*1.04*	*-0.90*	*0.25*	*1.26*	***3.85***	*0.57*	***2.57***	*-0.41*	***2.14***	***1.58***			
Growth dividend	0.01	0.01	**-0.25**	-0.06	**0.18**	-0.04	-0.04	0.05	**0.34**	**0.28**	0.21	**0.39**	**-0.33**	**0.27**	-0.17	-0.03	0.21	***0.57***	***0.40***	***3.02***
t-statistic[b]	*0.40*	*0.19*	***-2.51***	*-0.61*	***3.55***	*-0.72*	*-0.36*	*0.37*	***2.72***	***2.01***	*1.64*	***2.59***	***-1.92***	***1.98***	*-1.33*	*-0.15*	*1.61*			
Inflation dividend	0.03	0.01	**0.12**	0.02	0.03	0.03	-0.07	-0.03	-0.08	-0.14	**-0.16**	**0.27**	**0.43**	0.16	**0.58**	**0.44**	**0.21**	***0.77***	***0.67***	***7.50***
t-statistic[b]	*1.15*	*0.37*	***1.71***	*0.34*	*0.81*	*0.63*	*-0.85*	*-0.39*	*-0.89*	*-1.43*	***-1.76***	***2.54***	***3.48***	*1.61*	***6.28***	***3.68***	***2.23***			

a. Coefficients significant at 95 per cent confidence level are bolded.

b. The critical value of the t statistic for 17 explanatory variables and 55 observations is 1.7 at the 95 confidence level.

c. The critical value of the F stasitic for 17 explanatory variables and 55 observations is 2 at the 95 per cent confidence level .

Source: authors' caluclations

5. Concluding remarks

Our conclusions can be summarised in three main points.

First, we are sceptical about fiscal discretion as a means to stabilise the business cycle. As to the main reasons why, we couldn't have summarised it better than Solow (2002) who states that: "Maybe prolonged imbalances between aggregate supply and demand (…) occur in market economies, and maybe appropriately tuned fiscal policy could help to relieve them. But maybe also democratic politics is simply incapable of making the appropriate fiscal-policy adjustments in time to do much good. (…) Whenever discretionary fiscal policy rises to the top of the political agenda, special interests come out of the woodwork. Every tax change, every increase or decrease in public spending is caught over by the potential winners and losers, their lobbyists and elected representatives. The final outcome may often be distributionally and allocationally, and even macroeconomically, perverse. In any case it is bound to be delayed, and possibly dangerous on that account. (…) Note that this is not some kind of minor flaw in the system; it is the system." This almost universal truth is a fact of life. It argues strongly in favour of rules-based fiscal policy, with strong reliance on automatic stabilisers.

Second, we believe there is scope to heighten the effectiveness of the automatic stabilisers and that this would not necessarily be at the expense of alternative adjustment mechanisms, *i.e.* market flexibility. Both market flexibility and automatic stabilisers are essential to absorb asymmetric shocks in a monetary union and there perhaps not being a trade-off between the two is very encouraging. One example of a feature that may impart the effectiveness of automatic stabilisers we have not explored in this paper are the myriad tax incentives governments provide to stimulate home ownership – an area which receives more and more attention. A tax system that contains generous incentives of home ownership may result in greater volatility of house prices and associated wealth effects (Van den Noord, 2003). Hence it would act as a destabilising force, to some extent offsetting the automatic stabilising properties that are normally attributed to income taxation. Revamping tax systems so as to reduce the volatility of housing cycles may in fact contribute also to the traditional automatic stabilisation properties of tax systems. Further research to underpin the complementarity of automatic stabilisers and efficient markets, such as the one identified above, would be highly welcome.

Third, we find that there are, unfortunately, decisive political economy impediments against the free working of automatic stabilisers in EMU. The political business cycle in EMU is alive and kicking, and therefore automatic stabilisers have tended to be offset by pro-cyclical fiscal discretion. Despite the consolidation challenges and commitments stemming from the Treaty and Pact the stance of fiscal policy has been eased in countries with a busy electoral calendar in the immediate aftermath of the 1999-2000 economic upswing. Our econometric work provides evidence of this. It is tempting to look at the experience in other monetary unions like the collective states in the United States. The experience there shows that states with the tightest fiscal rules (or that are enforced most strongly) are also the ones more inclined to build up reserves (often in the form of "rainy day funds") that allow them to let automatic stabilisers work over the cycle (Inman and Bohn, 1996, and Knight and Levinson, 1999). If they are right that tight fiscal rules work out favourably for stabilisation policy, the conclusion might be drawn that in order to achieve more fiscal flexibility in EMU, the enforcement of the SGP should be strengthened, not become more lenient.

In sum, the present difficulties of the fiscal framework of EMU have little to do with its alleged weaknesses and inconsistencies and much to do with strong political incentives which shape budgetary behaviour. Any reassessment of the fiscal rules of EMU aiming at increasing their political ownership by the member countries will have to take such powerful inner forces into account.

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