

## Why Did the Stability and Growth Pact Fail?

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### Abstract

This paper evaluates the Stability and Growth Pact. After briefly examining the rules in place and the experience so far, the Pact is analysed from a political economy perspective, focusing on the choice for hard versus soft law and drawing inferences from characteristics of successful fiscal rules at the state level in the United States. The main argument of the paper is that the Pact's enforcement mechanisms are too weak. It is also argued that big countries are less likely to adhere to the fiscal policy rules in place. Reform of the Pact should aim at stricter instead of more flexible rules and should not rely on cyclically-adjusted deficit estimates.

**Key words:** Stability and Growth Pact, EMU, budget discipline

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## 1. Introduction

The fiscal policy framework of the Economic and Monetary Union (EMU) aims at combining budgetary discipline with flexibility. The Maastricht Treaty stipulates that member states should avoid so-called excessive deficits (measured against reference values of 3% of GDP for the general government budget deficit and 60% for the general government debt-to-GDP ratio). According to the Stability and Growth Pact (SGP), member states should achieve and maintain a budgetary position 'close to balance or in surplus' in the medium term. Compliance with these rules implies fiscal discipline, while at the same time providing the necessary room for using automatic stabilisers.

In 2002/3 the budgetary position of various countries in the euro area deteriorated. According to the Spring 2004 forecasts of the European Commission, the actual budget deficit in the euro area reached 2.3% of GDP in 2002 and 2.7% in 2003. In 2002 the fiscal position of especially Germany, France, and Portugal were weak. France and Germany had deficits above the 3% of GDP reference value in 2003 (4.1% and 3.9 %, respectively). As a result of their budgetary imbalances, the ECOFIN Council started the so-called excessive deficit procedure for France, Germany and Portugal. However, at their meeting of November 25, 2003, the majority of the EU finance ministers decided to suspend the excessive deficit procedure against France and Germany, despite the European Commission's recommendation to the contrary.<sup>1</sup> The European Commission declared on January 13, 2004 that it would mount a legal challenge in the European Court of Justice to the ECOFIN decision. These developments led many observers to conclude that the Stability and Growth Pact is effectively dead.<sup>2</sup>

This paper argues that the major problem of the SGP is its weak enforcement mechanisms. It is also argued that big countries are less likely to adhere to the fiscal policy rules in place. In our view, reform of the Pact should aim at stricter instead of more flexible rules and should not rely on cyclically -adjusted deficit estimates.

The remainder of the paper is organized as follows. The next section examines the rules in place and the experience with these rules so far. In section three, the effectiveness of the SGP is analysed from a political economy perspective, drawing inferences from characteristics of successful fiscal rules at the state level in the United States. Section four discusses directions of future changes in the Pact. We argue against using the so-called cyclically adjusted budget balance for policy purposes as is currently done. Section 5 offers our concluding comments.

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<sup>1</sup> The European Commission had proposed to extend the deadlines for the elimination of the excessive deficits in Germany and France by one year, provided that effective measures were taken by the respective authorities. In its proposal, the European Commission took into account that too large a budgetary consolidation in one year may prove economically costly if undertaken in a single year.

<sup>2</sup> Some authors welcome this, as they feel that the rules in place lack legitimacy. For instance, Wyplosz (2002, p. 5) argues that the rules "tend to be rigid and artificial, which makes them ultimately impossible to defend in the face of public opinions". Still, in a recent discussion meeting Tommaso Padoa-Schioppa (member of the Executive Board of the ECB), Franz-Cristoph Zeidler (Member of the Executive Board of the German Bundesbank) and André Sapir (European Commission's Group of Policy Advisors) all agreed that the Pact is not dead (Friends of Europe, Café Crossfire, 16 February 2004).

## 2. The rules in place and the experience so far

### 2.1 SGP: the rules

The SGP provides the details for multilateral surveillance and the excessive deficit procedure.<sup>3</sup> It consists of two Council Regulations on the strengthening of the surveillance and co-ordination of budgetary positions<sup>4</sup> and on speeding up and clarifying the implementation of the excessive deficit procedure<sup>5</sup>, tied together by a corresponding European Council Resolution.<sup>6</sup> Regulation 1466/97 sets out to strengthen multilateral surveillance and gives member states a goal of a medium term budgetary position of close to balance or in surplus. Regulation 1467/97 clarifies and accelerates the excessive deficit procedure as specified in the Maastricht Treaty so that within 10 months non-interest bearing deposits and ultimately fines can be imposed in case the member state concerned takes no effective actions to redress fiscal imbalances.

Member states of the euro area have to present so-called stability programmes, which have to be updated annually. Issues covered by the programmes include the adjustment path for the general government deficit towards the medium-term objective of close to balance or in surplus and the expected general government debt ratio on an annual basis. In addition to the preceding and current year, this information has to cover at least the following three years.

Even though the multilateral surveillance and the excessive deficit procedures are both laid down in regulations they are very different in terms of the distinction between hard and soft law, where hard law lies at one end of the spectrum and soft law at the other. Following Abbott and Snidal (2000), hard law refers to legally binding obligations that are precise and that delegate authority for interpreting and implementing the law, whereas the realm of soft law begins once legal arrangements are weakened along one or more of the dimensions of obligation, precision, and delegation. Or, as Senden and Prechal (2001, p. 185) describe it, soft law consists of “general rules of conduct laid down in instruments which have not been awarded legal force as such, but which nevertheless have certain legal effects and which are directed at and may produce practical effects”.

Especially, the multilateral surveillance part of the SGP heavily relies on soft law. Why have the EU member states opted for a soft law approach?<sup>7</sup> According to Abbott and Snidal (2000), soft law measures may be the most appropriate rule type under some circumstances. First, soft law reduces *negotiating costs*. Highly legalized agreements entail significant contracting costs. As soft law reduces the levels of obligation, delegation or precision, the costs of negotiation are similarly reduced, which may make agreement possible. Because the commitments made under hard law are more precise and may involve delegation of interpretation of these rules, it will be harder to reach an agreement. Soft legalization mitigates these costs of reaching an agreement. The negotiating costs argument seems relevant in the case of the SGP. As is illustrated by its

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<sup>3</sup> This part of the paper heavily draws on Amtenbrink and De Haan (2003).

<sup>4</sup> Council Regulation No. 1466/97, O.J. 1997, L209/1.

<sup>5</sup> Council Regulation No. 1467/97, O.J. 1997, L 209/6.

<sup>6</sup> Resolution of the European Council on the Stability and Growth Pact, Amsterdam, 17 June 1997, O.J. 1997, C 236/1. For an overview of the working of the Stability and Growth Pact, see Amtenbrink, De Haan and Sleijpen (1997).

<sup>7</sup> This part heavily draws on Hodson and Maher (2003).

name, the member states had rather different views on the aims of the SGP and how to reach them. A rather vague and legally non-binding objective for the medium term helped to reach an agreement.

Second, soft law may also reduce *sovereignty costs*. Accepting a binding legal obligation, especially when it entails delegating authority to a supranational body, may be costly to states. States can limit sovereignty costs through arrangements that are non-binding or imprecise or that do not delegate extensive powers. Again this argument seems applicable to the SGP, as various member states were unwilling to delegate much authority to the Community level. A scheme that leaves actual policy decisions and implementation at the national level, while at the same time offering the opportunity for peer pressure, is then a natural outcome.

Third, in case of considerable *uncertainty* soft law may be the most appropriate method of legalisation. This observation is also relevant in analysing the existing system of economic co-ordination. Indeed, one ambiguity in the SGP has concerned the “close to balance or in surplus” budget objective. The view underlying this objective is that the medium-term budget target should be set such as to provide a safety margin for both cyclical developments and unanticipated budgetary risks. A common interpretation, although not specified as such in the SGP, has been that this implies a target for the cyclically adjusted budget balance (see section 4.1 for a further discussion of this issue).

Fourth, soft law is a *tool of compromise*. It can take divergent national circumstances into account through flexible implementation. Soft legalization provides for flexibility in implementation, helping states deal with the domestic political and economic consequences of an agreement. Because even soft legal agreements commit states to characteristic forms of discourse and procedure, soft law also provides a way of achieving compromise over time. Furthermore, it can give states the opportunity to learn about the consequences of what they have agreed to, opening the way for further negotiation. Also this argument seems relevant in the context of the SGP. The recent Commission proposals for reform (as discussed by Amtenbrink and De Haan, 2003) were, to quite an extent, based on the experience with the Pact.

## 2.2 SGP in practice

As many countries entered the monetary union with deficits close to 3 per cent, a further budgetary adjustment in the early years of EMU was needed to move to close-to-balance positions. In this respect, three groups of countries can be distinguished. First, there is a group of countries that already had a balanced budget at the beginning of the period under consideration. Helped by the favourable economic developments they managed to stick to the objective of a balanced budget or a surplus. Finland, for instance, had a budget surplus during the entire period under consideration.

Second, various countries not only targeted for a balanced budget (or a surplus), but also realised it. A good example is Belgium, not a country known for its excellent track record when it comes to sound public finances. Still, it managed to bring back its deficit in a relatively short period.

Finally, a third group of countries did not manage to reduce their deficits and moved the years in which they aimed to have a balanced budget to the more distant future in their respective stability programmes. A good example is Germany. Early stability programmes foresaw a deficit of only 1 per cent in 2002. However, the stability

programme of December 2001 aimed for a deficit of 2 per cent in 2002. According to the most recent figures published by the European Commission, Germany had a deficit of 3.5% of GDP in 2002 (see Table 1).

[insert table 1 here]

As follows from Table 1, also other countries have exceeded the 3 per cent threshold recently, or are forecasted to do so. France and Germany exceed the reference value even three years on a row. According to the European Commission (2003), the French authorities failed to take corrective measures to address the growing budgetary imbalances. In line with the Commission proposal, the Council initially recommended “the French authorities to achieve a significantly larger improvement in the cyclically -adjusted deficit in 2003 than that currently planned” and “to implement measures ensuring that the cyclically-adjusted deficit is reduced in 2004 by 0.5% of GDP....to ensure that the nominal deficit will be below 3% in 2004 at the latest.”<sup>8</sup> As explained in the Introduction, the Council later decided to accept that France would exceed this level in 2004. Even though the Council did not decide in favour of sanctions “at this point in time”<sup>9</sup>, it recommended that France achieves a reduction in the cyclically -adjusted deficit of 0.8 per cent of GDP in 2004 and at least 0.6 per cent in 2005 to ensure that the deficit is brought below the 3 per cent level. A similar recommendation was given to Germany.

In April 2004, the European Commission proposed to end the excessive procedure for Portugal as its deficit was below 3% in 2002 and 2003. However, the budget deficit in the Netherlands and the UK in 2003 exceeded the 3% level. Italy’s budget deficit for 2004 is forecasted to exceed the 3% reference value as well. Therefore, the Commission proposed to give an early warning to Italy.

### *2.3 Same rules, but different behaviour*

It is quite interesting that although the countries in the euro area all faced the same external constraint, their fiscal policy outcomes were very different. It follows from Table 2 that small and intermediate-sized states, i.e. states with a GDP less than two per cent of the EU GDP and between two and seven per cent of EU GDP have been more successful in bringing down their debt-to-GDP ratio after 1997 than large states (with a share in EU GDP exceeding 7 per cent).<sup>10</sup> Table 2 also shows that between 1997 and 2002 the small member states had – on average – a surplus of 1 percent, whereas the large member states had a deficit of 1.5 percent. The intermediate-sized countries had – on average – a balanced budget. In section 3, where we discuss the effectiveness of the rules in place, we will come back to the difference between small and large states.

[insert table 2 here]

In conclusion, the experience with the SGP so far is mixed. It is clear that especially some of the large member states have not taken the political commitment to

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<sup>8</sup> Interestingly, Denmark and the Netherlands voted against this decision. The latter even had its arguments made public, arguing that France should bring down its structural deficit by at least 0.5% of GDP in 2003.

<sup>9</sup> ECOFIN meeting, 25 November 2003, 14492/1/03REV1.

<sup>10</sup> The distinction between the countries in terms of their size follows Von Hagen (2003).

strive for a balanced budget or a surplus in the medium term very serious. As a consequence, these countries have exceeded the 3 per cent deficit threshold. In the next section we will analyse the weaknesses of the SGP in some more detail, drawing on the experience of US states with restrictions on fiscal policy at the state level, and focusing on different incentives for large and small countries to adhere to the rules.

### 3. The political economy of the SGP

#### 3.1 Strong and weak rules

According to Papademos (2003, p. 75), “a comparison of the rules and procedures of the Stability and Growth Pact with characteristics [of successful rules at the state level in the US] shows that the European fiscal rules perform reasonably well, which may lead us to conclude that they are – in principle – suited to ensure fiscal discipline”.

Inman (1996) has identified certain characteristics of successful fiscal policy rules (so-called Balanced Budget Rules, BBRs) at the state level in the US. Even though these rules are different from the SGP as they are self-imposed in a unilateral way, the US experience can be helpful to assess the strengths and weaknesses of the Pact. According to Inman, the potentially most important distinguishing attribute of any BBR specification is whether the rule involves *ex ante* or *ex post* accounting. *Ex ante* rules apply only at the beginning of the fiscal year, i.e. fiscal policy intentions, whereas *ex post* rules apply to fiscal policy outcomes. The US experience suggests that weak BBRs use *ex ante* balance rules; strong BBRs use *ex post* accounting rules. A second attribute is whether politicians can suspend a certain rule temporarily if they think this to be appropriate. The US experience suggests that weak rules allow such a BBR override, while strong rules do not.

The third attribute of enforcement can be described along three dimensions: access to complain about adherence to the rules is closed or open, the enforcer is partisan or independent, and the penalties are economically insignificant or significant. The US experience suggests that strong enforcement of the BBR requires open access to a review panel or court to allow all potentially affected parties to claim a violation; closed access weakens the BBR. Further, for a strong BBR the enforcing review panel must be independent of – i.e. not connected by partisan obligations to – the political bodies setting deficit policies. Also, if a violation is found, penalties must be enforceable and large enough to induce the political bodies setting deficit policies to prefer the balanced budget outcome to a deficit and the associated penalty. Finally, allowing the BBR to be amended by current political interests – the same interests preferring larger deficits – may weaken the BBR.

In assessing whether Papademos (2003) is right, it is important to realise that the multilateral surveillance and excessive deficit procedure employ forms of co-ordination that differ substantially. The former can be regarded as an application of the so-called open method of co-ordination based on soft law (Hodson and Maher, 2001), while the latter relies more on the closed method of co-ordination and is more based on hard law. The open method of co-ordination incorporates different governance approaches in different policy areas. It relies on self-commitment by the member states, peer review and peer pressure, on benchmarking, and on placing emphasis on policy learning and

consensus building. In contrast, the closed method of co-ordination tends to have top-down policy formulation and provides for rules and sanctions.

So how well does the SGP fare within the framework of Inman (1996)? Table 3 presents our assessment. With regard to the specification of the rule, as far as the *ex post* character is concerned, there is a clear distinction between the multilateral surveillance and the excessive deficit procedure. With respect to the latter, Art. 99(3) paragraph 2 EC refers to information on “important measures taken” and thus to the *ex post* reporting. In contrast, the stability programmes under Council Regulation 1466/97 have to be based on the plans for future national measures in the field of economic policy and thus on *ex ante* reporting. So under the excessive deficit procedure, the member states are primarily judged on the basis of realised fiscal performance, even though planned budget deficits can also be a reason for the Commission to initiate the excessive deficit procedure, while under the multilateral surveillance they are judged on the basis of policy intentions.

[insert table 3 here]

Concerning the question of whether the rules can be set aside easily, the fact that the same ministers, who are responsible for drafting national budgets, also have to decide whether they breach the 3 per cent criterion and the medium term objective, has to be considered as the most severe weakness of both parts of the SGP.<sup>11</sup> As Buiter (2003) points out, credible rules need an impartial, consistent and competent enforcement mechanism. The SGP rules are enforced in the end by the ECOFIN, which “manifestly does not have the collective capacity to commit itself to an impartial, consistent enforcement of the rules” (Buiter, 2003, p. 15).

Access is clearly limited, since the Council will only take decisions after the European Commission has prepared a report when a member state fails to fulfil the requirements under the criteria listed in Art 104c(2) or when the Commission is otherwise of the opinion that a risk exists that a member state will run an excessive deficit. If the Commission comes to the conclusion that an excessive deficit exists or may occur, it addresses an opinion to the Council, which takes a decision on whether or not an excessive deficit exists.

Regarding the application of sanctions, the same argument that has been made with respect to the possibility for an override by the Council can be made. In comparison to the BBRs of US States, the sanctions due to breaching the deficit criterion are quite tough and could be expected to have a deterrent effect. However, there is a conceptual difference between US state sanctions and the sanctions imposed by the ECOFIN. As pointed out by Inman (1996), in the US penalties for violating a self-imposed BBR are imposed by the state court. The ultimate penalty is court control over the state budget, likely to be viewed as a costly penalty by most state legislators. In the EU, penalties for violating the agreed-upon rules (including fines) are imposed by a ‘federal’ enforcer. However, the ECOFIN can never get control over the national budgets, which remain

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<sup>11</sup> Inman (1996) concludes that the Excessive Deficit Procedure, as outlined in the Maastricht Treaty, does not allow for an override, as national legislatures are unable to suspend the rules temporarily. As we pointed out in the previous section, national legislatures do not play any role in the SGP. However, since the Council can effectively put the rules aside, we think that the SGP does not have the features of a strong BBR.

under control of national legislators. Furthermore, the possible fines of the SGP aggravate the budgetary imbalances they were expected to prevent. Still, the most important objection to the current system is that the ECOFIN will not automatically impose sanctions, as a discretionary decision by the Council is required.<sup>12</sup> The sanctions in the multilateral surveillance procedure are very weak. In fact, only moral suasion and peer pressure (“naming and shaming”) can be applied here. Whether peer pressure works, depends on the incentives that member states have to ensure that other member states adhere to the rules (see section 3.2 for a further analysis).

Finally, with regard to the question of whether the BBR can be changed, a differentiation has to be made between the provisions included in the EC Treaty and the Protocols annexed thereto and the two Council Regulations. An amendment of the rules on the multilateral surveillance and excessive deficit procedure as formulated in Art. 99 et seq. EC would require an amendment of the EC Treaty itself and therefore needs the consent of all member states. To the extent to which the excessive deficit procedure is laid down in Council Regulation 1467/97, an amendment requires a unanimous decision by the Council. Only the rules on the multilateral surveillance procedure, to the extent to which they are laid down in Council Regulation 1466/97, can be amended by a qualified majority vote in the Council. Fundamental amendments of the multilateral surveillance and excessive deficit procedure thus in principle require a consensus between all member states which is not easily achieved.

### 3.2 *Ineffective soft law?*

In section 2 we showed that the non-binding objective of a balanced budget in the medium term was not adhered to by various member countries, especially the larger ones. As a consequence, they exceeded the 3% deficit threshold once the economic downturn set in. Often it is argued that this is due to the ‘soft law’ character of the regulation concerned. Some observers even go as far as to argue that, by definition, soft law is not effective. This is, however, too simplistic a view. Whether soft law works depends on the reactions of various participants in the process. Even in areas without explicit obligation to adjust there may be substantial incentives for governments to change policies. Two distinct sets of incentives operate: a “competition” incentive and a “co-operation” (regime-building) incentive (see Padoan, 2002).

The *co-operation incentive* is relevant to the extent that poor performance in any member state participating in the single currency weakens the performance and attractiveness of the euro area as a whole vis-à-vis the rest of the world. Poor policy in any one member of the club decreases the quality of the club good and may generate a negative externality on the other club members. This will presumably lead to strengthened peer pressure on the poor performer from the other club members. The co-operation incentive depends on externalities. A number of these so-called spillover effects of unsound national fiscal policies have been identified (see, e.g. Eijffinger and De Haan, 2000). First, there is a potential risk that other governments could in the end feel forced to bail out a bankrupt government of an individual member state despite the fact that Community law excludes such a move. Second, there is a risk for pressures on

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<sup>12</sup> As pointed out by Antenbrink and De Haan (2003), it is also quite surprising that the SGP does not specify sanctions in case the debt ratio is too high since the EC Treaty defines an excessive deficit in terms of the deficit and the debt ratio.



the ECB. This may lead to a direct bailout in the form of the purchasing of the debt of a highly indebted country in the bond market, or an indirect bailout taking the form of interest rates lower than motivated by price stability considerations. Third, lack of fiscal discipline in one country may affect interest rates and/or the external value of the euro, thereby affecting the other participating member states.

It follows from this analysis that peer pressure will be stronger, the larger the externalities of excessive deficits. However, the risks of the externalities seem small, especially in the short run. For instance, the external value of the euro seems currently not to be at risk due to the fact that some countries have an excessive deficit. Also the risk of a bailout by either the ECB or the other member states seems rather small, as even the countries with an excessive deficit are perfectly capable of borrowing at financial markets. Therefore, governments have little incentives to push hard when another member state does too little to adhere to the medium-term objective of a balanced budget or a surplus. So the co-operation incentive is weak.

The *competition incentives* derive from both the policy arena and from the market. A country that performs poorly would see its reputation weaken, which may diminish its leverage in the design and implementation of EU policies at large. In addition, markets may punish a poor performer to the extent that poor policies make that country less attractive for investment, whereas good performers would presumably enjoy greater profitability and thus increased investment. The competition incentives are also weak. So far, financial markets hardly punish a country with an excessive deficit. For instance, when the Council decided that Germany had an excessive deficit, interest rates on German bonds did not rise substantially.<sup>13</sup> The credit ratings of the countries concerned have also not been changed.

### 3.3 Small vs. big countries

As the preceding section showed, the incentives for member states to prevent other member states from deviating from the non-binding political commitment to strive for a balanced budget in the medium term are not strong. The size of the countries may play a role here. Big countries may be less susceptible to peer pressure than smaller ones, as they are unlikely to lose their influence on EU policies anyway. Indeed, as pointed out in section 2, most large member states did not reduce their deficits (enough) after the start of EMU.

How does this relate to the excessive deficit procedure that mainly consists of hard law? How will countries behave in this case, and will all countries behave in the same way? To shed light on this question, we will use, for illustrative purposes, a very simple model developed in a somewhat different context by Berger et al. (2003).

Consider the problem of a decision maker in country  $i$  facing a choice between a “loose” ( $L_i$ ) or “tight” ( $T_i$ ) fiscal policy ( $F_i$ ). Further, assume that a tight policy would

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<sup>13</sup> Recently, Afonso and Strauch (2004) have evaluated to which extent relevant fiscal policy events taking place in the course of 2002 produced a reaction in the long-term bond segment of the capital markets. They identify the fiscal policy events and qualitatively assess the views of capital market participants and estimate the impact of these fiscal events on the interest rate swap spreads. Their results suggest that the reaction of swap spreads, where it turned out to be significant, has been mostly around five basis points or less.

imply a fiscal deficit (or a surplus) in line with the conditions of the SGP, while a loose policy would constitute an excessive deficit in conflict with these conditions. To simplify, we assume that fiscal policy is determined simultaneously across countries.

Policy makers will take into account both the expected utility – in a political economy sense, i.e. the utility expected by the decision makers – from the deficit level chosen ( $u_i$ ) and any penalty ( $S_i$ ) a country might suffer when running a loose fiscal policy.  $S_i$  could be interpreted as combination of the fiscal charge foreseen in the SGP for deficits exceeding 3per cent and the loss of reputation or “political capital” that ensues from breaching the SGP, which might reduce the bargaining power of country  $i$  in negotiations regarding various other issues on the euro area or EU level. Arguably,  $S_i$  will take different values for any euro area member. A reasonable assumption is that smaller countries will suffer more from a loss of reputation of sticking to the rules than larger countries simply because their overall bargaining power is significantly lower to start with.<sup>14</sup> However, as evidenced by recent developments, choosing a loose fiscal policy in breach of the SGP does not necessarily mean that a country will be penalized. To capture the political economy of this decision, we assume that the penalty  $S_i$  occurs only with a certain probability ( $p_i$ ) – we will return to the nature of this probability below.

A simple and straightforward way to illustrate the problem of the decision maker in country  $i$  is that (s)he chooses fiscal policy  $F_i$  to maximize expected utility

$$EU_i = u_i - p_i(F_i, F_{\neq i}) \cdot S_i, \quad (1)$$

where

$$u_i = \begin{cases} \underline{u}_i & \text{if } F_i = T_i \\ \bar{u}_i & \text{if } F_i = L_i \end{cases} \text{ with } \bar{u}_i > \underline{u}_i \quad (2)$$

is the utility level associated with the type of fiscal policy chosen. The assumption  $\bar{u}_i > \underline{u}_i$  could reflect the neglect of the medium-run consequences of fiscal indulgence due to political-economic reasons.<sup>15</sup>

A key element of the set-up described in equation (1) is  $p_i$ , which captures a number of elements characterizing the political process behind EU or euro area decisions, including the possible interaction between the fiscal policies chosen across different member countries:

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<sup>14</sup> Consider a standard generalized Nash bargaining model with symmetrical concave utility functions and symmetrical fall-back positions. In such a framework the decrease in welfare associated with a marginal decrease in bargaining power is higher for lower initial levels of bargaining power. That is, “smaller” countries characterized by a lower initial bargaining power will suffer more from a decrease in bargaining power than “bigger” countries with a higher initial level of bargaining power. This is a straightforward implication of the concavity of utility. A more detailed exposition of the argument is available from the authors on request.

<sup>15</sup> This could, for instance, reflect the election cycle or a wish to restrict the room of manoeuvre of a successor government.

$$p_i = \begin{cases} 0 & \text{if } F_i = T_i \\ \underline{p} & \text{if } F_i = L_i \wedge F_{\neq i} = L_{\neq i} \\ \bar{p} & \text{if } F_i = L_i \wedge F_{\neq i} = T_{\neq i} \end{cases} \text{ with } 1 > \bar{p} > \underline{p} > 0. \quad (3)$$

The probability of being fined is 0 if a country steers a fiscal course in line with rules of the SGP (i.e.,  $F_i = T_i$ ); it is positive, however, if a country opts for a loose fiscal position ( $F_i = L_i$ ). In the latter case, the probability is a function of fiscal policy stance decision makers in  $i$  expects to prevail in other countries ( $F_{\neq i}$ ) at the time:<sup>16</sup> a plausible assumption is that it will be politically easier (or less costly) to sanction one country for fiscal misbehaviour than many. Thus, the probability of being penalized under the SGP is smaller if all euro area member countries steer of course ( $F_i = L_i \wedge F_{\neq i} = L_{\neq i}$ ) compared to a situation in which only country  $i$  chooses a loose fiscal policy ( $F_i = L_i \wedge F_{\neq i} = T_{\neq i}$ ).

A useful start to describing country  $i$ 's fiscal policy decision is identifying the point at which decision makers are indifferent between the two policy options  $L_i$  and  $T_i$ . This is the case if the expected utility (1) is the same under both policies, that is,

$$\underline{u}_i = \bar{u}_i - p_i \cdot S_i. \quad (4)$$

Making use of (2) and (3) and rearranging yields the level of  $S_i$  that fulfils (4)

$$S_i^* = \frac{\bar{u}_i - \underline{u}_i}{p_i} = \begin{cases} \frac{\bar{u}_i - \underline{u}_i}{\bar{p}} \equiv \underline{S}_i^* & \text{if } L_i \wedge T_{\neq i} \\ \frac{\bar{u}_i - \underline{u}_i}{\underline{p}} \equiv \bar{S}_i^* & \text{if } L_i \wedge L_{\neq i} \end{cases}. \quad (5)$$

Equation (5) implies a simple decision rule: for penalties larger than  $\bar{S}_i^*$ , decision makers in country  $i$  will find it more attractive to choose a tight fiscal policy, while for penalties smaller than  $\underline{S}_i^*$ , running a “loose” fiscal policy will be more attractive. Note that  $S_i^*$  takes on two different levels depending on the expected behaviour in other member states. Obviously, since  $\bar{u}_i > \underline{u}_i$ , it also holds that  $\bar{S}_i^* > \underline{S}_i^*$ . Moreover, both  $\bar{S}_i^*$  and  $\underline{S}_i^*$  are decreasing in  $\underline{u}_i - \bar{u}_i$ .

It is instructive to illustrate this result along the dimension of  $S_i$  (see Figure 1). The horizontal  $\underline{u}_i$ -line marks the utility level that decision makers in  $i$  expect from a tight fiscal policy, while the downward sloping lines show the expected utility related to a loose fiscal policy. The intersection between the downward sloping lines and the  $\underline{u}_i$ -line define the indifference level(s)  $S_i^*$ .

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<sup>16</sup> While not explicitly modelled in our simple set-up, the term “all other” countries is interpreted as representing a group of other countries sufficiently large to exhibit a significant influence on decisions on the euro area level while being perceived as exogenous from country  $i$ 's perspective. This could mean a simple majority of countries or a group of countries with sufficient political clout to achieve the same.

[insert figure 1 here]

In the case of a loose fiscal policy, expected utility is strictly decreasing in  $S_i$ , but the swiftness of the decline is a function of the expected fiscal policy in the rest of the euro area. In a situation in which all members are thought to violate the SGP rules the probability of being fined will be lower compared to one in which only country  $i$  is running a loose policy ( $\underline{p} < \bar{p}$ , see equation (3)). Therefore, if all countries simultaneously violate the SGP, the curve will be flatter, and the intersection with the  $\underline{u}$ -line, will be further to the right than when country  $i$  alone chooses a loose policy. This leaves us with three possible fiscal policy regimes.

*The large country case: loose fiscal policy dominates ( $S_i < \underline{S}_i^*$ )*

A country that perceives the penalty for fiscal misbehaviour as low, perhaps because its size makes the ensuing loss in political reputation negligible, will have no incentive to choose a tight fiscal policy. Independently from the behaviour of other euro area members, for  $S_i < \underline{S}_i^*$  the expected utility from selecting a loose policy will always exceed the expected utility level under a tight policy. In Figure 1, both downward-sloping lines are above the  $\underline{u}_i$ -line. More formally, not playing according to the rules of the SGP becomes a dominant strategy for country  $i$ .

*The small country case: tight fiscal policy dominates ( $\bar{S}_i^* < S_i$ )*

An equivalent result holds at the opposite end of the spectrum. If a country perceives the penalty for not playing according to the rules of the SGP as sufficiently high, for instance, because its bargaining power within the euro area or EU is otherwise limited, it will always prefer to play according to the rules of the SGP. As Figure 1 illustrates, for  $\bar{S}_i^* < S_i$  both downward-sloping lines remain below the  $\underline{u}_i$ -line. A tight fiscal policy is a dominant strategy.

*The intermediate case: fiscal policy as a coordination game ( $\underline{S}_i^* < S < \bar{S}_i^*$ )*

For intermediate values of  $S_i$ , however, country  $i$ 's policy choice will depend on its assumptions regarding the simultaneous fiscal policy selection in other accession countries. In the region  $\underline{S}_i^* < S < \bar{S}_i^*$  in Figure 1 expected utility under a tight fiscal policy (the  $\underline{u}_i$ -line) is higher than under a loose policy if only country  $i$  violates the SGP (the  $(\bar{u}_i - p_i \cdot S_i) | L_i \wedge T_{\neq i}$ -line) but lower than in the case where all member countries simultaneously choose a loose fiscal policy (the  $(\bar{u}_i - p_i \cdot S_i) | L_i \wedge L_{\neq i}$ -line). As a result, fiscal policy is determined in a coordination game.

For illustrative purposes, it is helpful to reduce the exposition to a symmetric two-country set-up, with country  $i$  on the one hand and “all other” countries  $\neq i$  on the other. In this case, equation (5) describes a normal (or strategic) form coordination game that can be summarized in a simple matrix:

		Country $\neq i$	
Country $i$		$L^{\neq i}$	$T^{\neq i}$
	$L_i$	A, A	B, C
	$T_i$	C, B	C, C

where

$$A \equiv \bar{u}_i - p \cdot S_i > C \equiv \underline{u}_i > B \equiv \bar{u}_i - \bar{p} \cdot S_i.$$

It is straightforward to show that the game has two Nash equilibria: if both countries expect the other country to choose to play loose ( $L$ ), both will choose  $L$  themselves. If, however, both  $i$  and  $\neq i$  believe their counterpart to play tight ( $T$ ), both will find it optimal to choose  $T$  as well. Note that the equilibrium that is least desirable from a SGP perspective, that is, the equilibrium in which both countries decide to run a loose fiscal policy, entails higher pay-offs for the individual decision makers in  $i$  and  $\neq i$ . This makes the equilibrium with loose fiscal policies ( $L_i, L_{\neq i}$ ) more likely to be selected in a repeated coordination game or if a refined Nash-equilibrium concept were to be applied.

The basic message from the model outlined above is that countries will behave differently depending the perceived size of the SGP's penalty and thus, arguably, on size.<sup>17</sup> This finding seems to be in line with the stylised fact describes earlier in section 2 that most of the smaller euro area countries showed greater adherence to the rules of SGP than larger countries.

In addition, if the penalty for a loose policy stance falls in an intermediate range, fiscal policy decisions might depend on the policy stance chosen in other member states. If the probability of actually being sanctioned is lower in a situation in which all members simultaneously choose not to adhere to the SGP, picking a loose fiscal policy could be a self-enforcing Nash equilibrium. In this sense, the fiscal behaviour of countries will depend on the number of member states that may breach the deficit criterion in the near future. This result suggests, among other things, that non-adherence to SGP rules by all but the largest euro area members could have elements of herd behaviour or contagion. Recent developments offer some support for this: now also a medium-sized country (the Netherlands) failed to stick to the rules of the Pact.

#### 4. How (not) to reform the SGP?

There seems to be widespread support for the view that the SGP should be reformed since the current rules in place do not offer enough flexibility to use fiscal policy in a counter-cyclical way. This is quite remarkable, as in our view the major weakness of the Pact is not that it does not offer enough flexibility, but that its enforcement mechanisms are too weak. Nevertheless, the current policy debate on the SGP remains firmly focused

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<sup>17</sup> Another plausible property of the results is that the more developed a country's preference for prudent fiscal policy, e.g., the less pressing is the election cycle, the larger is the difference  $\underline{u}_i - \bar{u}_i$ , and the less attractive is selecting a loose fiscal policy. See Berger et al. (2003).

on reinterpreting the current rules (Buti, Eijffinger and Franco, 2003).<sup>18</sup> An excellent example is the European Commission's endorsement of a cyclically adjusted budget balance for assessing fiscal policy in member countries. Will this improve the SGP? Or, if increasing flexibility is not at the core of the issue, what type of reform does the SGP actually need?

#### 4.1 Do not use cyclically adjusted budget balance

According to the European Commission, in defining the "close to balance or in surplus" requirement the business cycle situation should be taken into account.<sup>19</sup> Isolating the impact of the economic cycle on budgetary positions, provides a better picture of the true state of public finances in a country, and enables the Commission to carry out a better assessment of compliance with budgetary commitments given in the stability and convergence programmes. The Council agrees with this view. The estimation of cyclically adjusted balances would be made using the methodology endorsed by the Council on 12 July 2002.<sup>20</sup> In this meeting the Council endorsed a report by the Economic Policy Committee to calculate trend income.<sup>21</sup>

The largest problem in computing the cyclically adjusted budget balance is how to estimate the output gap. There exists no universally accepted way of doing this. Instead, different methods give different results and the estimates are often subject to large ex post revisions. To illustrate this point, Table 4 shows the estimates of the cyclically adjusted deficit for the same years in subsequent issues of the OECD's Economic Outlook. It follows that the estimates are very frequently revised. In fact, the initial estimates of the cyclically adjusted deficit are generally substantially different from the most recent ones. In other words, only after some time has elapsed will it be possible to calculate the cyclically adjusted deficit with some precision.<sup>22</sup>

[insert table 4 here]

So even though it makes sense to take the cyclical situation of a country into account in assessing the budgetary position of that country, it may create all kind of new loopholes for member states. Only if countries are willing to accept the calculations of the cyclically adjusted deficit of the Commission, so that there is no discussion about them, political debates similar to those that could recently be witnessed when the Council discussed the German and Portuguese public finance situation can be circumvented. The

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<sup>18</sup> Likewise, in an article in the *Financial Times* on May, 21, 2004 the finance ministers of the UK, France, and Germany called for a reinterpretation of the SGP, arguing that it should take account of individual cyclical and structural conditions in each member state.

<sup>19</sup> Communication from the Commission to the Council and the European Parliament, *Strengthening the coordination of budgetary policies*, COM (2002) 668 final, section 5 i).

<sup>20</sup> Press release 6877/03.

<sup>21</sup> Press release 10668/02. See Berger and Billmeier (2003) for a further discussion.

<sup>22</sup> Recently, Jaeger and Schuknecht (2003) have argued that the automatic cyclical responsiveness of taxes to real output growth seems to be larger than normal during boom-bust phases in asset prices. Revenue related to capital gains or losses and turnover taxes as well as wealth effects on consumption boost revenue disproportionately during booms but also adversely affect receipts during busts. A similar pattern occurs at the spending side of the budget. As a result, fiscal balances tend to improve during the boom but deteriorate significantly during the bust phase.

mere fact that the Council has agreed on a certain calculation method for trend income is no guarantee that member states will accept these calculations.

#### *4.2 Enough flexibility*

Despite the popularity of the claim to the contrary, the current rules in place offer member states enough flexibility for fiscal stabilisation. Table 5 shows calculations in which we determine safe targets by focusing on the largest negative output gap during the 1980s and the 1990s, using the elasticities of (components of) the government balance with respect to the output gap from the OECD model INTERLINK (Van den Noord, 2002). As table 4 shows, based on historical experience, most countries can even run medium term deficits up to about 1.5% and still have enough flexibility to use automatic stabilisers. A similar conclusion was reached by Buti and Sapir (1998).<sup>23</sup>

[insert table 5 here]

#### *4.3 More safety needed*

The message of the analysis of the preceding section is cautiously optimistic. This seems to be the consensus in the literature in the period before EMU (see also Eichengreen and Wyplosz, 1998). Once governments succeed in bringing their cyclically adjusted deficits back to, say, 1% the chances are small that they will breach the 3% threshold. However, Hughes Hallett and McAdam (2003) conclude that this conclusion is too optimistic. They argue that the probability distribution of the deficit ratio has a complicated form, as both its numerator and denominator are driven by the same stochastic variable (economic activity). It therefore tends to have a wide variance with fat tails. Using stochastic simulations over a forty year time period with the IMF's Multimod model – with shocks distributed according to their historical characteristics – they examine in what proportion of those time periods, repeated over 400 replications of each policy experiment, a particular country's deficit goes beyond the 3 per cent limit. Table 6 reproduces some of their results. It becomes clear that in all fiscal policy regimes that are assumed (a 3 per cent deficit target, a 1 per cent deficit target, national targets<sup>24</sup> and tax smoothing), the actual deficit will, on average, be close to target (compare the average deficit with the target). However, there is also a fair chance that the 3 per cent level will be breached. This is obvious in the case of 3 per cent target, where the chances that the deficit will exceed the threshold are around 80 per cent. However, also in the case of lower targets, the probabilities that deficits exceed 3 per cent of GDP differ substantially from zero. For instance, with 1 per cent deficit rule, the chances that the critical deficit level will be breached are between 15 and 19 per cent. This suggests that extra safety margins (i.e. low structural deficits) may be needed in order to forego excessive deficits in an economic downturn.

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<sup>23</sup> Similar conclusions are reached by Dalsgaard and De Serres (1999) who use a different approach. They conclude that budget deficits between 1 and 1.5% should allow enough room for the automatic stabilisers to operate. Barrell and Pina (2000) reach a similar conclusion.

<sup>24</sup> Hughes Hallett and McAdam assume here that Italy has a deficit target of zero, while Germany and France aim at ratios of 0.5 per cent of GDP.

[insert table 6 here]

#### 4.4 Ensure that existing rules are enforced

Last but not least, tackling the weakness of the SGP's enforcement mechanism is key. Although the decision of the ECOFIN to suspend the excessive deficit procedure against France and Germany violated the spirit of the Pact, Collignon (2004) argues that it was nothing else but the application of the rules. In contrast to the original proposal for a Stability Pact by the German finance minister Waigel, the SGP does not contain automatic sanctions. The rules stipulate the need for a vote by the Council and therefore imply that the European Commission can be overruled.

The most obvious reform would be to give the European Commission more power in the decision-making on whether or not a country has an excessive deficit. If a decision has been taken that a country has not done enough to adjust its policies, the European Court of Justice could be given the power to decide on sanctions. While strengthening the SGP's enforcement mechanisms would have clear advantages, it looks increasingly unlikely that the Pact will be adjusted to address its major weakness. Governments seem not to be willing to delegate substantial enforcement powers to the European Commission. Indeed, in their recent article in the *Financial Times* of May, 21, 2004 the finance ministers of the three largest EU countries stressed that "national governments remain responsible for fiscal policy".

## 5. Conclusions

The experience with the SGP has clearly shown that its major shortcoming is its weak enforcement mechanism. Our analysis also suggests that large member states are less likely to be constrained by the rules in place than small member states and that there is the potential for herd behaviour in violating the rules of the Pact.

Enforcement is weak in both the multilateral surveillance part of the Pact that relies primarily on soft law and the excessive deficit procedure, which relies primarily on hard law. There are no strong incentives for member states to prevent other member states from deviating from the non-binding political commitment to strive for a balanced budget in the medium term. The main reason is that the externalities of not adhering to this objective are small. Furthermore, the member states have no other means than peer pressure in the multilateral surveillance part of the SGP. No wonder, therefore, that various member countries did not adhere to this medium term objective. Especially, large countries did not bring down their deficit sufficiently. As a consequence, they exceeded the 3% deficit threshold once the economic downturn set in. It then became clear that also the enforcement mechanism in the excessive deficit procedure is weak. Its major shortcoming is the lack of an impartial enforcement mechanism, as the ECOFIN is responsible for enforcing the rules.

What will happen with the Pact? In our view, the most likely scenario is that in the near future the basic rules will remain in place and that in implementing the rules European governments will be muddling through, sometimes perhaps not imposing sanctions to countries that do not adjust excessive deficits sufficiently. Even if the



European Court of Justice sides with the European Commission, there is no guarantee that sanctions will be imposed since the SGP does not contain automatic sanctions. The rules stipulate the need for a vote by the Council and therefore imply that the European Commission can be overruled.

What will happen if this scenario turns into reality? In our view, the economic consequences of individual, one-off breaches of the SGP will be limited. Financial markets hardly reacted when the ECOFIN decided that some member countries had an excessive deficit. Apparently, fiscal policies in the euro area are still perceived as being sustainable. Indeed, from an historical perspective deficits in most member countries are relatively low. As long as that is the case, the economic consequences of the current slippage of the SGP will be small. However, if market perceptions of the sustainability of fiscal policies within the euro area change severe economic effects (such as substantially higher interest rates) are likely. It is this scenario that makes it clear why restrictions on national fiscal policy in a monetary union may be needed after all.

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Table 1. Budgetary positions of EU member states, 2001 -2004

	Budget balance (% GDP)				Government debt (% GDP)			
	2001	2002	2003	2004	2001	2002	2003	2004
Austria	0.2	-0.2	-1.1	-1.1	67.1	66.6	65.0	65.5
Belgium	0.5	0.1	0.2	-0.5	108.1	105.8	100.5	97.4
Denmark	3.1	1.7	1.5	1.1	47.8	47.2	45.0	42.3
Finland	5.2	4.3	2.3	2.0	43.9	42.6	45.3	44.5
France	-1.5	-3.2	-4.1	-3.7	56.8	58.6	63.0	64.6
Germany	-2.8	-3.5	-3.9	-3.6	59.4	60.8	64.2	65.6
Greece	-1.4	-1.4	-3.0	-3.2	107.0	104.9	101.0	97.0
Ireland	1.1	-0.2	0.2	-0.8	36.1	32.3	32.0	32.4
Italy	-2.6	-2.3	-2.4	-3.2	110.6	108.0	106.2	106.0
Luxembourg	6.3	2.7	-0.1	-2.0	5.5	5.7	4.9	4.5
Netherlands	0.0	-1.9	-3.2	-3.5	52.9	52.6	54.8	56.3
Portugal	-4.4	-2.7	-2.8	-3.4	55.6	58.1	59.4	60.7
Spain	-0.4	0.0	0.3	0.4	57.5	54.6	50.8	48.0
Sweden	2.8	0.0	0.7	0.2	54.4	52.6	51.9	51.8
UK	0.7	-1.6	-3.2	-2.8	38.9	38.5	39.9	40.1
Euro area	-1.6	-2.3	-2.7	-2.7	69.4	69.2	70.4	70.9
EU15	-1.0	-2.0	-2.6	-2.6	63.2	62.5	64.0	64.2

Source: European Commission, Economic Forecasts Spring 2004

Table 2. Average budget balance (% GDP) in different groups of EU member states, 1997-2002

<b>Group:</b>	<b>Average deficit:</b>	<b>Change in debt ratio:</b>
All EU countries	-0.1	-10.3
Small EU countries	1.0	-10.6
Intermediate EU countries	0.0	-13.0
Large EU countries	-1.5	-7.7

Source: own calculations based on OECD (2003)

Table 3. Aspects of effective fiscal policy rules: US Balanced Budget Rules (BBR) and SGP

Specification:	Weak BBR	Strong BBR	Surveillance	Excessive deficit procedure
Rule Timing for Review	Ex Ante	Ex Post	Ex Ante	Ex Post
Override Majority Rule	Allowed	Not Allowed	Allowed	Allowed
Enforcement Access Enforcer Penalties	Closed Partisan Small	Open Independent Large	Closed Partisan None	Closed Partisan Large
Amendment Process	Easy	Difficult	Difficult	Difficult

Table 4. Cyclically adjusted deficits according to various issues of the OECD Economic Outlook

Outlook:	65	66	67	68	69	70	71	Max. difference	Stand. Dev.
<b>Austria</b>									
1995	-4.4	-4.7	-4.9	-4.9	-4.8	-4.9	-5.0	0.6	0.20
1996	-3.1	-3.3	-3.7	-3.6	-3.5	-3.6	-3.8	0.7	0.24
1997	-1.3	-1.7	-1.7	-1.4	-1.3	-1.6	-1.8	0.5	0.21
1998	-2.0	-2.3	-2.5	-2.1	-2.1	-2.5	-2.7	0.7	0.26
<b>Belgium</b>									
1995	-2.9	-2.9	-3.2	-2.9	-2.9	-4.0	-3.3	1.1	0.41
1996	-1.5	-1.1	-2.0	-1.6	-1.6	-2.6	-2.1	1.5	0.49
1997	-0.9	-0.7	-1.0	-0.5	-0.5	-1.6	-1.1	1.1	0.39
1998	-0.7	-0.3	-0.4	0.3	0.3	-0.4	0.0	1.0	0.38
<b>Finland</b>									
1995	-1.6	-0.8	0.4	1.8	1.9	0.1	0.1	3.5	1.27
1996	-1.2	-0.5	-0.1	1.5	1.6	0.5	0.5	2.8	1.02
1997	-1.2	-0.8	-0.7	1.1	1.3	0.1	0.0	2.5	0.96
1998	0.9	0.7	1.1	2.7	3.0	1.8	1.7	2.3	0.89
<b>France</b>									
1995	-3.8	-4.7	-4.7	-4.6	-4.6	-4.6	-4.6	0.9	0.32
1996	-2.8	-3.0	-2.9	-2.8	-2.8	-2.9	-2.8	0.2	0.08
1997	-1.9	-1.9	-2.0	-1.7	-1.6	-1.8	-1.8	0.4	0.13
1998	-2.4	-2.2	-2.2	-1.8	-1.8	-2.1	-2.0	0.6	0.22
<b>Germany</b>									
1995	-2.7	-2.9	-2.9	-2.7	-2.7	-2.8	-2.7	0.2	0.10
1996	-2.4	-2.6	-2.6	-2.4	-2.4	-2.5	-2.4	0.2	0.10
1997	-1.7	-1.8	-1.8	-1.6	-1.6	-1.8	-1.7	0.2	0.09
1998	-1.4	-1.1	-1.1	-1.2	-1.1	-1.4	-1.3	0.3	0.14
<b>Greece</b>									
1995	-9.1	-8.9	-9.0	-8.9	-8.9	-8.6	-8.7	0.5	0.17
1996	-6.3	-6.4	-6.5	-6.4	-6.4	-6.0	-6.1	0.5	0.18
1997	-3.0	-3.2	-3.3	-3.5	-3.5	-3.2	-3.3	0.5	0.18
1998	-1.8	-2.1	-2.1	-1.5	-1.5	-0.9	-1.3	1.2	0.44
<b>Ireland</b>									
1995	-1.9	-2.0	-1.9	-1.0	-1.0	-1.3	-1.3	1.0	0.44
1996	0.0	0.0	0.2	0.9	0.9	0.5	0.5	0.9	0.38
1997	0.5	-0.3	0.2	0.8	0.8	0.1	1.0	1.3	0.46
1998	1.0	1.0	1.5	1.8	1.8	2.3	2.3	1.3	0.54
<b>Italy</b>									
1995	-7.0	-7.3	-7.2	-7.2	-7.2	-7.3	-7.6	0.6	0.18
1996	-5.6	-5.8	-6.5	-6.5	-6.4	-6.5	-6.9	1.3	0.45
1997	-1.7	-1.9	-2.0	-2.0	-2.0	-2.0	-2.5	0.8	0.24
1998	-1.4	-1.6	-1.9	-2.0	-2.0	-2.0	-2.7	1.3	0.41
<b>Netherlands</b>									
1995	-3.5	-3.9	-3.7	-3.6	-3.6	-4.4	-4.3	0.9	0.36
1996	-2.2	-1.8	-1.5	-1.4	-1.4	-2.1	-2.1	0.8	0.35
1997	-1.6	-1.8	-1.3	-0.9	-0.9	-1.6	-1.6	0.9	0.36
1998	-2.0	-1.8	-1.1	-0.8	-0.8	-1.6	-1.7	1.2	0.49
<b>Portugal</b>									
1995	-4.9	-5.1	-5.1	-3.9	-4.0	-3.9	-3.3	1.8	0.71
1996	-2.6	-2.8	-2.8	-3.6	-3.6	-3.6	-3.1	1.0	0.44

1997	-2.1	-2.2	-2.2	-2.5	-2.5	-2.6	-2.1	0.5	0.21
1998	-2.2	-2.2	-2.2	-2.3	-2.4	-2.5	-2.4	0.3	0.12
Spain									
1995	-6.4	-6.3	-6.1	-4.3	-4.6	-4.8	-4.9	2.1	0.89
1996	-3.3	-4.2	-4.0	-2.3	-2.7	-2.7	-2.9	1.9	0.71
1997	-1.7	-2.7	-2.6	-1.1	-1.5	-1.4	-1.5	1.6	0.62
1998	-1.6	-2.4	-2.3	-1.2	-1.6	-1.5	-1.5	1.2	0.45



Table 5. Safe medium-term budgetary positions implied by OECD elasticities and output gaps

	I 1980-1989	II 1990-2004
Austria	-1.9	-2.2
Belgium	-0.6	-0.9
Denmark	0.2	-0.1
Finland	-1.9	3.8
France	-1.1	-1.6
Germany	-0.9	-1.8
Greece	-0.9	-1.4
Ireland	-1.6	-1.6
Italy	-1.6	-1.6
Luxemburg	n.a.	n.a.
Netherlands	1.0	-1.2
Portugal	1.0	-1.7
Spain	-0.3	-1.2
Sweden	-1.6	1.8
United Kingdom	0.5	-0.9

Note: safe budgetary positions calculated by multiplying the largest output gap observed in a period by the OECD elasticities for the total budget balance and calculating the difference from the 3% limit.

Table 6. Stochastic simulation results (Multimod model, various regimes)

	(1) 3% target	(2) 1% target	(3) National targets	(4) National targets and tax smoothing
	Germany			
Average deficit	3.11	1.09	0.50	0.50
Prob. > 3%	80%	15%	13%	8%
	France			
Average deficit	3.14	1.11	0.53	0.50
Prob. > 3%	83%	15%	11%	8%
	Italy			
Average deficit	3.07	1.52	0.90	0.75
Prob. > 3%	80%	19%	12%	8%

The monetary regime in all simulations is the same (inflation targeting).

Source: Hughess Hallet and McAdam (2003)

Figure 1. Model: The Critical  $S$  Value

