Institutions for Fiscal Stability¹

Barry Eichengreen

University of California, Berkeley Department of Economics 549 Evans Hall # 3880 Berkeley, CA 94720-3880 Facsimile: +1 510 643 0926 eichengr@econ.berkeley.edu

April 2003

This paper reviews the controversy over Europe's Stability and Growth Pact and offers a proposal for its reform. It argues that Europe would be best served by focusing on the fundamental problems for fiscal policy — public enterprises that are too big to fail, unfunded public pension schemes that are too big to ignore, inefficient and costly labor market and social welfare problems, and budget making institutions that create common pool and free-rider problems — rather than on arbitrary numerical indicators like whether the budget deficit is above or below 3 per cent of GDP. It proposes defining an index of institutional reform with, say, a point for pension reform, a point for labor market reform, and a point for revenue sharing reform. Countries receiving three points would be exempt from the Pact's numerical guidelines, since there is no reason to think that they will be prone to chronic deficits. The others, whose weak institutions render them susceptible to chronic deficits, would in contrast still be subject to its warnings, sanctions and fines.

Keywords: Stability Pact, fiscal policy, Europe

¹Prepared for the Munich Economic Summit, 2-3 May 2003.

In its short life, the Stability Pact has accomplished many good things. It has reminded governments to avoid policies that can jeopardize financial stability. It has signaled that the euro area takes seriously its commitment to a sound and stable currency. It has given the European Commission an opportunity to remind governments that the greying of populations implies the need to start saving more.

But it is important to recognize that the pact is now on life support. France, Germany and Italy, three of the large countries at the heart of Europe, are all violating its strictures. While they have made significant progress in the direction of fiscal consolidation, all now show signs of reform fatigue. Their deficits having remained too close to the 3 per cent reference value during the period of expansion, they now threaten to breach that ceiling in the current slowdown unless governments raise taxes and cut public spending at the worst possible macroeconomic time.

In principle, of course, the 3 per cent reference value leaves adequate room for Europe's automatic fiscal stabilizers to operate if countries keep their deficits close to zero, or preferably in slight surplus, in expansions. This is a point that was first documented in a systematic fashion in a 1998 article that Charles Wyplosz and I published in *Economic Policy* (Eichengreen and Wyplosz 1998).² So what is the problem? It is not only that some European governments have not displayed the discipline needed to keep their budgets at or close to balance during expansions; it is that, given the structure of their budgetary processes, there is reason to worry that they may fail to do so again. This explains why officials continue to attach such importance

²I would be less than honest if I did not admit that the finding came as something of a surprise to the authors.

to the mutual surveillance of fiscal policies in expansions and also why the 3 per cent ceiling is problematic in slowdowns.

It is no coincidence, then, that the recent flurry of suggestions for revising the Stability Pact coincided with an economic slowdown. Proposals range from abolishing the pact, to cyclically adjusting the 3 per cent ceiling (equivalently, keying it to the constant employment budget balance), to exempting public investment, to shifting from a deficit ceiling to a public debt ceiling. I will not say more about abolishing the Stability Pact. Among other things, the fact that Europe has committed to the pact makes it difficult to abandon it in midstream without sending a negative signal to the markets.

Unfortunately, existing reform proposals all have a weakness in common with the existing pact. They all focus on numerical reference values for debts and deficits, whether cyclically adjusted or unadjusted, whether inclusive or exclusive of defense and public investment spending, whether for debts or deficits. These numerical values are arbitrary. They have no clear economic rationale.³ There is no a priori reason to think that dire economic consequences will follow if the 3 per cent rule is violated or that all will be well if the deficit comes in below 3 per cent. This numerical threshold is not well grounded in theory. Whether it implies a sustainable public debt depends on the real interest rate, the real growth rate, and other variables that vary over time – unlike the 3 per cent reference value, which is set in stone.

³Buiter, Corsetti and Pesenti (1993) noted that 60 per cent was in fact the EU-wide debt/GDP ratio in 1992, when the Maastricht Treaty was ratified, and that a deficit/GDP ratio of 3 per cent stabilizes a net debt/GDP ratio of 60 per cent when nominal income growth is 5 per cent (close to the 1980s and 1990s norm in Europe). 3 per cent was also a typical level of public investment spending, and the golden rule on which German fiscal policy was based stated that deficits that did not exceed public investment were permissible, since they posed no threat to financial stability. I return to the golden rule in Section 3.

It is this fact – that the 3 per cent ceiling is arbitrary, capricious, and not grounded in a clear conceptual framework – that robs it of political legitimacy and explains why member states and their constituents are able to resist the Commission when the latter attempts to enforce it. They can always say "We are a fast growing accession economy with high real growth rates and low real interest rates; hence a deficit in excess of 3 per cent does not imply the same problems of debt sustainability as for other countries." Or "We have fewer unfunded pension liabilities than other countries; there is therefore no reason to be worried about this year's 3 per cent deficit." These and other arguments are credible. An arbitrary 3 per cent ceiling is not.

Recent reforms proposed by the Commission and accepted by the Council are a step in the right direction. These would allow member states that stick to a medium term objective of balancing their structural budgets – meaning their budgets adjusted for the effect of the business cycle -- to run larger deficits in recessions. Countries with low state pension liabilities and low public debts would also be cut additional slack, at the Commission's discretion.

But these modest reforms do not go far enough. The essential rationale for the Stability Pact is that deficits today may imply deficits tomorrow, and that chronic deficits are problematic because they will force the ECB to provide an inflationary debt bailout. But not all deficits are chronic. Transitory deficits in recessions are part of the solution, not part of the problem; they simply reflect the operation of automatic stabilizers. On the other hand, deficits are likely to prove chronic when countries fail to reform their fiscal institutions. Countries with large unfunded pension systems will almost certainly have deficits down the road. Where workers are allowed to draw unemployment and disability benefits at will for indefinite periods, deficits today signal deficits tomorrow. Countries that have not completed privatizing public enterprise

are similarly more likely to have fiscal skeletons in the closet. Where decentralized decision making and revenue sharing allow states and municipalities to spend today and be bailed out by the central government tomorrow, the latter will inevitably suffer chronic deficits.

These observations are grounded in a large literature showing that institutional arrangements are strongly and robustly associated with observed fiscal outcomes.⁴ For example, the literature on Latin America shows that countries with large vertical fiscal imbalances are prone to chronic deficits; they allow states and provinces to spend now and be bailed out by the central government tomorrow.⁵ It shows that where state governments have their own public banks, the latter tend to become lenders of last resort to the local authorities and engines of deficit spending and inflation. Where national budgetary institutions are more hierarchical, in contrast (where the president maintains a one-party majority in the parliament or where the number of veto players is small), deficit bias is less. Revealingly, countries are more likely to have statutory caps on deficit spending, similar to the EU's 3 per cent rule, where vertical fiscal imbalances are large and budgeting processes are less hierarchical.⁶ Only countries with relatively decentralized budgetary institutions, large vertical fiscal imbalances, and open-ended spending programs -- countries which are prone to chronic overspending -- display a need for numerical rules.

The implication is the Stability Pact should focus not merely on fiscal numbers, which

 $^{^4\!\}text{See}$ von Hagen and Harden (1995), Fukasaku and Hausmann (1998), and von Hagen (1998).

⁵See Stein (1998). Readers will remember how the deficits of the provinces constituted a large part of Argentina's fiscal problem.

⁶As documented in von Hagen and Eichengreen (1996).

are arbitrary and easily cooked, but on fiscal institutions. The Council should take recent reforms a step further. It agree on an index of institutional reform with, say, a point for pension reform, a point for unemployment and disability insurance reform, and a point for revenue sharing reform. Countries receiving three points would be exempt from the Stability Pact's guidelines, since there is no reason to expect that they will be prone to chronic deficits. The others, whose weak institutions render them susceptible to chronic deficits, would in contrast still be subject to the pact's warnings, sanctions, and fines.

I develop this argument in five parts. Part I first describes the provisions of the Stability Pact and how it fits with the Maastricht Treaty. Part II reviews the rationales that have been offered for this arrangement, while Part III highlights the problems with existing reform proposals. Part IV sketches what a sensible, institution-based reform of the pact would look like. Part V then concludes.

I. Europe's Fiscal Rules

Europe's fiscal rules are well known, but it is worth reviewing them briefly in order to remind ourselves of the controversy.

The Maastricht Treaty requires EU member states to avoid excessive budget deficits whether or not they have adopted the euro. A protocol to the treaty provides that deficits should be assessed on the basis of two criteria: whether the budget deficit is less than 3 per cent of GDP, and whether the government debt exceeds 60 per cent of GDP (and, if it does, whether it is

firmly on a declining trend).⁷ If the Council decides that an excessive deficit exists, a procedure is initiated for eliminating the discrepancy. If acceptable steps are not taken for its elimination, the Council may then decide to issue warnings and impose non-interest-bearing deposit requirements that, with time, convert into fines.

The Stability Pact, in turn, consists of two Council regulations which clarify the Excessive Deficit Procedure and the Mutual Surveillance Procedure of the Maastricht Treaty, and a Council resolution that provides guidance to the Council itself and to member states on the application of those two regulations. These state that the medium term budgets of member states should be "close to balance or in surplus." The "close to balance" criterion is intended to provide room for automatic fiscal stabilizers to operate; if budgets are in or close to balance in normal times, the 3 per cent swing then permitted by the reference values of the protocol to the Maastricht Treaty will allow automatic stabilizers free play in response to all but the most exceptional recessions.

The Stability Pact also allows deficits to exceed the 3 per cent reference value if the excess is "exceptional, temporary, and limited in size." An exceptional deficit is one that results from unusual events beyond the country's control and/or a severe downturn; a severe downturn is one that involves output declines of at least 0.75 per cent of GDP. (Countries will be exempted automatically if their GDPs have declined by 2 per cent and their excesses are temporary and small, while those whose GDP's decline by between 0.75 per cent and 2 per cent

⁷The UK is not bound by these reference values, because it obtained an opt-out from the euro-related provisions of the Maastricht Treaty. It is, however, required to avoid excessive deficits and to meet the "close to balance or in surplus" requirements of the Stability Pact (described below).

require in addition the concurrence of the Council.) A temporary excess is one that is corrected "as quickly as possible" and "without delay" – given the procedures detailed in the SGP, the discrepancy would typically have to be eliminated within two years. The determination of whether the excess is sufficiently limited in size is ultimately at the discretion of the Council.

To anticipate the need for corrective action, member states that have adopted the euro are required to submit "stability programs." Other member states are required to submit "convergence programs." These set out a multi-year fiscal trajectory designed to ensure the maintenance of medium term balance or describe how the government proposes to get there over time. Should a country fail to submit an acceptable program or significantly miss its targets, the Council then may issue an early warning. In July 2001 the ECOFIN Council revised its Code of Conduct on the content and presentation of these stability and convergence programs, requiring the adoption of agreed assumptions about the main extra-EU variables, and clarifying the meaning of the medium-term target of "close to balance or in surplus" by encouraging countries to make reference to cyclically adjusted budget balances and to provide an additional margin for fiscal responses to unforeseen budgetary risks.

In February 2002 the ECOFIN Council refused to endorse the European Commission's recommendation of early warnings for Germany and Portugal, although it issued a warning to Portugal 9 months later and then to Germany, France and Italy in 2003. This budgetary slippage, and the ECOFIN Council's early warnings, occurred at a time of economic slowdown, raising fears that strict enforcement of the SGP would render European fiscal policies dangerously procyclical, and rendering the issuing of a yellow card extremely delicate both politically and economically.

In response, the European Commission's Economic Policy Committee (2002) proposed, and the Council of Minister accepted, a reinterpretation of the pact that would allow officials to place more weight on cyclically-adjusted deficits. This reform has five parts. First, budgetary objectives should take better account of the economic cycle. Second, countries whose underlying budget positions are not yet close to balance or in surplus should develop a medium term plan consistent with elimination of the discrepancy at the rate of at least 0.5 per cent of GDP each year. Third, automatic stabilizers should operate symmetrically over the cycle, by avoiding the excessive growth of expenditures in good times. Fourth, a temporary deterioration in the underlying (cyclically adjusted) deficit should be envisaged only if the country concerned is close to balance, while a sustained one should be contemplated only if the debt is well below 60 per cent. Fifth, sustainability concerns such as future public pension and other contingent government liabilities should be explicitly taken into account when assessing budgetary positions. All this is designed to better ensure that budgets are in or close to balance at normal times, giving fiscal policy more freedom of action in recessions.

Finally, EU members are expected to follow the recommendations of the Council (proposed annually by the Commission) regarding the "Broad Economic Policy Guidelines" (BEPGs). These guidelines have a broader focus than the convergence and stability programs; they focus not only on traditional budgetary issues but also on employment and wage developments and the need for structural reform. The BEPGs are an acknowledgment that structural reform and fiscal outcomes are connected (with causality running in both directions). Other than tongue lashing by the Commission and the Council, however, no consequences follow from a country's failure to follow the recommendations of the guidelines.

II. Rationales

Economists have identified two rationales for these rules and procedures.

- First, noncooperative fiscal policies will lead to excessive spending and/or deficits if member states fail to internalize the cross-border spillovers of their fiscal policies for macroeconomic conditions and therefore do not take into account the induced reaction of the ECB. The mutual surveillance procedure of the Maastricht Treaty and the excessive deficit procedure of the SGP are designed to internalize these externalities.
- Second, in the absence of peer pressure, some European governments may skate closer to the edge of debt sustainability. A debt crisis could jeopardize banking-system stability and require costly lender-of-last resort intervention by the ECB; thus, the costs of resolving such crises would be borne by the euro area as a whole. This too is an externality that can in principle be internalized through the operation of the SGP.

I refer to these two mechanisms, for want of better labels, as the problems of excessive deficits and unsustainable debts.

Excessive Deficits. Uhlig (2002) presents a simple model of the first mechanism. It is a stochastic model in which desired government spending may differ from steady state government spending by a random shock and realized inflation may deviate from underlying inflation by a cost-push shock. Each national fiscal authority has a quadratic loss function that is increasing in deviations of the output gap its steady state value and of government spending from desired levels. The single central bank also has a quadratic loss function, but its is increasing in deviations of the output gap and inflation from target levels. Inflation in each country is determined by a simple Phillips Curve (it is increasing in the output gap and a cost-push random

disturbance term), while the output gap in each country is increasing in government spending and declining in the real interest rate (which is the difference between the single interest rate, set by the central bank, and the country-specific expected inflation rate, which is set rationally).

Consider now a shock to government spending. In response to the higher inflation resulting from the operation of the Phillips Curve, the central bank raises interest rates. Because output and inflation are both above the central bank's preferred levels, it feels unrestrained in pushing them both down to pre-shock levels. Consequently, inflation is no higher in the steady state than in the absence of the shock. But interest rates are higher, and the composition of spending is presumably inferior (higher interest rates mean less investment). The key point is that the larger is the number of governments and the smaller each government is relative to the euro area, the less is the incentive for each government to take into account the impact of its spending on euro-area aggregate demand, euro-area inflation, and the induced reaction of the ECB, and to preempt the ECB's interest rate response by restraining its own spending.

Alternatively, consider a positive cost-push shock. Again, the central bank will raise interest rates in response to the acceleration in inflation, although this time it will be more restrained because inflation and output move in opposite directions. Governments will respond to the decline in output by increasing their spending but only to a limited extent, because they know that more government spending which means more demand also means more inflation and that the central bank will respond by raising interest rates still further. Once again, however, the larger the number of countries, the less will be the impact of each fiscal authority's spending reduction on the common inflation rate and the less the induced decline in interest rates.

Relative to the cooperative equilibrium, there will again be an inefficient policy mix, with fiscal

policy too loose and monetary policy too tight. These are two illustrations, then, of how, in principle, self-interested behavior by national authorities unrestrained by incentives to cooperate may lead to excessively expansionary fiscal policies, inflationary pressures, and high interest rates.

Questions can be raised about this story. If the problem is that national governments have inadequate incentive to internalize the cross-border spillovers associated with their deficits, would not a more efficient solution be a system of tradable deficit permits (as suggested by Casella 1999 and subsequently endorsed by Poland's finance minister) that set the price of the marginal deficit efficiently but let national officials and their constituents decide on its distribution across countries? In addition, the more integrated are European goods and financial markets with the rest of the world (the greater the extent to which inflation rates and real interest rates are determined on world markets), the smaller the intra-euro-area externalities. This model and analysis provide little justification for the convergence programs required of countries outside the euro area, for whom the direction of fiscal spillovers may be different. And the model assumes that the direct effect of fiscal policy on aggregate demand is limited to the initiating country; in the real world, as distinct from the world of theory, fiscal expansion in France also stimulates aggregate demand in Germany to some extent; this attenuates the free-rider problem.

⁸I return to this proposal below.

⁹In the baseline model, fiscal expansion in France has contractionary effects in Germany, since its only impact on the Germany economy comes through the increase in ECB interest rates. In this more general model, the tendency for the German fiscal authorities to expand in order to offset the induced decline in output is moderated by the positive spillover effects from France's fiscal expansion.

Finally, it can be argued that the costs of the investment-unfriendly policy mix that results from noncooperative fiscal policies are small. To avoid them, European governments may find their fiscal freedom and flexibility limited, and the EU may end up devoting much of its time and good will to internalizing externalities with only second order effects. The question is whether the game is worth the candle.

Unsustainable Debts. The other rationale for the Stability Pact is that national governments in a monetary union are subject to a moral hazard which leads them to risk problems of debt sustainability, because some of the costs of their risk taking – that is to say, some of the costs of resolving their debt crises – are borne by their monetary union partners. Imagine that, because of a shock to revenues, a government finds itself unable to service its debts. The liquidity of banks and other financial institutions may be called into question. The holders of government paper may be rendered illiquid, and as they sell other assets to raise funds, other financial market participants will come under pressure. Investors may develop doubts about the solvency of other governments, leading neighboring countries' debt instruments to suffer. The ECB will respond, as did the Fed in 1998 to the all-but-failure of Long Term Capital Management, by injecting credit into financial markets and thereby executing its responsibility for the maintenance of the payments system. It will purchase the government paper and other assets of European banks as the mechanism for injecting that liquidity.

The problem is that Bagehot's rule – lend freely only against good collateral – means not purchasing the paper of the government that has defaulted, which presumably means not discounting on behalf of the banking system of the crisis country. If banks and nonbank financial intermediaries hold internationally diversified reserve portfolios (as Eichengreen and

Wyplosz 1998 argue should be required), this will not be a problem. Even the banks of the crisis country will then have some good collateral, and the ECB will be able to assist them. But, more generally, the desire to prevent bank failures and avoid damage to the payments system may cause the ECB to purchase impaired assets, passing on to the citizens of other European countries the cost of its lender-of-last-resort operations. In principle, one can imagine that this could be done under the terms of a contract that required the government of the crisis country to compensate the ECB for that cost. In practice, however, this would be subject to the problem that the government in question was already unable to make good on its debts.

Questions about this scenario include: how serious is government moral hazard – given that governments incur reputational and other costs from debt defaults, would the prospect of a euro-area-financed debt bailout really cause them to skate closer to the edge of sustainability? Would the threat of contagion be so immediate that the ECB really felt compelled to bail out insolvent banks? While these are open questions, defenders of the Stability Pact will suggest that we don't want to have to find out the answers.

III. The Problem with Existing Reform Proposals

There is no shortage of proposals for reforming the SGP. The problem with most of these is that they are either predicated on numerical rules for fiscal policy that are as arbitrary and free of economic logic as the present pact, or else they envisage vesting extensive

¹⁰This recommendation has been echoed subsequently by Buiter and Grafe (2002) and Buti, Eijffinger and Franco (2002). Such diversification requirements would have to be designed carefully. If they simply required banks to hold diversified reserve portfolios that included some bonds from all European countries, it would become easier for profligate countries to place their bonds, weakening the operation of market discipline.

discretionary powers in an unaccountable European Commission or its delegate. Either way the new rules and procedures are unlikely to be regarded as legitimate: in the first case their legitimacy would be undermined by their inefficiency; in the second, it would be weakened by their stewards' lack of democratic accountability. And, if they are not seen as legitimate, when push comes to shove, Europe's fiscal rules will not be enforced.

Cyclically adjusted deficits. It is proposed that the SGP should focus on whether the cyclically adjusted deficit is close to balance or in surplus while paying less attention to the actual (cyclically unadjusted) deficit. But there is no agreement on how to compute cyclically adjusted deficits. Budgets show different degrees of elasticity with respect to the cycle in different countries. Economists do not even agree on how to detrend output growth in order to isolate that cycle. To take one example, in 1999 the IMF's estimate of the cyclical component of the German budget balance (the difference between the actual budget balance and the structural budget balance) was four times as large as the estimate of the European Commission. Nor would substituting the cyclically adjusted deficit for the actual deficit remove the pact's focus on arbitrary numerical thresholds like 3 per cent of GDP, which have no clear basis in economic logic and are therefore unlikely to be respected. Hence, governments will continue to dispute the Commission's calculations, and lack of precision will mean lack of legitimacy, thereby diminishing the credibility of potential sanctions.

The golden rule. The golden rule implies that budget deficits in excess of 3 per cent of GDP are not a problem as long as they do not exceed public investment. Productive public

¹¹For Belgium, the two institutions could not even agree on the sign of the gap (Economic Commission 2002, p.45).

investment yields future income and tax receipts that allow the project to pay for itself; hence, it does not create problems of debt sustainability and need not be financed out of current revenues. Again, however, the problem is one of identification, in this case how to identify productive public investment. One can imagine that governments on the verge of violating the 3 per cent threshold would be tempted to relabel current spending as public investment. More fundamentally, not all public investments are equally productive; not all public construction projects have positive rates of return. Teachers' salaries are typically categorized as current spending, while new school buildings are classified as public investment. Is the latter more productive, in the relevant sense, than the former? And, again, while this proposal specifies an exemption from the 3 per cent ceiling, that number remains an arbitrary and hence problematic focal point for the EU's surveillance exercise.

Focusing on the debt ceiling. A related proposal due to Pisani-Ferry (2002) is to ignore fluctuations in the deficit and to focus on the debt. Countries whose debts are less than 60 per cent of GDP or rapidly converging to that level should be free to choose their own fiscal policies, while countries whose debts exceed 60 per cent and show no sign of declining should be subject to stringent enforcement of the Stability Pact. Implicitly, this proposal singles out debt sustainability and threats to financial stability as the problems to be addressed by the Stability Pact, while downplaying the need for ongoing policy coordination to prevent distortions to the monetary-fiscal mix. For some observers (including this author), this is a strength, because it focuses attention on the more dangerous and potentially costly problem.

¹²In addition, net public investment makes better sense than gross public investment, but there exist no unambiguous guidelines for calculating economic depreciation of the public capital stock.

Unfortunately, there is no agreement on how to operationalize the concept of debt sustainability. Even in the simplest models, determining sustainability requires the capacity to reliably forecast the path of real interest rates and growth rates as well as shocks to revenues and expenditures. It requires a political judgment regarding the level of taxation (and of transfers from the government's debtors to its creditors) that the political system is capable of supporting. This is the same problem that the IMF has been grappling with in attempting to decide when to provide emergency assistance to a crisis country. The Commission and the Council would find themselves in the position of having to tell a country "We are fining you several percent of GDP because our forecasters predict that your rate of growth will decelerate sever years from now." Would such a procedure be enforceable?

Deficits by independent committee. Wyplosz (2002a) suggests that the optimal deficit could be determined by an independent fiscal policy committee, the fiscal equivalent of the Executive Committee of the ECB. This committee would be insulated from political pressure to spend, in election years and generally. It would be inoculated from free-rider and commonpool problems (the problem that each bureau, state or special interest lobbies for just a little additional spending without internalizing the implications for the overall deficit). Its independent experts would set the deficit with its overall macroeconomic implications and considerations of debt sustainability in mind, but the politicians would have to decide how to meet it by either raising taxes or reducing spending. The committee could allow deficits to widen in slowdowns without raising the specter of unsustainability. Countries would not be

¹³Obviously, this would be an entirely different animal from the independent committees that exist in countries like Denmark and Germany to simply give advice on the stance of fiscal policy.

subject to one-size-fits-all procedural rules; national fiscal policy committees would be free to take distinctive national economic structures and conditions into account. The credibility of fiscal procedures would not be damaged by keying the latter to arbitrary numerical reference values. And the interference of Brussels with national fiscal decisions could be removed.

I have some sympathy for this scheme, since it builds on a proposal for the creation of independent national fiscal councils for Latin American countries by Eichengreen, Hausmann and von Hagen (1999). It takes an institutional approach to eliminating deficit bias. And it addresses the fundamental problem, that of the politicization of fiscal policy, by taking the decision of how to set the deficit out of the political domain. There is a large literature showing that delegation can be efficient for monetary policy. Why not also for fiscal policy?

Proponents of this idea argue that delegating only the decision of the size of the deficit, and not the decision of the size of government or the composition of government spending, would not be a significant infringement on political prerogatives. But the uncomfortable fact is that even Latin American countries undeniably prone to chronic deficit spending have not been willing to delegate this responsibility. Is it really realistic to think that European governments, where evidence of chronic deficits and inability to correct political distortions is less compelling, will be prepared to take this step? In practice, the credibility of this approach would rest on the steps that would be taken once the fiscal policy committee has decided on the maximum allowable deficit. Imagine that the politicians are incapable of keeping the deficit within prescribed bounds. What automatic procedure would then come into play? Would taxes be raised across the board to fill the gap, or would only certain taxes be raised? Would expenditure be cut across the board to eliminate the excess, or would certain "essential expenditures" like

those on national security or public health be exempted? Obviously, no simple rule would be credible; there would always be reasons for an exception, dumping the decision back into the lap of the politicians. Or else the decision would be handed back to the fiscal policy committee, and the infringement on the fiscal prerogatives of the politicians would be much greater than envisaged by the architects of this proposal.¹⁴

Tradeable deficit permits. Casella (1999) has proposed that the Commission and the Council should decide only on the overall size of Europe's budget deficit and issue permits for deficit spending that governments can buy and sell. Each country could receive permits proportional to its size. (Permits proportional to a country's budget or, even worse, its deficit would create perverse incentives.) At the time the final fiscal statistics are released, each country would have to have a euro's worth of permits in its account for each euro's worth of deficit. Those not in compliance would incur steep fines. Thus, a country in recession wishing to run an exceptionally large deficit would purchase permits from a country wishing to run a smaller deficit and in turn be happy to part with its permits for a price. The result would be an unchanged Europe-wide deficit, more fiscal flexibility for the country in recession, and some compensation for its European partners.

This proposal has the merit of addressing the problem of intra-European spillovers by limiting the impact of deficits on inflation and therefore avoiding distortions in the monetary-fiscal mix. It would ensure the sustainability of Europe's debt in the aggregate, although questions can be raised about whether it would also ensure the sustainability of individual

¹⁴In addition, this idea is suitable for addressing problems of debt sustainability, it does not address intra-European spillovers, insofar as these national fiscal committees would still be national institutions.

countries' debts. In particular, there would be nothing to prevent a profligate government from mortgaging its future – from borrowing at high interest rates in order to purchase permits – were it reckless enough to do so.¹⁵ Nor is the initial allocation of permits straightforward; allocating permits as a proportion of GDP favors high-income countries and disfavors those with large public sectors.

IV. An Institutional Alternative

The argument, then, is that the Stability Pact as currently configured can never be efficient and legitimate: if enforced, it will not have the desired effect of preventing chronic deficits without interfering with the normal operation of automatic fiscal stabilizers and sensible discretionary fiscal policies, and consequently it is unlikely to ever garner the political support necessary to be enforced. Reform schemes which simply replace one set of arbitrary numbers with another set of arbitrary numbers will not be seen as any more legitimate or enforceable.

These problems can be solved if the pact is reformed to focus on fundamental fiscal institutions rather than transitory fiscal outcomes. Specifically, the EU should design an index of institutional reform with a point each for pension reform, unemployment and disability insurance reform, and revenue sharing reform. Countries receiving three points would be exempt from the pact's guidelines, since there is no reason to expect that they will be prone to chronic deficits. In contrast, the others, with weak institutions rendering them susceptible to chronic deficits, would

¹⁵One can imagine that the Council and the Commission might place an escalating tax or surchange on purchases of permits by a country whose debts approached unsustainable levels, but this would raise the same problems created by proposals for focusing on the 60 per cent debt threshold rather than the 3 per cent deficit ceiling.

still be subject to the pact's warnings, sanctions, and fines.

One can imagine various objections to this proposal.

- Selective exemptions are not politically acceptable. It might be argued that European countries will never agree to differential treatment to a situation where some countries are subject to the Stability Pact while others are exempt. However, there is a sense in which this is precisely what the Commission's recent reform already proposes to do -- that is, to apply the pact differentially to countries with and without sustainability concerns. My proposal is simply to recognize this decision and give it legitimacy by defining clearly and precisely the criteria that will be used in determining which countries are exempt. This is more transparent and objective than leaving the decision of whose debts are "sustainable" to the discretion of the Commission.
- An institutional index would be less credible. It can be argued that an index of fiscal institutions would be less transparent, less easily monitored, and therefore less credible than a 3 per cent reference value for the consolidated budget deficit. The appeal of simple rules is that they are easily verified and, other things equal, easily enforced. And what could be more simple than a 3 per cent ceiling for deficits? The problem is that simple rules that bear little relationship to the ultimate goals of policy are too simple. They can be so misleading as to be unenforceable when push comes to shove. Consider the following analogy. Once upon a time central banks were instructed to adopt a fixed growth of the M1 money stock rule to guide their policy. An unchanging three-per-centar-year-rate-of-growth rule for the money supply is the ultimate simple rule, but in

¹⁶Alesina (2002) makes a strong argument for simple rules in this context.

practice it was too simple to be efficient or practicable. Central banks have therefore gravitated toward a more complex inflation-targeting rule, where they consider the relevance of a range of different variables for observed policy outcomes. Simplicity may be a virtue, other things equal, but other things are not always equal.

An index of fiscal institutions would be too difficult to calculate. In fact, economists have considerable experience in constructing simple quantitative measures of the relevant fiscal institutions precisely in order to show that these are robustly correlated with observed fiscal outcomes.¹⁷ And the question, in any case, is whether these institutional measures would be harder to calculate than the deficit ratio that is currently the focus of the Stability Pact. In this connection we should not overlook the ability of governments to fudge their fiscal accounts. Recall Italy's budget deficit in 1997, or more recent restatements of the Portuguese public accounts.¹⁸ And remember that any problems that the opacity of these countries' accounts has created for Eurostat will be dwarfed by problems of statistical disclosure, coverage, timeliness and reliability in the accession economies. My institutional indices may be disputable, in other words, but what about your deficit figures? Are measures of the adequacy of fiscal institutions really that much more difficult to calculate than accurate and economically meaningful deficit figures that

¹⁷There is a large empirical literature doing precisely this. See for example footnote 5 above.

¹⁸Each time a problem is detected with the national accounts, of course, a new Council regulation is adopted to force the offending country into compliance. Thus, when it was discovered that Portugal was recording taxes and social security payments assessed but never collected, a regulation was adopted to preclude the practice. But this is a classic problem of "bloodhounds versus greyhounds" – that the fiscal detectives in Brussels will always be one step behind the politicians in national capitals, who know better where the fiscal skeletons are buried.

include estimates of, inter alia, unfunded future pension liabilities, which are totally neglected by conventional budgetary accounting? Are they really more problematic than calculations of cyclically adjusted deficits based on questionable estimates of the output gap, or forecasts of debt sustainability predicated on forecasts of growth rates, interest rates, etc.?

- The appropriate fiscal institutions are context specific. What fiscal institutions help to avoid a bias toward excessive deficits may change over time, or they may be context specific, rendering it a mistake to codify them. But permitting the politicians and officials responsible for the Stability Pact to alter the index of budgetary institutions would open the door to lobbying and backroom deal-making. I therefore propose creating an independent committee of fiscal policy experts to define the index.¹⁹
- Such a powerful independent committee would not be politically acceptable. In fact, this committee would have much more limited powers than the one Ricardo Hausmann,

 Jurgen von Hagen and I recommended for Latin American countries some years back, or that Charles Wyplosz and Simon Wren-Lewis have suggested in the European context.²⁰

 Recall that the Eichengreen-Hausmann-von Hagen proposal was for an independent committee with the power to determine the deficit, presumably with cyclical conditions

¹⁹It may or may not be desirable for the members of that committee to also rate member states' compliance; I have an open mind on this question.

²⁰See Wren-Lewis (2000) and Wyplosz (2002b). My committee would also have more limited powers than that proposed by Buiter (2002), who would delegate enforcement of the Stability Pact to a committee of independent experts. (Alternatively, he proposes delegating this responsibility to the ECB's Executive Board. This seems highly problematic, insofar as it would concentrate extensive powers over both monetary and fiscal policy in six pairs of hands and conflate oversight of monetary and fiscal policies.)

in mind, the idea being that countries with very serious political distortions should delegate the power to make this decision. But political distortions are not as severe in Europe as Latin America; hence European countries do not require such radical measures. Under my proposal for reforming the Stability Pact, the power to decide the size of the deficit would still rest with national politicians and officials. The committee would only decide on the criteria determining whether or not a country was subject to the 3 per cent limit. In effect, my committee would have much more limited powers than, inter alia, the Board of the European Central Bank.

How would such a committee be appointed? It would be important to avoid a system where each country appointed a member who then became an advocate of that country's fiscal institutions. Better would be to emulate the Executive Board of the ECB, which is made up of members at large who are prohibited from taking instructions from their national governments. Appointees should serve reasonably long terms in office and not be eligible for reappointment to prevent them from being partial to their friends in government. Making the Commission rather than the Council responsible for their appointment might be considered as a way of further loosening the link with national governments.

Finally, there is the objection that countries would not tolerate having a committee of the EU prescribe the structure of their fiscal institutions. As Buti, Eijffinger and Franco (2002, p.15) put it, "the adoption of harmonized budgetary procedures would raise fundamental problems from the point of view of national sovereignty and might conflict with national institutions and traditions." But no one is talking about harmonized institutions. My committee would not have the power to make a country to modify its institutions. If countries prefer institutional

arrangements that have proven to be conducive to chronic deficits in other times and places, they would be free to adopt them. They would then be subject to the surveillance and reference values of the Stability Pact, of course, but if they were able to keep their deficits below 3 per cent, contrary to the experience of other countries with similar institutions, they would not be subject to fines, non-interest-bearing deposits, or warnings. And, if they kept their budgets near balance or in surplus in normal times, there would be room for their automatic stabilizers to operate.

While this proposal might seem radical, in fact it is not unlike procedures already followed by commercial rating agencies. The rating agencies assign numerical ratings (or their alphabetic equivalent) to countries on the basis of a combination of quantitative and qualitative inputs, including information about the structure and efficiency of their institutional arrangements. In other words, the rating agencies already consider institutions. They have not found it impossible to translate information about them into numerical indices on which banks, pension funds and other market participants already base economically consequential decisions. Questions can be raised about the efficiency with which commercial ratings predict future economic problems, of course, but the same can be said about the EU's current procedures, and in particular about the Stability Pact's crude numerical ceilings. In comparison with the SGP, the procedure I propose should be more information efficient, in the sense that it would take a broader range of economic, financial and institutional variables into account.

Table 1 summarizes the preceding, building on Buti, Eijffinger and Franco (2002), who rate the Stability and Growth pact according to the Kopits-Symansky (1998) criteria for the ideal

fiscal rule. My rating of the SGP differs slightly from Buti, Eijffinger and Franco's.²¹ According to this rating, both rules are equally well-defined: both specify enforcement criteria but leave a good deal of discretion to the enforcing authorities. Both rank low in terms of enforceability relative to a hypothetical rule where dire sanctions would be triggered automatically in the event of fiscal misbehavior. The SGP is simpler and more transparent, but these advantages come at the cost of less flexibility, less consistency (in that the SGP fails to tailor the 3 per cent deficit and 60 per cent deficit ceilings to countries' varying growth and interest rates), and less adequacy relative to final goals (in terms of focusing on the fundamental problem of fiscal sustainability, in particular avoiding chronic deficits while at the same time minimizing interference with the conduct of stabilizing fiscal policies). My alternative, by focusing on institutions, provides sharper, more immediate incentives for undertaking the relevant structural reforms.

With EU enlargement, an even greater premium will be placed on flexibility and structural reform. As Buti, Eijffinger and Franco note, the tradeoff between simplicity and flexibility will shift with enlargement of the EU and its monetary union. As the euro area is enlarged to include accession economies with very different real interest rates (reflecting common nominal interest rates in conjunction with different inflation rates due to the operation of the Balassa-Samuelson effect) and different growth rates (reflecting the scope for catch-up growth in the new members), the uniform 3 and 60 per cent references values will be even less

²¹Differing from them, I regard the pact as somewhat less flexible, consistent, and adequate relative to final goals.

suitable to the members as a whole.²² To the extent that the need for structural reform is especially urgent in the accession economies, a reformed SGP that focused directly on this desiderata would become all the more desirable.

Von Hagen (1998) makes a similar point when he observes that small countries tend to rely on numerical limits on deficit spending while large ones tend to rely on procedural rules. Numerical limits are simple to administer, and in small, homogeneous countries that simplicity presumably comes with few associated costs. In contrast, large countries encompass local economies with different economic structures that are subject to different economic conditions; simple rules that make no allowance for those differences tend to result in inefficient outcomes, leading these countries to opt for more flexible procedures that better accommodate the heterogeneity of their parts. The EU is a very large, heterogeneous entity in the relevant economic sense. Complaints that the numerically-oriented Stability and Growth Pact has fitted its very different members to a single fiscal strait jacket is a manifestation of this fact. It will become even larger and more heterogenous in 2004.

As always, the proof of the pudding is in the eating. Table 2 therefore constructs a provisional ranking of European countries according to my index. Column 1 denies one point to countries whose public pension expenditures to persons over 55 years in age are projected to rise by at least 1 per cent of GDP between 2000 and 2010. Denmark, France, the Netherlands, and Portugal are the problem countries. (Table A1 in the appendix shows the evolution of public

²²As noted above. See also Coricelli and Ercolani (2002).

pension expenditures in these and other countries.²³) Note that this list includes one country, Denmark, that European Commission (2002) applauds for its sustainable public finances and in particular for its explicit objective of running budget deficits over the coming decade.²⁴ There is no contradiction; the increase in pension liabilities does not imply unsustainable finances, only that the country cannot afford to run large budget deficits as those liabilities come due, and that it should be subject to the SGP if its deficits suddenly widen.

Column 2 gives a point to countries which use either targets or delegation to limit the common pool problems and deficit bias that arise from decentralized spending decisions. The binary indicators used here are drawn from Hallerberg, Strauch and von Hagen (2001), who show that countries that either delegate spending decisions to a strong finance minister or use targets at the national level to constrain spending generally adjust more quickly to disturbances and display less deficit bias than countries where neither device is used. I assign a point either when the finance minister has significant agenda setting and veto powers in at least three of the four stages of the budgetary implementation process distinguished by Hallerberg, Strauch and von Hagen, or when there are formal rules requiring specific forms of adjustment to shocks in at least three of the four cases considered by these authors. Individual country ratings are reported in Appendix Table A2.

Column 3 gives a point to countries that have taken significant steps to enhance labor

²³Note that the much-warned-of increase in pension expenditures only affects many European countries later: Greece between 2010 and 2020, for example, and Germany between 2020 and 2030. In constructing Table 2 I have assumed that prospective deficit problems that far in the future should not be the basis for concerns about fiscal spillovers now.

²⁴The Commission also applauds the Netherlands for its sound and stable public finances, although this country does not have an explicit surplus target.

market flexibility by reducing hiring and firing costs and facilitating temporary employment. It is based on the composite indicator constructed by Nicoletti, Sarpetta and Boyland (1999) for 1998 on the basis of 15 detailed indicators. These include measures of the burden of procedural requirements that must be followed in order to lay off permanent workers, notice and severance pay requirements, penalties for unfair dismissals, and limits on the use of temporary contracts. Countries receive a point if they having a rating of 2.5 or less on Nicoletti, Scarpetta and Boyland's 6 point scale (where higher values indicate more restrictions). It will be seen that the resulting binary indicators map fairly neatly into conventional understandings of which countries have done the most extensive labor market reform.

These illustrative calculations suggest that Belgium, Ireland, Luxembourg, Austria, and the UK would be exempted from the numerical ceilings of the Stability Pact under my proposal. Other member states, in contrast, would still be subject to existing EU procedures. In particular, the four large countries of the continent – France, Germany, Italy and Spain – would still be subject to the warnings, non-interest-bearing deposits and fines of the Stability Pact, given the shortcomings of their institutional reform programs. Some might draw from this the conclusion that the reform I suggest here is a political non-starter. Perhaps, but these countries are already subject to the warnings, non-interest-bearing deposits and fines of the existing pact. It is not clear that they should be even less happy about the institutional alternative I propose.

V. Conclusion

In this paper I have argued that Europe would be best served by focusing on the fundamental problems for fiscal policy – public enterprises that are too big to fail, unfunded

public pension schemes that are too big to ignore, inefficient and costly labor market and social welfare programs, and budget making institutions that create common pool and free-rider problems – rather than on arbitrary numerical indicators like whether the budget deficit is above or below 3 per cent of GDP. So long as Europe continues to focus on "reference values" for fiscal policy that are only very loosely related to the central problem of chronic budget deficits, and that are prone to interfere with the efficient setting of fiscal balances when chronic deficits are not a problem, the Stability Pact will never be regarded as legitimate; consequently, it will never be rigorously enforced. Better would be to reorient the pact toward the institutional weaknesses that in fact create the danger of chronic deficits and that should be the focus of policy makers' concern.

By now, the double meaning of my title should be clear. Not only are institutions important for fiscal stability, but, in addition, institutions should be the focus of the revised Stability Pact.

References

Alesina, A. (2002), "The Coordination of Monetary and Fiscal Policies in Europe: A Skeptic's View," paper prepared for the Bundesbank Conference on Monetary Policy, 5-6 December.

Buiter, W. (2002), "Ten Commandments for a Fiscal Rule in the E(M)U," unpublished manuscript, EBRD (November).

Buiter, W., G. Corsetti and P. Pesenti (1993), "Excessive Deficits: Sense and Nonsense in the Treaty of Maastricht," *Economic Policy* 1.

Buiter, W. and C. Grafe (2002), "Patching Up the Pact: Some Suggestions for Enhancing Fiscal Sustainability and Macroeconomic Stability in an Enlarged European Union," unpublished manuscript, EBRD (July).

Buti, M., S. Eijffinger and D. Franco (2002), "Revisiting the Stability and Growth Pact: Grand Design or Internal Adjustment," unpublished manuscript, European Commission (November).

Casella, A. (1999), "Tradeable Deficit Permits: Efficient Implementation of the Stability Pact in the European Monetary Union," *Economic Policy* 29, 323-361.

Coricelli, F. and V. Ercolani (2002), "Cyclical and Structural Deficits on the Road to Accession: Fiscal Rules for an Enlarged European Union," CEPR Discussion Paper no. 3672 (December).

Economic Policy Committee of the European Union (2002), "Budgetary Challenges Posed by Ageing Populations: Executive Summary," EPC/ECFIN/630-EN final, Brussels: Economic Policy Committee (24 October).

Eichengreen, B., R. Hausmann and J. von Hagen (1999), "Reforming Budgetary Institutions in Latin America: The Case for a National Fiscal Council," *Open Economies Review* 4 (October).

Eichengreen, B. and C. Wyplosz (1998), "The Stability Pact: More than a Minor Nuisance?" *Economic Policy* 26, 65-114.

European Commission (2002), "Public Finances in EMU 2002," European Economy 3, 1-221.

Fukasaku, K. and R. Hausmann, (eds) (1998), *Democracy, Decentralization, and Deficits in Latin America*, Paris: OECD.

Hallerberg, M., R. Strauch and J. von Hagen (2001), "The Use and Effectiveness of Budgetary Rules and Norms in EU Member States," report prepared for the Dutch Ministry of Finance, Institute of European Integration Studies, University of Bonn (June).

Kopits, G. and S. Symansky, (1998), "Fiscal Policy Rules," *IMF Occasional Paper* 162.

Nicoletti, G., S. Scarpetta and O. Boyland (1999), "Summary Indicators of Product Market Regulation with an Extension to Employment Protection Legislation," Economics Department Working Paper no. 226, Paris: OECD ECO/WKP(99)18.

OECD (1999), EMU: Facts, Challenges and Policies. Paris: OECD.

Pisani-Ferry, J. (2002), "Balancing the Stability Pact," Financial Times 28 June, p.15.

Stein, E. (1988), "Fiscal Decentralization and Government Size in Latin America," in K. Fukasaku and R. Hausmann (eds), *Democracy, Decentralization, and Deficits in Latin America*, Paris: OECD, 95-120.

Uhlig, H. (2002), "One Money, But Many Fiscal Policies in Europe: What Are the Consequences?" unpublished manuscript, Humboldt University (April).

Von Hagen, J. (1998), "Budgeting Institutions for Aggregate Fiscal Discipline," ZEI Policy Paper no. B98-01, Bonn: Center for European Integration Studies.

Von Hagen, J. and B. Eichengreen (1996), "Federalism, Fiscal Restraints, and European Monetary Union," *American Economic Review* (May).

Von Hagen, J. and I. Harden (1995), "Budget Processes and Commitment to Fiscal Discipline," *European Economic Review* 39.

Wren-Lewis, S. (2002), "The Limits of Discretionary Fiscal Stabilisation Policy," *Oxford Review of Economic Policy* 16, 92-105.

Wyplosz, C. (2002a), "The Stability Pact Meets its Fate," paper prepared for the Euro 50 Group, Paris, 27 November.

Wyplosz, C. (2002b), "Fiscal Policy: Rules or Institutions," paper prepared for the Group of Economic Analysis of the European Commission (April).

Table 1. Rating the Alternatives

Ideal Fiscal Rule	Stability and Growth Pact	Institutional Approach
1. Well defined	++	++
2. Transparent	++	+
3. Simple	+++	+
4. Flexible	+	+++
5. Adequate Relative to Goal	+	+++
6. Enforceable	+	+
7. Consistent	+	+++
8. Underpinned by Structural Reform	+	+++

+++ good ++ fair + poor

Source: see text.

Table 2. Who Would Be Exempt from Sanctions and Fines?
(3 point indicates exemption)

Country	Criterion		
	Limited Future Pension Liabilities	Appropriate Fiscal Institutions	Adequate Labor Market Reforms
Belgium	1	1	1
Denmark	0	0	1
Germany	1	0	0
Greece	1	1	0
Spain	1	0	0
France	0	1	0
Ireland	1	1	1
Italy	1	1	0
Luxembourg	1	1	1
Netherlands	0	0	1
Austria	1	1	1
Portugal	0	0	0
Finland	1	0	1
Sweden	1	0	1
UK	1	1	1

Source: see text.

Table A1. Public Pension Expenditures (Including Public Replacement Revenues) to People Aged Over 55 Before Taxes (As a % of GDP)

riged over 33 before Taxes (ris a 70 of GDT)						
2000	2010	2020	2030	2040	2050	peak
						change
10,0	9,9	11,4	13,3	13,7	13,3	3,7
10,5	12,5	13,8	14,5	14,0	13,3	4,1
11,8	11,2	12,6	15,5	16,6	16,9	5,0
12,6	12,6	15,4	19,6	23,8	24,8	12,2
9,4	8,9	9,9	12,6	16,0	17,3	7,9
12,1	13,1	15,0	16,0	15,8		4,0
4,6	5,0	6,7	7,6	8,3	9,0	4,4
13,8	13,9	14,8	15,7	15,7	14,1	2,1
7,4	7,5	8,2	9,2	9,5	9,3	2,2
7,9	9,1	11,1	13,1	14,1	13,6	6,2
14,5	14,9	16,0	18,1	18,3	17,0	4,2
9,8	11,8	13,1	13,6	13,8	13,2	4,1
11,3	11,6	12,9	14,9	16,0	15,9	4,7
9,0	9,6	10,7	11,4	11,4	10,7	2,6
5,5	5,1	4,9	5,2	5,0	4,4	-1,1
10,4	10,4	11,5	13,0	13,6	13,3	3,2
	2000 10,0 10,5 11,8 12,6 9,4 12,1 4,6 13,8 7,4 7,9 14,5 9,8 11,3 9,0 5,5	2000 2010 10,0 9,9 10,5 12,5 11,8 11,2 12,6 12,6 9,4 8,9 12,1 13,1 4,6 5,0 13,8 13,9 7,4 7,5 7,9 9,1 14,5 14,9 9,8 11,8 11,3 11,6 9,0 9,6 5,5 5,1	2000 2010 2020 10,0 9,9 11,4 10,5 12,5 13,8 11,8 11,2 12,6 12,6 12,6 15,4 9,4 8,9 9,9 12,1 13,1 15,0 4,6 5,0 6,7 13,8 13,9 14,8 7,4 7,5 8,2 7,9 9,1 11,1 14,5 14,9 16,0 9,8 11,8 13,1 11,3 11,6 12,9 9,0 9,6 10,7 5,5 5,1 4,9	2000 2010 2020 2030 10,0 9,9 11,4 13,3 10,5 12,5 13,8 14,5 11,8 11,2 12,6 15,5 12,6 12,6 15,4 19,6 9,4 8,9 9,9 12,6 12,1 13,1 15,0 16,0 4,6 5,0 6,7 7,6 13,8 13,9 14,8 15,7 7,4 7,5 8,2 9,2 7,9 9,1 11,1 13,1 14,5 14,9 16,0 18,1 9,8 11,8 13,1 13,6 11,3 11,6 12,9 14,9 9,0 9,6 10,7 11,4 5,5 5,1 4,9 5,2	2000 2010 2020 2030 2040 10,0 9,9 11,4 13,3 13,7 10,5 12,5 13,8 14,5 14,0 11,8 11,2 12,6 15,5 16,6 12,6 12,6 15,4 19,6 23,8 9,4 8,9 9,9 12,6 16,0 12,1 13,1 15,0 16,0 15,8 4,6 5,0 6,7 7,6 8,3 13,8 13,9 14,8 15,7 15,7 7,4 7,5 8,2 9,2 9,5 7,9 9,1 11,1 13,1 14,1 14,5 14,9 16,0 18,1 18,3 9,8 11,8 13,1 13,6 13,8 11,3 11,6 12,9 14,9 16,0 9,0 9,6 10,7 11,4 11,4 5,5 5,1 4,9 5,2 5,0 <th>2000 2010 2020 2030 2040 2050 10,0 9,9 11,4 13,3 13,7 13,3 10,5 12,5 13,8 14,5 14,0 13,3 11,8 11,2 12,6 15,5 16,6 16,9 12,6 12,6 15,4 19,6 23,8 24,8 9,4 8,9 9,9 12,6 16,0 17,3 12,1 13,1 15,0 16,0 15,8 4,6 5,0 6,7 7,6 8,3 9,0 13,8 13,9 14,8 15,7 15,7 14,1 7,4 7,5 8,2 9,2 9,5 9,3 7,9 9,1 11,1 13,1 14,1 13,6 14,5 14,9 16,0 18,1 18,3 17,0 9,8 11,8 13,1 13,6 13,8 13,2 11,3 11,6 12,9 14,9 16,0</th>	2000 2010 2020 2030 2040 2050 10,0 9,9 11,4 13,3 13,7 13,3 10,5 12,5 13,8 14,5 14,0 13,3 11,8 11,2 12,6 15,5 16,6 16,9 12,6 12,6 15,4 19,6 23,8 24,8 9,4 8,9 9,9 12,6 16,0 17,3 12,1 13,1 15,0 16,0 15,8 4,6 5,0 6,7 7,6 8,3 9,0 13,8 13,9 14,8 15,7 15,7 14,1 7,4 7,5 8,2 9,2 9,5 9,3 7,9 9,1 11,1 13,1 14,1 13,6 14,5 14,9 16,0 18,1 18,3 17,0 9,8 11,8 13,1 13,6 13,8 13,2 11,3 11,6 12,9 14,9 16,0

Note: For most Member States, these projections include most public replacement income for persons aged 55 and over. Note that the coverage is not fully comparable across countries.

Source: EPC working group on ageing populations.

¹⁾ For Denmark, the results include the semi-funded labor market pension (ATP). Excluding the ATP, the peak increase would be 2.7% of GDP.

²⁾ Results for Ireland are expressed as a share of GNP.

³⁾ For the Netherlands the second tier is quite well developed. Such characteristics have a direct positive effect of the public pension scheme by reducing the burden of ageing populations of first tier pensions. However, there is also an important indirect implication: taxes on future pension benefits (which are drawn from the private funds) are expected to be quite high and may partially counterbalance the rise in public pension benefits.

Table A2.

	Implementation & Power of Fin Min	Formal Rules for Unanticipated Shocks
Austria	4*	0
Italy	3*	0
France	4*	0
UK	4*	1
Denmark	2	2
Greece	4*	0
Spain	2	0
Belgium	1	3 *
Germany	2	0
Ireland	3*	0
Sweden	0	0
Finland	1	1
Netherlands	1	2
Luxembourg	2	4*
Portugal	2	1

Source: Constructed from Hallerberg, Strauch and von Hagen (2000), Tables 4a and 4b.