

: 12/03/96

Forthcoming: National Institute Economic Review

Saving Europe's Automatic Stabilizers¹

Barry Eichengreen
University of California, Berkeley

November 1996

Abstract

European policy makers have repeatedly suggested that fiscal-policy coordination and fiscal federalism will play key roles in Europe's monetary union. This paper warns that this hope is misplaced. Fiscal federalism will not be available to offset recessionary shocks for the foreseeable future. The effects of coordination designed to internalize the cross-border spillovers of fiscal policies are too weak. Freeing up fiscal policy to replace national governments' loss of monetary independence requires allowing European countries' automatic stabilizers to operate. That in turn requires a flexible application of the Excessive Deficit Procedure and the Stability Pact.

The solution suggested here is that the Excessive Deficit Procedure and any fines and sanctions associated with the Stability Pact be applied to the constant-employment budget balance, not the actual deficit. Applying them to actual deficits when European countries enter EMU up against the 3 per cent limit will render fiscal policy strongly procyclical, aggravating the problem of macroeconomic fragility created by the loss of monetary autonomy. Still, countries like Germany haunted by the specter of fiscal profligacy need to be reassured that member states will not abuse their fiscal discretion. Procedural and institutional reform to offset the deficit bias in national political systems is the obvious quid pro quo.

¹ Based on a presentation to the staff of DG II of the European Commission. As with all my work on this subject, this paper owes much to my ongoing collaboration with Jürgen von Hagen of the University of Bonn. I thank also the members of the editorial board of the NIER for helpful comments. Financial support for this research is provided by the DAAD's Transcoop Program.

I. Introduction

What is the role for fiscal policy in Europe's monetary union? This question is addressed in the MacDougall Report (1977), the Delors Report (1989), and the Maastricht Treaty (1991). The MacDougall Report emphasized the need for fiscal federalism at the EU level to offset asymmetric shocks once monetary independence is lost. It estimated that an EU budget of at least five per cent of European GDP was needed to carry out this task. The Delors Report (para. 30) acknowledged that a central budget of this magnitude might not be feasible politically and called instead for the closer coordination of fiscal policies. It argued this case on the grounds that virtually all federations possess budgetary mechanisms with "powerful 'shock-absorber' effects" that dampen "the amplitude either of economic difficulties or of surges in prosperity of individual states. This is both the product of and the source of national solidarity which all relevant economic and monetary unions share." The implication is that fiscal federalism is necessary to insure the smooth operation of Europe's monetary union and to prevent a political backlash against the project.

Written in an age of budgetary pressures, the Maastricht Treaty made little mention of fiscal federalism or additional EU spending. Instead, it placed its bets on improved mechanisms for fiscal policy coordination. To that end, Art. 103 of the treaty, the Mutual Surveillance Procedure, empowered the Council to develop guidelines for the economic policies of member states, monitor their economic policies, and issue warnings should their policies prove inconsistent with its recommendations.

Behind the scenes, the European Commission soon launched a series of studies of fiscal

² Delors Report (1989).

federalism. Italianer and Pisani-Ferry (1992) hypothesized that a dedicated system of fiscal transfers between member states requiring a budget of no more than 2 per cent of EU GDP could provide regional coinsurance on a scale comparable to that which exists in Canada (where some 20 per cent of a decline in regional relative income is offset by inter-provincial fiscal transfers). A special issue of The European Economy, the Commission's official organ, collected elaborate studies of budgetary coinsurance in federations around the world.

The reasons for this interest in fiscal federalism and fiscal-policy coordination are not hard to discern. As the date for the inauguration of Stage III approaches and monetary union looms as an increasingly realistic possibility, European officials are running scared. By creating a structure that constrains both the monetary and the fiscal independence of EMU member states, the Maastricht Treaty threatens to create an exceedingly rigid and fragile European economy. With the advent of monetary union the participating states will lose all recourse to independent monetary policies to offset disturbances affecting them asymmetrically. The Excessive Deficit Procedure of the treaty and the Stability Pact negotiated subsequently threaten to further hamstring fiscal policy. Under the provisions of the EDP, a member state has an "excessive deficit" if its deficit and general government debt exceed 3 and 60 percent of GDP, the reference values specified in a protocol to the treaty. Although the EDP leaves leeway for European officials to interpret the broader fiscal picture, most policy makers advocate a strict application of the provisions of the treaty, meaning that the numerical criteria should be the only basis for judgement.

³ Strictly speaking, it has to be declared to do so by the European Council upon a report by the European Commission and a judgement by the Monetary Committee.

The Stability Pact is designed to limit wiggle room and back up determination of an excessive deficit with fines. Under the proposal submitted to the Dublin meeting of finance ministers and central bankers by the German government in September 1996, countries would have no more than nine months to eliminate excessive deficits, and exceptions to the 3 per cent ceiling would be permitted only if output declined for four consecutive quarters. This raises the danger that fiscal policy will become increasingly procyclical, as governments are forced to raise taxes and cut spending in downturns to satisfy these restrictions. With neither fiscal nor monetary flexibility, Europe will be helpless in the face of business cycle disturbances.

II. The Limits of Fiscal Policy Coordination and Fiscal Federalism

In this setting, fiscal-policy coordination and fiscal federalism have obvious appeal. Unfortunately, neither is capable of addressing the problems that are likely to arise in the early phases of EMU. Because the cross-border spillovers of fiscal policy are small, the benefits of more extensive coordination are slight. A fiscal expansion has cross-border repercussions that work in opposing directions and hence tend to cancel out. On the one hand, the direct expenditure effect of a tax cut or public spending increase boosts the demand for foreign as well as domestic goods. On the other, increased government borrowing drives up interest rates, crowding out investment and depressing spending abroad. While the two effects need not offset one another exactly, by working in opposing directions they tend to minimize the cross-border repercussions of fiscal policies, in turn limiting the gains from coordinating those policies. It is

⁴ This point was first highlighted by Oudiz and Sachs (1984), but a large subsequent literature has established its generality.

hard to imagine, therefore, that the closer coordination of national fiscal policies could make much headway against major shocks.

It is sometimes argued uncoordinated fiscal policies will drive up interest rates continent-wide, depressing capital formation and hampering Europe's international competitiveness. Fiscal-policy coordination is needed to discourage free riding and induce governments to internalize the negative externalities otherwise imposed on their EMU partners. However, this argument is independent of monetary union per se; it is a product of the high international capital mobility with which national governments will be forced to live, monetary union or not, now that new information technologies have made capital controls so difficult and costly to enforce. And it neglects the fact that Europe is open to financial transactions with the rest of the world. The French and German governments may be large relative to European financial markets, but they are small in the global capital market in which world (and hence European) interest rates are determined. Again, the advantages of intra-EU fiscal coordination are likely to be small.

The appeal of a system of fiscal federalism which provides for transfers across EU member states in response to asymmetric shocks is that it could be tailored to address the issue at hand. Following Italianer and Pisani-Ferry, transfers could be linked to, say, changes in unemployment differentials across countries. But there are problems with this approach. For one, as Mélitz and Vori (1992) note, shocks to real per-capita GDP in the EU are positively correlated, so the potential for mutual insurance is small. Mélitz (1994) argues that unemployment-based insurance would benefit only a small number of European workers under

Here I differ from the otherwise compatible treatment of Allsop and Vines (1996). While I share their concern for reconciling fiscal flexibility with the elimination of excessive deficits, I do not see that the cross-border spillovers of fiscal initiatives and therefore the benefits of fiscal policy coordination as great.

exceptional circumstances.

For another thing, there is likely to be a singular lack of political enthusiasm for an increase in the EU budget at a time when national governments are taking painful fiscal cuts. It is hard to imagine that French politicians, for example, would support the transfer of another 1/4 or 1/2 per cent of French GDP to the EU at a time when they are being forced to cut several percentage points from the national budget.

In addition, a program which rewards member states experiencing high unemployment with budgetary transfers from their EU partners is a potential source of moral hazard. The conditionality associated with these transfers would have to be strong to prevent countries from succumbing to the incentive to pursue risky macroeconomic strategies that maximize growth in certain states of the world but produce high unemployment in others. If some countries are particularly prone to this form of moral hazard, they may be ongoing recipients of intra-EU transfers. Unlike the Structural Funds, to which countries lose access when their incomes approach the EU average, there would arise the prospect of such transfers continuing indefinitely, an outcome which might threaten rather than bolster EU solidarity.

Finally, there is the possibility that the EU's technocrats and politicians, unable to agree on an elaborate structure along the lines suggested by Italianer and Pisani-Ferry, will opt for a less sophisticated and efficient scheme. Von Hagen and Hammond (1994) find that insurance works well only when transfer payments are based on an intricate multifaceted index. Moving

⁵ In the long run, one can imagine that the severe restrictions of the EDP and the Stability Pact will so limit the ability of national governments to provide income-smoothing services and borrow to finance public investment projects that there will arise pressure for the EU to borrow for them, and a larger EU budget capable of accommodating a serious program of fiscal federalism will develop. But this is a very long-term prospect.

⁶ As noted in Eichengreen (1992).

from an elaborate index to simple asymmetric growth differentials produces transfers that differ significantly in size and direction from the more sophisticated design. Thus, equipping EMU with an improperly-designed insurance scheme may destabilize rather than stabilize the monetary union.

III. The Scope for Automatic Stabilizers Under the Maastricht Treaty

Allowing governments' automatic fiscal stabilizers to operate would be more important than international fiscal-policy coordination and more feasible than a large-scale EU program of fiscal federalism. Bayoumi and Eichengreen (1995) estimate that the elasticity of the central government revenue share of GDP with respect to output ranges from 0.48 in the Netherlands to 0.40 in France, and 0.30 in Germany. Changes in government revenues thus offset a third to a half of changes in disposable income.

Bayoumi and Eichengreen further establish that the operation of automatic stabilizers significantly reduces output variability. They simulate the IMF's MULTIMOD model, showing that automatic stabilizers reduce the first-year effect of a five per cent reduction in the marginal propensity to consume on real GDP by as much as 50 per cent. With automatic stabilizers, output falls by 2.8 per cent; without them it falls by 3.2 or 4.6 per cent, depending on whether cuts in government consumption or increases in net taxes are used to close the budget gap.

There is empirical as well as counterfactual evidence that governments which operate under Maastricht-type restrictions engage in significantly less automatic stabilization. Bayoumi

⁷ The specification regresses the change in the budget surplus/output ratio on a constant, the change in real GDP, the lagged budget surplus/GDP ratio, and a time trend. The elasticity with respect to the change in real GDP is differs significantly from zero at standard confidence levels for each of the countries.

and Eichengreen (1995) analyze data for the U.S. states, 49 of which operate under statutory or constitutional restrictions on debts and deficits of some sort. Since these restrictions vary in their stringency, it is possible to relate the latter to the degree of automatic stabilization. States with relatively strict restrictions on deficits and debt issue (principally in the Great Lakes region, the Plains states, the Southeast and the Southwest) are found to stabilize the least. While state budgets on the Eastern Seaboard and the Far West display relatively large fiscal offsets to fluctuations in state income, on the order of 0.11-0.14 per cent, those of the Plains states, where fiscal restrictions are tight, are only 0.04, those of the South East and Great Lakes only 0.07, those of the Southwest only 0.08. Most of the difference is on the expenditure side of the budget. In other words, states operating under relatively stringent fiscal restrictions carry out significantly less fiscal stabilization due to reductions in the cyclical sensitivity of their spending.

Were countries to enter Stage III with balanced budgets, there would remain room for their fiscal stabilizers to operate. Most of the swings in fiscal positions that have occurred in Europe since the early 1970s could be accommodated without breaching the Maastricht limits. Still, there are cases where shifts in fiscal positions exceeded 3 per cent of GDP: in the UK, Denmark, Portugal and Italy in the mid-1970s, in Belgium in the early 1980s, and the UK, France, Spain, Finland and Sweden in the early 1990s. If countries started out with 3 per cent surpluses and hence scope for a 6 per cent fiscal swing, only Sweden and Finland in 1991-93 would have violated the 3 per cent deficit limit.

In fact, however, most member states' 1996 deficit ratios exceed the 3 per cent reference value in the protocol to the Maastricht Treaty. They are being forced to adopt painful cuts to squeeze under the Maastricht limbo bar in 1997 and qualify for EMU. In some cases, as with the

French government's decision to divert resources from France Telecom's financial reserves into general revenues, they are taking exceptional steps that will be impossible to repeat in 1998 and after. It is all but certain, therefore, that most of the founding members of the monetary union will be up against the 3 per cent limit when Stage III begins.

With time, there is reason to hope that this problem will be solved. Debt/GDP ratios cannot keep on rising indefinitely; governments will have to settle on one solution or another. Growing consciousness of Europe's demographic problem (rising dependency ratios and pension liabilities after the year 2020, which create a strong case for government saving now) creates all the more reason for governments to return their fiscal policies to a sustainable course. In the short run, however, it is more likely that European governments, having sucked in their stomachs to fit in Maastricht's tightly-pegged trousers, will insist on letting out their breath upon gaining admission to EMU. There is good reason to think, in other words, that many countries will be right up against the three per cent limit when Stage III commences. The danger that automatic fiscal stabilizers will be deactivated is therefore particularly acute in the short run.

The larger the monetary union, the more alarming is this prospect. If EMU is limited to a small number of countries in relatively strong fiscal positions, it may be possible to reassure the German public and German politicians that excessive deficits will not lead EMU member states to press the European Central Bank to keep interest rates low to moderate their debt servicing problems. It may be possible to convince them that the ECB will not be compelled to come to the aid of highly-indebted governments experiencing a debt run. But it is argued that EMU is a non-starter without the participation of France. And the French government has hardly shown the fiscal rectitude necessary to reassure Germany. If a France that just misses the 3 per cent

target is admitted to the monetary union, it will be harder to exclude other countries like Spain that make a good-faith effort but come up short. This raises the possibility of a monetary union that extends well beyond the so-called deutschemark zone, one over which the German government will demand that EU authorities exert strict fiscal control by adopting an ironclad Stability Pact.

IV. Gearing the EDP to the Constant Employment Budget: A Proposal

A Stability Pact will only compound the problem of fiscal inflexibility created by the Excessive Deficit Procedure. Still, the German authorities, mindful of their country's special history of inflationary instability, have made clear that they will demand multilateral surveillance of member states' fiscal policies as a price for EMU. History matters, and historical memories of inflation are no exception. Realistic proposals for reform must take into account Germany's preoccupation with inflation and budget deficits.

The obvious solution is to apply the EDP and the Stability Pact to the constant-employment budget deficit, not the current deficit. Output, employment and the public-sector accounts would be adjusted to those corresponding to the nonaccelerating inflation rate of unemployment (or NAIRU). Deficits would not be allowed when the budget was adjusted to a constant-employment basis. The reason German and other national authorities are concerned with excessive deficits is the fear that they will apply inflationary pressures on the ECB. Keying the constant-employment budget balance to the NAIRU would avoid exciting these fears. Only when unemployment was above the NAIRU, and when the existence of excessive slack in the economy meant that inflation was decelerating, *ceteris paribus*, would a deficit be allowed.

This procedure would allow founding EMU members some fiscal flexibility in the early years of Stage III, when their actual budget deficits would be significant but their constant employment deficits would be less. Such governments would not be forced to raise taxes and cut public spending in a dangerously procyclical fashion in the event of another recession. As they recover from recession and their unemployment rates decline, actual budget deficits should be expected to shrink. Those which do not will then be in violation of the constant-employment budget-balance rule, and the countries in question should suffer the consequences laid down in the Maastricht Treaty and the Stability Pact. The Maastricht Treaty features language authorizing European officials to interpret fiscal conditions in member states flexibly. It makes reference to "exceptional circumstances" under which actual deficits can exceed 3 per cent of GDP; one can well imagine that serious recessions constitute just such an exception. The proposal advanced here is an attempt to render such exceptions systematic.

Calculating the constant-employment budget balance is not straightforward. The authorities have to estimate the NAIRU, the gap between actual and potential output, and the elasticity of various categories public expenditure and revenue with respect to output. As Barrell and Sefton (1995) have shown in these pages, estimates of the output gap and therefore of the cyclically-adjusted budget balance are sensitive to alternative assumptions and statistical procedures. This raises the danger that governments would adopt assumptions of convenience and manipulate estimates of the constant-employment budget so as to avoid violating the revised EDP. This same problem arises in the context of the actual budget balance, of course; again, recall that controversy over the French government's use of France Telecom's financial reserves. To minimize already-existing problems of moral hazard, the European Commission and the

European Monetary Institute construct independent estimates of budget deficits, and the EU has empaneled a committee of statisticians to advise it on the admissability of member states' fiscal accounting practices. The revised EDP could be administered in a similar way: the EC or an EC-appointed panel of independent economic statisticians could do the cyclical correction under a range of alternative assumptions and publish upper- and lower-bound estimates of the constant-employment deficit.

A more permissive version of this scheme would limit the cyclically corrected deficit not to zero but to 3 per cent of GDP. Buitier, Corsetti and Roubini (1993) have suggested that the original rationale for the 3 per cent ceiling was that public investment is not inflationary and that European governments have historically undertaken public investment in the amount of 3 per cent of GDP. The notion that productive public investment is self-financing -- it eventually generates the revenues needed to service the debts incurred -- and therefore is not inflationary is referred to in the German literature, and EC documents, as the golden rule of public finance. The point can also be viewed in another way. Starting with a debt-income ratio of 60 per cent, nominal income growth of 5 per cent per annum can support a constant debt ratio even if deficits are running on the order of 3 per cent of GDP. Thus, if inflationary pressure on the ECB is a function of the weight of the debt burden, a constant-employment deficit of 3 per cent should not be inflationary.

Almost exactly 3 per cent of EC GDP between 1974 and 1991, according to these authors.

See Commission of the European Communities (1991).

A 3 per cent deficit and 5 per cent rate of growth of nominal income in the steady state produce a 60 per cent debt ratio, assuming constant compounding.

In the four years since Buitier, Corsetti and Roubini wrote, observers may have grown more pessimistic about the

The problem with this variant is that if governments utilize this flexibility to the fullest but unemployment is not allowed to fall below the NAIRU (since allowing it to do so would cause inflation to accelerate and be inconsistent with the Maastricht Treaty mandate for price stability), this scheme would not stabilize the debt ratio. If the deficit runs at 3 per cent of GDP and the debt/income ratio neither rises nor falls when unemployment is at the NAIRU, the debt burden would rise when growth slowed, the deficit widened, and unemployment rose relative to the NAIRU. Although this problem would not arise if governments ran deficits significantly below 3 per cent of GDP when unemployment was at the NAIRU, allowing the debt/income ratio to fall, those who insist on a strict EDP and a Stability Pact do so precisely because they doubt that governments can be relied on to follow such practices. If the extra deficit spending all went into public investment which raised the steady state rate of growth and reduced the NAIRU, the story would be different. But there is no reason to think that governments, given additional fiscal leeway, would devote all the additional spending to public investment, or that all the public investment in question would be productive in the sense of raising growth rates and prove self-financing. Indeed, the share of public investment in European public spending has been declining over time. In the U.K., it has fallen from 4-5 per cent of GDP in the 1960s and early 1970s to nearly zero under the weight of deficit pressures and in response to privatization.

Even the zero-per-cent-deficit version of this scheme this is a weaker interpretation of the EDP than currently insisted upon by the German government. Hence, Germany and other member states which share its concern will require other reassurance in return from granting

prospects for 3 per cent real growth in Europe. If real growth is 2 per cent instead, and a two per cent inflation rate is still assumed, four per cent nominal growth supports a steady state debt/income ratio of 60 per cent if deficits are limited to 2 1/2 rather than 3 per cent of GDP.

other countries this additional fiscal discretion. The obvious quid pro quo is procedural and institutional reform at the national level to offset the existing bias in national political systems toward excessive deficits. Recent studies suggest that some budgetary procedures are more conducive to sound fiscal outcomes than others (von Hagen and Harden, 1994; Alesina, Hommes, Hausmann and Stein, 1996). Centralized procedures (in the language of von Hagen and Harden) that empower the prime minister, the finance minister or the treasury minister to overrule spending ministers in intra-governmental negotiations, limit the scope for parliamentary amendments to the government's budget, and limit the scope for deviations from the budget law in the implementation stage are consistently associated with smaller deficits and debts. In contrast, decentralized institutions and procedures that assign significant prerogatives to the legislature and spending ministers tend to be associated with higher deficits and larger debts.

An alternative to strict application of the numerical guidelines of the EDP would thus be to encourage countries to reform their fiscal procedures and institutions along more centralized lines. This approach is consistent with the theory of regulation, which suggests that in the presence of uncertainty, regulation through appropriately-designed decision-making procedures is preferable to regulation involving rigid numerical targets. It is consistent with the principle of subsidiarity. National governments can be encouraged to reform their budgetary institutions and procedures as they see fit, in contrast to the "one-size-fits-all" approach of the EDP and the Stability Pact. Their success in doing so, gauged in terms of the institutional and procedural centralization that results, should then affect the stringency with which the EDP and the Stability Pact are applied to their national cases.

This approach is consistent with the spirit of the Maastricht Treaty, and in particular with

Art. 103d, which instructs member states to make their budget procedures conducive to fiscal discipline. It is consistent with the approach adopted in the Maastricht Treaty to the conduct of monetary policy. The framers of the treaty did not set numerical targets for money growth but gave the ECB a mandate to pursue price stability and specified the procedures it was to follow. They made sure that its Executive Board was independent, that its members would serve long terms in office, and that they would not take advice from national governments. There is no reason why the same approach should not be taken to insure that Europe retains its fiscal flexibility.

Thus, member states could be encouraged to adopt more centralized fiscal procedures in the same way that the Maastricht Treaty encourages them to fortify the independence of their national central banks. Since the danger that a budget problem will persist and ultimately run out of control is a function of the fiscal institutions and procedures through which that budget is determined, the stringency with which the EDP was applied to a particular country (whether the upper- or lower-bound estimate of the constant-employment budget balance was utilized, for example) could be made a function of those institutions and procedures. Von Hagen and Harden develop a series of indicators of the centralization of fiscal procedures and their susceptibility to special-interest pressures. These give countries points depending on whether the prime minister or finance minister has agenda-setting power in the annual budgetary round, whether the latter begins with a binding vote on the overall size of the deficit, and whether there exist significant barriers to the adoption of supplementary budgets, to the fungibility of budgetary appropriations, and so forth. In the same way that the EC and EMI are responsible for assessing the independence of national central banks in Stage II of the Maastricht Process, the Commission

could develop explicit numerical indicators of the centralization of the fiscal institutions and procedures of the member states, following the von Hagen and Harden guidelines.

V. Conclusion

The hope that fiscal-policy coordination and fiscal federalism will play key roles in Europe's monetary union is misplaced. Fiscal federalism will not be available to offset recessionary shocks for the foreseeable future. The effects of coordination designed to internalize the cross-border spillovers of fiscal policies are too weak to solve the problems at hand. Freeing up fiscal policy to replace national governments' loss of monetary independence requires, at a minimum, allowing European countries' automatic stabilizers to operate. That in turn requires a flexible application of the Excessive Deficit Procedure and the Stability Pact.

I have offered the concrete suggestion that the Excessive Deficit Procedure and any fines and sanctions associated with the Stability Pact be applied to the constant-employment budget balance, not the actual deficit. Applying them to actual deficits when European countries enter EMU up against the 3 per cent limit will render fiscal policy strongly procyclical, aggravating the problem of macroeconomic fragility created by the loss of monetary autonomy. Still, countries like Germany preoccupied by the specter of fiscal profligacy need to be reassured that member states will not abuse their fiscal freedom. Procedural and institutional reform to offset the deficit bias in national political systems is the obvious quid pro quo.

References

- Alesina, Alberto, Rudolph Hommes, Ricardo Hausmann and Ernesto Stein (1996), "Budget Deficits and Budget Procedures in Latin America," unpublished manuscript, Interamerican Development Bank.
- Allsop, Christopher and David Vines, "Fiscal Policy and EMU," National Institute Economic Review 158, pp.**-**
- Barrell, Ray and James Sefton (1995), "Output Gaps: Some Evidence from the UK, France and Germany," National Institute Economic Review 151, pp.**-**.
- Bayoumi, Tamim and Barry Eichengreen (1995), "Restraining Yourself: The Implications of Fiscal Rules for Economic Stabilization," Staff Papers 42, pp.32-48.
- Buiter, Willem, Giancarlo Corsetti and Nouriel Roubini (1993), "Excessive Deficits: Sense and Nonsense in the Treaty of Maastricht," Economic Policy 16, pp.57-100.
- Commission of the European Communities (1991), "The Economics of EMU," European Economy, Special Issue No. 1.
- Delors Committee [Committee for the Study of Economic and Monetary Union] (1989), Report on Economic and Monetary Union in the European Community, Luxembourg: Office for Official Publications of the European Communities.
- Eichengreen, Barry (1992), "Is Europe an Optimum Currency Area?" in Silvio Borner and Herbert Grubel (eds), The European Community After 1992, London: Macmillan, pp.138-164.
- Italianer, Alexander and Jean Pisani-Ferry (1991), "Regional Stabilization Properties of Fiscal Arrangements: What Lessons for the Community?" unpublished manuscript, Commission of the European Communities.
- MacDougall Committee [Study Group on the Role of Public Finance in European Integration] (1977), Report of the Study Group, Brussels: European Commission.
- Maastricht Treaty (1991), Treaty on Economic and Monetary Union, Luxembourg: Office for Official Publications of the European Communities.
- Méltz, Jacques, (1994), "Is There a Need for Community-wide Insurance Against Cyclical Disparities?" Economic and Monetary Union. Economie et Statistique, Special Issue, pp.99-106.
- Méltz, Jacques and Silvia Vori (1992), "National Insurance Against Unevenly Distributed Shocks in a European Monetary Union," unpublished manuscript, INSEE and Bank of Italy.

Oudiz, Gilles and Jeffrey Sachs (1984), "Macroeconomic Policy Coordination among the Industrial Countries," Brookings Papers on Economic Activity 1, pp.1-76.

von Hagen, Jürgen and Barry Eichengreen (1996), "Fiscal Restraints, Federalism and European Monetary Union: Is the Excessive Deficit Procedure Counterproductive?" American Economic Review 86 (May), pp.134-138.

von Hagen, Jürgen, and George W Hammond (1995), "Regional Insurance Against Asymmetric Shocks: An Empirical Study for the EC," CEPR Discussion paper 1170, London.

von Hagen, Jürgen and George W. Hammond (1996), "Insurance Against Asymmetric Shocks in a European Monetary Union," working paper, University of Mannheim.

von Hagen, Jürgen and Ian J. Harden (1994), "National Budget Processes and Fiscal Performance," European Economy Reports and Studies 3, 311-408.