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EMU: An Outsider's Perspective[1]

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The first economist to deliver the Finlay-O'Brien Lecture was John Maynard Keynes in 1933. Ireland had just embarked on a policy of protectionism, and Keynes's academic hosts, free traders all, expected him to condemn the government's initiative. Instead, in a lecture entitled "National Self-Sufficiency," Keynes endorsed the policy, arguing that the attempt to recreate the integrated international economic system of the 19th century had failed. Faced with the Great Depression, countries needed to be free from international entanglements in order to pursue recovery strategies.

In a sense, I am in a similar position. Americans are notorious skeptics of the merits of European monetary unification. Some of my hosts may share their reservations. I may have been invited here in the hope that I would provide a critical perspective on EMU. But like Keynes in 1933, I am inclined to surprise my hosts. Where Keynes argued that Ireland should

[1] The Finlay-O'Brien Lecture, delivered at University College, Dublin, October 7, 1996. As with all my writings on EMU, this one draws on the fruits of joint work with my collaborators Tam Bayoumi, Jürgen von Hagen, and Fabio Ghironi. In particular, I draw in this lecture on Bayoumi and Eichengreen (1996), von Hagen and Eichengreen (1996) and Eichengreen and Ghironi (1995).

minmize international entanglements, I will make the opposite case.

EMU is a gamble, no doubt. An article I wrote several years ago began with the sentence "European monetary unification is a leap in the dark." One of the themes of my talk is that the economics profession knows little about EMU's benefits and costs. But while EMU is a gamble, it is probably a gamble worth taking, if you believe, as I do, that the EMU project is integrally linked to the effective completion of the Single Market, and that the benefits of the Single Market are large.

But EMU also has costs, and it is the difficulty of quantifying them that creates the uncertainty. Most discussions focus on the costs of forsaking monetary autonomy -- that countries which give up a separate national currency give up recourse to an independent monetary response to economic shocks. While there is some merit to this argument, I will suggest that these costs are not the ones about which Irish policymakers and their constituents should be particularly worried.

The more serious danger is that EMU will disable not just monetary but also fiscal policy. Normally, a country which ties its monetary arm behind its back leaves its fiscal hand free to fend off macroeconomic disturbances. The danger in Europe is that the Maastricht Treaty's Excessive Deficit Procedure and Mr. Waigel's Stability Pact will hamstring fiscal as well as monetary policy. In the short run, Europe will have very little fiscal room for maneuver. This could result in an exceedingly fragile and unstable European economy.

Peering further into the future, the danger is that EMU will lead to an unhealthy degree of fiscal centralization. I will argue that EMU should be understood as a bargain between Germany and France, where France wants monetary integration to recapture some control over the

continent's monetary policy, while Germany wants political integration in order to acquire a foreign policy role in the context of an EU foreign policy. Historically, the vehicle for political unification has been the assignment of the power to tax to the national government. One can readily imagine how this could come about in Europe. The Maastricht Treaty limits the ability to borrow of EU member states. Government borrowing is a way to distribute transitory shocks over time; restricting it will create a second-best argument -- and political pressure -- to instead provide this smoothing at a more centralized level. Moreover, national governments will still undertake public investment projects; if their ability to borrow for this purpose is constrained, they will press the EU to borrow for them. For Europe this means that the Excessive Deficit Procedure may encourage the transfer of fiscal and hence political control to Brussels.

The danger that the EMU will set in motion a process whereby the EU usurps the fiscal and political prerogatives of the member states is, I believe, what really bothers most Irish, not the fact that the Central Bank of Ireland will lose a little monetary autonomy. Few observers and certainly not an American whose own country is turning an increasing number of government functions back to the states would argue that the creation of a European "super-state" is desirable. The advantages of "subsidiarity" were precisely what motivated Keynes in his Finlay Lecture, when he argued that countries "need to be as free as possible of interference from economic changes elsewhere, in order to make our own favorite experiments towards the ideal social republic of the future."

Fortunately, there are ways of fending off this threat. The Excessive Deficit Procedure needs to be interpreted liberally. The Stability Pact should not be too restrictive. I will make some suggestions for institutional reforms that facilitate this and should be politically acceptable

to the parties involved.

I. Economic Approaches to Monetary Unification

Work by economists on the subject of European monetary unification builds on the theory on optimum currency areas. This approach balances the reduction in transactions costs from eliminating separate national currencies against the loss of policy autonomy associated with the existence of a common monetary policy. Robert Mundell, the father of this theory, argued that small countries that trade heavily benefit the least from a distinct national currency and, by implication, gain the most from monetary integration.[1] In contrast, countries that suffer business cycle disturbances at unsual times have the most reason to retain a separate national currency with which to address them.

1. Operationalizing the Theory of Optimum Currency Areas

The problem with this theory is the difficulty of operationalizing it. Let me describe to you an attempt to do that. In a recent paper with Tamim Bayoumi, I analyze the determinants of exchange rate variability using insights from the theory of optimum currency areas. (Mundell himself suggested that the same factors that determine whether two countries should adopt a common currency will also affect their decision of whether or not to stabilize the exchange rate between their separate national currencies.)[2] Exchange rate variability is related to four country characteristics that OCA theory suggests make stable exchange rates and monetary unification more or less desirable. First, "asymmetric" output disturbances (that affect different countries differently), which are measured as the standard deviation of the change in the log of relative output in the two countries. Second, the dissimilarity of the composition of the exports of the

two countries, a second proxy for asymmetric shocks.[3] Third, the importance of bilateral trade linkages.[4] Fourth, economic size, since the costs of a common currency, in terms of macroeconomic policy independence foregone, should be balanced against the benefits, which will be greatest for small economies where there is least scope for utilizing a separate national currency in transactions.[5]

When we estimate this equation using data on bilateral exchange rates for the industrial countries, all four variables have the anticipated signs and coefficients that differ from zero at the one per cent confidence level. This allows us to use them to construct fitted values of our dependent variable for 1987 and 1995. In terms of the predicted level of exchange-rate variability vis-à-vis Germany, the European countries divide into three groups (as shown in Figure 1): prime candidates for EMU, those which are converging to EMU, and those for which the index shows little convergence. In the first group are Austria, Belgium, and the Netherlands, joined recently by Ireland and Switzerland. There is striking parallel between the make-up of this group and press commentary, circa 1996, on the leading candidates for EMU, except for the presence of Switzerland, which is not an EU member, and the absence of France, whose participation is widely regarded as essential to the political viability of the enterprise.

The result for Ireland is interesting, since our index of its convergence in economic structure and cyclical position corresponds to the convergence observed under the Maastricht criteria. As operationalized here, the theory of optimum currency areas suggests that only Austria and the Benelux countries have a higher benefit/cost ratio from joining EMU.

Many Irish observers are concerned that the UK will remain outside EMU. The approach taken here could be extended to address this question. Rather than predicting exchange rate

variability vis-à-vis Germany, the estimated equations could be used to predict it vis-à-vis a weighted average of all the countries that join the monetary union at the beginning of Stage III (where EMU participants are weighted by their size). If we assume that France, Austria, the Benelux countries, and the UK are in, along with Germany, then Ireland's OCA index rises from 2.1, the value vis-à-vis Germany, to 2.4 (mainly because Irish business cycles are less well correlated with those for some of these other countries, and Ireland trades less with some of them). If one then assumes that the UK is not among the founding EMU members, Ireland's index rises to 2.6. While we have the predictable effect that the UK refusing to join makes EMU less attractive, what is striking is that monetary union is still relatively attactive for Ireland compared to the situation facing everyone except the Benelux countries and Austria.

Thus, these calculations provide a surprisingly strong case for Irish participation in Europe's monetary union. On grounds of its economic size, its trade, and its business cycle disturbances, the case for Ireland joining at the beginning of Stage III is much stronger than that for the UK.

This exercise is not without problems. The proxies for asymmetric shocks and savings in transactions costs are crude. While this exercise allows us to use insights from OCA theory to rank candidates for EMU, we still cannot say whether the costs or benefits dominate for an individual country or the group as a whole. To have a hope of answering this question, we need to analyze transactions costs, asymmetric shocks and adjustment mechanisms in more detail. It is to this question that I now turn.

2. Transactions Costs

On transaction costs I can be brief. There is little agreement about the savings that will

result from EMU. Money remains perhaps the most difficult variable for economists to analyze. Standard approaches to modeling it are ad hoc and unrealistic.[6] Absent a consensus about the structure of the relevant transactions costs, it remains problematic to develop a reliable estimate of the benefits of eliminating them. Economists simply do not know how to rigorously model the efficiency advantages of a single currency.

3. Asymmetric Shocks

If macroeconomic disturbances are "asymmetric" -- if they affect different potential monetary union partners differently -- there may be grounds for resisting monetary unification. Governments will wish to retain the policy autonomy needed for an independent response to idiosyncratic shocks. This is an area to which considerable research has been devoted. Its limitation is that evidence that is likely to be useful for policy debate is necessarily based on historical correlations that will change with the advent of EMU.

Again with my faithful collaborator Tamim Bayoumi, I have utilized a method of Olivier Blanchard and Danny Quah to distinguish aggregate supply and aggregate demand shocks.[7] We estimated bivariate autoregressions using data from 1968 through 1988 for output and prices, restricting demand disturbances to affect only prices in the long run while allowing supply disturbances to have a long-run impact on both prices and output. The results suggest the existence of an EU core and an EU periphery. In the core, whose disturbances are highly correlated with those of Germany, are Austria, France, Denmark and the Benelux countries. Ireland is not in the core because we start the analysis earlier than in the work I was discussing in Subsection 1, and the longer sample period reduces the correlation with Germany.

The fact that such studies find disturbances to the members of the EU core to be more

highly correlated than those to the EU periphery does not tell us that disturbances to the core are sufficiently well correlated to support the operation of a monetary union. Neither do comparisons with existing monetary unions, although the results are suggestive. Bayoumi and I found that the correlation of disturbances to the ten census regions of the U.S. are comparable to those for the members of the EU core (and that they are significantly higher than those to the EU periphery).

It is tempting to conclude that if the U.S. can operate a monetary union, so can the EU core. The problem is that the pattern of disturbances may shift with EMU. While demand disturbances are likely to grow more highly correlated with the advent of EMU (monetary disturbances will become symmetric by definition), the correlation of supply disturbances may move in the opposite direction. Paul Krugman (1993) has argued the completion of the Single Market will cause Europe's regions to grow more specialized in production, in the manner of regions of the United States, increasing the magnitude of idiosyncratic regional shocks and heightening the costs of foresaking monetary autonomy. Lorenzo Bini-Smaghi and Silvia Vori (1993), on the other hand, have argued that intra-industry rather than inter-industry trade will receive the greatest boost. As markets are deregulated and access is freed, two-way trade across Europe's internal borders will grow. To the extent that shocks are industry-specific, they will become more symmetric, and inferences based on historical data will exaggerate the costs associated with the loss of monetary autonomy.[8]

4. Alternative Adjustment Mechanisms: The Labor Market

Even if the timing of supply and demand disturbances differs across EU member states, national governments may attach little value to monetary independence if there exist other

mechanisms for coping with shocks. The obvious alternative, to which Mundell pointed in his seminal article, is labor market adjustment.

Olivier Blanchard and Lawrence Katz (1992) is the most widely cited study of the contribution of labor mobility to adjustment. Using data for U.S. states they found that inter-state migration plays a major role in adjustment to shocks. The contribution of migration to the elimination of labor-market disequilibria dominates that of wage flexibility and labor force participation. Jorg Decressin and Antonio Fatas (1995) subsequently obtained strikingly different results for Europe: there, they found, migration played a significantly smaller role. In the first three years following a disturbance, most of the decline in regional labor demand is met by increased unemployment and reduced labor force participation; the impact of migration becomes evident only after four years. These results suggest that Europe is less well suited for monetary union than because of the lesser responsiveness of migration to region-specific shocks.[9]

Adjustment can also occur through changes in the cost of labor. If real wages fall in the European country where suffering the negative shock, there will be no need for either out-migration or exchange rate adjustment. Here the evidence points in the same direction, namely to the fact that real wage flexiblity is limited in Europe.[10] But the question once again is whether this relationship is likely to be affected by the exchange rate regime. Wages may grow more flexible once unions and workers realize that there will be no change in the exchange rate to relieve them of the consequences of wage-setting mistakes. The economists who have studied this question generally find some increase in wage flexiblity as a country's exchange-rate commitment hardens, but the response is slight.[11] It is by no means sufficient to convince one that EMU will produce a significant increase in wage flexiblity.

II. Political Economy Considerations

While the literature inspired by the theory of optimum currency areas is useful for thinking about the costs and benefits of Europe's monetary union project, it remains difficult to assert with confidence which side of the equation dominates. The difficulty of quantifying the gains from EMU is one reason for thinking that the decision of whether to go ahead is unlikely to be determined on narrowly economic grounds.

If an economic argument carries the day, it will be that the Single Market must be accompanied by a monetary union. The Single European Act and the 1992 Program were efforts to inject competition into an overregulated European economy. But while national producers may be prepared to cope with increasingly intense competition from their European rivals, they are unwilling to accept arbitrary changes in competitiveness conferred by capricious currency swings. Confronted with large intra-EU exchange-rate fluctuations, they will demand subsidies and state aids from their national capitals and Brussels. Thus, exchange rate volatility may be incompatible with the creation of a truly free and integrated internal market.[12]

Various kinds of evidence have been adduced in support of this view.[13] The Italian lira's depreciation starting in 1992 is widely cited in this connection; it evoked pained complaints from French producers who found it increasingly difficult to compete with imports and responded by demanding subsidies to compensate them for the damage. In the spring of 1995, talk of a transatlantic free trade area was scotched by the depreciation of the dollar; how, asked European officials, could Airbus be expected to compete against Boeing when the latter could reap a ten per cent improvement in its competitive position in a matter of months as a consequence of

currency fluctuations? It is said that political support for the Interstate Commerce Act, which prohibits barriers to trade between U.S. states, could hardly be sustained if the United States possessed 50 state currencies, all of which were allowed to fluctuate against one another.

The implication is that the currency stability offered by monetary unification is essential for the maintenance of a free and integrated internal market. European officials thus paint EMU as integral to the Single Market program and essential for the dynamism of Europe more generally.

This argument rests on a long chain of assumptions all of which can be questioned. Even if significant changes in competitiveness result from intra-European exchange-rate fluctuations, political support for the internal market, and resistance to demands for state aids and subsidies, may be robust to such effects. Even if the impact of exchange rates on competitiveness encourages protectionism, most exchange-rate changes are quickly passed through into wages and prices and do not produce sustained competitiveness shifts. And even if exchange-rate movements are sustained and have significant competitiveness effects, it may still be possible to limit currency volatility and prevent sustained misalignments from occurring by coordinating inflation targets for monetary policies across countries.[14]

It is harder still to assess the hypothesis that EU member states -- and Germany in particular -- want monetary union not because of any connection to the Single Market but because EMU is part of a broader program of political integration. German politicians and their constituents may regard monetary union as undesirable when taken in isolation but still support it as an acceptable price for French support for political integration and for a more prominent foreign policy role for Germany in the context of an EU foreign policy.

There is anecdotal evidence consistent with this view. Recall that the impetus for the formation of the Delors Committee came not from the German finance ministry but from Foreign Minister Hans-Dietrich Genscher, who expressed a willingness to consider replacing the EMS with a monetary union in return for accelerating European integration. Chancellor Kohl appealed to this notion when, on the eve of the March 1996 elections in three German länder, he insisted that EMU was needed to free Europe from war in the 21st century. While the resumption of open hostilities between France and Germany is all but inconceivable, it is entirely possible to imagine more conflicts like that which has afflicted the former Yugoslavia; an EU which has taken only tentative steps toward political integration has been incapable of a coherent response to the crisis in the Balkans. Kohl's allusion to war can thus be understood as appealing to the desire in Germany for a more effective EU foreign policy. Finally, when efforts to complete the transition to EMU began to falter in the spring of 1996, Chancellor Kohl and French President Jacques Chirac urged the Intergovernmental Conference to fix ambitious goals for European foreign and security policy, again pointing up the linkage between monetary and political integration.

The literature in political science on issue linkage is designed to capture these spillovers across areas.[15] One conclusion to emerge from this work is that linkage operates effectively only when restrictive conditions are met. For example, problems of commitment and time consistency must be solved. According to the Maastricht timetable, monetary union will precede political integration and the creation of an effective EU foreign policy within which Germany can project influence and force abroad. If this permits France first to secure German support for completing the monetary union, a step which is likely to prove permanent or at least costly to

reverse, what then prevents Paris from reneging on its commitment to pursue political integration when it comes times to take steps in that direction?

One answer is the institutions and procedures of the European Union, which can be understood as a commitment mechanism which reins in the temptation to renege on the intertemporal bargain. The institutions of the EC provide a monitoring technology to check compliance with the terms of the agreements, and bonds in the form of international treaties that formally tie together commitments on different issues. Thus, the literature on issue linkage points to topics -- like the structure of EU decision-making processes -- to be studied by scholars who believe that EMU must be understood as part of a larger cross-issue bargain.

III. Fiscal Risks

The fiscal provisions of the Maastricht Treaty are the most prominent obstacles that remain to be overcome. During Stage II of the transition to Economic and Monetary Union (which we are currently in), member states endeavor to avoid "excessive deficits," and their success in doing so is one of the four criteria governing admission to Stage III, monetary union itself. During Stage III, member states are unconditionally required to avoid "excessive deficits." The EDP is set in motion if the country's deficit and general government debt exceed 3 and 60 percent of GDP, the reference values specified in the protocol to the treaty.

The danger is that if these provisions are not interpreted flexibly, Europe's automatic stabilizers will be deactivated. Even if countries are not held to deficit limits even tighter than those of the Maastricht Treaty and the 3 per cent limits of the protocol still set the standard for good fiscal performance, governments will be up against those limits when Stage III begins,

leaving them little scope to increase their deficits in the event of a cyclical downturn.

Thus, national governments may possess neither the monetary nor the fiscal independence needed to buffer shocks. The European Central Bank, concerned to establish its commitment to price stability, will be reluctant to tailor monetary policy to changing cyclical conditions in its early years. This makes it all the more alarming that fiscal policy may be deactivated as well.

Bayoumi and I have tested the hypothesis that fiscal restrictions weaken the operation of automatic stabilizers using data for U.S. states.[16] Of the 50 states, 49 have limits on the quantity and type of debt that they are allowed to issue, although these vary widely in their stringency. A number of states operate subject to statutes that limit deficits as well as debts: some are prohibited only from carrying a deficit into the next fiscal year; in others, the governor must sign a balanced budget; in still others, the legislature must only pass a balanced budget. We find that states that operate under more stringent fiscal restraints tend to have relatively large fiscal offsets to macroeconomic fluctuations. Moving moving from no fiscal controls to stringent controls reduces the cyclical variance of the fiscal balance by about 40 per cent. Most of the effect occurs through reducing the variance of public spending over the cycle. The macroeconomic impact of inhibiting the operation of Europe's automatic stabilizers to this extent could be substantial: the IMF's MULTIMOD model suggests that reducing the sensitivity of the fiscal balance to the cycle by 40 per cent increases the magnitude of output fluctuations by fully 20 per cent.

3. Are Fiscal Restrictions Redundant?

One justification for the Excessive Deficit Procedure is that the international coordination of fiscal policies is essential in an integrated Europe. I have several problems with this view. First, the spillover effects of fiscal policy are small because the expenditure and interest rate

effect work in opposite directions. Second, if one is concerned about the impact on interest rates, it is important to remember that Europe is only a small part of the global capital market. Third, even if one rejects these arguments, the EDP remains a blunt instrument for coordinating fiscal policies. By limiting the flexibility of fiscal positions, it may actually impede the efforts of countries to coordinate their stabilization policies. The Maastricht Treaty acknowledges this point by providing an entirely different mechanism for policy coordination: the "mutual surveillance procedure" of Art. 103, under which the Council develops guidelines for the economic policies of member states, monitors their economic policies, and issues recommendations.

Another motivation for the EDP is fear that unfettered fiscal policies will be a source of inflationary pressure on the ECB. Because excessive debt may lead to a bailout by the Union and threaten the stability of the single currency, the argument goes, monetary union requires restrictions on the autonomy of member states to prevent the latter from over-borrowing. That bailout might take two forms: an ex-post bailout involving monetization of government debt, or an ex-ante bailout entailing policies to keep interest rates on government debt artificially low. Either policy could give rise to inflation and threaten the stability of the single currency. This is in contrast to a situation in which each state issues its own currency and each government can expect to act as its own lender of last resort, leading it to internalize the bailout risk.

If limits on freedom to borrow are essential to guard the stability of a common currency, then one would expect them to prevail in existing monetary unions. In fact, this is not the case.[17] We should expect to see them in federal states, which resemble EMU in certain respects (monetary centralization, fiscal decentralization). Again, this is not generally the case.[18] While

fiscal restrictions are more prevalent in unitary states, this is hardly comforting to those who insist that restraints are needed safeguard a common currency from fiscal abuses, since the budgetary powers of subcentral governments and hence their capacity to undermine monetary stability are larger in federations; by this argument, borrowing limits should be more prevalent in federal than unitary states, where the opposite appears to be true.

How then is the cross-country incidence of borrowing restrictions to be understood? The key lies in the structure of the tax base. Consider two situations: one in which all taxes are raised by a central government which provides grants to subcentral governments to permit the latter to carry out their functions, and another in which subcentral governments control taxes sufficient to finance their own expenditures. In the first case, the own resources of the subcentral government are scarce, and it may face bankruptcy due to even a small shock to its economy. The only choices available to it will then be to allow the subcentral government to go bankrupt or to bail it out. Under many circumstances, the first alternative will not be acceptable, leaving the central government to opt for the second. Anticipating this, subcentral governments have an incentive to engage in riskier fiscal and financial policies than if there was no prospect of a bailout. In contrast, when subcentral governments possess tax resources of their own, a third alternative exists: the central government can demand that they use these to service and restructure their debts. Hence, borrowing limits designed to protect the central government's financial stability tend to be imposed in countries where subcentral governments finance only a small share of their expenditures through own tax resources.[19]

The implications for EMU are clear. The vertical structure of taxes in the EU is controlled almost entirely by national governments. A political entity with these characteristics

would not impose borrowing restrictions. Given the scope for EU member states to use their own taxes to deal with their financial difficulties, the EDP would appear to be redundant.

4. Are Fiscal Restrictions Counterproductive?

Pressure for the central government to provide tax-smoothing and automatic-stabilization services through a system of fiscal federalism will surely be greater where subcentral governments are prevented from providing those services themselves. Government borrowing is a way to distribute transitory shocks over time; restricting this option creates an argument to instead provide this smoothing via the central government budget.

For Europe this means that the EDP may spur the creation of a system of fiscal federalism in which Brussels collects taxes and provides transfers to member states in amounts that increase with, say, the level of unemployment. And because the member states will resist giving up their tax revenues as quickly as they demand additional services from the EU, the financial position of the latter may deteriorate as a result. Restraints on the budgetary freedom of subcentral governments may thus increase the demand for central government borrowing, ultimately weakening the financial stability of the center.[20]

Cross-country evidence is consistent with this view. The central governments of countries with tight borrowing restraints on subcentral jurisdictions tend to be more heavily exposed to debt. It appears that subcentral governments with limited freedom to borrow pressure the central government to undertake activities that lead to additional borrowing, weakening the position of the central authorities.

These results point to the possibility that member states will pressure the EU to provide them with the tax-smoothing services they forego as a result of the EDP. The EU has the

capacity to accomodate these demands; for example, it can borrow off-budget through the European Investment Bank. An unanticipated consequence of the EDP may therefore be to augment the fiscal powers of Brussels. As the latter provides additional tax-smoothing services and undertakes additional responsibilities, it will tend to accumulate larger debts than if member states were free to borrow.

This analysis suggests that the EDP may in fact aggravate the problem it is designed to solve. If the tax-smoothing and automatic-stabilization capacities of national governments are limited, national officials will lobby for these services to be provided by the EU, leading to the transfer to Brussels of the power to tax and expanding transfers to member states. By increasing the degree of vertical fiscal imbalance, this will raise the pressure for bailouts and undermine Brussels' capacity to resist. By weakening the financial position of the Union, it may place another financial supplicant on the doorstep of the ECB.

5. Procedural Reform as an Alternative to Numerical Targets

If potential participants in Europe's monetary union nonetheless fear that their prospective EMU partners are prone to reckless and irresponsible fiscal policies, they can be reassured not by rigid enforcement of the Excessive Deficit Procedure and by the addition of a Stability Pact entailing even stricter numerical limits on the size of budget deficits, but by reforming budget-making procedures and institutions at the national level.

Recent studies suggest that certain budgetary procedures are conducive to sound fiscal outcomes.[21] Centralized procedures that empower the prime minister, the finance minister or the treasury minister to overrule spending ministers in intra-governmental negotiations tend to be associated with lower deficits and smaller debts. Many such procedures feature an annual fiscal

round that begins with a binding vote on the overall size of the budget and strict limits on the power of the parliament or legislature to adopt supplementary budgets. In contrast, institutions and procedures which assign significant prerogatives to the parliament or legislature and to spending ministers within governments tend to be associated with higher deficits and larger debts.

An alternative to the numerical guidelines and politicized procedures of the EDP would thus be to encourage countries seeking to qualify for monetary union to reform their fiscal procedures and institutions along more centralized lines. This approach is consistent with that adopted to guide the policies of the European Central Bank. The framers of the Maastricht Treaty were not so silly as to set numerical targets for money growth. Rather, they 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.

Thus, reforming the institutions and procedures through which fiscal policy is made can substitute for rigid enforcement of the Excessive Deficit Procedure and the Stability Pact. Politicians in Germany and other countries who are most leery of fiscal excesses can draw reassurance from procedural and institutional reforms that conduce to sound fiscal policies. Allowing national governments to operate their automatic stabilizers and to continue to use fiscal policy in countercyclical ways will limit the pressure for Brussels to do the borrowing for them. It will discourage the centralization of fiscal and, by implication, of political functions that so worries observers in this and other countries.

III. Conclusion: Ireland and EMU

It is appropriate to conclude on a modest note. Economists really know little about the costs and benefits of monetary unification. We have trouble modelling the increase in economic efficiency associated with a single currency, and we disagree about the value of an independent monetary policy. My own view is that neither of these considerations, which are emphasized in the theory of optimum currency areas, is likely to be decisive. The savings in transactions costs is surely small. And the value of an independent monetary policy is increasingly limited.

Thus, the debate will be decided on other -- ultimately political -- grounds. EMU will happen if policymakers are convinced that currency stability is the only way to solidify the Single Market and that monetary union is the only way to guarantee currency stability. It will happen if there exists a viable package in which the French get EMU and the Germans get an increased foreign policy role in the context of an EU foreign policy.

This last sentence underscores the extent to which monetary and political integration are linked. Germany will concede monetary union only if it eventually gets an EU foreign policy, which implies steps toward political integration. For a readership concerned with Ireland's sovereignty, the question then becomes what kind of political integration Europe will have. Will the EU's budget be limited, or will the vehicle for political integration be the transfer of the power to tax to the center, as was historically the case in countries like the United States?

I have suggested that Europe's fiscal rules may be decisive. If the Excessive Deficit Procedure is applied rigidly and reinforced with a stability pact, national governments will be unable to provide the countercyclical stabilization services their constituencies desire, and there will be pressure for the EU to do so. The power to tax and spend will be transfered to the center.

If, on the other hand, institutional and procedural reform at the national level is substituted for the inflexible application of the Excessive Deficit Procedure, the creation of a European super-state can be avoided. This suggests an agenda for action by Irish policymakers who are committed to European integration but also value their country's sovereignty.

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Endnotes

1. See Mundell (1961), and also McKinnon (1964) and Kenen (1969).

2. See Bayoumi and Eichengreen (1996). We focus on nominal exchange rate variability, although we replicate the analysis using real exchange rate and find that the general conclusions follow through.

3. On the grounds that industry-specific shocks will be more symmetric when two countries have a revealed comparative advantage in the same export sectors. To construct this variable we collected data on the shares of manufactured goods, food and minerals in total merchandise trade for each country. Manufactured goods are defined as the total of basic manufactures, chemicals, machines and transport equipment, miscellaneous manufactured goods, and other goods. Food is the sum of food and live animals, beverages and tobacco, and animal, vegetable oils and fats. Minerals amalgamate data on crude materials excluding fuel with mineral fuels, etc. The dissimilarity of the commodity composition of two countries' exports was then defined as the sum of the absolute values of the differences in each share (with higher values indicating less similarity in the composition of commodity exports between the two countries).

4. We compute the average value of exports to the partner country, scaled by GDP, for the two countries concerned.

5. That is, small countries should benefit the most from the unit of account, means of payment, and store of value services provided by a common currency. We measure the benefits from a more stable currency by including the arithmetic average of (the log of) real GDP in U.S. dollars of the two countries as a measure of country size. The estimating equation is therefore:

$$(1) \qquad SD(e_{ij}) = \alpha + \beta_1 SD(\Delta y_i - \Delta y_j) + \beta_2 DISSIM_{ij} + \beta_3 TRADE_{ij} + \beta_4 SIZE_{ij},$$

where $SD(e_{ij})$ is the standard deviation of the change in the logarithm of the end-year bilateral exchange rate between countries i and j, $SD(\Delta y_i - \Delta y_j)$ is the standard deviation of the difference in the logarithm of real output between i and j, $DISSIM_{ij}$ is the sum of the absolute differences in the shares of agricultural, mineral, and manufacturing trade in total merchandize trade, $TRADE_{ij}$ is the mean of the ratio of bilateral exports to domestic GDP for the two countries, and $SIZE_{ij}$ is the mean of the logarithm of the two GDPs measured in U.S. dollars. In each case, the independent variables are measured as averages over the sample period.

For 1983-92, estimation yielded the following (with standard errors in parentheses):

$$SD(e_{ij}) = \underset{}{-0.09} + \underset{(0.21)}{1.46}\, SD(\Delta y_i - \Delta y_j) + \underset{(0.62)}{0.2.24}\, DISSIM_{ij} + \underset{(0.07)}{-0.054}\, TRADE_{ij}$$

$$+ \underset{(0.23)}{2.50}\, SIZE_{ij},$$

$n = 210 \quad R^2 = 0.51 \quad S.E.= 0.027$

6. These place it in the utility functions of households and the production functions of firms or assume a cash-in-advance technology imposing a rigid relationship between the money stock and the volume of merchandise transactions. Recent theoretical treatments, like Kiyotaki and Wright's (1989) model in which money is characterized by network externalities, lack an empirical basis on which to be realistically calibrated.

7. Bayoumi and Eichengreen (1993a,b). The reference is to Blanchard and Quah (1989).

8. Frankel and Rose (1996) analyze the impact of trade on the correlation of output movements across countries, and conclude in favor of the Bini-Sunaghi and Vori conjecture that greater integration increases the cross-country correlation of business-cycle disturbances.

9. These conclusions are reinforced by the analysis of my 1993 article, where I find that the elasticity of inter-regional migration with respect to unemployment and wage differentials is smaller in the U.K. and Italy than the United States.

10. See for example OECD (1986).

11. Blanchard and Muet (1991) detect little sign that French wage behavior has changed as the government's commitment to its exchange rate peg has hardened. Artis and Omerod (1994, 1995) analyze data for four EMS countries, finding little evidence that a hardening commitment to the ERM has had a noticeable effect on their labor market dynamics. Only Anderton and Barrell (1993) detect some evidence of increasing wage flexibility in Italy over the period of that country's ERM membership.

12. Once upon a time it was possible to limit fluctuations between separate national currencies by operating a system of narrow exchange-rate bands. Starting in the late 1980s, however, the liberalization of capital movements made intermediate exchange rate arrangements like the pegged-but-adjustable rates of the narrow-band European Monetary System more difficult to sustain. The elimination of capital controls, a concomitant of the Single Market project, stripped governments of the insulation they require to defend pegged-but-adjustable rates and removed the breathing space they needed to organize orderly realignments. The interest rate increases they were forced to impose when their currencies came under attack so aggravated unemployment, raised the cost of servicing the public debt, inflated mortgage payments and destabilized banking systems as to be insupportable. In this environment, a government that would have been willing otherwise to maintain an exchange rate peg could be induced to abandon it by speculative pressure; speculative attacks could become self-fulfilling. As it became more difficult to operate pegged-but-adjustable rates, countries had to choose between some form of floating on the one hand and permanently fixed rates on the other, where the second alternative could only be achieved through monetary unification.

13. The discussion here summarizes, very briefly, the lengthier analysis in Eichengreen (1996).

14. This is argued in CEPR (1995). A more general review of experience with inflation

targeting is Leiderman and Svensson (1995). Of course, this is a debate that ought to be decided on empirical grounds. The volatility of exchange rates in a regime of inflation targeting is an empirical question that can be addressed with theory and with evidence from countries with this monetary policy strategy in place. The speed with which exchange-rate fluctuations are passed through to prices can be studied using models of pricing to market. The connection between currency swings and the political economy of trade liberalization can be analyzed with public opinion data (for example, Eurobarometer surveys in which questions about EMU and the Single Market are asked repeatedly over time). While there exists literature on all these topics, in only a few cases has the research design been adapted to speak to the need for a single currency to support the Single Market. As with the debate over the economic costs and benefits of monetary unification, it remains beyond the capabilities of economists to attach numbers to these effects.

15. See Keohane and Hoffman (1991).

16. See Bayoumi and Eichengreen (1995). Other recent studies that reach similar conclusions are Bohn and Inman (1995) and Poterba (1994).

17. The Belgium-Luxembourg monetary union imposes no borrowing limits on its members. In the East Caribbean Currency Area and the West and Central African Monetary Unions, limits exist on the ability of governments to borrow from the central bank but not on borrowing from other sources. See Boughton (1993) and Nascimento (1994). The monetary union between the United States and the Federated States of Micronesia (FSM) is an exception in that the FSM are subject to a strict balanced-budget provision. This is a product of national legislation, however, and is not mentioned in the Compact Agreement between the United States and the FSM (although the monetary union is). In sum, fiscal restraints are the exception rather the rule in monetary unions.

18. Eichengreen and von Hagen (1995) consider 16 federal states, and find that exactly half of them restrict the fiscal autonomy of subcentral governments.

19. Von Hagen and I test this hypothesis by estimating a probit regression on cross-country data for 1985-87. The dependent variable is zero if a country has no restrictions on subcentral government borrowing or only a weak golden rule, and unity otherwise. The independent variable, the vertical structure of the fiscal system, is measured as the share of subcentral government spending financed by revenues from own taxes. 1987 GDP per capita in U.S. dollars (denoted PCGDP) is included to control for stage of economic development. The estimated equation (with standard errors in parentheses) confirms that countries in which subcentral governments control a large share of the tax base are significantly less likely to restrict borrowing by subcentral governments.

(2) Restrictions = 0.25 - 3.51 Structure - 0.04 PCGDP
(0.65) (1.16) (0.04)

$X^2 = 8.00$ Number of observations = 45 $\rho = 0.045$

20. Testing this hypothesis requires a measure of the latter's financial position. The ratio of government debt to GDP is unsatisfactory because it may be high or low depending on the size of the public sector, which is a matter of national preference. Instead, Eichengreen and von Hagen measure debt exposure by the ratio of central government debt to central government tax revenues, again in 1985-87. The main explaining variable, the index of the stringency of borrowing restraints, equals zero for no restrictions, one for a strict golden rule or congressional approval, two for self-imposed restraints, three where central government approval is required, and four for outright bans on subcentral borrowing. This assumes that self-imposed restrictions are weaker than those applied by the central government, since revoking the latter requires the concurrence of an outside authority, and that Congressional approval is weaker than approval by the Executive, since a region is sure to have representation in the national congress.

One might argue that debt exposure also depends on unobservable country-specific preferences affecting the propensity to finance central government expenditures with future taxes. Eichengreen and von Hagen therefore consider a proxy for the preference for tax financing, namely the ratio of central government tax revenues to GDP (lagged to minimize simultaneity). Estimation yields the following:

(3) Debt exposure = 2.79 + 0.41 Restrictions - 7.77 Tax Preference (0.69)
(0.15) (2.60)

$R^2 = 0.31$ Number of observations = 36 $F = 7.31$ $\rho = 0.001$

21. See von Hagen and Harden (1994) and Alesina, Hommes, Hausmann and Stein (1996).