Fiscal Policy in the Member States under EMU*

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1. Introduction

The launch of EMU, which is expected to represent a source of benefits for European economies facing recovery after years of slowdown, to some extent implies the end of national fiscal policies. A key-element of EMU will in fact lie in the disciplined and coordinated fiscal policies of all its participants. If we take a look at the years following the 1990-91 supply-side shock and the 1992 currency crisis, we see that fiscal policies in Member States have been restricted both according to the criteria stated by the Maastricht Treaty and due to the levels of deficit inherited from the past and the consequent need to reduce them.

Budget deficits under EMU will have to decrease further than they already have been and with the acceptance of the even stricter provisions contained in the Stability and Growth Pact possibly tend to zero (the Maastricht Treaty itself only requires a deficit of not more than 3% of GDP) in order to maintain convergence in the long run, although, as we will see, there are no effective sanctions if a Member State fails to meet the target once EMU has started. In fact, in principle, interest rates should not be pushed upwards by any deficit-prone or inflationary policy. In addition, the end of the exchange rate regime in the EU means that weaker economies will no longer be allowed to devalue their currencies in order to limit the impact of asymmetric shocks.[1]

The main purpose of this paper is to consider whether fiscal policy according to EMU's constraints is sustainable particularly in the context of high unemployment and low growth. In this respect, this paper is mainly based on previous studies which developed possible scenarios in order to examine this sustainability. The paper also considers the implications of the sanctions stated in the Stability and Growth Pact on EMU Member States' economies should they actually be applied. In this respect, a negative economic scenario characterised by asymmetric shocks is presented in order to try to establish whether the EMU provides measures which may help economic recovery by enhancing regional convergence. A comparison with US fiscal federalism is also made to compare the means used in the US to achieve stabilisation. Finally, the discussion is extended by considering whether fiscal policies in a Monetary Union should in principle incorporate stabilising functions, and whether a Monetary Union actually needs a centralised fiscal policy in order to pursue such stabilisation.

2. EMU's Fiscal Policy constraints and its effects on national policies

According to the Commission's forecasts,[2] the benefits of EMU should mainly consist of: 1) reduced budget deficits and coordinated fiscal policies; 2) lowered costs for businesses, price transparency and lower prices for consumers; 3) monetary stability due to the absence of exchange rate fluctuations; 4) the creation of a euro-area capable of attracting investors thanks to a stable level of interest rates. The sustainability of EMU itself, however, lies in economic recovery being maintained in the long term and no Member State being forced to pursue goals which are not stated in the Treaty on European Union and in the Stability and Growth Pact. The criteria should in fact be sustained at a desirable level in the long run, which would certainly be easier if there were no economic downturns.

Let us now see what has been the main implication of convergence criteria towards EMU with respect to fiscal policy. Since the Maastricht Treaty imposes low budget deficits – that is deficits which do not amount to more than 3% of GDP – in order to keep interest rates low, some inflation-prone and less disciplined countries – such as Italy, and Spain, which suffered considerably from the 1992-95 slowdown – have found it difficult to satisfy this criteria because they are facing economic recession. Though it is also very easy to say these Member States have had more disciplined fiscal policies because they are now subject to the Maastricht criteria, it is also true that the huge amount of public debts they inherited from the past also made it necessary for them to reduce their deficits and to correct the trends in their public finances.

While these economies have succeeded in satisfying the criteria their unemployment levels have generally risen, as has the average EU unemployment rate when compared to the US rate.[3] Therefore, during the convergence process towards the so-called Maastricht criteria, restrictive fiscal policies may have contributed to a further rise in unemployment, beyond that caused by the economic downturn in these countries alone. Summing up, since EMU will imply the maintenance of tight fiscal policies, the question whether such policies will help economic recovery remains open.

In examining how fiscal policy should be conducted under EMU according to the spirit of the Treaty one can see, firstly, that the rules of fiscal policy as proposed by the Treaty of Maastricht contain explicit rules on the

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public finances of the individual Member States of the EU as a necessary condition for the entry in EMU.[4] Secondly, after entry, Member States must retain fiscal flexibility for stabilisation purposes, but as public debt monetisation is forbidden,[5] they should avoid excessive deficits which may lead to an unsustainable fiscal position. Countries running excessive deficits have to correct their position otherwise they are subject to penalties and fines. In this respect, the Treaty of Maastricht suffers from a remarkable weakness, that is it lacks provisions for the creation of a strong federal institution to help Member States conduct national fiscal policies. The Stability and Growth Pact, agreed at the European Council in Dublin on 13 December 1996, provides guidelines for Member States' governments with respect to fiscal policy. It imposes sanctions on those states which have transgressed budgetary discipline (by having a deficit of more than 3% of GDP) – we will not focus on the exceptions which will allow a Member State to avoid such sanctions. What is important to emphasise is that it seems that while some measures aimed at the enforcement of budgetary discipline exist, any measure to help a State towards a recovery is apparently missing. Broadly speaking, according to the spirit of the Stability and Growth Pact it may seem that if a Member State in economic downturn loses control of its deficit it is punished, rather than given support to improve its economy.[6]

During the Third phase of EMU, when the conduct of monetary policy is centralised at the European level and, therefore no longer available as a policy tool at the national level, budgetary policy will be the main macroeconomic policy instrument available for individual Member States in order to limit the impact of recessions, especially as a result of asymmetric shocks. In such a context due to the impossibility of lowering interest rates and resorting to currency devaluation larger deficit changes might be required. However, according to the Mundell-Fleming model,[7] in the new policy environment of EMU, budgetary policies will in principle become more effective in softening the impact of cyclical fluctuations with centralised monetary policy and irrevocably fixed exchange rates between Member States. However, unless national policies are coordinated, these budgetary policies will increase the changes in the budget deficit required in order to obtain the same degree of stabilisation achieved in the past.

The actual deficit changes which took place during past severe recessions, such as that of 1992-95, usually started from markedly higher pre-recession deficit levels. The impact on the economy of budgetary policy changes during recession under EMU should, however, be different from that of a rise in a deficit from, let us say, 8% to 10% of GDP, which may have been seen in the past. This is because at higher rates the deficit is more likely to shift on to an unsustainable path, as such fiscal expansion generally leads to an increase in the risk premium on interest rates, in order to avoid inflation.

In the flexible exchange rate regime Member States facing recession were able to improve their situations by increasing their competitiveness and by lowering wages, social security transfers and taxation levels. However, such advantages often vanished because of the volatility of the exchange rates regime. With the EMU and the single currency, things change. Variations in labour costs, or labour law, as well as the level of skill and mobility of the labour force become key-factors once the exchange rate advantage disappears, especially in case of economic downturns. Therefore, a stricter fiscal policy will affect the competitiveness of firms but other microeconomic policies – affecting labour market flexibility and taxation level – will also play a predominant role.

In short, after the launch of EMU, fiscal and monetary policy will run according both to the Stability and Growth Pact and to the provisions stated in the Maastricht Treaty (no fiscal solidarity, no monetisation of public debt). However, no form of coordination of fiscal policies among Member States has been conceived of so far, and it is possible to predict that there may be fiscal policies in some EMU countries which will be run in a different way from that stated in the Treaty. In these cases, the sanctions stated by the Stability and Growth Pact could be applied.

However, the most apparent lack of form of coordination regards fiscal policy. If there is a common monetary policy, that is the European Central Bank (ECB) fixing short-term interest rates to have an anti-inflationary effect, other economic policies (such as taxation level, social security, labour cost and labour mobility) will still depend on each government's policies, and all governments will run their own national policies according to their domestic priorities, but not necessarily with a significant degree of coordination.

3. Are there alternatives to fiscal federalism?

Let us now draw a scenario, where an asymmetric shock affects EU economies and deepens regional disparities in terms of output, growth level, income and employment levels. We have seen that when a country joins EMU it loses its ability to use monetary and exchange rate policy in order to stabilise its economy. In the case of a shock affecting Italy, for instance, with flexible exchange rates the Lira would depreciate, and the resulting real depreciation would raise export demand and help the Italian economy recover. This is not the case with EMU. Moreover, adjustments are unlikely to come about through migration for, while the free movement of labour is a theoretical reality within the EU, migration is still difficult because of language and cultural differences. Indeed it may even be considered politically unacceptable as a mean of making adjustments. Doyle, at the time when the Delors Report was launched,[8] found that this leaves EU's fiscal policy as the main mechanism for absorbing such shocks.[9]

The question is whether there is a net transfer system according to EMU provisions. In case of a country-specific recession due to an asymmetric shock, the institutional framework of EMU does not provide for forms of cooperation. The Cohesion Fund, which we may compare to US federal taxes in this case, amount to less than 1.5% of EU's GDP. According to the US pattern, a region which is hit by a shock could benefit from a minimum fiscal transfer through the form of a smaller contribution to the EU's budget, as in the US where a

State in economic downturn in effect pays less taxes through the receipt of social transfers which are financed by the other States. Examples of fiscal flows in the US and Canada show that there is no fiscal federalism in the context of EMU where, in comparison, the budget is small and redistribution is limited. However, single governments can still carry out stabilisation policies using domestic fiscal instruments to an extent which is comparable to that of the US and Canada.

These considerations arise from the question of whether economies in a downturn (as in the case of asymmetric shocks, which are often country-specific) could be better stabilised by a federal-type of fiscal solidarity or by the simple respect of fiscal policy rules implemented at the national level by each EMU Member State.

When considering to what extent the US and Canada can be used as a reference point for the EU Bayoumi and Masson[10] drew the following three conclusions:

a) The size of the federal flows varies significantly depending on the institutional structure of the country concerned, so that neither the US nor Canada provide a benchmark for EMU.
b) The stabilisation which is performed by national governments in the EU is comparable to that which occurs in the US or Canadian federal fiscal systems at the national level. Therefore, there does not seem to be a case for a federal system among EU countries on stabilisation grounds at the federal/European level, unless increasing integration limits their ability to carry out stabilisation policies in the framework of EMU. (This, however, is supposed to be the case).
c) Both federations, the US and Canada, have remarkable redistributive functions. Even in the case of US, where there is no specific requirement for the federal government to pursue a policy of equality in income level, the federal fiscal system reduces long-term income differentials by 22 cents in a dollar. On the other hand, according to Bayoumi and Masson, the EU Structural and Cohesion Funds, which amount to 0.45% of the EU's GDP and do not have stabilising functions nor aim at redistributing wealth and equalising incomes, would not be sufficient to pursue such goals. In contrast to the US and Canada, the lack of an adequate fiscal instrument would expose the EU to regional economic disparities unrelated to the underlying trends of regional development, causing strain and dissatisfaction with the EMU and undermining its proper functioning, which would have particular consequences on unemployment levels. Sachs and Sala-i-Martin pointed to the US experience to enforce this view.[11]

They contend that the US federal fiscal system responds to regional shocks by offsetting about one-third of the effect of the impact through tax and transfer payments and lower federal taxes. Their conclusion is that an EMU without a sufficiently large fiscal apparatus would produce a detrimental impact, at least, in terms of sustainability. Von Hagen, however, shows that the estimates presented in Sachs and Sala-i-Martin are biased upward, because they do not separate transitory from permanent"regional shocks.[12] This distinction is clear in the empirical evidence, which shows that the US fiscal system offsets only around 10% of a transitory regional shock, a finding which is confirmed by Atkeson and Bayoumi.[13] Masson and Taylor present evidence for Canada showing the similar, relatively small role of the federal fiscal system in dealing with regional shocks.[14]

More generally, the question of whether the lack of an apparent fiscal integration in EMU would be offset according to US and Canadian patterns still remains unanswered, and the literature cannot reach an unanimous conclusion about how to settle it.

Is there really an alternative to fiscal federalism for EMU then? Looking back over the years, the call for a sizeable centralised fiscal budget goes back to the era of the McDougall Report of 1977, which estimated that a budget of about 5% of the Community's GDP would be required for a viable EMU.[15] The Delors Report judged that a central bank budget of that size would not be politically feasible in the near future and therefore called for the greater coordination of fiscal policies among the members to achieve the same purpose.

What form then should such net transfers assume? The McDougall Report and the Delors Report, which were mainly concerned with the problem of reducing disparities in per capita income through equalising and stabilising mechanisms, pointed to using public finances in unitary and federal states. This appears to be the approach also advocated and employed by the EU.

Fiscal policy under EMU should therefore involve net fiscal transfers to countries under recession, in order to stabilise rather than to redistribute wealth. Such transfers should also include a certain proportion of funds devoted specifically to the process of structural adjustment: a concept which already exists in EMU, especially in the context of regional policies as well as the structural elements of the functional policies. In addition to helping reduce disparities in the growth rate in per capita income, such an approach to net regional transfers would give birth to self-sustaining growth, reducing and eliminating the need for such net transfers in the long term.

The McDougall Report of 1977 showed that within both the unitary and federal states up to 40 per cent of regional disparities in per capita income are eliminated by fiscal transfers. Nevertheless, according to the McDougall Report the main purpose of the stabilisation policy would be to stabilise incomes, rather than to redistribute wealth. In combination with national provisions such as unemployment benefit, the tax system would execute automatic transfers among regions, without requiring any appropriation and spending authority at the EU level of coordination of national spending policies, that is without fiscal policies. From a politicoeconomic point of view, however, there are two alternatives which are not equally desirable. Firstly, increasing the EU budget would mean increasing the power of central administration both in comparison to Member States' governments and to ECB. Secondly, a federal tax system with redistributive functions, in contrast, would not make the actual transfers subject to political discussion at the national level. The theory of fiscal federalism suggests, in fact, that national administrations would recognise the priorities and needs of the individual Member States better, especially in case of an economic downturn[16] requiring more expansionary national fiscal policies.

The whole matter clearly implies a political choice as to how much redistribution should occur across countries, rather than a choice based on economic necessity related to Monetary Union. Such choice depends on the pressures of public opinions and speculation about this is beyond the scope of this paper. However, political pressures for such redistribution may grow in the EU in response to other forces for increased integration, in particular the Single Market and the EMU itself. As a matter of fact, a political discussion has already taken place in the EU Member States in order to clarify what will become of the savings coming from the reduction in interest rates, and whether the ECB will be enabled to use these resources and how. However, this involves the role and the tasks of the ECB and does not affect the question whether fiscal policy in EMU can actually play a decisive role – at a state or federal level – in softening the impact of recessions and asymmetric shocks. It appears clear that any fiscal federalism on the US or the Canadian pattern would mean a further loss of national sovereignty in fiscal matters, which would probably seem a too great a step towards federal economic integration in the framework of a non-federal political integration process.

4. Does a centralised fiscal policy matter in the EMU?

The orthodox Mundell-Fleming model of 1961 suggested that in the context of a monetary union the domestic effectiveness of fiscal policy would be enhanced[17] by autonomous fiscal policies. But given that fiscal policy intervention is perceived to be desirable and feasible in national terms, how autonomous can national fiscal policies be in a Monetary Union? The basic issue is whether market forces rely on Monetary Union to effect the necessary consistency between national fiscal policies and the common monetary policy of the EU, or whether some forms of coordination of national fiscal policies by the community are also required.

Whether in a monetary union national fiscal polices should be flexible and autonomous is now considered. If countries are hit by adverse country-specific shocks that the Union's monetary policy cannot address, and if the lack of fiscal integration rules out any automatic transfer through the Community budget for stabilisation purposes, Member States must be able to respond by incurring a budget deficit if the Union is not to be subjected to intolerable stresses.[18] Such deficits would automatically arise as tax revenues decline and social expenditures increase in order to soften the social impact of the shock – loss of jobs, etc. – and their magnitude could be increased by discretionary fiscal changes.

It should also be noted that, as Robson suggested,[19] achieving an optimal level of stabilisation does not necessarily require the centralisation of the stabilisation functions.

In principle, the problems could be addressed through policy coordination interventions of Member States. Policy coordination faces other difficulties, however, not least of which is that, even if it is based upon rules and even more so if it is discretionary, it requires continual intra-community negotiation, which takes time.

Fiscal discipline has also to do with the avoidance of unsustainable public debt. If a Member State runs a deficit and incurs public debt over a period and at a rate that threatens its capacity to service that debt, the debt is ultimately unsustainable. The incentives to engage in deficit financing will certainly be modified in various ways by the institution of Monetary Union.[20] It is therefore conceivable that the incentives to fiscal discipline may be reduced. One important reason for supposing this to be true is that the sanction of exchange rate depreciation against imprudent national policies will be lacking in Monetary Union.

Nevertheless, decisions have to be made on the means to be adopted to protect the Monetary Union and the financial system from the effects of excessive deficits of Member States. The choice seems to lie between the imposition of rigid ex ante limits on deficits and debt, which may hinder sustainable deficits, on the one hand, and some more flexible forms of fiscal surveillance that would be more clearly defensible in terms of national economic situations and community policy objectives on the other. The Stability and Growth Pact seems to solve the dilemma in favour of the first hypothesis, which means that although Member States do not lose any sovereignty as regards fiscal policy their room for manoeuvring in case of recessions is considerably reduced.

With respect to coordination between fiscal and monetary policy, the Commission has often suggested in the past a US-like policy mix, that is a combination of expansionary monetary policy and tightened fiscal policy, which is actually the opposite of what was pursued in the late 1980s and also throughout the first half of 1990s by most Member States, as reported by Buti, Franco and Ongena.[21]

The experience of large budget deficits in 1980s and early 1990s and the efforts made by EU Member States to restrain debt incurred due to fiscal policies in the 1980s have caused a delay in convergence which almost jeopardised the start of the third phase of the EMU. The additional borrowing which is needed to pay the interest on existing debt in some Member States could still create problems for sustainability – in terms of fiscal policy – even after the final entry into the third phase. If such a condition – that is the upward limit public debt – is violated, and the public debt in an EMU country keeps on growing, budgetary policies would then have to be changed and may have to be supported by the sale of public assets which could also negatively affect the country's foreign exchange reserves. This is why the Treaty prevents the Member States from running excessive deficits. Therefore, the evidence does not support the theory of Mundell's optimum currency areas that national fiscal policies can create deficits to absorb the negative effects of shocks without problems of sustainability. Thus, the main problem is how to establish rules for budgetary stability in the long run for members of the EMU, and the abovementioned consideration justifies the provisions regarding the rules for fiscal policy which are contained in the Maastricht Treaty and in the Stability and Growth Pact.

Besides, two other important implications of undertaking direct fiscal action for stabilisation purposes through the budget of an economic community may be underlined. First, asymmetric shocks can be expected to diminish in relative importance if economies converge in their structures as a result of integration. Secondly, if direct fiscal interventions for stabilisation at community level were to be limited to providing assistance to Member States, the whole budgetary cost of stabilisation would be substantially reduced.

5. Concluding remarks

The achievement of a reduction of regional disparities in output and unemployment levels should be seen as a long-term goal. Those who conceived the EMU knew that, with respect to fiscal policy, a positive scenario with low interest rates, no shocks and sustained growth would allow a tightened fiscal policy to be sustainable in the context of a Monetary Union. Yet, the EMU is made up by asymmetric economies, whose low degree of integration in microeconomic issues – mainly labour market flexibility and taxation level – is one of the main reasons why such economies are affected to a different degree by economic shocks. However, the membership of the EMU should protect weaker economies from such shocks, such as the crisis of 1992-93, and their impacts which are immediately reflected in prices, inflation rate and on interest rates.

The conclusion emerging is that the creation of the EMU will be associated with national government having a smaller scope in fiscal policies, thus indirectly contributing to greater fiscal discipline among the participating states. Yet, the Treaty does not provide for any significant centralisation of the national government budgets in the EMU. This implies that there will not be any explicit automatic transfer mechanism which redistributes income, thereby softening the social consequences for the Member States hit by asymmetric demand shocks. Under these conditions, the national governments are likely to push for higher transfer payments from the budget of the EU through negotiation.

The main consequence would be that, in case of asymmetric shocks, a tightened fiscal policy (which allows low deficits and low long-term interest rates) and a lax monetary policy (which leads to low short-term interest rates) could be barely sustainable in the long-term. Therefore, a common fiscal policy from the countries participating to the EMU would not itself be sustainable and, even if it were sustainable, it would be insufficient and not appropriate for every country. In this perspective, a long-lasting growth appears to be the only real condition not only to reduce gaps in economic performances and to lower unemployment rates, but also to avoid the whole EMU being put under pressure. In case of an asymmetric shock, the lack of a fiscal federalism may cast a shadow of uncertainty on the forthcoming EMU.

RÉSUMÉ

Cet article porte essentiellement sur la politique fiscale après le lancement de la troisième phase de l'Union économique et monétaire (UEM) et sur le caractère soutenable de l'UEM dans le contexte de taux de chômage élevés et de croissance faible. A ce sujet, on peut se demander quel sera l'impact des sanctions stipulées dans le Pacte de stabilité et de croissance et si l'UEM prévoit des mesures destinées à contribuer à la relance en cas de chocs asymétriques.

En premier lieu, les politiques fiscales seront resserrées comme ce fut le cas lors des récessions de 1992-95, compte tenu des règles stipulées dans le Traité de Maastricht et dans le Pacte de stabilité et de croissance (faibles déficits budgétaires, pas de monétisation de la dette publique). En fait, s'il y a une politique monétaire commune assurée par la Banque centrale européenne (BCE), qui fixe les taux d'intérêt à court terme dans une perspective anti-inflationniste, d'autres politiques économiques, y compris la politique fiscale, sont conduites au niveau national, de sorte que les gouvernements nationaux définiront probablement ces politiques selon leurs priorités internes, mais pas nécessairement avec un degré élevé de coordination.

Même si les politiques fiscale et monétaire seront menées suivant les dispositions stipulées dans le Pacte de stabilité et de croissance et le Traité de Maastricht, aucune forme de coordination entre les politiques fiscales des Etats membres n'a été conçue jusqu'ici, et l'on peut facilement prédire que les politiques fiscales dans certains Etats membres seront conduites autrement que ne le stipule le Traité. Contrairement aux Etats-Unis et au Canada, l'UEM ne prévoit aucune disposition concernant la solidarité fiscale au-delà du respect de ses règles relatives à la politique fiscale. Par ailleurs, on ne trouve jusqu'ici aucune réponse unanime dans la littérature économique à la question de savoir si le fédéralisme fiscal à l'américaine permettrait de mieux assurer une stabilisation. Il faut savoir que le thème du fédéralisme fiscal dans le cadre d'une future Union monétaire en Europe a fait son apparition pour la première fois dans l'agenda européen grâce au rapport Mc Dougall en 1977. Tout cela implique en fait un choix politique : si cela devait aboutir à un fédéralisme fiscal basé sur le modèle américain ou canadien, ce choix impliquerait une perte supplémentaire de la souveraineté nationale en matière fiscale et un trop grand pas vers l'intégration économique fédérale dans le cadre d'un processus d'intégration politique non fédéral.

La question du Pacte de stabilité et de croissance répond à la nécessité d'imposer des limites rigides ex-ante au déficit et à la dette, ce qui signifie que bien que les Etats membres ne perdent pas leur souveraineté en matière de politique fiscale, leur marge de manoeuvre en cas de récession est considérablement réduite. Le principal problème consiste à savoir comment établir des règles pour assurer une stabilité budgétaire à long terme aux membres de l'UEM. La Commission a suggéré dans le passé une sorte de mix de politiques, c'est-à-dire une combinaison d'une politique fiscale renforcée et

d'une politique monétaire expansionniste.

La principale conclusion que l'on peut tirer est que la création de l'UEM sera associée à la portée plus limitée des politiques fiscales des gouvernements nationaux, créant ainsi une plus grande discipline fiscale parmi les pays participants. Or, le Traité ne prévoit pas de centralisation importante des budgets nationaux dans l'UEM, ce qui implique qu'il n'y aura pas de mécanisme de transfert automatique de la solidarité fiscale qui redistribue les revenus, allégeant ainsi les effets sociaux sur les Etats membres frappés par les chocs asymétriques. Toutefois, l'une des conséquences négatives pourrait être qu'en cas de chocs asymétriques, le mix de politiques susmentionné serait difficilement soutenable à long terme et finirait même par mettre en péril le caractère durable de l'UEM dans son ensemble. On peut donc s'attendre à ce que les chocs asymétriques perdent de leur importance si l'intégration micro-économique entraîne une convergence des structures économiques.

NOTES

[1] Economic theory usually considers "asymmetric" those shocks which hit countries with different intensity in terms of loss of GDP and unemployment trend. An updated analysis of an asymmetric shock scenario under EMU can be found in M. Obstfeld and G. Peri, Regional Non-adjustments and Fiscal Policy, in Economic Policy, London, April 1998, No. 26, pp. 17-63.

[2] A complete and exhaustive view of EMU's advantages is contained in the Green Paper for the introduction to Economic and Monetary Union, European Commission, Brussels, 1995.

[3] The average level of unemployment in the 15 EU countries during 1997 was 10.9% against 4.6% in the US. For further details see OECD: Annual Economic Report, 1998 Edition. Other interesting comparisons between EU and US with respect to unemployment are contained in N. O'Kennedy, Unemployment in EU and in the US: Macroeconomic Perspectives, EUI, Working Papers, Florence 1997.

[4] The four convergence criteria to be satisfied by Member States for entering the third phase of EMU are: a) with respect to public finance, a ratio of budget deficit to GDP which is not higher than 3% and a ratio of public debt to GDP which is not higher than 60%; b) a per-year inflation rate which is no more than 1.5% higher than the average of the three Member States performing the lowest inflation rates; c) nominal long-term interest rates no more than15% higher than the average of the three Member States performing the lowest long-term interest rates; d) with respect to national currencies, a period of at least two years of membership to the Exchange Rate Mechanism (ERM).

[5] The Treaty of Maastricht clearly rules out any monetisation of public debt, which takes place when a Central Bank buys government bonds which have been issued in order to finance a budget deficit. In doing so, the Central Bank keeps interest rates low since it has to increase the money supply, so that monetary policy remains expansionary, which may cause inflation. This is against the principle of price stability which is a pillar of the whole EMU.

[6] See F. Amtenbrink, J. de Haan and O.C.H. Sleijpen, Stability and Growth Pact: Panacea or Placebo? in Europan Business Law Review, No. 20, 1997.

[7] See R. Mundell, A Theory of Optimum Currency Areas, in American Economic Review, vol. 53, 1961, and Capital Mobility and Stabilisation Policy under Fixed and Flexible Exchange Rates, in the Canadian Journal of Economics, November 1963. These papers explain the basics of the Mundell-Fleming macroeconomic model, characterised by a perfect capital mobility and fixed exchange rates. This model is still a fundamental point of reference for any analysis dealing with fiscal and monetary policies in the framework of free capital mobility and fixed exchange rates which characterise EMU's macroeconomic environment.

[8] The "Delors Report" of 1989 launched the plan for a real Economic and Monetary Union (EMU) to be adopted in three phases. See European Commission: Report on Economic and Monetary Union in the European Community, Official Publications of the EC, Luxembourg, 1989.

[9] M.F. Doyle, Regional Policy and European Economic Integration, in Committee for the Study of Economic and Monetary Union, Official Publications in the EC, Luxembourg 1989.

[10] T. Bayoumi, P.R. Masson, Fiscal Flows in US and Canada: Lessons for Monetary Union in Europe, in European Economic Review No. 39 (2), 1997, pp. 253-274.

[11] J. Sachs and X. Sala-i-Martin, Optimum Fiscal Policy and Optimum Currency Areas, Harvard University, Mimeograph, 1989.

[12] J. Von Hagen, Policy Coordination in the EMS with Stochastic Asymmetries, in C. Wihlborg, Financial Regulations and Monetary Arrangements after 1992, Amsterdam, North-Holland, 1992.

[13] A. Atkeson and T. Bayoumi, Do Private Capital Markets Insure Against Risk in a Common Currency Area? Evidence from the United States, in University of Chicago Working Papers, 1991.

[14] P.R. Masson and M. Taylor, Common Currency areas and Currency Unions, in International Monetary Fund Working Papers, Washington, 1991.

[15] European Commission: Report of the Study Group on the Role of Public Finance in European Integration ("McDougall Report"), Official Publications of the EC, Luxembourg 1977.

[16] See P. Masson, Fiscal Dimension of EMU, in International Monetary Fund Working Papers,1996.

[17] R. Mundell, op. cit. (see end note 7).

[18] Following the standard economic theory, we assume that a Monetary Union consists of countries A and B. If A is hit by an asymmetric shock, B is favoured by an increase in aggregate demand. The shock in country A creates an increase in unemployment and a decrease in output. The consequence is that income taxes collected by the government in A decline, while unemployment payments increase. We see the opposite effect in country B. Thus, A needs more income redistribution from B.

[19] P. Robson, The Economics of International Integration, Routledge, London-New York, 1998, pp. 130-138, and C.A. Goodhart and S. Smith, Stabilisation, in European Economy No. 5 (1993), pp. 417-55.

[20] P. Masson and M.P. Taylor, Policy Issues in the Operation of Currency Unions, Cambridge University Press, 1993.

[21] M. Buti, D. Franco, H. Ongena, Budgetary Policies during Recessions: Retrospective Application of the Stability and Growth Pact to The Post-War Period, in Economic Papers No. 121, May 1997, European Commission, Luxembourg, pp. 10-11. ❑