

**MAASTRICHT CRITERIA FOR NEW EU MEMBER COUNTRIES ACCESSION TO EMU**  
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**Guillermo de la Dehesa**

Chairman of the CEPR, Centre for Economic Policy Research

Chairman of the OBCE, Observatorio del Banco Central Europeo

Two previous remarks are necessary: First, past experience with the 12 present member countries when joining EMU shows that the benefits of joining the Euro tend to overcome, in the short to medium term, the costs of adapting to EMU and the costs of higher macroeconomic volatility by being outside the Euro. The Euro appears to be a strong shield that tends to insulate joining countries from exogenous shocks and to help them to achieve macroeconomic stabilization. The dangers of macroeconomic instability tend to be even larger for small, open economies, as are those of the candidates about to join now so they could enjoy larger benefits.

It is all a question of gaining more credibility with the financial markets: once a country joins a well established and credible monetary union, it also becomes credible. This is the main reason why these new EU members are willing to join as soon as possible and therefore, try to meet the Maastricht criteria as fast as they can in order to enjoy lower inflation and interest rates and more trade and capital flows.

Second, some old and new solid critiques have been made of the nominal convergence criteria that these countries have to fulfill in order to become EMU members. Nevertheless, even if these critiques are necessary and make economic sense, they do not have any chance to ever be implemented, given that any reinterpretation, modification or derogation of any of the criteria would violate the “prerequisite of equal treatment” considered to be a cornerstone of EMU, as it was pointed out by the Convergence Report of the ECB (2004).

As a quick reminder, the four Maastricht nominal convergence criteria are the following:

“Price stability”, that means an average consumer price inflation rate that does not exceed by more than 1.5 percentage points that of the three best performing member EMU countries.

“Sustainable fiscal position”, that means not having excessive general government budget deficits or debt. Excessive government budget deficit means higher than 3 per cent of GDP, unless it is declining and has reached a level close to 3 per

cent of GDP or if the surpassing of the 3 per cent level is only exceptional and temporary and remains close to 3 per cent. In the case of the gross government debt criterion, the gross debt to GDP ratio should not go beyond 60 per cent of GDP, unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

“Exchange rate stability”, that meaning that the currency has respected the normal fluctuation margins of ERM II (15 per cent) without severe tensions for at least two years.

“Low long-term interest rate”, meaning that the average long-term interest rate should not exceed by more than 2 percentage points the interest rates in, at most, the three best performing member countries in terms of price stability.

One of the major initial critiques was made by De Grauwe (1994) when he said that the Maastricht convergence criteria involving exchange rates, inflation rates and interest rates were paradoxical: they could be easily met once countries formed a monetary union, while it will be extremely difficult to meet the three criteria simultaneously before the union was realized. The Maastricht Treaty “had it back to front” since it was nominal convergence before monetary union. Moreover, it would make more sense to go to EMU without the nominal convergence criteria (De Grauwe, 1993).

The lack of enough theoretical foundations in the nominal convergence criteria has been well explained by Eijffinger and de Haan (2000). Later, Hughes Hallet and Lewis (2004) have found that the nominal Maastricht criteria are, at best, irrelevant and at worst, damaging for the duration of the catch-up process of the new EU member candidates to EMU and that, moreover, the three nominal criteria make harder to meet the fiscal criterion. Thus, they suggest that the “principle of subsidiarity” be applied to Euro membership, placing decisions over entry in the hands of the individual member states.

### Nominal versus Real Convergence

Charles Wyplosz (2002c) has rightly pointed out that the four Maastricht criteria for nominal convergence, in order to joining EMU, were originally introduced because most European Union member countries had achieved a reasonable degree of real convergence towards the EU average levels of GDP per capita (under PPP terms), but this real convergence had been reached in spite of a persistent nominal divergence among most EU members. Thus, it made sense to choose nominal convergence as the main requisite for joining EMU (even if the important Mundell’s OCA (Optimal Currency Area criteria) were not yet met; as shown by Bayoumi and Eichengreen (1993). The original choice of these criteria was based much more on politics than economics, mainly because of Germany’s fears of some “fiscally badly behaved” EU members joining too soon. Later on, the Stability and Growth Pact (SGP) had to be introduced to try to bring back to virtuosity some other EMU members, which became fiscally prodigal.

Now, in the case of the new EU member countries candidates to join the EMU, the problem is exactly the contrary. Although they have made some catching up progress, their real convergence is still a far away aim, since it will take many more years for most of these new members to get closer to the EU average GDP-PPP per capita, while their nominal convergence is even closer today than that achieved then by some of today's incumbent members when preparing to join EMU. Thus, as real convergence is going to be only achievable in the long run, then, nominal convergence has been chosen to be achieved as a short to medium term target.

Therefore, the main challenge for the new EU member countries joining EMU is how to achieve nominal convergence starting with a rather low real convergence. Past experience with the first group of candidates to EMU shows that it is easier achieving nominal convergence with a higher level of real convergence than without it, as shown by the greater difficulties to joining EMU for Greece or even Portugal or Spain than for other EMU members (being Italy, with high real convergence, the exception to this rule).

The challenge for the new EU members becomes somehow even greater than for the incumbent members for other reasons as well (Eijffinger, 2006):

The first is that new EU members do not have a formal derogation as the UK or Denmark achieved earlier. Therefore, they have an obligation to join the EMU and to fulfill the Maastricht criteria but, in principle, it is to their discretion to choose the time to achieve them, following the example of Sweden, which has thus far avoided the obligation to joining by not meeting the exchange rate criterion, as shown by Buiter and Grafe (2002b).

The second is that the present ERM II (Exchange Rate Mechanism) is different from ERM I. The new members have to be formal members of ERM II for two or more years after EU accession, when Italy as well as Finland and Greece joined EMU right from the start, even though they did not spend two years in ERM I, (Buiter and Grafe, 2002b).

The third is that in ERM I, all member currencies were bilaterally tied to each other and the burden of intervention in support of each pair was fully shared. By contrast, in ERM II, each currency is tied to the Euro and the ECB does not make any formal commitment to support the parities. Thus, in principle, each country bears the burden of defending its parity (Wyplosz, 2002b).

The fourth is that accession to EMU requires member countries to fully liberalize their current and capital accounts. This is another major issue, since one of the agreed critiques is that their transition period of two or more years at ERM II with limited fluctuations around their parities can be dangerous, not only because some investors can launch speculative attacks against their currency betting on a country or countries not making it, but also because it is a period in which most foreign and mainly Euro Area investors tend to discount its entry and flood them with capital inflows to be the first to get a foot in the new EMU markets, without exchange rate risk. Previous evidence suggests that speculative attacks were large and painful as it was the case of France and the UK (Begg, Eichengreen, Halpern, von Hagen and Wyplosz, 2003).

In this latter case, either new EMU candidate country is not able to fight the speculative attack for lack of financial muscle by its central bank and thus its currency falls beyond its agreed ERM II bands or if there is not such an attack, it gets very large amounts of FDI, portfolio and real estate inflows which appreciate its exchange rate and may provoke a loss of competitiveness, which tends to undermine the growth prospects derived from the same capital flows. Moreover, these capital inflows may also be quite volatile and leave the country if there are increasing doubts about its probability of joining EMU, even more so if there are expectations of a speculative attack on its currency.

If the central bank intervenes to prevent such an appreciation, since only non-sterilized interventions work, monetary policy becomes too lax and inflation ends reducing competitiveness and eventually its rate may go up beyond the bands established for ERM II. Furthermore, as part of the intervention process, the central bank acquires low-yielding foreign assets while issuing high-yielding domestic liabilities, which can reduce notably its muscle to fight an speculative attack or even can provoke doubts about its solvency and increase the pressure from its government, which is its “financer of last resort”, which may end reducing its independency (Wyplosz, 2002b).

Past experience with EMS has shown that a full liberalization of capital flows made more difficult to maintain the ERM I for two years or more, unless exchange rate bands were enlarged (what it was done in 1993) or alternatively, a final realignment of parities was allowed just before joining (de la Dehesa 1993)

The fifth difficult issue facing these new EU member countries candidates to join EMU, is the conflict between real and nominal convergence during their run-up to EMU and mainly between catching up and inflation, given that their level of real convergence is lower than that of the previous EMU candidates (De Grauwe and Schnabl, 2004) If there is no possibility of changing any of the nominal criteria, mainly the inflation one, as it is now the case, then the new EU member countries which want to join EMU need to show a “careful timing” of EMU accession as suggested by the Bundesbank (2003).

Alternatively, they need to introduce restrictive fiscal policies in the run-up to accession, as suggested by Begg et al. (2001) who argue that tighter fiscal policies can be helpful in controlling inflation and overheating and by Gros et al. (2002) who argue that a restrictive macroeconomic policy would help dampening the price gap between traded and non traded goods as well as the upward drift of consumer price inflation. This fiscal contraction could be supported by wage moderation as well. Or, finally, a transitional recession to depress inflation as suggested by Buiter and Grafe (2002a)

De Grauwe and Schnabl (2004b) think that a nominal appreciation is the main option to achieve a smooth EMU membership. Given that systemic upward pressure on inflation, a number of candidates will have to follow a policy of fiscal consolidation but other do not need to do that but just to try to avoid a real appreciation of their currencies by allowing for their gradual nominal appreciation, as Ireland and Greece did shown when they joined. This latter strategy could be the blueprint to follow for the candidates during ERM II, given that the lower their achieved nominal appreciation, the harder their

fiscal restriction needed. Therefore, choosing an entry currency rate in ERM II above the central rate can help to reduce exchange rate fluctuations and volatility and achieve a safe EMU entry for the candidate country. The only exception to this rule would be those new candidate countries which have decided to adopt credible hard pegs to the Euro and have invested a great deal of effort in it.

### Inflation criterion

There are many reasons why inflation in the joining candidate country will take time to come down. First is the Balassa-Samuelson effect. As these new EU member countries are trying to catching up with the EU average, some of them coming from a distant level of GDP per capita, their level of prices is still very low compared to the EU average, so that when catching up, its price level, expressed in euros, tends to rise. This effect can be achieved through stable prices and a nominal exchange rate appreciation or through stable exchange rate and higher inflation (a real exchange rate appreciation) or a combination of both.

This effect is mainly produced by the faster increases in productivity in the tradable sector than in the non tradable sector of these catching up countries (due to facing greater competition, to receiving larger FDI inflows into technology and equipment and to achieving a faster absorption of technology). By contrast, productivity growth in the non tradable sector tends to be lower, among other reasons because it tends to be more labour intensive and have a lower level of competition than the tradable one.

As wage collective bargaining systems do not differentiate much between the two sectors of the economy (because in most countries are not agreed at company or sector level but at national levels), wages in the tradable sector tend to bid up wages in the non tradable sector, which end rising faster than productivity and thus producing a persistent higher inflation rate in this sector. Thus, the catching up country trying to join EMU tends to get a higher average inflation rate than the three best incumbent members that are the benchmark.

Furthermore, when the growth rate of productivity in the catching up countries is higher than in the three best performer incumbent EMU member countries, which it is now the case, since they start with a level of productivity much lower, the new candidates will tend to have a higher inflation rate than the incumbents. There other reasons for the catching up countries surpassing the inflation rate of the best performers. Purchasing power parities are not reached in the short run, since domestic and foreign goods are not perfect substitutes, non tradable sector do no face the same pressures than tradable sectors, wage contracts are often backward looking and the wage adjustment a takes longer time than other prices in the economy (Roubini, 1999).

Most empirical evidence, about the Balassa-Samuelson effect on the inflation rate differential of the new EU members with the EMU member states, finds out that it can be of 2 percentage points, instead of the 1.5 percentage points set up as a limit in the Maastricht criterion (Halpern and Wyplosz, 2001) (Rogers, 2001). Others, like Pelkmans, Gros and Nuñez Ferrer (2000) find that this differential can go up to 3.8 percentage points. Today if the same analyses were done, the Balassa-Samuelson effect might be lower, given that the rate of growth of productivity tends to decelerate as higher productivity levels are reached by the catching up EU member countries (Backé, Fidrmuc, Reiniger and Schardax (2002).

As a consequence, some economists have argued for the convenience to modify or reinterpreted the inflation criteria. For instance, following the pioneer work of McKinnon (1984), Buitier and Grafe (2002b) and Rebelo (1993) propose to apply the inflation criterion to traded goods only, to exclude the productivity driven CPI inflation from the convergence process. Szapáry (2002) suggests a waiver or derogation to the inflation criterion for countries with a strong Balassa-Samuelson effect. Coricelli and Jazbec (2001) propose other modifications as either using the three least developed EMU member countries as the inflation benchmark, instead of the three best performers, or allowing for higher percentage point inflation differential.

Eijffinger (2006) shows that the fear by incumbent countries to allow any change in the inflation criterion because new EMU members joining with higher inflation rates could increase the average Euro Area inflation rate is somehow exaggerated given that their impact will be very small, given their smaller relative size in terms of GDP. Egert (2002) finds that a 3 per cent differential in the inflation rate between the 1998 accession group and the rest of the Euro Area would only imply a 0,1 per cent in the total Euro Area GDP-weighted inflation.

### Exchange rate criterion

The same can be said about the exchange rate target. Buitier (2004) has warned that forcing the new EU member countries to enter the ERM II “waiting room” for the Euro is both pointless and dangerous, thus, a creative reinterpretation is essential to avoid unnecessary to their financial stability. According to him, no central bank should be asked to pursue more than one nominal target and in the Maastricht criteria there are three (inflation, exchange rate and long term interest rate) so the probabilities to get into a major financial crisis is enhanced. Therefore, he urges Euro membership for the new candidates as soon as possible, given that they are relative small and open economies (even Poland). If they are not changed, eventually the risks of one or more candidates not being able to join may result in harm to old and new EMU members.

A similar view was previously argued by De Grauwe (1994) who found, after studying the EMS crisis, that Maastricht criteria did not lead to EMU, first and foremost because almost fixed exchange rates could not be maintained for a sufficiently period of

time and expectations of a final realignment would inevitably lead to speculative attacks. Thus, their exchange rates should be allowed to fluctuate within larger bands for the transition period, as it was previously stressed by Fratiani et al. (1992). Nevertheless, De Grauwe recognizes that the present more flexible bands, introduced after August 1993, could make technically easier to move to EMU by the new candidates than before.

Most economists think that it is too dangerous to be more than two years in ERM II with free capital controls, given that these tend to be very volatile and put macroeconomic stability at risk, provoking sudden reversals, endangering ERM II exchange rate bands and postponing EMU membership. This is the reason why, on the one side, most candidates want to keep their time in ERM II as short as possible, while, on the other, the European Commission, by contrast, stresses the disciplinary function of ERM II as an “internship” for macroeconomic discipline (De Grauwe and Schnabl, 2004) (Begg et al. (2002) and (Corker et al. 2000).

### Fiscal criterion

Finally, as shown by Montanino (2004) the fiscal criterion is better theoretically founded for the following reasons:

First, a growing debt can undermine price stability. That is, fiscal policy can be “non Ricardian” in the sense that governments do not increase the present value of future primary surpluses to counterbalance increasing outstanding debt. If governments were increasing primary surpluses in the future to control their excessive current debt dynamic, then additional government debt would be perceived as wealth by agents and thus private savings do not adjust to anticipate future tax liabilities. This leads to increasing demand at current prices which have to adjust in order to restore equilibrium (Barro, 1974), (Woodford, 1996)

Second, a high debt level leads to budget inflexibility and in particular it reduces the room for devoting additional resources to growth enhancing public expenditures or to reduce employment or investment unfriendly taxes as well as reducing the room to manoeuvre for countercyclical fiscal policy (Chouraqui et al. 1986).

Third, high and increasing debt positions can lead to rising interest rates in order to allow governments to attract private savings, crowding out private investment (Tanzi, 2003) If the debt level is high, agents can perceive the need for future monetization of the debt and this will impact not only inflation expectations and conversely long term interest rates. In addition, in a context of easily accessible capital markets, after joining EMU, the cost of issuing new debt for the new members will be lower than in the past, thus this could lead to a higher stock of debt in the aggregate level and to higher interest rates if budgetary policies are not coordinated across countries (Beetsma, 2001).

Nevertheless, major critiques have been expressed by economists about the lack of flexibility of the Maastricht EU fiscal rules framework, mainly about the Stability Pact (SGP) which can be also applied to the Maastricht fiscal criterion:

On the one side, it has been argued that the current criterion reference fiscal values are arbitrary (Fitoussi and Saraceno, 2003) or to its weak institutional design (Tabellini, 2002), (Alesina and Perotti, 2004) That the present fiscal framework does not take into account differences among EU countries on reform need, initial conditions in economic development and in debt levels.

Most economists suggest that budgetary coordination should concentrate more on debt levels to differentiate across EU countries instead of budget deficits. In this sense, there are very strong arguments against mechanical rules which limit budget deficits. As Kotlikoff (1986) pointed out: the deficit is an inherently arbitrary accounting construct that provides no real guide for fiscal policy. Hence the need for a judgment passed by ECOFIN before a deficit is considered excessive. For instance, a country with a low debt level should be able to be allowed an excessive deficit when it needs it, while another with a high debt level should not. Debt levels are much more important than short or even medium term deficits (Calmfors and Corsetti, 2003), (Buiter, 2003), (Wyplosz, 2002a), (Buti and Giudice, 2002)

On the other side, many critiques have attacked the excessive focus of the fiscal rules on short term fiscal behaviour, without taking properly into account the debt sustainability and the impact of ageing populations on public finances (Couré and Pisani-Ferry, (2003), (Buiter and Grafe, 2002a) Others have stressed that the nominal criteria make it harder to meet the fiscal criterion and that price and output levels of convergence between the new candidates and the incumbents necessarily implies inflation and growth convergence for many years to come making it more difficult to restrain debt growth within the Euro (Hughes Hallet and Lewis, 2004).

Finally, other concerns focus on the very little emphasis devoted by EU fiscal rules to the composition of public finances and, in particular, on differences between current and capital expenditures, underlining that the latter should be treated differently in budgetary surveillance (Blanchard and Giavazzi, 2003) A major critique is based on the conflicts of interest in their surveillance, given that enforcement relies on a political decision to be taken by the same member countries that are under scrutiny (Eichengreen, 2003) (Strauch and Von Hagen, 2001).

### Long-term interest rate criterion

The long term interest rate is a market price that merely reflects the inflation and exchange rate expectations and the level of debt of the member country concerned. The interest rate criterion is a clear test of whether the country is in fact prepared to make a sacrifice of monetary sovereignty and economic independence that joining EMU

requires. Interest rate convergence comprises two distinct kinds of integration according to Frankel et al. (1993) First it implies the elimination of capital controls and other barriers to capital flows across national boundaries, that is, “financial integration” and second it implies the elimination of investors perception that the exchange rate is likely to change in the future, that is, “currency integration”.

They found that currency factors (the exchange risk premium and expected depreciation) were a more important component of interest rate differentials than are capital controls and other barriers. But, as shown by Dornbusch (1993b) experience with ERM I, show that, even if there was a certain but slow trend of long term interest rate differentials to converge, the differentials between the bid/ask rate spreads were very high, showing that investors were still expecting a realignment, as it finally happened in 1992.

In this sense the late Dornbusch (1993) made another of his polemic statements by pointing out when referring to the speculative attacks on ERM I that: “On this occasion the speculators, who finally made the ERM blow and forced interest rates down, were the best friends of the unemployed and... of many monetary authorities who made unsustainable promises”.

## References

Alesina, A. and Perotti, R. (2004) “The European Union: a politically incorrect view”, NBER Working Paper 10342

Backé, P. ; Fidrmuc, J.; Reininger, T. and Schardax, F. (2002) “ Price dynamics in Central and Eastern European EU Accession countries”, Oesterreichische National Bank Working paper 61

Barro, R. (1974) “Are government bonds net wealth?”, Journal of Political Economy, Vol. 86, Vol. 6

Bayoumi, T. and Eichengreen, B. (1993) “Shocking aspects of European monetary integration”, in Francisco Torres and Francesco Giavazzi eds. “Adjustment and growth in the European Monetary Union”, Cambridge, Cambridge University Press for CEPR

Beetsma, R., Debrun, X. and Klaassen (2001) “Is fiscal policy coordination in EMU desirable?”, CEPR Discussion Paper 3930

Begg, D.; Eichengreen, B.; Halpern, L; von Hagen, J. and Wyplosz, C. (2003) “Sustainable regimes of capital movements in accession countries“, CEPR Policy Paper No. 10

Begg, D. Halpern, L. and Wyplosz, C. (1999) “Monetary and exchange rate policies, EMU and Central and Eastern Europe”, Economic Policy Initiative, No. 5, CEPR

- Blanchard, O. and Giavazzi, F. (2003) "Improving the SGP through the correct accounting of public investment and enhanced transparency", Mimeo
- Buiter, W. (2003) "Ten commandments for a fiscal rule in E(M)U", Oxford Review of Economic Policy Vol. 19, No. 1
- Buiter, W. and Grafe, C. (2002a) "Patching up the Pact: some suggestions for enhancing fiscal sustainability and macroeconomic stability in the enlarged European Union", CEPR Discussion Paper 3496
- Buiter, W. and Grafe, C. (2002b) "Anchor, float or abandon ship: exchange rate regimes for accession countries", Banca Nazionale del Lavoro Quarterly Review, No. 221
- Buiter, W. (2004) "En attendant Godot? Financial instability risks for countries targeting Eurozone membership", Paper prepared for the 8th CEPR/ESI Annual Conference on EMU enlargement to the East and the West", Magyar Nemzeti Bank, Budapest September 24 and 25
- Buti, M. and Giudice, G. (2002) "Maastricht fiscal rules at ten: an assessment", Journal of Common Market Studies, Vol. 40, No. 5
- Calmfors, L. and Corsetti, G. (2003) "How to reform Europe's fiscal policy framework", World Economics, Vol. 4, No. 1
- Chouraqui, J. C.; Jones, B. and Mondador, R. B. (1986) "Public debt in a medium term context and its implications for fiscal policy", OECD Working Paper 30
- Colure, B. and Pisano-Ferry, J. (2003) "A sustainability pact for the Eurozone", Mimeo
- Corker, R.; Beaumont, R.; van Elkan, R. and Iakova, D. (2000) "Exchange rate regimes in selected advanced transition economies: coping with transition, capital inflows and EU accession", IMF Policy Discussion Paper 00/3
- Coricelli, F. and Jazbec, B. (2001) "Real exchange rate dynamics in transition economics", CEPR Discussion Paper 2869
- De Grauwe, P. (1993) "The political economy of monetary union in Europe", CEPR Discussion Paper 842
- De Grauwe, P. (2002) "The Euro at stake? The monetary union in an enlarged Europe", CES Ifo Forum Vol. 3, No. 2
- De Grauwe, P. and Schnabl, G. (2004a) "Exchange rate regime and macroeconomic stability in Central and Eastern Europe", CES Ifo Working Paper 1182
- De Grauwe P. and Schnabl, G. (2004b) "Nominal versus real convergence with respect to EMU accession: entry strategies for the new Member States", Tübinger Diskussionsbeitrag 287
- De la Dehesa, G. (1995) "EMU paradoxes", The Group of Thirty Occasional Paper 50

De la Dehesa, G. (1998) "El reto de la Union Económica y Monetaria", Instituto de Estudios Económicos Pedro Barrié de la Maza.

Dornbusch, R. (1993a) "European international economic policy issues", Mimeo

Dornbusch, R. (1993b) "Comments on Frankel, Phillips and Chinn", in F. Torres and F. Giavazzi eds. "Adjustment and growth in the European Monetary Union", Cambridge, Cambridge University Press for CEPR

Eichengreen, B. (2001) "The EMS crisis in retrospect", CEPR Discussion Paper 2704

Égert, B. (2002a) "Estimating the impact of Balassa-Samuelson effect on inflation and real exchange rate during the transition", Economic Systems, Vol. 26, No. 1

Égert, B. (2002b) "Investigating the Balassa-Samuelson hypothesis in the transition: Do we understand what we see? A panel study", Economics in Transition, Vol. 10, No. 2

Eijffinger, S.C.W. and De Haan, J. (2000) "European monetary and fiscal policy", Oxford, Oxford University Press

Eijffinger, S.C.W. (2006) "Possible entry into the Euro Zone of New member States in January 2007", Briefing Paper for Monetary Dialogue, February

European Central Bank (2004) "Monthly Bulletin" July

Fitoussi, J. P. and Saraceno, F. (2002) "A theory of social customs of which soft growth may be one consequence: Tales of the European Stability Pact", OECDE Working Paper No. 07

Frankel, J., Phillips, S. and Chinn, M. (1993) "Financial and currency integration in the EMS: the statistical record", in F. Torres and F. Giavazzi eds. "Adjustment and growth in the European Monetary Union", Cambridge, Cambridge University Press for CEPR

Fratiani, M.; von Hagen, J. and Waller, C. (1992) "The Maastricht way to EMU", Essays in International Finance No. 187

Hughes Hallet, A. and Lewis, J. (2004) "Hansa versus Habsburg: Debt, deficits and the entry accession countries into the Euro", CEPR Discussion Paper 4500

Kotlikoff, L. (1986) "Deficit delusion", Public Interest

Lane, P. (2006) "The real effects of EMU", CEPR Discussion Paper 5536

McKinnon, R. (1984) "An international standard for monetary stabilization", Washington DC, Institute of International Economics

Montanino, A. (2004) "More focus on long term: Is there a need to change the Maastricht criteria?" Paper prepared for the XVI International Economic Seminar, University of Rome "Tor Vergata", 22-24 June

Pelkmans, J.; Gros, D. and Nuñez Ferrer, J. (2000) "Long-run economic aspects of the European Union's eastern enlargement" WRR Working Document No. W109

Rogers, J. H. (2000) "Price level convergence, relative prices and inflation in Europe", Board of Governors, Federal Reserve System, International Finance Discussion Paper No. 699

Roubini, N. (1999) "The case against currency boards: debunking 10 myths about the benefits of currency boards", Mimeo, Stern School, New York University

Schadler, S.; Drummond, P.; Kijis, L; Murgasova, Z. and van Elkan, R. (2005) "Adopting the Euro in Central Europe: Challenges of the next step in European Integration", IMF Occasional Paper 234

Sinn, H-W. and Reutter, F. (2001) "The minimum inflation for Euroland" NBER Working Paper 8085

Strauch, R. and von Hagen, J. (2001) "Formal fiscal restraint and budget processes as solution to a deficit and spending bias in public finances", ZEI Working Paper No. 14

Szapari, G. (2000) "Maastricht and the choice of the exchange rate regime in transition countries during run-up to EMU", NBH Working Paper 2007/7

Tabellini, G. (2002) "Principles of policymaking in the European Union: an economic perspective", Munich Economic Summit, June 7-8

Tanzi, V. (2003) "On the Stability and Growth Pact", Mimeo

Von Hagen, J. and Zhou, J. (2001) "The choice of exchange rate regimes of transition economies", Mimeo, ZEI

Woodford, M. (1996) "Control of the public debt: a requirement for price stability", NBER Working Paper 5684

Wyplosz, C. (2002a) "Fiscal policy: Institutions versus rules" CEPR Discussion Paper 3238

Wyplosz, C. (2002b) "Enlargement: The suppressed exchange rate debate", Paper prepared for the Euro 50 Group meeting in Brussels July 9 and 10

Wyplosz, C. (2002c) "The dangers of inflexibility", Central Banking Journal, Vol. XIII, No.