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Marek Dabrowski

A Strategy for EMU Enlargement

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CASE - Center for Social and Economic Research
12 Sienkiewicza, 00-944 Warsaw, Poland
tel.: (48 22) 622 66 27, 828 61 33, fax: (48 22) 828 60 69
e-mail: case@case.com.pl
<http://www.case.com.pl/>

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Marek Dabrowski

Professor of Economics, Chairman of the Council of the CASE - Center for Social and Economic Research in Warsaw, Chairman of the Supervisory Board of the CASE-Ukraine in Kiev, Member of the Board of Trustees of the Institute for the Economy in Transition in Moscow, former First Deputy Minister of Finance (1989-1990), Member of Parliament (1991-1993) and Member of the Monetary Policy Council of the National Bank of Poland (1998-2004). In the last decade he has been involved in policy advising and policy research in Belarus, Bosnia and Herzegovina, Bulgaria, Georgia, Iraq, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Mongolia, Romania, Russia, Serbia, Turkmenistan, Ukraine and Uzbekistan and in a number of international research projects related to monetary and fiscal policies, currency crises, EU and EMU enlargement, and political economy of transition. Consultant of the World Bank and UNDP.

Abstract

This paper summarizes the results of CASE's research project on 'Strategies for Joining the EMU' and proposes policy recommendations both for new member states (on how to manage their accession to the Eurozone) and for the European Commission, ECB and old member states (on how to manage and absorb EMU enlargement in an optimal way).

Both the economic and the political economy arguments point to fast EMU accession of NMS. Looking at the 'classical' optimum currency area criteria, i.e. trade integration, co-movement of business cycles and actual factor mobility, NMS' record is not worse, on average, than that of the current Eurozone members, and should further improve before Eurozone entry, decreasing risk of their exposure to idiosyncratic shocks. After joining the EMU, the common currency should help NMS to develop additional intra-EMU trade links, further synchronize business cycle and increase factor mobility. Both theoretical arguments and empirical experience demonstrates that so-called real convergence accompanies nominal convergence, and that there is synergy rather than a trade-off between the two.

The credibility of the Euro and price stability in the Eurozone will not be threatened by fast EMU Enlargement. Neither can the accession of fast growing NMS create an additional 'recessionary' impact on slow growing incumbent members. The biggest challenge for the common currency in the medium to long run may come from widespread breaches of EU fiscal rules. So the incumbents should replace their 'don't rush' advice by active encouragement of NMS to proceed with fast nominal convergence in order to meet the Maastricht criteria and join the EMU as quickly as possible.

1. Introduction

May 1, 2004 brought the biggest enlargement in the history of the European Union. Ten countries, eight of them from the former Soviet block, were admitted as new member states (NMS) to the EU. However, despite its symbolic character, this date neither began nor ended the integration process. All the post-communist NMS have already gone through a series of deep, radical, and sometimes painful reforms for the last 15 years, which allowed them to build the foundations of democratic capitalism and prepare them for EU membership.

This process was accompanied and supported by the series of Trade and Association agreements signed between the EU and candidate countries and among some of the candidate countries themselves (the Central European Free Trade Agreement — CEFTA). Six years of accession negotiations brought further economic and institutional adjustment. As a result, NMS are at present much more closely integrated with the old member states (OMS) than was the case with Greece, Spain or Portugal when they entered the EU in the 1980s. The current level of trade integration of NMS does not differ from that of OMS, and in some cases is even greater.

However, the date of formal EU entry did not complete the accession process. One of the remaining tasks is joining the Economic and Monetary Union (EMU). Formally, NMS do not have an opt-out clause like the UK or Denmark, and as such they are expected to join the EMU soon. However, the Accession Treaty does not contain a timetable for entry, which will formally depend on states meeting the Maastricht criteria of nominal convergence. In practice, this leaves significant room for maneuver in setting the date for joining the Eurozone, as confirmed by the example of Sweden.

In both the NMS and the OMS, politicians, economists and public opinion are divided on the optimal timing of NMS joining the Eurozone. The advocates of fast EMU entry stress the high level of trade and business cycle integration of NMS with the Eurozone, and the potential benefits for NMS in terms of eliminating transaction costs and exchange rate risk. Opponents of fast Eurozone entry underline the costs of meeting the Maastricht criteria and giving up the supposed shock-absorbing role of the

exchange rate. In addition, in OMS there are some political and economic concerns. The former come down to retaining a carrot which can be granted or withheld from NMS depending on their good behavior, and some understandable concerns about how responsibly they are likely to behave after EU accession. Economic fears relate mainly to the controversial hypothesis that accession of fast growing countries will increase inflationary pressure and interest rates in the Eurozone, which will have an additional contractionary impact on the slower growing economies of some OMS.

Another controversy relates to the path leading to EMU accession and in particular to the Exchange Rate Mechanism (ERM-II), which needs to be adjusted to the new realities of international financial markets dominated by unrestricted capital movements.

This paper¹ tries to address these dilemmas, summarizing the results of CASE's research project on 'Strategies for Joining the EMU' carried out during 2002-2004, which was financed by Poland's Scientific Research Committee (grant No. H02C 029 23). The eighteen papers prepared under this project² cover two broad groups of problems. The first group addresses the theoretical and practical issues relating to the process of EMU accession itself, such as the implications of optimum currency area theory, the degree of trade and economic integration of NMS with the EU and Eurozone, the degree of progress in nominal and real convergence that has already been achieved by the NMS, the additional benefits from trade creation and investment in NMS expected from adopting the Euro, the nature of shocks experienced by the NMS, their labor market rigidities and fiscal challenges and, finally, the dilemmas associated with the ERM-II mechanism and with the choice of the final euro conversion rate. The second group of papers deals with the functioning of an enlarged Eurozone and discusses key questions such as the role of counter-cyclical fiscal policy, the future of the Stability and Growth Pact (SGP), the voting mechanism in the ECB Governing Council and an extent to which a single interest rate policy fits economic realities of countries with very different rates of productivity growth.

¹ I am very grateful to Jacek Rostowski and Wojciech Paczynski for their very useful comments and editorial support.

² See CASE Studies and Analyses nos. 253, 256-258, 260-262, 265-267, 269-270,

Based on the findings of the project, this paper proposes policy recommendations both for NMS (on how to manage their accession to the Eurozone) and for the European Commission, ECB and OMS (on how to manage and absorb EMU enlargement in an optimal way).

Section 2 starts with a review of arguments about EMU accession by NMS, based on optimum currency area (OCA) theory, both in its classical (static) and modified (dynamic) versions. Section 3 confronts the argument that rapid nominal convergence may be harmful for real convergence. Section 4 discusses the formal criteria and procedures of EMU membership and EMU accession as set by the Treaty, and assesses the room of maneuver available for various EMU accession strategies. Section 5 Analyses how the EMU will function after its enlargement. Finally, Section 6 contains conclusions and policy recommendations.

2. What can be learnt from OCA theory?

Discussions of the advantages and disadvantages of membership in monetary unions usually start from OCA theory and try to find empirical evidence verifying the arguments of the theory in relation to a particular country or group of countries³. However, before we resort to the results of empirical research, it is worth devoting attention to OCA theory itself and its evolution. In spite of its great intellectual appeal, the OCA theory, particularly in its original version, is not free of shortcomings.

2.1. Original OCA theory

The original OCA theory in the version proposed by Mundell (1961) and McKinnon (1963) concentrates on so-called asymmetric shocks, i.e. shocks affecting two territorial units (regions in Mundell's terminology) in a different way. In a world of sticky wages and prices there are basically three possibilities of addressing the negative social consequences of such shocks, i.e. (1) move production factors (labor, capital) between regions, (2) use fiscal transfers to help a disadvantaged region and (3) change the exchange rate between these regions. If we cannot count on (1) or (2) the exchange rate remains the only available adjustment tool. So a common currency for two territories makes sense only if the risk of asymmetric shocks is small, there is factor mobility or the possibility of fiscal redistribution between them. Because nobody can be sure *ex ante* about the risk of asymmetric shocks, factor mobility and/or the opportunity for fiscal redistribution are of crucial importance and both can be provided under a political union (inside one state). On the other hand, existing states in their current borders do not necessarily overlap with regions in the Mundell sense, i.e. they do not always have a full internal mobility and external immobility of production factors. Under such conditions, i.e. states and their currencies having borders different from the borders of Mundell's regions, floating exchange rates cannot provide full adjustment. On the other hand, multiplicity of currencies and floating exchange rates increase transaction costs and harm trade.

³ This is, for example, the case of Berg, Borensztein and Mauro (2002), who discuss monetary-regime options for Latin America.

Although Mundell (1961) was very careful in balancing potential advantages and disadvantages of exchange rate flexibility and did not formulate any strong and explicit policy recommendations, his paper could be interpreted as rather discouraging for the idea of introducing a common currency for territories not being part of a political union, because only the latter allowed for deeper fiscal redistribution and made factor mobility easier. Furthermore, exchange rate adjustment could be considered as a convenient and rather costless way of stabilizing output and employment in response to adverse shocks. This was slightly corrected by McKinnon (1963) who stressed that currency depreciation in a small open economy must inevitably lead to higher inflation⁴, which in turn would force the central bank to tighten monetary policy with inevitable output/ employment losses.

Generally speaking, the original OCA theory reflected the post-WWII economic landscape with its extensive trade, current account and capital account restrictions, its increasing microeconomic rigidities and an almost universally activist approach to monetary and exchange rate policies aimed at stabilizing output and employment rather than fighting inflation (see McKinnon, 2000).

2.2. Modified OCA theory

OCA theory evolved in the subsequent decades, partly as a result of serious changes in world economic and financial architecture. Most currencies became convertible and trade liberalization progressed. Global product and financial markets have become increasingly integrated: we live in a world of free capital and product mobility. Thus, international factor immobility, one of the key assumptions of Mundell's (1961) model⁵, has partly disappeared. Moreover, even if labor mobility is still seriously restricted (internationally but also internally), the associated problems can in principle be attenuated by far-reaching capital mobility.

⁴ To be fair, Mundell at the end of his (1961) paper also abandoned his initial assumption that inflation reflected only prices of a basket of domestically produced goods. Thus, multiplying the number of currencies (to fit optimum currency areas better) might lead, to an increase in the share of imports in the consumer baskets of each individual area, and thus greater inflationary pass-through of currency depreciation leading, for example, to higher wage demands by trade unions.

⁵ Following the Ricardian theory of international trade.

In his later papers Mundell (1973a; 1973b) became more active in demonstrating the advantages of a common currency, particularly in the case of European Economic Community (EEC), discussing the first blueprints for EMU. He raised three new arguments in favor of monetary unification — risk pooling, saving international reserves due to 'internalization' of the formerly foreign trade, and benefits of scale connected with lowering the costs of financial transactions (see Blaszkiewicz and Wozniak, 2003) — which significantly changed his original balance of costs and benefits.

2.3. Endogeneity of OCA criteria and political determinants of monetary union

Another weakness of the original version of OCA was due to its static character. Asymmetric shocks and limitations in factor mobility were viewed as exogenous. This may be true in the short to medium-term, but in the longer run they can become endogenous. Monetary unification will promote trade and capital flows within the common-currency area, and create pressures to synchronize fiscal policies. It may also encourage the further deregulation of labor, capital and product markets. All these factors will reduce the incidence of asymmetric shocks and increase factor mobility.

In fact, already Mundell (1961) noted this problem, quoting an earlier view of Scitovsky (1958) who believed that a common currency in Western Europe would induce a greater degree of capital mobility. However, it was Frankel and Rose (1998) and Rose (2000) who analyzed the question of the endogeneity of OCA criteria in depth and supported it by a large-scale cross-country analysis of the influence of a common currency on trade creation and synchronization of business cycles.

Looking historically, most national currency areas have had a political origin and design (formation of national states, colonial empires, political unions) and both trade flows and factor mobility have had to adjust (and did adjust in most cases) to politically determined borders. It would be hard to identify cases when static OCA criteria determined national borders and, therefore, formal territorial coverage of national currencies. They could and sometimes did, however, play a role in determining the

exchange rate regime in relation to other countries' currencies or the international role of individual currencies.

2.4. Costs and benefits of sovereign monetary policy

Finally, one may ask what the real benefits of exchange rate flexibility are, as a tool for the stabilization of output and employment in a world of free capital movement, particularly in the case of small economies which trade a great deal? Under a fully floating exchange rate regime nominal (and real) exchange rates may automatically adjust to changing terms of trade and changes in capital flows unless other factors push in the opposite direction. As regards discretionary policy moves, authorities can change nominal exchange rates but this does not mean that they are able to achieve any durable change in the real exchange rate. For example, a discretionary currency devaluation aimed in boosting external competitiveness will most likely end with higher inflation eating up the real effects of the nominal devaluation.

Flexible exchange rates also leave some room for discretionary monetary policies focused on achieving goals other than price stability. However, giving up monetary independence does not fully eliminate the counter-cyclical role of monetary policy. If the central bank of a common currency area does pursue such a policy⁶ and the business cycle conditions do not differ significantly between monetary union members, monetary conditions will help to close any output gap. The problem occurs when a country must deal with asymmetric shocks (i.e. shocks not affecting other members of a monetary union or affecting them differently), notwithstanding the influence of monetary unification in harmonizing business cycles and promoting trade inside a common currency area.

There is, however, another question: to what extent is the central bank in a small open economy able to 'lean against the wind' — particularly if

⁶ Strictly speaking, the case of a multilateral monetary union such as the EMU, in which representatives of all member countries have seats in the governing body, implies individual states retaining some influence on monetary policy decision. On the other hand, however, if the number of members is big and each individual member represents only a small portion of the union's overall economic potential (which will be the case of NMS as future members of the EMU) its influence on decision is quite limited (see Section 5.2).

we take into account the issue of credibility (see below) and political and technical constraints. Any monetary policy discretion needs to be backed by a strong conceptual and political anti-inflationary consensus, which is not always present in less developed economies, including NMS — this despite the formal independence of their central banks required by the *acquis communautaire*. Second, discretionary monetary policy (for example, the direct inflation targeting adopted in the Czech Republic and Poland) needs well-developed analytical and forecasting skills, both inside and outside the central bank, as well as high-quality monetary, fiscal, price, balance of payments and output statistics.

If a central bank wants to build its credibility in order to achieve rapid disinflation at relatively low output/ employment costs, it must stick quite resolutely to its low inflation target, without compromising it in favor of other goals. This means giving up most of the potential advantages that an independent monetary policy is supposed to have compared to a lack of monetary sovereignty—at least for the period of disinflation and subsequent consolidation of the low inflation environment (which may take a quite long time)⁷.

2.5. Criteria of empirical verification

Several empirical investigations, including those done under this project, have tried to answer to what extent NMS meet the OCA criteria required for them to become part of the Eurozone. The incumbent EMU members, or their less developed Mediterranean sub-group, usually serve as a benchmark for comparison. Such an approach implicitly assumes that the current Eurozone is an OCA which not necessarily the case⁸. The following indicators are most frequently used to assess how well prepared NMS are to become a part of the EMU:

1. trade links with the EU-15 or with the current Eurozone, including the role of intra-industry trade,
2. synchronization of business cycles,

⁷ For more detail discussion of pros and cons of retaining sovereign monetary policy by developing and transition economies - see Dabrowski (2004).

⁸ In fact, this assumption has been challenged by some well-respected economists like Feldstein (2000).

3. actual exchange rate variability (nominal and real),
4. actual factor mobility between the NMS concerned and OMS

The main rationale behind the first two indicators is the belief that the deeper trade integration and the closer co-movement of business cycles between countries, the smaller is the probability of idiosyncratic shocks affecting them. Furthermore, close trade links increase the benefits of a common currency in terms of lower transaction costs and stable prices⁹. The third measure is supposed to provide a historical picture of how frequently and how deeply exchange rates had to adjust, indicating the frequency of various shocks affecting the economy, or at least its balance of payments. However, one must remember that exchange rate variability may reflect incidence of both real and nominal shocks. The latter are very frequently caused by a national monetary policy. When a country gives up its monetary sovereignty and joins a stable currency area it will eliminate an important source of exchange rate fluctuation. Finally, the fourth type of empirical test should tell us to what extent international factor mobility can help in cushioning the consequences of asymmetric shocks.

2.6. Trade integration of NMS

Rostowski (2002) underlines the very high level of trade integration of then EU candidate countries (now NMS) with EMU countries. In 1999 all accession countries "...traded a higher share of their GDP with EMU countries than six of the current 12 EMU members (including the four largest Germany, France, Italy and Spain) in the year preceding the launching of the euro" [i.e. 1998]. In addition, all EU candidates "...traded a higher share of their total trade with EMU countries than two EMU members, and six of the CEECs traded a **higher** share of total trade with EMU than **all but two** current EMU members".

Very similar empirical conclusions have been reached by Blaszkejewicz and Wozniak (2003) on the basis of the more recent, 2002, trade data. The authors confirmed that candidate countries were already "...very open to trade with the EU, in many cases much more open than the members of the EU themselves. While the share of exports to EU15 in GDP for

⁹ The role of trade links in determining the choice of exchange rate regime was already analyzed in McKinnon's (1963) paper.

the Euro-zone amounts to 16%, the analogous indicators reach 15% for Poland, 28% for Slovenia, 36% for Estonia and Hungary and 38% for the Czech Republic."

Comparing the 2002 trade indicators for NMS with historical ones for Mediterranean countries in 1992 (assuming that the latter were then at the same stage of preparing themselves to EMU membership as NMS were in 2002), Blaszkiewicz and Wozniak (2003) found that the latter generally had a lower share of trade with the EU-15 in GDP (6.8% for Greece, 7.8% for Spain and 8.9% for Italy) than Poland, which was the accession country with the lowest value of the indicator (except Cyprus) in 2002. Only Portugal had EU-15 trade exposure in the range of 15-17% of its GDP during first half of the 1990s, very close to 2002 values of Latvia, Lithuania, Poland and Romania, but less than half the level of the Czech Republic, Slovakia, Hungary and Estonia.

Regarding NMS exports to the EU-15 as a share of their total exports, this generally amounted to 60-70% in 2002, compared to an intra-EU-15 average of 60%. Only two NMS represented lower shares: Lithuania (48%) and Cyprus (50%).

It is worth stressing that both Rostowski (2002) and Blaszkiewicz and Wozniak (2003) analyses of trade links between the individual NMS and the EMU-12 (Rostowski) or the EU-15 (Blaszkiewicz and Wozniak) do not take account of trade between NMS themselves. Assuming that all NMS will eventually enter the EMU, this means that their trade exposure to other members of the common currency area will be even higher¹⁰.

Following Fidrmuc and Schardax (2000), Rostowski (2002) claims that '*...a higher share of intra-industry (II) trade within a currency area will lead to more synchronous business cycles, because industry specific supply or demand shocks are then more likely to be symmetric across countries.*'¹¹ He also compared the 1997 share of NMS II trade with EMU-12 in their GDP with the same indicator for EMU members, and found that seven of

¹⁰ To make a cross-country analysis of trade links inside the enlarged EU-25 or EU-27 really comprehensive and comparable, one should also add OMS exports to NMS to the trade exposure of the former. However, because of the limited economic potential of NMS this will not substantially increase their intra-EU trade statistics.

¹¹ Rostowski (2002) also discusses the potential differences between 'horizontal II trade' and 'vertical II trade'. However, he concludes that the prevalence of the latter in NMS trade with the EMU-12 should not increase NMS exposure to asymmetric shocks.

the then EU candidates (Hungary, Slovenia, Czech Republic, Slovakia, Estonia, Bulgaria and Poland) had a higher value for this indicator than three EMU members (Italy, Finland and Greece). One may guess that the II trade share in NMS GDP and exports has expanded since that time.

2.7. Synchronization of business cycles

As regards the synchronization of business cycles, the results of empirical work, including those carried out under this project are somewhat contradictory. Boone and Maurel (1999), using de-trended unemployment, show that between 55% (Poland) and 86% (Hungary) of the cycles can be explained by German cycles, whereas this is the case for only 43% of Spanish and 18% of Italian cycles.

Other research results cited by Rostowski (2002), those obtained by Fidrmuc and Schardax (2000) show that '*...Poland's industrial production is as closely correlated with Germany's as is Austria's, and more so than those of Switzerland or Italy. Hungary and Slovenia's industrial outputs are more closely correlated with Germany's than is that of Italy, although those of the Czech Republic and Slovakia are far less correlated*'.

Rostowski (2002) also quotes Karhonen and Fidrmuc (2001), who analyze the correlation of supply and demand shocks in individual EMU members and NMS with those of the EMU as a whole in the 1990s. According to their results, Hungary, Estonia and Poland have a relatively good correlation in both kinds of shocks. The remaining NMS either have very low correlations in both kinds of shock, or reasonable ones on one kind of shock but negative ones of a similar size on the other kind. Finally, Lithuania recorded quite large negative correlations in both kinds of shock.

Blaszkiewicz and Wozniak (2003) quote Gros and Hobza (2003) who found that both trade structure and intra-industry trade in most NMS approach the levels typical for current EMU members and that the share of EU-oriented exports might even be higher than the shares of current EMU members. However, the three indicators of business cycle co-movement (GDP, industrial output and employment) provide mixed results, with countries like Hungary and Slovenia exhibiting high real GDP and industrial output correlation, while the rest remaining far from close

co-movement and often exhibit negative correlations. Unemployment rate changes were found negatively correlated in the case of most countries.

Finally, Blaszkiewicz and Wozniak (2003) develop their own empirical Analyses of business cycle correlation. They examine correlations between real GDP growth rates of the Eurozone and individual countries (both Eurozone members and NMS) for 1994-2002, including separate analyses for shorter sub-periods. While for EU members (except for Greece) the correlation coefficients stay well above 0.5, for NMS they are extremely dispersed and often take negative values. Real growth rates in the Czech Republic, Slovakia, Latvia and Lithuania have exhibited negative correlation with that of the Eurozone, while that for Estonia has been close to zero. Only in Poland, Hungary, Slovenia, Malta and Cyprus have correlations been positive and increasing over time. A comparison with the very high correlation coefficients of Mediterranean countries during 1991-1995 might suggest that NMS are less suited to become part of the Eurozone than the former were at a similar stage of their path towards EMU accession.

Correlation coefficients of the annual change in unemployment rates have also been relatively high for OMS (with the exception of Greece and Denmark) and very dispersed for NMS: relatively high with positive sign for Hungary, Slovenia and Latvia while for the remaining countries often negative and close to -1 (Lithuania, Estonia and Poland). Again, this contrasts with the correlations for Club Med countries in 1989-1994, all of which were positive and very high.

Similar tests based on quarterly data conducted by Blaszkiewicz and Wozniak (2003) gave a similarly mixed picture for NMS. Hungary and Slovenia recorded very high correlations, both annual and quarterly. Poland and Slovakia exhibited high correlation for industrial production but rather chaotic and negative correlation in the case of GDP. Coefficients for Latvia and Lithuania were very unstable and often negative. Czech quarterly correlations have been positive and high, in contrast to annual ones. In the case of unemployment changes, Latvia, Hungary and Slovenia exhibited high correlation, but for the remaining countries correlations were unstable and mostly negative. On the other hand, all the Eurozone countries but Greece (GDP) and Italy and France (unemployment rate) recorded high and positive correlations. Also a correlation of real-economy indicators between Club Med countries and Germany in

early 1990s was much stronger than that for NMS in the period examined.

Summing up, unlike in the case of exports to EU/ EMU, the picture obtained in the area of business cycle correlations seems to be less optimistic for the perspective of NMS membership in the Eurozone. With the exception of Hungary and Slovenia, other NMS record weak or even negative correlations of their business activity parameters with those of the Euro-zone. According to Blaszkiewicz and Wozniak (2003), '*...the situation is particularly problematic in the case of the unemployment rate which for most countries exhibits negative correlation with Euro-zone unemployment changes*'. So, NMS might be, on average, more exposed to a danger of idiosyncratic shocks than the current EMU members.

There are three caveats, however. First, from purely statistical point of view correlation coefficients for Eurozone members include a certain component of autocorrelation, particularly strong for the biggest countries (because the growth and unemployment dynamics for the Eurozone have been calculated as a weighted average of its members). Second, NMS went through a deep restructuring in the 1990s and at the beginning of the 2000s, as part of their post-communist transition and the structural/ institutional harmonization of their economies with those of EU members. This process was very painful in terms of GDP and employment losses (particularly at the beginning of 1990s but in some countries also later) and was followed by a post-adaptation recovery and catching-up (see Dabrowski, Rohozynsky and Sinitcina, 2004). Neither the transition-induced output decline nor the ensuing recovery have followed business cycle patterns in the EU economies. In addition, changes in employment did not fully follow changes in output dynamics because, again, of deep restructuring and, to some extent, because of labor market rigidities (see Radziwill and Walewski, 2003). Furthermore, it is very difficult to find evidence of any business cycle (in its classical meaning) in most of transition economies, at least until the end of 1990s.

Finally, the endogeneity hypothesis should be also taken into consideration, at least partly. Some of the current EMU members fixed the exchange rates of their currencies to the German Mark well before they formally joined the ERM-I and EMU. This relates, above all to Austria and the Benelux countries, which have effectively belonged to a D-Mark zone at least from the beginning of 1980s. On the other hand, weak or negative correlation coefficients of Lithuania and Latvia are hardly surprising as the

former had a dollar-denominated currency board between 1994 and 2001 (and USD recorded substantial fluctuations vis a vis DEM and EUR during this period) and the latter pegged its currency to SDR. All three arguments call for care in gauging the future appropriateness of individual countries becoming members of EMU based on their historical record, and reflect the logic of the Lucas critique.

2.8. EMU and trade and investment creation

Exploring further the question of endogeneity, Maliszewska (2004a) assess the potential for additional trade expansion after the NMS will join the EMU. In her simulation, based on a gravity model, she follows the approach proposed in a series of papers by Andrew K. Rose (see Rose, 2000; Rose and van Wincoop, 2001; Glick and Rose, 2001), using also the evidence already available on trade creation in the Eurozone. According to empirical studies quoted by Maliszewska (2004a)¹² '*the early estimates for the EMU indicate that its members trade on average between 6% and 26% more than otherwise identical countries*'.

As regards NMS, Maliszewska's (2004a) simulations show that their trade with Eurozone countries (and among themselves, assuming that all they will join the EMU at approximately the same time) should expand beyond what can be expected as result of their accession to the EU (see Maliszewska, 2004b).

According to Maliszewska (2004b) the biggest potential gains should be enjoyed by those NMS (Latvia, Lithuania and Poland), which have not yet reached the level of trade integration typical for members of the EU. For these three countries, the potential trade flows exceed their 2002 actual trade levels by 50-70%. On the other hand, four countries (Estonia, Hungary, the Czech Republic and Slovakia) have already reached the level of integration that would have been enjoyed by EU-15 members if they had similar income levels and other economic characteristics to the NMS. In addition three of them (except Estonia) record levels of trade typical for EMU members with similar characteristics, so their additional trade gains coming from joining the Eurozone will be smaller but still substantial.

¹² See e.g., Barr, Breedon and Miles, 2003; Bun and Klaassen, 2002; Micco, Stein and Ordonez, 2003.

Trade expansion between NMS following euro adoption should be even higher, particularly for Slovenia and Poland. The smallest gains may be recorded by the Czech Republic and Slovakia because of their high level of bilateral trade, reflecting the legacy of the Czechoslovak federation.

The results of another empirical study by CASE (Brzozowski, 2003) point to the possibility of bigger FDI inflow to NMS after their EMU accession. Both increased intra-EMU trade and FDI flows should lead to a closer correlation of business cycles between NMS and the EMU, decreasing the probability of asymmetric shocks.

These potential gains from joining the common currency can be enjoyed not only by the NMS, but also by such high-income countries as the UK (see Begg et al., 2003).

2.9. Exchange rate variability

The examination of exchange rate variability carried out by Blaszkiewicz and Wozniak (2003) follows the approach adopted by Vaubel (1976, 1978), von Hagen and Neumann (1994) and Gros and Hobza (2003). Authors show that according to this criterion NMS in the early 2000s have been, on average, similar to the Mediterranean countries in the early, rather than mid 1990s. Two countries — Estonia and Slovenia — have exhibited fluctuations of real exchange rates similar to or lower than the Club Med countries (both for a more turbulent period — 1993-1995 — and a less turbulent one — 1996-1998). The real exchange rate variability of Bulgaria, the Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia has exceeded that of Mediterranean countries.

Two important comments must be made at this point. First, even countries, which do not record nominal exchange rate fluctuations (because of their currency boards or ERM-I membership) are subject of real exchange rate changes, which means that there are other ways of accommodating shocks like inflation differentials or differences in productivity gains.

Second, we should raise again questions of endogeneity and causality. As we mentioned before, apart from real shocks such as, for example, a dramatic change in oil prices, national economies are exposed to nom-

inal shocks caused by domestic macroeconomic policies, including monetary and exchange rate shocks. Thus, it should not be surprising that in Blaszkiewicz and Wozniak (2003) study, Estonia and Slovenia recorded the lowest real exchange rate variability. Estonia gave up any sovereign monetary policy in 1992, introducing a currency board and pegging its currency (the Kroon) to the German Mark and then the Euro. Slovenia followed an informal crawling peg to the D-Mark and then the Euro from 1991, which also seriously limited the room for a discretionary monetary policy. When Mediterranean countries finally locked the exchange rates of their currencies in the ERM-I system in the second half of 1990s, variability of their real exchange rates also went down.

Maliszewska and Maliszewski (2004) investigate a much bigger sample of 144 countries for a period of more than 60 years (1940-2001) and find that (i) hard pegs help to improve inflation performance; (ii) de facto pegged regimes as defined according to the 'natural' classification (see Reinhard and Rogoff, 2002) are associated with lower output volatility. Similar conclusions can be drawn from Kowalski's (2003) empirical research covering seven countries of Central and Eastern Europe. Fixed exchange rates helped these countries in achieving both better inflation performance and higher growth rates.

Interpretation of these findings can go in one of two directions:

- Floating exchange rates do not necessarily help to cushion shocks. On the contrary, they can cause greater volatility and instability of both nominal and real variables. Thus, they often play the role of shock generator instead of shock absorber¹³.
- In the medium to long run, the benefits of exchange rate stability and low inflation can outweigh risks connected with giving up national monetary policy. We will come back to this issue in the next section.

¹³ A similar conclusion has been reached by Radziwill and Walewski (2003). While inflationary surprises help real wages to adjust after adverse shocks, *discretionary monetary policy was more often a shock generator than a shock absorber.*'

2.10. Factor mobility

Regarding factor mobility, one should note that NMS have completely opened their economies to free capital movement¹⁴. The Single European Market involves free movement of labor between member states (MS),¹⁵ although the actual cross-country labor mobility is far from being perfect. However, internal labor mobility (particularly geographical) within most EU countries is also highly imperfect due to numerous labor market rigidities (see Radziwill and Walewski, 2003). So the actual EU picture (including NMS) is far from that originally assumed by Mundell (1961), i.e. full domestic mobility and full external immobility of production factors.

Radziwill and Walewski's (2003) empirical research shows that, generally, nominal wages in NMS are not downwardly flexible, although the degree of rigidity differs between countries. Lithuania is the only exception, demonstrating some nominal flexibility in its wage setting. As this country has run a currency board from 1994, this may point again to the endogeneity of OCA criteria.

Fast productivity growth in NMS is another mechanism, which allows for adjustment even when nominal wages cannot be easily cut (see Radziwill and Walewski, 2003). Whether introducing the Euro and ultimate giving up the possibility of competitive devaluation will further boost productivity growth remains an open question.

2.11. Summary

Summing up this part of our analysis, NMS seem to be relatively well prepared for EMU membership. Taking into consideration the 'classical' OCA criteria, i.e. trade integration, co-movement of the business cycles and actual factor mobility with the rest of the currency area their record is not worse, on average, than that of current Eurozone members at a similar stage of their EMU accession process. Assuming a continuation of

¹⁴ Some transitory restrictions relating to purchase of agricultural land by foreigners remain in force in selected NMS (particularly in Poland), which may limit capital inflow to the agriculture sector.

¹⁵ Twelve OMS have introduced temporary (2 to 7 year) restrictions on labor movement from NMS.

rapid integration with OMS and among themselves, NMS can further decrease their exposure to idiosyncratic shocks before entering the Eurozone. After joining the EMU, monetary unification should help them to develop additional intra-EMU trade links, further synchronize business cycles and increase factor mobility with the rest of the MU (endogeneity hypothesis).

3. Is there a trade-off between nominal and real convergence?

Both Western and Eastern skeptics regarding fast EMU enlargement argue that while NMS joining the Eurozone can speed up their nominal convergence with the rest of the EU, it will not necessarily help them with real convergence. It is claimed, therefore, that they should make progress in real convergence first and only then think about EMU membership, which requires nominal convergence and tough macroeconomic policy to meet the Maastricht criteria. As with the debate discussed in the previous section, the key question relates to the role of discretionary monetary and fiscal policies: are they helpful tools in speeding up the long term rate of economic growth? Or, putting it in another way, can the macroeconomic discipline, required by the Treaty on European Union and the SGP, be harmful for economic growth?

3.1. Definitional problems

While the debate on OCA criteria is well anchored in the economic theory this is not the case with the controversy on nominal vs. real convergence. The difficulties start already with understanding what the two types of convergence precisely mean. There are fewer problems with defining nominal convergence. It is broadly understood as '*...convergence of certain macroeconomic indicators to levels ensuring macroeconomic stability in an economically integrated area*' (Kowalski, 2003). Or more concretely, EMU candidates approaching the numerical values of inflation and long-term interest rates prevailing in the Eurozone, stabilizing their exchange rates vis a vis the Euro during the two years of ERM2 membership, and respecting fiscal discipline as defined by the Treaty (see Section 4.2).

The meaning of a real convergence is not so clear. One may find at least two interpretations of what 'real convergence' means. The first, which dominates in the economic literature on growth and 'catch-up', refers to diminishing the welfare (income, living standard, productivity, etc.) gap between poor and rich countries (regions) as result of faster growth of the former. This meaning of real convergence is very close to

the term 'cohesion' used frequently in the official EU jargon. Economic cohesion involves a set of policies at the EU level aiming at a reduction of income disparities between regions and MS (Ardy et al., 2002)¹⁶.

A second interpretation of 'real convergence' can be indirectly found in the European Commission convergence reports (see CR, 2004a; 2004b). These documents speak generally about 'convergence' and do not distinguish between the 'real' and 'nominal'. However, the content of CR allows one to conclude, that apart from nominal criteria the Commission also Analyses a set of criteria related to the real economy, like financial and product market integration, development of the balance of payments, FDI and trade flows, unit labor costs and other price indices. According to CR (2004b, p. 6), they are '*...relevant to economic integration and convergence*'¹⁷. CR (2004b, p. 1) also argues that '*...when the economic and monetary union is hit by a shock, a high degree of convergence limits the emergence of asymmetric economic developments at the country level, to which not any longer can be responded by using the exchange rate*'. So from the overall context of the Convergence Report one can conclude that real convergence is understood as integration of national product and financial markets¹⁸ of EMU candidates with those of the remaining EU/EMU members rather than accomplishing any numerical targets of income catching up.

In fact this kind of understanding of real convergence corresponds quite closely to the OCA theory discussed in Section 2. And if one believes that progress in real convergence is to determine country eligibility for joining a monetary union only the second kind of interpretation makes sense. There is no theoretical foundation to claim that countries or territories with substantial differences in level of economic development cannot share a common currency. Neither is there any empirical evidence (within nation states or the EMU-12 which in both cases represent huge regional income disparities) that confirms such a hypothesis. As one of the arguments behind the EMU project was exactly a belief that it would

¹⁶ In EU terminology 'cohesion' has a wider meaning and includes also 'social cohesion', which relates to such issues as unemployment, poverty, environmental quality and social exclusion (see Ardy et al., pp. iv & 1).

¹⁷ However, from a legal point of view, these are not binding criteria for euro adoption.

¹⁸ Surprisingly, labor market integration is not discussed in the Convergence Report.

speed up economic growth and reducing the income disparities of its members (see 'Delors Report', 1989; Emerson et al., 1992; Jarocinski, 2003) it would be strange to reverse this causality in relation to the current EMU candidates, and expect that they will first catch up and only then become eligible to join the Eurozone. In practical terms, as differences in development level between most of NMS and OMS are quite substantial now and closing this gap will require a lot of time (see e.g. Fischer, Sahay and Vegh, 1998), this approach would delay the perspective of EMU enlargement for many years if not decades (see Rostowski, 2002).

Still, questions remain: first, to what extent will EMU membership help in achieving nominal and real convergence (the later understood as diminishing the development gap); and second, will fast nominal convergence be supportive of real convergence? We examine each of these questions, both from a theoretical and an empirical perspective.

3.2. Monetary union and nominal convergence

Numerous empirical observations demonstrate that a credible exchange rate anchor (in the form of currency board) or giving up the national currency in favor of dollar or euro may be very helpful in achieving sustainable disinflation, price stability and either elimination or substantial reduction of interest rate spreads vis a vis an anchor currency (due to elimination of exchange rate risk). Such positive effects are especially evident in less developed and transition countries, which face huge problems in building a wide political consensus around the goal of price stability, lack a credible track record for their central banks¹⁹, which may be technically incapable of running a really independent and price-stability-oriented monetary policy (see Section 2.4). Even if sovereign monetary policy manages to achieve price stability in such circumstances it usually comes at substantial cost in terms of high interest rates and nominal appreciation of the exchange rate and strong exchange rate fluctuations (see Rostowski, 2002; Dabrowski, 2004).

¹⁹ Jarocinski (2004) compares price responses to monetary shocks in selected EMU members (for the pre-EMU period) and in NMS. One possible interpretation of the deeper and more lagged price responses he finds in NMS is a credibility shortage of central banks there.

Looking at the five so-called Maastricht criteria of nominal convergence, credible exchange rate stability has primary importance being, in fact, exogenous in relation to both the inflation and (particularly) the interest rate criterion. In other words, a country that decides to credibly peg its currency to the Euro forever enjoys a rapid convergence of interest rates and — if its inflation level significantly exceeds that of Eurozone — also convergence of the inflation level. Evidence of how a fixed exchange rate can effectively influence the disinflation process and interest rate convergence can be found in numerous empirical studies, including those discussed in Section 2.9²⁰. In his comparative study analyzing the EMU accession experiences of Greece, Portugal and Spain, Jarocinski (2003) demonstrates that entering the ERM and the serious fiscal tightening required by the Maastricht criteria led to rapid disinflation and interest convergence in these countries.

However, after the launch of EMU in 1999, some of its members (Ireland in the first instance but also Spain, Greece, Portugal, the Netherlands, Italy) started to experience significantly higher inflation than the average of the Eurozone (see Jarocinski, 2003). This could be explained by several factors, such as higher rate of productivity growth and its consequences for price structure (the so-called Harrod — Balassa — Samuelson [HBS] effect), rapid depreciation of EUR in relation to USD and GBP, which increased inflationary pressure in countries dependent on trade denominated in these currencies (e.g. Ireland — see Honohan and Lane, 2004), original price level disparities, particularly observed in lower income EMU members, and fiscal expansion. Some of these factors have a probably temporary character (e.g. purchasing power parity disparities) and will disappear at some point, while others may last much longer or need to be avoided by better policies (fiscal tightening).

The causal link between entering a monetary union and the strengthening of fiscal discipline is not as obvious as in the case of inflation and

²⁰ See Maliszewska and Maliszewski (2004) for a sample of 144 countries over more than 60 years, Kowalski (2003) for seven EU candidate countries in the 1990s and early 2000s. Similar conclusions (i.e. that currency board arrangements provide for the fastest nominal convergence) are offered by Szczurek (2003), who analyzed the macroeconomic performance of ten EU candidates (including Bulgaria and Romania). Among earlier research related to transition economies one can mention Fischer, Sahay and Végh (1996); Ganev et al. (2001); Dabrowski et al. (2002).

interest rate convergence. On the one hand, giving up monetary sovereignty and with it the possibility of corrective devaluation, ties policymakers' hands and forces them into fiscal prudence. Furthermore, interest rate convergence can bring huge fiscal gains, making fiscal adjustment much easier. Such benefits could be observed in particular in the process of EMU accession by highly indebted countries suffering credibility problems (Italy and Greece). The same may happen in the case of relatively highly indebted and high-interest-rate NMS like Hungary or Poland (see Gorzelak, 2004).

On the other hand, a rapid decrease of interest payments creates a temptation to substitute them with other spending programs, instead of using this opportunity for improving the fiscal balance. Worse, there is a risk of free riding behavior when government, exploiting the credibility of a monetary union, can raise debt at relatively low cost and without the danger of being quickly punished by financial markets (Rostowski, 2004a). This is the main rationale behind the two fiscal criteria in the Maastricht Treaty and the additional fiscal discipline rules of the SGP (see Section 4.2).

3.3. Nominal convergence and growth prospects

Let us turn to the issue of how nominal convergence (speeded up by joining the EMU) can influence the growth prospects of NMS. The potential costs and benefits of giving up monetary sovereignty and flexible exchange rate have been already discussed in Section 2. A positive impact of lower real and nominal interest rates seems to be also beyond controversy (see Rostowski, 2002) and does not require further elaboration. The remaining question is whether lower and more stable inflation and bigger fiscal discipline can be helpful or harmful for economic growth, particularly in middle-income transition countries?

There is a vast economic literature giving a positive answer to both parts of this question. Low inflation is positively correlated with economic growth in the medium to long run²¹ and the same is true for fiscal prudence. The main benefits coming from stable prices and balanced budg-

²¹ See Sarel (1996) and Gosh and Phillips (1998) for empirical evidence based on a large sample of countries.

ets are of two kinds. First, the rate of private savings should be higher, other things being equal, and smaller portion of savings would be eaten up by the public sector borrowing requirements (the crowding out effect). Second, in a zero or very low inflation environment market forces should work better and both prices and wages should be more flexible (one should remember that sticky prices and wages are the main argument in favor of exchange rate flexibility).

Nevertheless, in the short run both disinflation and fiscal adjustment may involve output and employment losses. While this argument cannot play any substantial role in a discussion of real convergence (where only the long-term perspective really matters) it is a real dilemma, which worries many politicians and policymakers whose behavior is determined mostly by the political cycle, for example, election schedule (see Alesina and Perotti, 1994).

There are three additional circumstances, however, which make the short-term policy trade off less dramatic, at least for NMS. First, there is an increasing number of empirical cases in which discretionary fiscal policy brings effects quite opposite to those expected by advocates of fiscal activism, i.e. higher growth results from fiscal tightening and lower growth is a consequence of fiscal expansion (see Siwinska-Gorzelak and Bujak, 2003 for broad empirical evidence). Such 'non-Keynesian' effects of fiscal policy seem to be determined by the expectations of economic agents and their saving behavior. If government is already close to its borrowing limit (determined by financial markets' judgment on the actual and expected size of deficits and debt or formal fiscal rules like those existing in the EU) they know that fiscal adjustment (in the form of higher taxes or lower expenditures) will come soon and they therefore increase precautionary savings, decreasing current demand. The opposite will then be true in the case of fiscal consolidation (see Bertola and Drazen, 1993; Sutherland, 1997; Siwinska-Gorzelak and Bujak, 2003).

Second, all member states of the EU are obliged to respect the fiscal rules in the Treaty and the SGP, irrespective of their participation in the EMU²². Thus, those NMS, which postpone their EMU accession, will have

²² There are, however, some differences between the two groups as regards the 'excessive deficit' procedure in the SGP. For example, only EMU members can be subject of financial fines. However, NMS may be punished in other ways, e.g. by freezing disbursement of structural and cohesion funds.

to follow fiscal discipline rules anyway and bear all the associated costs of fiscal consolidation, without enjoying benefits of joining a common currency.

Finally, as regards inflation, most of NMS have already brought inflation down and paid the costs of this process, and the question now is how to stabilize low inflation in a credible way. Here joining the Eurozone offers a much better perspective than any national monetary fine-tuning.

Regarding empirical evidence on the positive correlation between nominal and real convergence, this has been provided, among others, by the papers of Maliszewska and Maliszewski (2004), Kowalski (2003) and Jarocinski (2003) cited above.

Summing up, it is hard to find any logical argument or empirical evidence that entering the EMU and the nominal convergence associated with it can hurt the economic growth of NMS. On the contrary, EMU entry will likely accelerate catch-up in the long run, helping real convergence or economic cohesion²³.

²³ A similar conclusion has been drawn by Ardy et al. (2002).

4. The rocky road to EMU

The NMS appear to be relatively well prepared to join the Eurozone (according to the OCA criteria) and it should help them both in nominal and real convergence — these are the main conclusions from the two previous sections. So what should be done in order to achieve this policy goal?

4.1. Member States 'with derogation'

According to Article 4 of the Treaty of Accession (signed in April 2003 in Athens) NMS obtained the status of 'Member States with derogation' regarding the EMU membership (CR, 2004b, p. 2). Although they do not have formally an opt-out option like Denmark and UK, a concrete date for their accession depends on their meeting the nominal convergence and legal criteria of the Treaty. This provision gives the NMS great room for maneuver as to when they will adopt the common currency. The example of Sweden is very telling. While formally this country has not been granted the opt-out option and is expected to eventually join the EMU its status in practice does not differ from that of Denmark and UK, because Sweden does not meet the criterion of exchange rate stability under the ERM-II regime (entirely as a result of Sweden's own decision) and because it has failed to implement legal harmonization of its central bank law. But the real reason for these delays is to be found in domestic politics, reflecting the negative result of the 2003 referendum on Euro adoption.

On the other hand, it is also hypothetically possible to postpone the EMU accession of NMS by such an interpretation of entry criteria by the EMU side (eurogroup Member States and the European Commission) that they become difficult to fulfill (see below) or just through a failure by the European Council to decide to admit the new EMU member(s)²⁴.

²⁴ The new Treaty establishing a Constitution for Europe signed in Rome on October 29, 2004 and not ratified yet requires, in addition, approval of the new entrant by incumbent EMU members taken by QMV (Article III-198, paragraph 2).

4.2. Nominal and legal criteria and their traps

The four nominal convergence criteria as defined by the Treaty are as follows:

- average inflation rate over a period of one year before the examination, that does not exceed by more than 1.5 percentage points that of, at most, the three best-performing MS in terms of price stability (Article 121(1) of the Treaty and Article 1 of the protocol on the convergence criteria);
- exchange rate stability within the fluctuation margin of the exchange rate mechanism (ERM II) for at least two years without severe tensions (Article 121(1) of the Treaty and Article 3 of the protocol);
- average long-term nominal interest rate over a period of one year before the examination, that does not exceed by more than 2 percentage points that of, at most, the three best-performing MS in terms of price stability (Article 121(1) of the Treaty and Article 4 of the protocol).
- general government deficits below 3% of GDP (Article 121(1) in accordance with Articles 104(2) and 104 (6) of the Treaty) and general government debt level remaining below 60% of GDP or diminishing at a satisfactory pace towards the reference value (as above).

In addition, EMU candidates must demonstrate compatibility of their national legislation, including the statutes of their national central banks, with Articles 108 and 109 of the Treaty and the Statute of the ESCB/ECB (see CR, 2004a; 2004b).

Let us start with the legal criteria, keeping in mind that their detail analysis is goes beyond the agenda of this paper. The 'Member States with derogation' are expected to already have their legislation fully compatible with that of EMU members. Yet, surprisingly, none of the countries covered by the Convergence Report was assessed as meeting this requirement.

There are two broad groups of legal imperfections, which have been raised in CR (2004b). The first concerns insufficient central bank inde-

pendence in NMS and is important since most of them continue their sovereign monetary policies²⁵. In fact, this legislation was subject to Commission scrutiny already at the stage of EU accession negotiations, and had to be adjusted then. When NMS give up their monetary sovereignty and adopt the Euro its practical importance will mostly disappear.

The second group of required provisions is a call to give up NMS monetary sovereignty and national currencies in favor of ECB and Euro, and transfer part of prerogatives of national central banks to ECB. They will be important for eventual adopting the Euro and joining the EMU but they cannot be implemented now when NMS still run their own monetary policies. It is hard to predict now how the legal requirements will be executed in practice in relation to the EMU candidates but a quite formal and orthodox interpretation of them in the last CR may signal Commission's intention to use them as an instrument to delay the EMU enlargement.

The four criteria of nominal convergence were formulated in the beginning of 1990s. Their purpose was to create a monetary union and new currency and not merely to enlarge its territory and number of members. As Wyplosz (2004) correctly notices 'the design of the Maastricht convergence criteria reflected the fact that most European Union countries had achieved a high degree of real convergence, but exhibited, for a sustained period, serious nominal divergence'. Besides, the global macroeconomic and financial environment was quite different fifteen years ago when the foundations of the EMU were designed. Some of EU-12 members still had capital controls and global financial markets were less developed and sophisticated. Now all EU-25 members have fully open capital accounts and actual capital mobility is much higher. All these circumstances have consequences for the relevance of Maastricht criteria to forthcoming EMU enlargement and their mutual consistency.

It is fair to say that from the very beginning mutual consistency of these criteria raised some doubts and in fact was possible only under some additional assumptions. The two requirements of the fiscal criterion represent the best example here (see Gros et al., 2004, Rostowski, 2004a). The upper deficit ceiling of 3% of GDP is consistent with the upper debt ceiling of 60% of GDP only under the assumption of a 5% growth rate of

²⁵ Apart from Estonia and Lithuania, which run currency boards, so that the formal status of their central banks is less important.

nominal GDP. With a deficit of 3% of GDP and 2% annual inflation, real GDP must grow at least at 3% annually to avoid breaching the debt criterion in the longer. If average real growth is lower (which has been the case of the EU as a whole and of most of its members for a number of years) the deficit must be respectively lower. Countries growing faster than 3% per year or having slightly higher inflation (both cases can relate to NMS) could be allowed to run higher fiscal deficits without breaching the debt provision. Nevertheless, we do not recommend such a waiver because of: (i) the serious long-term fiscal risks facing most of EU members such as the negative consequences of population aging (Gros, 2004), already accumulated huge implicit public debt (Gomulka, 2001), numerous contingent fiscal liabilities (Polackova-Brixi, 2004) and others; (ii) uncertainty about future growth rates; (iii) general skepticism relating to the benefits that can be expected from higher deficits (see Section 3.3).

A similar inconsistency affects the exchange rate stability and inflation criteria (see Dabrowski, Rostowski et al., 2001, chapters 1 & 2). Fixing the exchange rate makes the inflation rate mostly exogenous for the monetary authorities, particularly in a world of free capital movement. And inflation differences exceeding what is tolerable under the inflation criterion can result from various sources such as differences in productivity growth (HBS effect), changes in demand structure (in favor of non-tradable services), or initial differences in PPP of individual currencies. NMS, growing faster than OMS and starting from lower levels of development can experience all these sources of higher inflationary pressure and thus face the danger of breaching the inflation criterion²⁶.

An additional difficulty can result from the fact that the reference value for the inflation criterion is calculated on the basis of a simple arithmetic average of the three best-performing EU members, which do not have to be the EMU members. In the case of the recent CR (CR, 2004a; 2004b) two of the three best-performing countries — Denmark and Sweden — did not belong to EMU. In fact, Lithuania with an inflation rate of -0.2% should have replaced Sweden in this reference group, bringing the reference

²⁶ The actual (2004) picture does not look so dramatic for NMS. According to CR (2004a, p. 4) four of the NMS-10 satisfy this criterion. Two of them (Estonia and Lithuania) have run currency boards for many years and Cyprus has a stable peg of its pound to Euro. The Czech Republic is the only floater meeting this criterion among NMS.

value down by 0.5 percentage point. However, the Commission decided to exclude Lithuania from the group on the grounds that '*...countries with negative inflation rates are not considered to be best performers in terms of price stability*'. This gives us a sense how random this criterion is, depending as it does on the composition of the group of three-best performing countries. With substantial differentiation of inflation rates inside the EU, it can happen that the three best performers representing a very small share of the overall EU GDP, can set the reference value well below the average inflation rate for the entire EU (and indeed EMU) and the actual rate of most of their members. If the Eurozone inflation were to increase, three non-members of the EMU running their own monetary policy (the majority of EU-25 member states remain outside the EMU) can cause the reference value to fall well below the EMU average and the performance of most EMU members. Obviously, such a hypothetical (but not completely unrealistic) scenario does not make any sense from the point of view of nominal convergence of the candidates with the current EMU (they should adjust their inflation rates to the Eurozone average rather than three EU-25 outliers).

What is the room of maneuver for the EMU candidates, particularly when they are already within the ERM-II and cannot use interest rates aggressively to bring inflation down (because this may cause excessive fluctuations of exchange rates)? First, fiscal and income policies may offer some help here (especially given that candidates will have to conduct very prudent fiscal policy anyway), but their potential impact may be limited. Second, there is the possibility of one-off revaluation of the exchange rate's central parity, which is not in conflict with the exchange rate criterion. Third, the central parity declared upon ERM-II entry should not be undervalued (see Section 4.4).

Similarly, rules for the calculation of the interest rate criterion can also give random results, although here the risk of serious deviation of the reference value is smaller than in the case of inflation (because there is already far going interest rate convergence inside the Eurozone and it is very unlikely that outsiders can significantly out-perform EMU members on interest rates). Here the danger is the opposite: outsiders with very low inflation rates may compose the reference group for the interest rate criterion, yet their long-term interest rates may be quite high.

We next turn to the exchange rate criterion.

4.3. The ERM-II trial period

According to Article 3 of the Protocol on the convergence criteria (as adjusted for the introduction of the euro) '*the criterion on participation in the ERM II(...) shall mean that a Member State has respected the normal fluctuation margins provided for by the exchange-rate mechanism ... without severe tensions for at least the last two years before the examination. In particular, the Member State shall not have devalued its currency's ... central rate against the euro on its own initiative for the same period*' (see CR, 2004b, p. 89).

The above definition of the exchange rate stability criterion raises several practical questions. The first one concerns the meaning of the phrase 'normal fluctuation margins'. After the 1992 ERM-I crisis this margin was extended to +/-15% and this interpretation remains in force until now. In spite of the earlier suggestions of the European Commission and the ECB that a narrow corridor of +/- 2.25 percent around the central parity will be the preferred ERM-II mechanism, three NMS, which joined the ERM-II on June 28, 2004 (Estonia, Lithuania and Slovenia) are formally obliged to intervene if the exchange rate of their currencies is about to breach the wide +/- 15% band. However, another important question is how the wording 'without severe tensions' will be interpreted in practice.

If the wide fluctuation band of +/- 15% is really an acceptable option for the European Commission and ECB (without the necessity of any additional commitment to follow a narrower band) it can give a very broad spectrum of permissible exchange rate mechanisms during the ERM-II trial period: all the way from a currency board to quite a flexible floating regime. Analyzing the advantages and disadvantages of various options, the two extreme solutions in this spectrum seem to be the best choices: either a currency board or a wide fluctuation band. The first one, if backed by a credible political commitment and institutional solutions (i.e. considered by financial market as unchangeable) may cause an immediate convergence of interest rates and make the economic benefits of belonging to the Eurozone such as trade creation, financial market integration and investment inflow available earlier. The potential advantages of this variant have been confirmed by the experience of Bulgaria, Estonia and Lithuania (see Kowalski, 2003; Szczerba, 2003; Ganev et al., 2001).

The second option, i.e. a wide fluctuation band gives a pretty good opportunity to continue a policy of direct inflation targeting, which if credible (as in the case of Czech Republic), well technically operated and backed by a prudent fiscal policy, gives a good chance to meet both the inflation and interest rate criteria without the necessity of defending a declared exchange rate corridor. However, one cannot rule out the risk that financial markets will try to test government and central bank commitment to the established central parity. In addition, financial markets can be uncertain about the final conversion rate of the national currency into the Euro (see Szczurek, 2003). In the case of a currency board the problem of setting the conversion rate is definitely solved at an earlier stage, i.e. during the entry to ERM-II or earlier.

The third option, i.e. managing the exchange rate in a narrow band seems to be the worst solution, because it is in conflict with the free movement of capital and the principle of the 'impossible trinity' (see Frankel, 1999). This is unable to provide either the credible ex ante exchange rate stability associated with 'hard' pegs (because of the risk of speculative pressure and uncertainty about the conversion rate), or the discretion in managing domestic liquidity that comes with free floats. Such regimes may also be less transparent and technically difficult to operate because of a fluctuating demand for money and changing market expectations (see Dabrowski, 2001; 2004). Generally speaking, this kind of exchange regime is prone to speculative attacks, as was experienced by many current EMU members in 1992-1993 (Wyplosz, 2004; Rostowski, 2002)²⁷.

Worse, each country participating in the ERM-II must defend the agreed central parity and allowed fluctuation band on its own and cannot count on ECB support, except at the margins, where intervention is compulsory. But reaching the edges of the 15% band is almost certain to be judged as evidence of excessive variability of the exchange rate and of severe tension in its maintenance, and would therefore lead to the

²⁷ Obviously, a part of this critique also relates to the wide-band variant of the ERM mechanism, which still differs from a free float or even from a managed float without any predetermined exchange rate path. A wide band belongs to the criticized category of intermediate (hybrid) regimes. The main difference is the accepted fluctuation margin, which in the absence of serious shocks and major policy inconsistencies or uncertainties, may allow running a monetary policy close to that with a free float.

Commission and the ECB judging a country to have failed the exchange rate criterion.

Surprisingly, the European Commission and ECB have consistently ruled out unilateral euroization as possible variant of ERM-II or more generally, as a transitory solution on the way to full EMU membership, resorting to very unclear economic and legal arguments (see Bratkowski and Rostowski, 2001; Rostowski; 2004b). The euro is a fully convertible and internationally tradable currency, so the European Commission and ECB do not have any legal grounds to prohibit any country, which has sufficient international reserves to replace its domestic notes and coins with Euros from doing so, whether it belongs to the EU or not. On the other hand, unilateral euroization is not the same as EMU membership, because it neither gives voting rights in the ECB or in the ECOFIN Eurogroup, nor access to ECB refinancing facilities. This means that fears regarding the use of unilateral euroization as a method for circumventing the conditionality of the Maastricht convergence criteria are not justified.

However, the European Commission and ECB resistance to the idea of unilateral euroization is the real political fact. Given that full EMU membership seems to be very close for NMS, and currency board arrangements are a very close substitute for unilateral euroization (at least in relation to the ERM-II trial period) the political costs of fighting for the right to unilaterally euroize do not make much sense for NMS. However, it remains an economically attractive option for countries applying for EU membership and having problems with the limited credibility of their monetary policies and currencies. This applies, for example, to the Balkan countries or Turkey, where even currency boards may involve credibility problems, and where a spontaneous euroization is far advanced (see Nuti, 2002; Gros, 2002). Hence, the idea of unilateral euroization should not be forgotten, and the objections of the EC and ECB are worth challenging further, on both economic and legal grounds.

Another question is connected with the length of the ERM-II trial period. Two years were probably chosen to have enough time to check: (i) correctness of a central parity, which is to become the irrevocable rate of domestic currency conversion into Euro; (ii) the sustainability and mutual consistency of macroeconomic. However in the case of the EMU founding members, three countries (Austria, Finland and Italy) were formally admitted before the end of the two-year ERM trial period. It is interesting

to see whether this precedent will be repeated in relation to NMS. In the cases of Estonia and Lithuania, which have been met all the nominal convergence criteria for a quite long time, thanks to stable and credible currency board mechanisms (Estonia since 1992, Lithuania since 2001) waiting another two years for full EMU membership does not make much sense. Their faster admission to EMU would create a positive demonstration effect for other NMS and provide an incentive for these to accelerate their nominal convergence (mostly fiscal adjustment) programs.

On the other hand, the length of the ERM-I trial period did not prevent the current EMU members from nominal divergence once they had adopted the common currency. This increase in inflation dispersion has been caused, to a large extent, by factors which have been beyond the control of national authorities (see Section 3.2). This reflects the mutual inconsistency of inflation convergence and exchange rate stability, and raises doubts about rationality of the former as a precondition of adopting a common currency. Fiscal divergence, in turn, reflects flaws of the EU fiscal surveillance mechanism (see Section 5.3).

4.4. Setting the conversion rate

The conversion rate of a national currency into Euro is formally determined only at the end of the ERM trial period, after the Council decides on the basis of Article 122 (2) of the Treaty (i.e. positive conclusion of the convergence report) abrogation of '*...the derogation of the Members States concerned*'. According to Article 123(5) of the Treaty the decision on conversion rate is adopted by the Council '*...acting with the unanimity of the Member States without a derogation and the Member State concerned, on a proposal from the Commission and after consulting the ECB*'. So far, in all cases the central parity of the ERM band was adopted as the conversion rate although in the case of Ireland and Greece central parities were revalued during the ERM trial period. Such an outcome is logical if a country has managed to fulfill the exchange rate stability criterion. Besides, in the case of NMS, whose economic potential is small comparing to OMS, it is very unlikely that the latter could be interested in correcting the exchange rates of EMU candidates either at the entry to ERM-II or, even more, after completing the trial period.

Thus, NMS will enjoy a relative freedom in setting their central parities under the ERM-II and, consequently, the rates of conversion. However, this does not imply ease in finding an appropriate conversion rate. Rawdanowicz (2003) argues that '*...despite several equilibrium exchange rate theories not all of them are useful for the real policy choice of the nominal conversion rate*'. Rawdanowicz's numerical estimates (2002; 2003) indicate quite a wide range of optimal conversation rates for individual countries. Thus, a choice of a particular central parity under the ERM-II (with assumption that this will be, most likely, the ultimate conversion rate) will always have an arbitrary character and will involve a risk of error.

How big this risk is and what can be consequences of wrong decision? In the case of currency undervaluation a country will have problems with meeting the inflation criterion and financial markets may push authorities to correct this mistake through revaluation of the central parity. With an overvalued currency, the economy may suffer output and employment loses and the risk of payments imbalance, which could force the authorities to devalue central parity and push the country out of the EMU accession track. However, regarding the second danger, the NMS record strong productivity growth (Lenain and Rawdanowicz, 2004), much higher than that of core EMU members, and this creates room for moderate overvaluation of the conversion rate²⁸.

Balancing various risks, it seems that sticking to the current exchange rate would be the most pragmatic recommendation (see Szczerba, 2003; Rawdanowicz, 2003). This is quite easy in the case of countries running currency boards or stable pegs of their currencies to the Euro for a certain period of time. It is less easy task in the case of flexible exchange rate regimes, especially for floaters without any predefined exchange rate trajectory (the Czech Republic, Poland and Slovakia).

4.5. Should the Maastricht criteria be modified?

If the criteria of nominal convergence and the ERM-II mechanism have so many flaws and inconsistencies should they perhaps be modified to

²⁸ Although such an adjustment may involve short-term loses of output and employment.

better reflect the macroeconomic realities of NMS at the beginning of the 21st century? On purely economic grounds the answer is positive at least in the case of two of the criteria:

- The inflation criterion should be applied to assess macroeconomic (mostly monetary) policies in the period preceding adoption of the ERM-II central parity and abandoned subsequently. It should be completely abandoned in the case of EMU candidates running well-established Euro-denominated currency boards. In addition the reference value should relate to average inflation in the Eurozone instead of the average of the three best performing EU members.
- The two-year trial period of the exchange rate criterion should be counted ex-post in the case of countries running Euro-denominated currency boards or having a stable fixed peg of their national currencies to the Euro. Artificial maintenance of the ERM-II requirement (the cases of Estonia and Lithuania) does not have any economic justification. In addition, unilateral euroization should be allowed as one of the variants of ERM-II membership, and EU members should not be discouraged from accelerating their nominal convergence in this way.

However, an attempt to modify the Treaty in respect to the nominal convergence criteria and the EMU accession mechanism would probably delay the process of EMU enlargement for many years. The new Treaty establishing a Constitution for Europe has just been signed (on October 29, 2004) and the next two years will be devoted to a very complicated and politically controversial ratification process. The EU is very unlikely to set up an Intergovernmental Conference to work out any new changes to the Treaty before the current ratification process has been completed. In addition there is the risk of opening a 'Pandora's box': nobody can be sure that the final outcome of the revision process will make the convergence criteria and the EMU accession process more efficient and rational. So those NMS which are interested in fast EMU membership, will have to follow the current rules of game, counting on their reasonable interpretation by the European Commission, ECB and the Council of Ministers.

4.6. Why is early EMU enlargement beneficial for both candidates and incumbents?

Our earlier discussion has pointed to various long-term economic benefits from early adoption of the Euro by NMS. In addition, EMU accession, although technically not easy and requiring some sacrifices, may have also a very beneficial impact on NMS economies in a short- to medium term perspective.

First of all, a clear prospect of rapid entry into the EMU may be a powerful incentive for NMS to discipline macroeconomic policy, particularly in the fiscal sphere. According to CR (2004a) only four out of ten NMS — the three Baltic countries and Slovenia — met the fiscal convergence criteria in mid-2004. And all of them (except Latvia) had already entered the ERM-II with the plan to adopt Euro at 2007 at the latest. So the most serious obstacles to rapid EMU entry are located in the fiscal sphere but, on the other hand, the potential fiscal benefits of fast accession can be substantial.

There are two reasons why a later adoption of the Euro will involve higher cumulative fiscal costs. First, the postponement of the EMU accession date will be caused in most cases by unwillingness to carry out fiscal consolidation now, which will lead to an accumulation of additional public debt or delay its reduction. Second, later accession will mean higher interest rates during the 'waiting' period. Both factors will lead to higher interest payments and, eventually, to a necessity of deeper cuts in non-interest expenditures or higher tax increases when the time of EMU entry comes (Dabrowski, Antczak and Gorzelak, 2004). According to the long term fiscal projections of Gorzelak (2004) the biggest fiscal benefits of early accession can be enjoyed by those countries which at present record the highest debt-to-GDP ratio, the worst primary fiscal balances and the highest interest rates (Poland and Hungary). The result of this simulation is consistent with the experience of Mediterranean countries when they joined the EMU (see Jarocinski, 2003).

In addition, fast EMU accession may push politicians in NMS to reform the existing microeconomic rigidities earlier, particularly those relating to labor markets (see Radziwill and Walewski, 2003). Although many economists correctly argue for labor market reforms before monetary sover-

eighty given up, the political economy of policy reforms very often changes the required sequence of actions. Only when politicians lose the monetary and exchange rate instruments for alleviating labor market rigidities (or at least the illusion of having such instruments) do they become ready to take the political risk of unpopular reforms. Such causality has been confirmed by the experience of both the EMU members and those NMS that run currency boards (see Radziwill and Walewski, 2003).

Moreover, delaying EMU accession means not only higher cumulative fiscal costs and later benefits from belonging to the Euro area, but also the risk of nominal divergence and serious macroeconomic and financial turbulence.

Looking from the perspective of EMU incumbent members, the benefits of early EMU enlargement also seem to outweigh the risks. First, faster nominal and real convergence means faster economic and social consolidation of the enlarged EU and more effective functioning of the Single European Market. Second, EMU accession by NMS will eliminate the risk of currency crisis on the periphery of the EU. This is not a purely hypothetical risk as the soundness and credibility of monetary and fiscal policies of NMS are lower than those of OMS not belonging to EMU (Denmark, Sweden and UK). Third, fast EMU enlargement will also have positive political consequences, as it will shorten the period of de facto two-class membership: a core belonging to Eurozone and a periphery staying outside it. EMU accession of NMS creates an opportunity to speed up their maturing in their new role as MS (instead of continuing 'applicant' behavior), increase their involvement in the process of the Union's deepening, and running responsible macroeconomic policies. Fourth, adoption of the Euro by NMS will increase its international importance and international demand for Euro. Although the EU has not been very interested in the international expansion of Euro, it would be beneficial in many ways for EU economies (for example, partially insulating them from the risk of changes in exchange rates between major currencies).

5. EMU after Enlargement

5.1. Enlargement fears

The arguments presented in the previous section should lead to a more active policy of OMS towards EMU Enlargement instead of the 'don't rush' advice, which could be heard until very recently.

The 'don't rush' advice of the incumbent side has been probably caused by a number of political and economic concerns. The former relates to a desire to impose on NMS another 'trial' period before they become full members of the 'club'. However, this will mean, an extended period of 'second class' membership, and the costs that will involve — limited rights usually mean limited responsibility.

One of economic fears refers to the hypothesis that accession of fast growing countries will increase the inflationary pressure in the Eurozone and that, as result, interest rates will have to increase, which will have an additional recessionary impact on the slower growing economies of some of the incumbent members (see Baldwin et al., 2001; Rostowski, 2002).

In his theoretical analysis of the consequences of productivity growth differences (HBS effect) for inflation and monetary policy inside the Eurozone, Zoubanov (2003) demonstrates that these fears are mostly unjustified. Faster productivity growth leads to either additional inflation in faster-growing countries (FGC), or Euro appreciation (vis à vis other currencies), or both in certain proportions, depending on ECB monetary policy but does not cause any increase in inflation in slower-growing countries (SGC). Furthermore, the SGC do not become less competitive in the world, and can indeed benefit from increased exports to FGC, provided their labor markets are flexible enough. Thus, the real challenge for SGC posed by FGC accession to EMU is not inflation, but rather making their labor markets more flexible.

Another fears is the supposed deficit of 'price-stability culture' in NMS (see Rostowski, 2002). If true, giving the representatives of NMS full voting rights in the ECB Governing Council and the so-called ECOFIN Eurogroup, could threaten price stability and macroeconomic prudence in the entire Eurozone. Again, this concern does not find sup-

port in empirical research, at least in relation to actual inflation performance and expected voting behavior in the ECB Governing Council. Paczynski (2003) compares the historical inflation patterns (for 1998–2002) of the current EMU members and NMS. He finds that '*...while enlargement of the Eurozone is indeed likely to widen inflation dispersion, median inflation is only affected to a limited extent*'. Moreover, once one assumes that the six ECB Executive Board members only consider EMU-wide inflation in making their interest rate decisions, the outcome of majority voting within the ECB council (were it to be used after enlargement of the Eurozone) '*...appears to mimic very well the outcome of decisions based on EMU-average inflation only, even if we allow central bank governors to exhibit regional biases*' (Paczynski, 2003).

However, even if a number of small and fast growing economies with an uncertain 'price stability culture' joining the EMU was going to change the balance of interests in the ECB Governing Council,²⁹ the future voting power of NMS governors has been substantially reduced by the new voting system (based on rotation of voting rights) accepted in 2003 (see below).

The same can be said about future voting power of NMS in the ECOFIN Eurogroup in relation to fiscal policy issues. All the NMS but Poland belong to the group of either small or medium-size countries and their overall voting power in any EU decision making bodies is limited (80 votes out of 321 total, according to the Treaty of Nice). Although the biggest NMS (Poland, Czech Republic and Hungary) have the worst fiscal record and might be least willing to back EU measures to enforce fiscal discipline, the same is true for large OMS, with Germany and France permanently in breach of the rules (see Rostowski, 2004, Gros et al., 2004).

²⁹ In fact, these effects will neutralize each other. While a higher growth rate may cause higher inflationary pressure through the HBS effect and push NMS governors (assuming that they look mostly at the monetary conditions in their home country) to vote for higher interest rates in the entire Eurozone, a deficit of 'price stability culture' would make their position more 'dovish'.

5.2. The institutional design of ECB governing bodies

The recent reform of the ECB voting system³⁰ is officially motivated by the 'numbers' problem, i.e. desire to guarantee an efficient decision making process in the ECB Governing Council when the number of EMU members exceeds 15. Less officially this reform was probably motivated by the 'enlargement fears' mentioned above by changing the original 'one-country one-vote' rule.

The 'numbers' problem is not non-existent. As Paczynski (2003) correctly notes, the 18 voting members of the ECB GC today already exceed the number of the US Federal Reserve Open Market Committee (12 voting members), and the monetary policy committees of central banks in Sweden, Canada, Australia, the UK and Poland (6-10 voting members). However, the new solution (the rotation system) will in fact not address this problem. It will limit the number of voting members, but the right of all National Central Bank governors to participate in the ECB GC discussions is retained. On the other hand, voting power inside the ECB GC, will be rebalanced, significantly decreasing the frequency of voting rights of governors from smaller and less developed MS. The criterion for allocating the voting-right frequency (5/6 of which depends on a country's GDP and 1/6 on the size of its financial sector) will definitely disadvantage NMS and may diminish their interest in fast EMU accession.

Indirectly the newly adopted voting pattern assumes that governors represent their countries' interests and preferences, instead of those of the entire Eurozone. Such an assumption is in conflict with the Treaty.

How else could one solve the 'numbers' problem? The literature suggests at least three other solutions: (1) consolidation of country representations into constituencies; (2) weighted voting; (3) delegating interest rate decision to the ECB Executive Board or to a specially formed monetary policy committee, consisting of individually appointed members (see Rostowski, 2002; Paczynski, 2003 for detail analysis). The first two options, which follow the IMF and World Bank Executive Board voting systems, strengthen the principle of country representation, and this is their

³⁰ The reform is based on a provision of the Treaty of Nice, and was formulated for the first time by the ECB Governing Council on December 20, 2002. It was accepted by the European Council on March 21, 2003.

main weakness. In addition, option (2) does not solve the 'numbers' problem. However, the third option does solve this problem. Furthermore, it guarantees that a pan-European perspective is adopted in setting ECB interest rates, further strengthens ECB independence, at least in relation to governments and political constituencies in individual MS, and enhances the individual accountability of EB or monetary committee members (see Baldwin et al., 2001).

5.3. The future of EU fiscal surveillance rules

Many arguments have been made against the current EU rules for fiscal discipline. The most important are:

1/ The upper limit on fiscal deficits (of 3% of GDP) does not leave room for an active countercyclical fiscal policy during recession or growth slowdown or does not allow the automatic fiscal stabilizers to work.

The main weakness of this argument is that it disregards the SGP provision obliging MS to achieve medium-term budgetary positions close to balance or in surplus. If, as required, they run large fiscal surpluses in 'good' times, they will easily accommodate the automatic fiscal deterioration associated with an economic downturn without breaching the 3% deficit limit. Possibly they will even have room for discretionary fiscal expansion if they find such a policy helpful in stimulating their economies.

The current problems of some EU members in meeting the fiscal deficit requirement, originates from their fiscal laxity in the years of higher economic growth (1999-2001 in the case of the Eurozone; see Rostowski, 2004a; Gros et al., 2004).

An additional counterargument relates to doubts regarding the short-term effects of fiscal policy. So-called "non-Keynesian" effects can be expected in countries recording high deficit and public debt (see Siwinska-Gorzelak and Bujak, 2003).

2/ The 3% deficit limit neglects public investment needs. Higher investment (and higher deficits) today can contribute to higher rates of economic growth in the future, which will make repaying the debt and lowering the deficit to GDP ratio much easier. This argument is frequently addressed to the situation of NMS, which are expected to have bigger needs in the area of infrastructural investments.

The main problem with this argument is that it assumes a substantial positive influence of additional public investment on economic growth and budget revenues. This need not be true. Growth may not accelerate and interest rates may increase as result of higher public sector borrowing, causing debt dynamics to get out of control. Economic history provides many examples of misdirected and ineffective public investment programs.

In addition, governments have little incentive to worry about the future solvency of their successors. Their current political needs (for example, forthcoming elections) may push them to over-investment, i.e. to the same kind of fiscal irresponsibility as occurs in the case of other public expenditures.

As regards NMS, Gros (2004) argues that their level of public investments is already adequate to their level of per capita income, and they do not need higher deficits for these purposes.

3/ Inconsistency between the fiscal deficit and public debt requirements and greater importance of the latter³¹. The practice of EU fiscal surveillance concentrates excessively on deficit at the cost of debt.

While we are sympathetic to giving the debt criterion (and particularly the changes in debt-to-GDP ratio) a bigger importance in the process of monitoring the fiscal positions of MS, we are against abandoning the deficit criterion or its relaxation. On the contrary, the SGP requirement of medium term budget balance or surplus should be given priority, and in the case of countries that have low average growth rates the maximum deficit permitted should be lower than 3% of GDP. On the other hand, having in mind the dramatic fiscal challenges connected with population aging (see Section 4.2) faced by the entire EU, faster growing countries should not be allowed to run higher fiscal deficits even if this does not involve an immediate treat of deterioration in their debt-to-GDP ratios.

What needs to be discussed seriously is the enforcement mechanism of the SGP and Treaty's fiscal requirements. Although theoretically backed by financial sanctions, these are not automatic. Each step in the excessive deficit procedure requires qualified majority support in the

³¹ See Gros et al. (2004), Rostowski (2004), Pisani-Ferry (2002), Buiter and Grafe (2002) and Section 4.2 of this paper on interrelations between the deficit and debt criteria.

Council of Ministers. In a situation in which an increasing number of MS face problems with meeting the fiscal requirements, a coalition of 'bad boys' that will block sanctions may become a frequent phenomenon.

At the technical level, the fiscal surveillance mechanism is additionally complicated by the practice of forecasting *ex ante* a country's structural (i.e. cyclically adjusted) deficit, which requires one to forecast potential output and other macroeconomic parameters. Experience points to repeated mistakes in forecasting the future growth rates and fiscal positions of individual countries. Furthermore, we do not believe that it is possible to find any formula³², which would guarantee the unquestionable (and free of political bargaining) prediction of future structural deficits. In addition, in the case of NMS, which went through a series of deep structural changes during last 15 years, identification of their business cycles and estimation of their potential outputs seems to be a particularly complicated task.

As regards improving the enforcement mechanism, Rostowski (2004a) suggests tightening fiscal rules at the national level, preferably in national constitutions (following the example of Poland). Another possibility is to introduce automatic sanctions at the EU level when countries breach the fiscal requirements. This could involve, for example, suspending a country's voting rights in the ECB Governing Council or in the ECOFIN Council of Ministers.

Generally we believe that: (i) EU fiscal surveillance rules cannot be relaxed; (ii) their effective implementation requires a much better enforcement mechanism based on automatic sanctions; (iii) NMS do not need different fiscal rules.

³² A proposal of this kind is suggested by Coricelli and Ercolani (2002).

6. Conclusions and recommendations

The Eastern Enlargement of the EU is not yet complete and will not be complete until NMS join the EMU, a key component of the EU integration package and the Single European Market. If EMU enlargement is delayed beyond the next couple of years, this will mean a significant change in the economic and political architecture of the EU, creating a de facto two-speed integration of Europe. Such a change may in turn cause an anti-integration backlash at the EU periphery, slowing down both nominal and real convergence and prolonging the 'applicant' behavior of the NMS (instead of co-responsibility for the entire Union).

Both the economic and the political economy arguments reviewed in this paper point, on balance, to fast EMU accession of NMS. First, looking at the 'classical' OCA criteria, i.e. trade integration, co-movement of business cycles and actual factor mobility, NMS' record is not worse, on average, than that of the current Eurozone members, and should further improve before Eurozone entry, decreasing risk of their exposure to idiosyncratic shocks. Second, after joining the EMU, the common currency should help NMS to develop additional intra-EMU trade links, further synchronize business cycle and increase factor mobility (the 'endogeneity hypothesis'). These benefits will be bigger, and the risks of asymmetric shocks smaller, if more new members join the EMU at an earlier stage (so-called network externalities). Third, theoretical arguments and overwhelming empirical experience (including that of Mediterranean members of the EMU) demonstrates that so-called real convergence (understood as catching up with the GDP per capita levels of richer countries) accompanies nominal convergence, and that there is synergy rather than a trade-off between the two. Fourth, a clear perspective of EMU membership can serve as a powerful incentive to conduct politically unpopular fiscal adjustment and microeconomic reforms (for example, making labor markets more flexible). This was observed in Mediterranean countries when they joined the EMU. Fifth, early EMU accession (say, at the beginning of 2007) can provide NMS with significant fiscal gains compared to a later accession date (say, around 2012).

OMS, the European Commission and the ECB should replace their 'don't rush' advice by active encouragement of NMS to proceed with fast

nominal convergence in order to meet the Maastricht criteria and join the EMU as quickly as possible. Taking into consideration the different fiscal positions of individual NMS, the EMU admission strategy we recommend is a case-by-case approach with immediate accession for countries that have had a hard peg to the Euro for many years and meeting the Maastricht fiscal criterion (Estonia and Lithuania). Exposing them to a two-year ERM-II trial period does not make any sense. On the other hand, if both countries were offered a fast track approach, this would create a positive demonstration effect for other EMU candidates and an incentive for them to accelerate their fiscal adjustments.

Both the ERM-II mechanism and other nominal convergence criteria designed in the early 1990s (and incorporated into the Maastricht Treaty) suffer a number of flaws and inconsistencies, and do not reflect the new realities of strongly integrated international financial markets dominated by unrestricted capital movements and an already existing Eurozone. Thus, it would be good to modify them but such a perspective seems to be politically unrealistic at the moment. As a result, the pace of EMU enlargement will depend very much on the criteria being interpreted reasonably and economically rationally. If used in a formalistic way they may serve to postpone EMU enlargement for many years.

Flexibility in interpretation will be needed especially in relation to the exchange rate and inflation criteria and their mutual dependence. If one wants to avoid the danger of speculative pressure during the ERM-II trial period, the best exchange rate mechanisms are either a currency board (first best) or a wide (+/- 15%) fluctuation band (which is second best). A choice of a narrow corridor of +/- 2.25% around the central parity should be discouraged as it would conflict with free movement of capital, and can lead to currency crises. The inflation performance of countries that have chosen the currency board variant, should be assessed with a certain margin of flexibility, on condition that they run a prudent fiscal policy and did not adopt an undervalued exchange rate just before entering the ERM mechanism. In addition, the reference value for the inflation criterion should be the EMU (weighted) average rather than, as at present, the arithmetic average of the three best performing MS (not even necessarily belonging to the EMU).

The credibility of the Euro and price stability in the Eurozone will not be threatened by fast EMU Enlargement. Neither can the accession of fast

growing NMS create an additional 'recessionary' impact on slow growing incumbent members. The biggest challenge for the common currency in the medium to long run may come from widespread breaches of EU fiscal rules. The domestic political difficulties many MS have with obeying these rules cannot serve as an argument that they are irrelevant for safeguarding fiscal prudence and avoiding fiscal 'free riding' under the umbrella of the monetary union. Growth problems in some OMS and forthcoming population aging in all of Europe, may require even tighter fiscal rules than those currently in the Treaty and SGP. Any fiscal rules (whether the present ones or not) must be solidly anchored in an effective enforcement mechanism (including automatic sanctions) at both the Union and national levels.

References

- Alesina, A., and Perotti R. (1994), 'The Political Economy of Budget Deficits', *IMF Working Paper*, WP/94/85.
- Antczak, M. (2003), 'Do Candidate Countries Need a Higher Fiscal Deficit?', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 260.
- Antczak, M., and Markiewicz M. (2003), 'Taking the opportunity', *Polish Economic Outlook. Trends, Analyses, Forecasts*, No. 19, CASE — Center for Social and Economic Research, Warsaw, <http://www.case.com.pl/dyn/plik—1606038.pdf>
- Ardy, B., Begg I., Schelke W., and Torres F. (2002), *EMU and its Impact on Cohesion: Policy Challenges*, EMUCO project report, <http://www.lsbu.ac.uk/euroinst/documents/emuco.pdf>
- Baldwin, R.E., Berglof E., Giavazzi F., and Widren M. (2001), 'Nice Try: Should the Treaty of Nice be Ratified?', Centre for Economic Policy Research, London, *Monitoring European Integration*, No. 11, June.
- Barr, D., Breedon F., and Miles D. (2003), 'Life on the outside: economic conditions and prospects outside euroland', *Economic Policy*, October, pp. 517-613.
- Begg, D., Blanchard O., Coyle D., Eichengreen B., Frankel J., Giavazzi F., Portes R., Seabright P., Venables A., Winters L.A., Wyplosz C. (2003), The consequences of saying no: *An independent report into the economic consequences of the UK saying no to the euro*, available at <http://195.157.85.85/Begg.pdf>.
- Berg, A., Borensztein E., and Mauro P. (2002), 'An Evaluation of Monetary Regime Options for Latin America', *North American Journal of Economics and Finance*, Vol. 85, pp. 1-23.
- Bertola, G., and Drazen A. (1993), 'Trigger Points and Budget Cuts: Explaining the Effects of Fiscal Austerity', *American Economic Review*, vol. 83, No. 1, pp. 11-26.
- Blaszkiewicz, M., and Wozniak, P. (2003), 'Do Candidate Countries Fit Optimum-Currency-Area Criteria?', CASE — Center for Social and

Economic Research, *Studies and Analysis*, No. 267.

Boone, L., and Maurel M. (1999), 'An Optimal Currency Area Perspective of the EU Enlargement to the CEECs', Centre for Economic Policy Research, *Discussion Paper*, No. 2119, London.

Bratkowski, Andrzej, and Jacek Rostowski (2001), *The EU Attitude to Unilateral Euroization: Misunderstandings, Real Concerns and ill-designed Admission Criteria*, [in:] Brzeski A., and Winięcki J., eds.: *A Liberating Economic Journey: Post-communist Transition, Essays in Honour of Ljubo Sirc*, CRCE London.

Brzozowski, M. (2003), 'Exchange Rate Variability and Foreign Direct Investment — Consequences of EMU Enlargement', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 258.

Buiter, W. and Grafe, C. (2002), 'Patching up the Pact — Some Suggestions for enhancing Fiscal Sustainability and Macroeconomic Stability in an Enlarged European Union', Centre for Economic Policy Research, *Discussion Paper*, No. 3496.

Bun, M., and Klaassen F. (2002), 'Has the euro increased trade?', *Tinbergen Institute Discussion Paper*, No. 02-108/2.

Coricelli, F., and Ercolani V. (2002), 'Cyclical and Structural Deficits on the Road to Accession: Fiscal Rules for an Enlarged European Union', Centre for Economic Policy Research, *Discussion Paper*, No. 3672, December.

CR (2004a), *Report from the Commission. Convergence Report 2004*, Commission of the European Communities, Brussels, 20 October, COM(2004) 690, http://europa.eu.int/comm/economy_finance/publications/european_economy/2004/cr2004_en.pdf

CR (2004b), *Convergence Report 2004 — Technical annex*, Commission of the European Communities, Brussels, 20 October, A Commission services working paper, SEC(2004) 1268, http://europa.eu.int/comm/economy_finance/publications/european_economy/convergencereports2004_en.htm

Dabrowski, M. (2001), *Global Integration of Financial Markets and Its Consequences for Transition Economies*, [in:] L. T. Orlowski (eds.), *Transition and Growth in Post-communist countries. The Ten-year*

Experience, Edgar Elgar.

Dabrowski, M. (2004), *Costs and Benefits of Monetary Sovereignty in the Era of Globalization*, [in]: Dabrowski, M., Neneman J., and Slay B., eds., Beyond Transition. Development Alternatives and Dilemmas, Ashgate Publishing Limited, Aldershot UK, Burlington USA, Sydney Aus.

Dabrowski, M., and Rostowski, J., eds. (2001), *The Eastern Enlargement of The EU*, Kluwer Academic Publishers, Boston/ Dordrecht/ London.

Dabrowski, M., ed. (2002), *Disinflation in Transition Economies*, Central European University Press, Budapest/New York.

Dabrowski, M., Rohozinsky O., and Sinitisina I. (2004), 'Post-Adaptation Growth Recovery in Poland and Russia — Similarities and Differences', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 280.

Dabrowski, M., Antczak M., and Gorzelak M. (2004), *Fiscal Challenges Facing the New Member States*, paper for the DG ECFIN Workshop on 'Fiscal Surveillance in EMU: New Issues and Challenges', Brussels, November 12, http://europa.eu.int/comm/economy_finance/events/2004/events_brussels_1104_en.htm

'Delors Report' (1989), *Report on Economic and Monetary Union in the European Community*, Committee for the Study of Economic and Monetary Union, Report to European Council by a Committee chaired by J. Delors (the 'Delors Report'), Office for Official Publications of the European Communities, Luxemburg.

Emerson, M., Gros D., Italianer A., Pisani-Ferry J. and Reichenbach H. (1992), *One Market, One Money: An Evaluation of the Potential Benefits and Costs of Forming an Economic and Monetary Union*, Oxford University Press.

Feldstein, M. (2000), 'Europe Can't Handle the Euro', *Wall Street Journal*, February 8.

Fidrmuc, J., and Schardax F. (2000), 'More 'Pre-Ins' Ante Portas? Euro Area Enlargement, Optimum Currency Area, and Nominal Convergence', *Transition*, vol. 2, pp. 28-47, National Bank of Austria, Vienna.

Fischer, S., Sahay R., and Vegh C.A. (1996), 'Stabilization and Growth in Transition Economies: The Early Experience', *Journal of Economic Perspectives*, vol. 10, No. 2.

Fischer, S., Sahay R., and Vegh C.A. (1998), 'How Far Is Eastern Europe from Brussels?', *IMF Working Paper*, WP/98/53, April.

Frankel, J.A. (1999), 'No Single Currency Regime is Right for All Countries or at All Times', *NBER Working Paper*, No. 7338, September.

Frankel, J. A., and Rose A.K. (1998), 'The Endogeneity of the Optimum Currency Area Criteria', *Economic Journal*, vol. 108, July.

Ganev, G., Jarocinski M., Lubenova R., Wozniak P. (2001), 'Credibility of the Exchange Rate Policy in Transition Countries', CASE — Center for Social and Economic Research, *CASE Reports*, No. 38

Glick, R., and Rose A.K. (2001), 'Does a currency union affect trade? The time series evidence', *NBER Working Paper*, No. 8396, July.

Gomulka, S. (2001), *A Great Leap Forward? Pension Developments And Reforms In The Czech Republic, Hungary, Poland And Romania*, [in:] Dabrowski, M., and Rostowski, J., eds. (2001), *The Eastern Enlargement of The EU*, Kluwer Academic Publishers, Boston/ Dordrecht/ London.

Gorzelak, M. (2004), 'Fiscal Costs of Delaying the EMU Accession — Medium Term Fiscal Projection for Selected New EU Members', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 277.

Ghosh, A.R., and Phillips S. (1998), 'Warning: Inflation May Be Harmful to Your Growth', *IMF Staff Papers*, vol. 45, No. 4.

Gros, D. (2002), 'The euro for the Balkans?', *Economics of Transition*, Vol. 10, Issue 2, pp. 491-511

Gros, D. (2003), 'Reforming the Composition of the ECB Governing Council in View of Enlarged: an Opportunity Missed', *CEPS Policy Brief*, No 32.

Gros, D. (2004), *The Fiscal Criteria and the New Member Countries?*, paper prepared for CEPS/ESI annual conference on "EMU enlargement to the East and West", Budapest, September 24/25, www.mnb.hu/Resource.aspx?ResourceId=mnbfile&resourcename=dgros.

Gros, D., Mayer T., and Ubide A. (2004), *The Nine Lives of the Stability Pact*, A Special Report of the CEPS Macroeconomic Policy Group, Center for European Policy Studies, Brussels.

Gros, D., and Hobza A. (2003), 'Exchange rate variability as an OCA criterion: Are the candidates ripe for the euro?', International Center for Economic Growth European Center, *Working Papers*, No. 23, Macroeconomic Studies.

Honohan, P., and Lane, P.R. (2004), 'Exchange Rates and Inflation Under EMU: An Update', *CEPR Discussion Paper*, No. 4583, August.

Jarocinski, M. (2003), 'Nominal and Real Convergence in Spain, Portugal and Greece During Their Accession to the EMU', CASE — Center for Social and Economic Research, *Studies and Analysis*, No. 256.

Jarocinski, M. (2004), 'Responses to Monetary Policy Shocks in the East and the West of Europe: A Comparison', CASE — Center for Social and Economic Research, *Studies and Analysis*, No. 287.

Karhonen, I., and Fidrmuc J. (2001), 'Similarity of Demand and Supply Shocks Between the Euro Area and the Accession Countries', *Focus on Transition*, No. 2, pp. 26-42, National Bank of Austria, Vienna.

Kowalski, P. (2003), 'Nominal and Real Convergence in Alternative Exchange Rate Regimes in Transition Countries: Implications for the EMU Accession', CASE — Center for Social and Economic Research, *Studies and Analysis*, No. 270.

Lenain, P., and Rawdanowicz L. (2004), 'Enhancing income convergence in Central Europe after EU accession', *OECD Economics Department Working Papers*, No. 392, OECD Economics Department.

Maliszewska, M, and Maliszewski W. (2004), 'Exchange rate: shock generator or shock absorber?', CASE — Center for Social and Economic Research, *Studies and Analyses*, No. 272.

Maliszewska, M. (2004a), "New Member States' Trading Potential Following EMU Accession: A Gravity Approach", CASE — Center for Social and Economic Research, *Studies and Analyses*, No. 286

Maliszewska, M. (2004b), 'Eastern EU Expansion: Implications of the Enlarged Single Market for Current and New Member States', CASE —

- Center for Social and Economic Research, *Studies and Analysis*, No. 273.
- McKinnon, R. (1963), 'Optimum Currency Areas', *American Economic Review*, vol. 53, pp. 717-25.
- McKinnon, R. (2000), 'Mundell, the Euro and Optimum Currency Areas', *Journal of Policy Modeling*, vol. 22(3), pp. 311-324
- Micco, A., Stein E., and Ordóñez G. (2003), 'The Currency Union Effect on Trade: Early Evidence from EMU', *Economic Policy*, October, pp. 315-366.
- Mundell, R. (1961), 'A Theory of Optimum Currency Areas', *American Economic Review*, vol. 51, pp 657- 65.
- Mundell, R. (1973a), *Uncommon Arguments for Common Currencies*, [in:] Johnson H. and Swoboda A. (eds.), *The Economics of Common Currencies*, London: George Allen & Unwin Ltd, pp. 114-132.
- Mundell, R. (1973b), *A Plan for a European Currency*, [in:] Johnson H. and Swoboda A. (eds.), *The Economics of Common Currencies*, London: George Allen & Unwin Ltd , pp. 143-173.
- Nuti, D.M. (2002), 'Costs and Benefits of Unilateral Euroization in Central Eastern Europe', *Economics of Transition*, Vol. 10, Issue 2, pp. 419-444.
- Paczynski, W. (2003), 'ECB Decision-making and the Status of the Eurogroup in an Enlarged EMU', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 262.
- Perotti, R. (1996), 'Fiscal Consolidation in Europe: Composition Matters', *American Economic Review*, vol. 86, No. 2, pp. 105-110.
- Pisani-Ferry, J. (2002), *Fiscal Discipline and Policy Co-ordination in the Eurozone: Assessment and Proposals*, paper prepared for the Group of Economic Analysis of the European Commission, Brussels.
- Polackova-Brixi, H. (2004), *Contingent Liabilities in the new Member States*, paper prepared for Workshop: 'Fiscal Surveillance in EMU: issues and challenges', Brussels, November 12, http://europa.eu.int/comm/economy_finance/events/2004/events_brussels_1104_en.htm
- Radziwill, A., and Walewski M. (2003), 'Future EMU Membership and Wage Flexibility in Selected EU Candidate Countries', CASE — Center for

- Social and Economic Research, *Studies & Analyses*, No. 265.
- Rawdanowicz, L.W. (2002), 'Poland's Accession to EMU — Choosing the Exchange Rate Parity', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 247.
- Rawdanowicz, L.W. (2003), 'The EMU Enlargement and the Choice of the Euro Conversion Rates: Theoretical and Empirical Issues', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 269.
- Reinhart, C.M., and Rogoff K.S. (2002), 'The Modern History of Exchange Rate Arrangements: A Reinterpretation', *NBER Working Paper*, No. 8963.
- Rose, A. (2000), 'One Market, One Money: Estimating the Effect of Common Currencies on Trade', *Economic Policy*, no. 30, April, pp. 7-33.
- Rose, A. K., and van Wincoop E. (2001), 'National Money as a Barrier to Trade: The Real Case for Monetary Union', *American Economic Review*, vol. 91, No. 2, May, pp. 386-90.
- Rostowski, J. (2002), 'When Should Central Europeans Join EMU?', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 253.
- Rostowski, J. (2004a), 'The Stability and Growth Pact — Essential and Unfeasible', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 275.
- Rostowski, J. (2004b), *Why Unilateral Euroization Makes Sense for (some) Applicant Countries*, [in]: Dabrowski, M., Neneman J., and Slay B., eds., *Beyond Transition. Development Alternatives and Dilemmas*, Ashgate Publishing Limited, Aldershot UK, Burlington USA, Sydney Aus.
- Sarel, M. (1996), 'Nonlinear Effects of Inflation on Economic Growth', *IMF Staff Papers*, Vol. 43, No. 1.
- Siwinska-Gorzelak, J., and Bujak P. (2003), 'Short-run Macroeconomic Effects of Discretionary Fiscal Policy Changes', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 261.
- Scitovsky, T. (1958), *Economic Theory and Western European Integration*, Stanford.
- Szczurek, M. (2003), 'Exchange rate Regime and Nominal Convergence',

CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 266.

Sutherland, A. (1997), 'Fiscal Crises and Aggregate Demand: Can High Public Debt Reverse the Effects of Fiscal Policy?', *Journal of Public Economics*, vol. 65.

Vaubel, R. (1976), 'Real Exchange-Rate Changes in the European Community — The Empirical Evidence and its Implications for European Currency Unification', *Weltwirtschaftliches Archiv*, vol. 112, pp. 429-470.

Vaubel, R. (1978), 'Real Exchange-Rate Changes in the European Community: A New Approach to the Determination of Optimum Currency Areas', *Journal of International Economics*, vol. 8, pp. 319-339.

von Hagen, J., and Neumann M. (1994), 'Real Exchange Rates Within and Between Currency Areas: How Far Away is EMU?', *The Review of Economics and Statistics*, Vol. 76, Issue 2 May, pp. 236-244.

Wyplosz, C. (2004), *Exchange Rate Regimes after Enlargement*, [in]: Dabrowski, M., Neneman J., and Slay B., eds., *Beyond Transition. Development Alternatives and Dilemmas*, Ashgate Publishing Limited, Aldershot UK, Burlington USA, Sydney Aus.

Zoubanov, N. (2003), 'Uneven Growth in a Monetary Union: on the Possible Implications for its Slow-Growing Members', CASE — Center for Social and Economic Research, *Studies & Analyses*, No. 257.