

Darvas, Zsolt

Working Paper

The Case for Reforming Euro Area Entry Criteria

IEHAS Discussion Papers, No. MT-DP - 2010/22

Provided in Cooperation with:

Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences

Suggested Citation: Darvas, Zsolt (2010) : The Case for Reforming Euro Area Entry Criteria, IEHAS Discussion Papers, No. MT-DP - 2010/22, ISBN 978-615-5024-13-9, Hungarian Academy of Sciences, Institute of Economics, Budapest

This Version is available at:

<https://hdl.handle.net/10419/108194>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

MŰHELYTANULMÁNYOK

DISCUSSION PAPERS

MT-DP – 2010/22

The Case for Reforming Euro Area Entry Criteria

ZSOLT DARVAS

Discussion papers
MT-DP – 2010/22
Institute of Economics, Hungarian Academy of Sciences

KTI/IE Discussion Papers are circulated to promote discussion and provoke comments.
Any references to discussion papers should clearly state that the paper is preliminary.
Materials published in this series may subject to further publication.

The Case for Reforming Euro Area Entry Criteria

Author:

Zsolt Darvas
senior research fellow
Institute of Economics
Hungarian Academy of Sciences,
Bruegel, Brussels
Corvinus University of Budapest
E-mail: darvas@econ.core.hu

September 2010

ISBN 978-615-5024-13-9
ISSN 1785 377X

The Case for Reforming Euro Area Entry Criteria

Zsolt Darvas

Abstract

The global economic and financial crisis has raised further concerns about the euro-entry criteria, in addition to other factors, such as the effective tightening of the criteria due to the enlargement of the EU from 12 to 27 members, the highly unfavourable property of business cycle dependence, the internal inconsistency of the criteria due to the structural price level convergence of Central and Eastern European countries, and the continuous violation of the criteria by euro-area members. The interest rate criterion became a highly volatile measure. Many US metropolitan areas would fail to qualify to be members of the US monetary union by applying the currently used inflation criterion to the US. It is time to reform the criteria and to strengthen their economic rationale within the legal framework of the EU treaty. A good solution would be to relate all criteria to the average of the euro area and simultaneously to extend the compliance period from the currently considered one year to a longer period.

Keywords: Euro; EU institutions; financial crisis; Maastricht-criteria

JEL: F33; F36; F53

Acknowledgement:

This article partly draws on a paper that the author prepared for the conference on “The Future of the Baltic Sea Region in Europe”, held on 27-28 August 2009 in Hamina, Finland. The conference was organised by Centrum Balticum and Town of Hamina together with the Finnish Prime Minister’s Office to commemorate the 200th anniversary of the Treaty of Hamina that established the autonomous Grand Duchy of Finland within Imperial Russia, which marked the gradual emergence of Finnish nationhood.

The author is grateful to Torbjörn Becker, Daumantas Lapinskas, Jean Pisani-Ferry, Indhira Santos, André Sapir, Karsten Staehr, György Szapáry, Vilija Tauraitė, Jakob von Weizsäcker and two lawyers, who wish to remain unnamed, for stimulating discussions about this paper, to the conference participants in Hamina and to the seminar participants at the German Marshall Fund in Berlin for helpful comments. However, the views expressed in this article do not necessarily reflect those of the persons mentioned above. The author would like to thank Stephen Gardner for editorial advice. Maite de Sola, Kristina Morkunaite and Juan Ignacio Aldasoro provided excellent research assistance. Bruegel gratefully acknowledges the support of the German Marshall Fund of the United States to research underpinning this article.

Az eurobevezetési kritériumok reformra szorulnak

Darvas Zsolt

Összefoglaló

A globális gazdasági és pénzügyi válság újabb kételyeket ébresztett az eurobevezetési kritériumok megfelelőségével kapcsolatban. Ezek kiegészítik azokat a régebb óta is ismert problémákat, mint például az inflációs kritérium effektív szigorodása az EU 12 tagállamról 27-re bővítése miatt, továbbá a kritériumok teljesíthetőségének üzleti ciklusoktól való függősége, a kritériumok inkonzisztenciája a felzárkózó országok árszint-konvergenciája miatt, valamint azt, hogy az euróövezethez már csatlakozott tagországok folyamatosan megsértik a kritériumokat. A kamatláb-kritérium az alkalmazott értelmezés miatt rendkívül változékonnyá vált. Számos régió az Amerikai Egyesült Államokban nem használhatná az amerikai dollárt, ha az inflációs kritérium Európában használt módszerét az Egyesült Államok adataira alkalmaznánk. Eljött az ideje az eurobevezetési kritériumok reformjának, amely során a kritériumok közgazdasági ésszerűségét kellene erősíteni az Európai Unió szerződésének keretén belül. Az lenne jó megoldás, ha minden kritériumot az euróövezet átlagához viszonyítanának, és egyidejűleg meghosszabbítanák a jelenleg használt egy éves vizsgálati időszakot.

Tárgyszavak: Euró, EU-intézmények, pénzügyi válság, maastrichti kritériumok

JEL: F33; F36; F53

A tanulmány megjelenés alatt áll a Society and Economy c. folyóiratban.

1. INTRODUCTION

Even before the crisis, there was much discussion about euro-area entry rules, but this debate has intensified in the wake of the crisis. Euro-area entry criteria (Box 1) were established in the early 1990s before the euro area existed and when the EU had 12 member states. Intense discussions preceded the drawing up of the rules and the end result was a compromise between economics, politics and simplicity. Now the euro area exists and there are 27 members of the EU but the rules remain the same. Are the criteria suitable for the new member states of EU? Does the crisis provide new arguments for reforming the criteria? How should the criteria be reformed and would a reform violate the 'equal treatment' principle? What are the legal options for reforming the criteria? This article aims to address these questions.

Four new member states (NMS) of the EU have joined the euro area (Slovenia in 2007, Cyprus and Malta in 2008 and Slovakia in 2009) and Estonia will join in 2011. Only one former application (Lithuania in 2006) has been rejected. This may suggest that the enlargement process of the euro area is a smooth one. Unfortunately this perception does not stand up to scrutiny. As we shall argue, the first three euro newcomers had a crucial difference from the rest of the NMS by having an already high price level compared to the euro area and less scope for economic catching-up. Slovakia could meet the inflation criteria by allowing its currency to appreciate sharply before the examination, which raises the question of the appropriateness of the exchange rate criterion and whether the criteria are internally consistent. Estonia, on the other hand, did not have a chance to join during the 'good times' before the crisis and will only be able to join by imposing a strict (and hence counter-cyclical) fiscal policy in the midst of an extraordinarily deep recession.

We shall argue that keeping the criteria unchanged violates the equal treatment principle. The entry criteria should be reviewed and fine-tuned within the legal framework of the Treaty on the Functioning of the European Union (hereafter: treaty) and only those countries should be offered the option of joining the euro area that meet the reviewed criteria.

It is important to emphasise that this article does not address the issue of the desirability of euro area entry (neither from the side of current members, nor from the side of prospective members). This article also does not discuss the strategies and timing of euro adoption (see Darvas and Szapáry 2008 on these issues). We confine our scope to the four questions listed above.

In section 2 we discuss the economic rationale behind the review of the euro-area accession criteria, which will be followed, in Section 3, by an analysis of the legal options under the treaty. Section 4 presents some concluding thoughts.

Convergence ('Maastricht') criteria

The Maastricht criteria set the path to euro accession and are supposed to ensure that a country is ready to join the euro. The criteria require:

- (1) the achievement of a high degree of price stability, measured as at most 1.5 percentage points higher consumer price inflation than that of the average of the three best performer member states of the EU;
- (2) the sustainability of the government financial position, as reflected by the lack of an excessive deficit procedure¹, which, in turn depends on the fulfilment of two criteria:
 - (2a) the budget deficit should not be higher than three percent of GDP, unless “*either the ratio has declined substantially and continuously and reached a level that comes close to the reference value, or, alternatively, the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value*”,
 - (2b) the government debt should not be higher than 60 percent of GDP, unless “*the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace*”;
- (3) the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, “*without severe tensions*”, and in particular, without devaluing against the euro, and
- (4) the long term interest rate should not be higher by 2 percentage points than the that of the average of the three best performer member states of the EU in terms of price stability.

The first and the fourth criteria are benchmarked on the “*three best-performing member states of the EU in terms of price stability*”, which have been interpreted in special ways. The treaty does not specify how to determine the “three best performers”. Up to 2009 this been defined as the three EU countries having the lowest non-negative inflation rates. However,

¹ The Excessive Deficit Procedure is the crucial common component in the Stability and Growth Pact (that applies to all members of the EU) and the euro accession criteria.

European Commission (2010) did exclude only one country with a negative inflation rate, but not the others.²

The exact interpretation of the third criterion is also not specified in the treaty. In practice it has been interpreted in an asymmetric way: exchange rate depreciation is considered as the violation of this requirement, but exchange rate appreciation is not. A country receiving international balance-of-payments support was also assessed to have violated this criterion even if the exchange rate has not depreciated (Latvia), because such support was the reflection of “severe tensions” and have likely contributed to the avoidance of exchange rate depreciation.

The first and fourth criteria are examined using the average of the most recent 12-month data at the time of the assessment reports; the second criteria are considered for the most recent calendar years; while the third one considers a 2-year long period. In addition to analysis of past data, the assessment reports also take into consideration the sustainability of convergence, though neither the treaty, nor its protocol, define how to assess that. In practice, forecasts are considered up to the end of the year in which the assessment is made.

In addition to these criteria, the assessment reports by the ECB and the Commission “*also take account of the results of the integration of markets, the situation and development of the balances of payments on current account and an examination of the development of unit labour costs and other price indices*”. Further, “*These reports shall include an examination of the compatibility between the national legislation of each of these Member States, including the statutes of its national central bank, and Articles 130 and 131 and the Statute of the ESCB and of the ECB.*” (All citations are from the Treaty on the Functioning of the European Union.)

² “*Taking into account the current exceptional economic circumstances, over the 12 month period covering April 2009-March 2010 the three best performing Member States in terms of price stability were Portugal (-0.8%), Estonia (-0.7%) and Belgium (-0.1%), yielding a reference value of 1.0%. This excludes Ireland, the only country whose average inflation rate (-2.3%) deviates from the euro area average by a wide margin, and which could hence not reasonably be regarded as a best performer in terms of price stability (Box 1.2.1).*” (European Commission, 2010, p. 37). Euro-area inflation was 0.3 percent during the same period, implying that a 2.6 percentage point deviation from the euro-area average was regarded as “a wide margin”, while a 1.1 percentage point deviation was not.

2. THE CASE FOR REFORMING THE CRITERIA

2.1 THE GENERAL LOGIC BEHIND THE CRITERIA: MADE SOME SENSE FOR THE FIRST WAVE COUNTRIES

The criteria on inflation, interest rate, public debt, fiscal deficit and exchange rate stability, as designed in the early 1990s, had a rationale at that time for the then EU member countries. The logic of this set of nominal convergence criteria can be described as follows. In order to live with a common monetary policy, countries must have broadly similar inflation rates. A candidate country must therefore demonstrate before adopting the euro that its inflation rate is not excessively out of line with the rest of the euro area members. The long-term interest rate criterion, in principle, serves as a means to assess the sustainability of the low inflation rate. The two fiscal criteria are to prevent free riding and spill-over effects and to ensure fiscal sustainability, as countries will not have a chance to decrease the real value of their public debt by inflating it away, and also will not have a chance to devalue their currency in order to boost economic growth, which can help to reduce the debt/GDP ratio. The exchange rate stability criterion can be looked at as a “catch all” test, demonstrating that a country can live with exchange rate stability. This is of course only possible if a country follows stability oriented fiscal and monetary policies.

We should highlight that fixing the exchange rate limits monetary policy, and with free capital mobility there is little fiscal policy and financial regulation can do to control inflation and interest rates. This implies, in principle, that countries should be highly integrated and have a similar level of economic development in order to qualify for the monetary union. High integration can ensure that countries also satisfy the optimal currency area (OCA) properties, even though OCA requirements are not directly required. Indeed, mostly those euro-area countries had worrisome developments before the crisis, such as high current account deficit and rapidly rising external debt, which failed to meet the inflation criterion while being members of the euro area.

The budget deficit criterion was also viewed by many economists with skepticism. The reason is simple: this criterion also has little to do with OCA properties, of which business cycles synchronization is arguably the most important. However, Darvas, Rose and Szapáry (2007) showed that there is an indirect relationship between the fiscal criteria and business cycle synchronization. Using panel econometric models of 21 OECD countries and 115 countries of the world and 40 years of data, they found that countries with similar government budget positions tend to have business cycles that fluctuate more closely. That is, fiscal

convergence (in the form of persistently similar ratios of government surplus/deficit to GDP) is systematically associated with more synchronized business cycles. They also find evidence that reduced fiscal deficits increase business cycle synchronization. This is because deficit reduction and fiscal convergence eliminate idiosyncratic fiscal shocks. The budget deficit criterion encouraged fiscal convergence and deficit reduction during the run-up to euro adoption; thereby it has contributed to a higher level of business cycle synchronisation. Since business cycle synchronisation is one of the most important OCA criteria, the budget deficit criterion has indirectly moved Europe closer to an optimum currency area.

2.2 NUMERICAL VALUES AND COMPLIANCE PERIOD OF THE CRITERIA: QUESTIONABLE

Therefore, while there seems to be a rationale behind the criteria considering the circumstances of the early 1990s, the actual numerical values of the criteria and also the time period of their analysis (compliance period) can be debated.

The one year period for which most of the criteria are considered is too short. As for the inflation criterion, countries might be tempted to resort to techniques - such as a freezing of administered prices, a reduction of consumption taxes or a tightening of credit growth by various short term expedients - to squeeze in under the reference value. Such behaviour would be tantamount to what Szapáry (2000) labelled as the “weighing-in” syndrome: like the boxer who refrains from eating for hours prior to the weighing-in to satisfy the weight limit only to consume a big meal thereafter, the candidate country would resort to all sorts of techniques in order to squeeze in under the inflation criteria, only to shift gears after it has joined the euro area. Indeed, considering the first eleven countries that joined the euro area in 1999, all of them met the inflation criterion in 1997 and 1998, but six of them failed to meet in 2000 and similarly large violations occurred in later years as we shall discuss later.

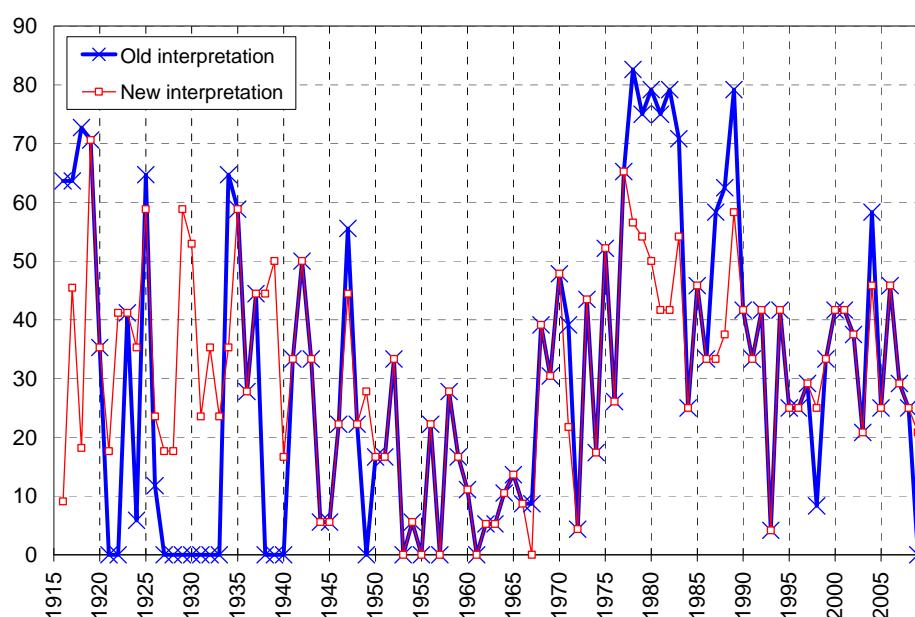
Considering the 1.5 percentage points discrepancy compared to the average inflation of the three ‘best performer’ member states, many US metropolitan areas³ would have not qualified to be part of the US monetary area. We have calculated the hypothetical inflation criterion using data of the US metropolitan areas: *Figure 1* shows that there were frequent violations of this hypothetical criterion during the almost one hundred year period for which data is available. On average, 30 per cent of the metropolitan areas violated this criterion between 1916 and 2009 (both according to the ‘old’ and the ‘new’ interpretations of the three best performers; see Box 1). Considering recent periods and the ‘old’ interpretation, from 1970 to

³ Regional inflation rates are not available for US states, but they are available for main metropolitan areas.

1989, on average, 53 per cent of the metropolitan areas violated this criterion, but even 32 percent of them, on average, have violated between 1990 and 2007, when inflation was lower and less variable than before. The key exceptions are those years when there was deflation (including 2009, when more than two-thirds of the metropolitan areas experienced deflation). According to the ‘new’ interpretation⁴, the failure-rate was 41 percent between 1970 and 1989, and 33 percent between 1990 and 2007.

Figure 1

**US metropolitan areas violating Maastricht inflation criterion
(as percentage of all metropolitan areas), 1916-2009**



Note: Old interpretation: those three metropolitan areas are considered that have the lowest, but non-negative inflation rates. New interpretation: those three metropolitan areas are considered that have the lowest inflation rates, but less than two than two percentage points lower than the US average. Number of metropolitan areas for which data is available: 11 for 1916-18, 17 for 1919-35, 18 for 1936-1961, 19 for 1962-65, 22 for 1963, 23 for 1966-78, and 24 since 1979.

Source: Author’s calculation using data from Bureau of Labor Statistics.

⁴ For the new interpretation we considered at least two percentage points difference from the US average as a “wide margin”; see footnote 2.

Regarding the two fiscal criteria, the fundamental question should be debt sustainability, and in this respect, the Maastricht reference value of 60 percent of GDP cannot be regarded as a useful guide. There is no uniform yardstick of what the level of budget deficits should be and the optimal level of debt depends on various factors including eg future contingent liabilities due to ageing. Yet the 60 percent debt and 3 percent deficit numbers were internally consistent: considering the potential growth rate and real interest rate of the EU members of the time, the 3% overall deficit benchmark ensured the convergence to the 60 percent debt target for those countries that had much higher government debt at the time of drafting the Maastricht treaty.⁵ Furthermore, the euro area is a monetary union without political and fiscal union and without a single economic policy, and its labour and product markets are less flexible. Under such circumstances it makes sense to tie the hands of the governments by restricting the government debt at a reasonably low percentage of GDP. This statement is also supported by the fact that a key reason for the euro-area debt crisis in the first half of 2010 was the non-compliance of Greece with the government debt and deficit benchmarks in the pre-crisis period.

2.3 IMPLICATIONS OF THE CREATION OF THE EURO AREA AND THE ENLARGEMENT OF THE EU: VIOLATION OF THE EQUAL TREATMENT PRINCIPLE IN THE ECONOMIC SENSE

It is easy to show that keeping the same rules in an expanded EU violates the equal treatment principle in the economic sense – new applicants have to meet tougher criteria than previous ones because two of the criteria are benchmarked on the “*three best-performing member states of the EU in terms of price stability*”, which have been interpreted as the three EU countries having the lowest non-negative inflation rates up to 2009, but even this interpretation was blurred in 2010 and only one country was excluded from the calculation (see Box 1). Irrespective how the average of the three lowest inflation rate countries is calculated, the three ‘best performers’ among 27 countries are expected to generate a lower average than the three best performers among 15 countries. Lewis and Staehr (2010) found that according to this interpretation the expansion of the EU from 15 to 27 members reduces the expected inflation reference value by 0.15-0.2 percentage points, and there is a considerable probability of a larger reduction.

⁵ See more details in Darvas and Szapáry (2008).

The adopted interpretations of the three “best performers in terms of price stability” are also in contradiction with the ECB’s definition of price stability, as also highlighted by, eg, Buiter (2005) and Pisani-Ferry et al (2008). According to the ECB:

"Price stability is defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%. The Governing Council has also clarified that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2% over the medium term. ... By referring to “an increase in the HICP of below 2%” the definition makes clear that not only inflation above 2% but also deflation (i.e. price level declines) is inconsistent with price stability."

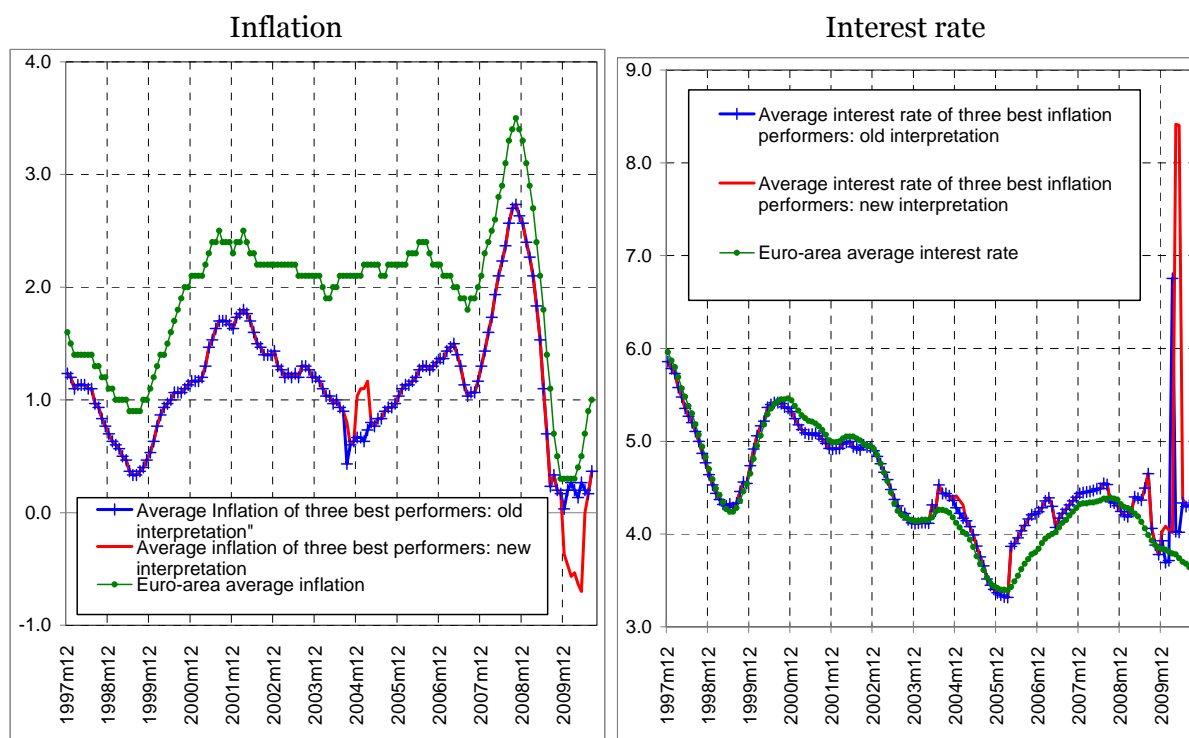
(European Central Bank: ‘The definition of price stability’, available at: <http://www.ecb.int/mopo/strategy/pricestab/html/index.en.html>)

From an economic viewpoint euro newcomers should have an inflation rate similar to the euro area, and not necessarily to any EU member state.⁶ For example, during the 44 months between May 2004 (the date of enlargement of 10 NMS) and December 2007, there were 27 months when two of the three ‘best performers’ were not euro area member, and there was one such country in the remaining 17 months. The inflation rates of those EU countries that are not euro-area members may be affected by eg large exchange-rate swings. The right panel of *Figure 2* shows the inflation rate of the euro area and the average of the three best performer member states according to both the old and the new interpretations.

⁶ We note, however, that benchmarking against all EU countries the inflation criterion (as well as the interest-rate criterion) was a perfectly natural idea before the euro existed.

Figure 2

Inflation and interest rate benchmarks, December 1997 – August 2010



Note: Old interpretation: those three countries are considered that have the lowest, but non-negative inflation rates. New interpretation: those three countries are considered that have the lowest inflation rates, but less than two percentage points lower than the euro-area average. Similarly to the procedure of European Commission (2010), whenever Estonia was among the three best performers, its interest rate was not considered (due to the lack of comparable 10-year maturity government bond), but only the average interest rate of the other two countries are considered. Whenever more than one country had the same third lowest inflation rate (eg the four countries with the lowest inflation rate had the following inflation rates in percent: 0.1, 0.5, 1.0, 1.0, and these countries had the following interest rates in percent: 3.0, 2.5, 4.5, 5.0), we first calculated the average interest of the third countries (4.75 percent in the example) and then averaged this value first two (ie $(3.0+2.5+4.75)/3$). We followed a similar procedure when even more countries constituted the third best performer.

Source: Own calculation using data from Eurostat.

2.4 INTEREST RATE CRITERION: UNSTABLE DUE TO THE MISGUIDED INTERPRETATION OF PRICE-STABILITY BEST PERFORMERS

The interest rate criterion is also benchmarked on the on the three best performer member states of the EU in terms of price stability. But the adopted interpretation of best performers leads to an unwise instability of the interest rate criterion. The right hand panel of (*Figure 2*) shows that average interest rate of the best inflation performers (according to both the old and new interpretation) became extremely volatile in recent years. Such volatility is highly undesirable, because even if the interest of an applicant country remains stable, luck will be a factor in whether this country meets this criterion or not.

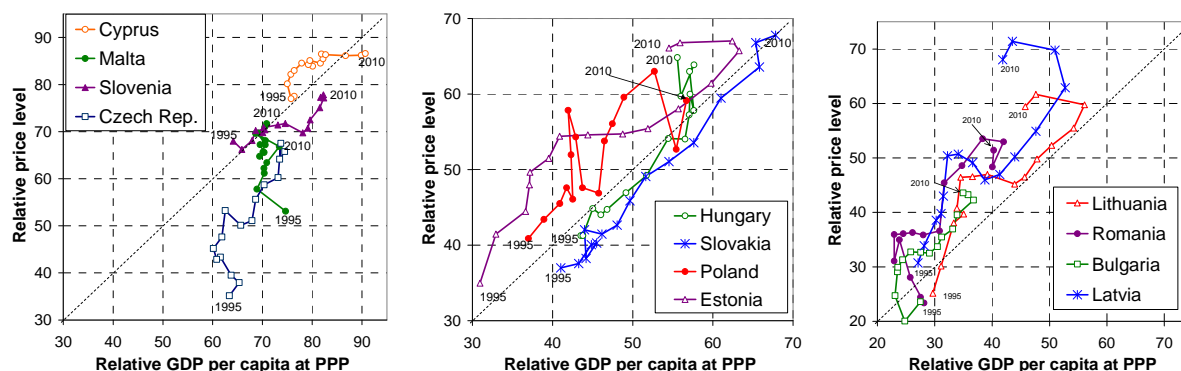
2.5 KEY CHARACTERISTICS OF NEW EU MEMBERS STATES: CRITERIA ARE INCONSISTENT

A salient feature of the economic developments of the NMS is their catching up in terms of GDP per capita and the associated price level convergence (*Figure 3*). A well established fact in economic development (which is partly the consequence of the so-called ‘Balassa-Samuelson effect’) is that richer countries tend to have higher price levels expressed in a same currency and therefore the overall inflation rate in the catching-up countries is higher and/or their nominal exchange rate appreciates as they close the gap.⁷ This effect results in higher inflation if the exchange rate is to be kept stable. Such inflation is structural and not a reflection of unsustainable policies. While this effect was present in some current euro-area member countries, the effect is much stronger in the NMS and hence it is much harder for them to meet the inflation criterion than it was for earlier applicants, unless they revalue the exchange rate as Slovakia did (*Figure 4*). However, continuous appreciation of the currency, while not against the letter of the treaty, questions the usefulness of the exchange-rate criterion, as its rationale must have been to demonstrate that a country can live with exchange-rate stability. Furthermore, the case of Slovakia clearly highlights the internal inconsistency of the convergence criteria.

⁷ See Égert, Halpern and MacDonald (2006) for a survey of research on the equilibrium development of real exchange rates of transition economies.

Figure 3

GDP per capita and price level (euro area 12 = 100), 1995-2010



Note: Countries are ordered according to their GDP per capita in 1995. 2010 values were calculated the following way: forecast for GDP per capita, PPP exchange rate and inflation are from the IMF October 2009 WEO; nominal exchange rate is actual data from 1 January till 17 March 2010 and the 17 March 2010 values are assumed to be unchanged for the rest of the year.

Source: Author's calculation using data from Eurostat and ECB.

Figure 4

The Slovak koruna against the euro and the ERM-II band, 1999-2008



Note: A decrease in the exchange rate indicates appreciation of the koruna against the euro. The horizontal lines the central parity and the edges of the exchange rate band. The width of the exchange rate band was ± 15 percent.

Source: ECB.

We should also highlight that the first three NMS that joined the euro area, Slovenia, Cyprus and Malta, already had relatively high price level and GDP per capita compared to the euro area, which have lessened the need for price level convergence. Consequently, the speed of their economic catching up and price level convergence was subdued compared to the speed of the less developed NMS as reflected in the second and third panels of *Figure 3*.

Another important characteristic of the NMS is that they are small and open economies and are exposed to potentially volatile capital inflows. Under their circumstances exchange rate fixity removes almost all tools of an effective inflation control, as neither financial regulation and supervision, nor fiscal policy can control properly domestic demand and inflation, as the pre-crisis experiences clearly demonstrate (Darvas and Szapáry, 2008). And the crisis has also demonstrated that even the currencies of those countries that are regarded less vulnerable (eg Czech Republic and Poland) can also depreciate sharply.

2.6 IMPACT OF THE CRISIS: ASYMMETRY, BUSINESS CYCLE DEPENDENCE, AND HIGH STAKES

Nevertheless, before the crisis and in the first few months of it, we shared the view that not all criteria should be reviewed, restricting ourselves to advocating a change to the misguided interpretation of the inflation criterion mentioned above (Darvas and Szapáry, 2008; Darvas, 2008). But the crisis has prompted a rethink of many positions, and we ought to rethink the euro-area entry criteria too, because serious asymmetry exists and serious issues are at stake.⁸

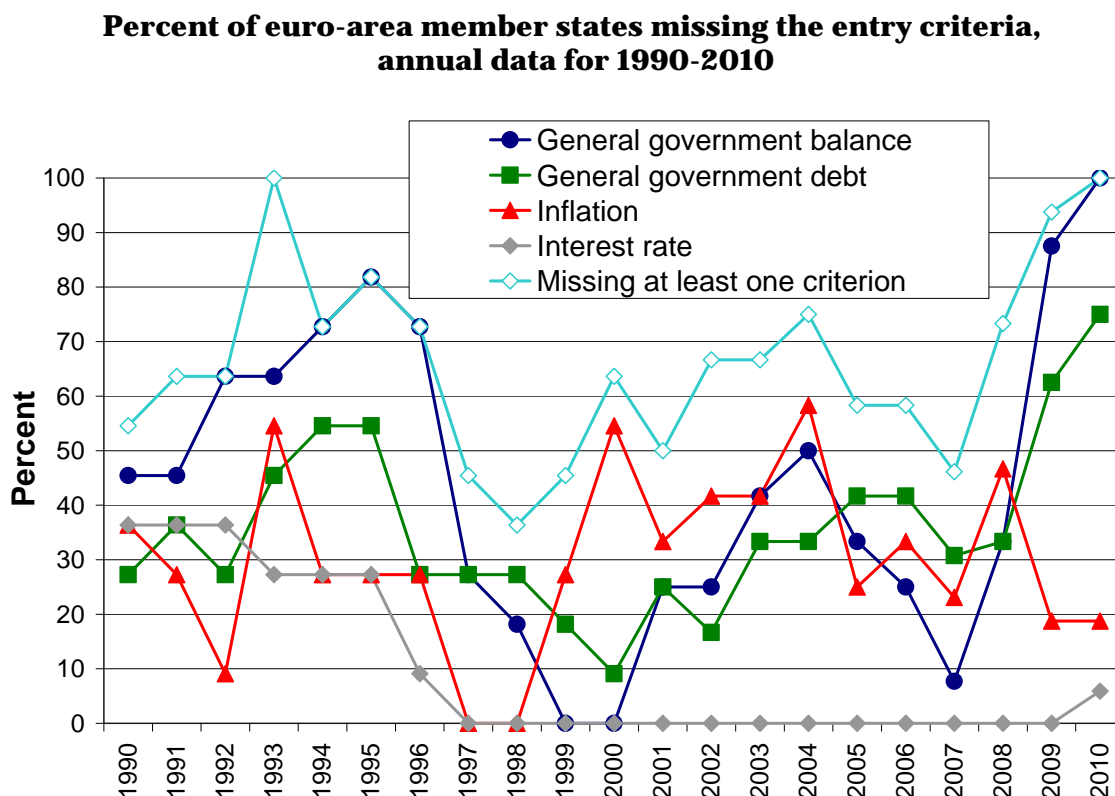
Asymmetry. Once a country is inside the euro area, it can do almost anything it likes. The Stability and Growth Pact in principle limits the scope of government action inside the euro area, but not much, as many examples show, both in the pre-crisis period but especially during the crisis. *Figure 5* indicates that about 50-60 percent of euro-area member countries have violated at least one entry criterion between 1999 and 2008.⁹ In response to the crisis, government deficits and debt are ballooning in euro-area countries, but countries wishing to

⁸ Most economic arguments in this section first appeared in Darvas (2009a).

⁹ The entry criterion for government budget positions is the absence of an excessive deficit procedure (see Box 1). Calculations behind the figure assume a pragmatic definition of the government debt criteria (see details in the note to the figure) and use the three percent deficit benchmark. The figure is based on currently available data – at the time of evaluation, real time data was used; this has been revised in some cases (in Greece in particular).

join are subjected to extremely tough and painful measures if they are, in a few years, to be considered eligible.¹⁰

Figure 5



Note: The percentages are calculated from the actual euro-area member states in each year (and the first eleven members before 1999): from 1995 to 2000 the 11 countries that introduced the euro in 1999; in 2001 Greece is added as the 12th country; in 2007 Slovenia is added as the 13th country; in 2008 Cyprus and Malta are added as the 14th-15th countries; for 2009-2010 Slovakia is added as the 16th country. Definition of meeting the general government debt criterion: a country is considered to meet the criterion if either the debt/GDP ratio is below 60 percent or, if above, then projecting the average change in debt/GDP ratio of the latest three years twenty years ahead will lead to a ratio below 60 percent. Three percent is used for the budget deficit criterion. The three EU countries (considering the actual members of the EU of the given year) with the lowest inflation rate were used to determine the inflation and interest rate criteria up to 2008; for 2009 and 2010 we excluded those countries that had an inflation rate lower than two percentage points the euro-area average. The interest rate criterion for 2010 considers data for January-July 2010.

Source: Author's calculation based on data from Eurostat (data up to 2008), European Commission (data and forecast for 2009 and 2010), and ECB (monthly interest rate data till July 2010).

¹⁰ According to the findings of Darvas, Rose and Szapáry (2007), this will impact business cycle synchronisation as well, ie fiscal divergence will likely decrease business cycle synchronisation.

The countries that have joined the euro area were judged to have achieved a “*high degree of sustainable convergence*”. The large number of violations after euro-area entry suggests that the criteria are inadequate for judging “*sustainable convergence*”. This fundamentally calls into question both the economic and moral foundations of the future application of the current entry criteria.

The asymmetry also highlights that the capacity to meet the current entry criteria depends on the business cycle, which is a highly unfavourable property. Suppose, for example, that Slovakia applies for euro-area membership a year later and hence is evaluated in the spring/summer of 2009 instead of the spring/summer of 2008. Slovakia would have been rejected in 2009 because of the general government balance criterion, though fiscal policy has not become ‘irresponsible’ between 2008 and 2009. Also, all regional floating currencies, the Polish zloty, the Czech koruna, the Hungarian forint and the Romanian leu experienced serious pressures and significantly depreciated against the euro between the summer of 2008 and the spring of 2009. The Slovakian koruna may also have come under pressure at that time without a sure prospect of euro-area entry. This in turn may have qualified it for “*severe tensions*” status according to the letter of the treaty, putting the evaluation of the exchange-rate criterion at risk, and the tensions may have increased government bond yields, putting the fulfilment of that criterion at risk as well.

Business cycle dependence is the result of the fact that the two budgetary criteria (deficit and debt) are phrased in absolute terms (the inflation and interest rate are phrased in relative terms). Business cycle dependence implies that most countries can join only in good times, which does not make much sense: meeting the criteria in good times obviously does not tell one much about long term sustainability, as *Figure 5* has also demonstrated.

Estonia’s chances also depend on the business cycle but the opposite way: it could not join in ‘good times’ because of the inflationary pressures (see Darvas, 2009b). But the drop in GDP of about 17 percent in 2008 and 2009 led to deflation and the government squeezed the budget in the midst of this extremely deep output contraction. These developments were needed to assess the achievement of ‘sustainable convergence’ positively.

High stakes. One may say that the new applicants should have pursued policies similar to those of the five newest euro members. However, the stakes are much higher now than just naming and shaming. For example, the Latvia and Lithuania, which aim to join the euro area as soon as possible, are in a deep trouble and the current misery is not only their own fault (Darvas, 2009b). A Baltic exchange-rate peg failure or a prolonged recession and a halted economic catch-up would not just cause further pain for the populations of these countries. It could undermine trust in the notion of common European values, and lead to a new divide within Europe (Darvas and Pisani-Ferry, 2008). Western European investors in the Baltic countries would also be caused heavy losses. If the Baltic countries do not recover, this will

impact the EU's role as driver of reform in other NMS as well as in the neighbourhood countries.

2.7 THE PROPOSAL AND ITS IMPLICATIONS: THE EURO-AREA AVERAGE IS A GOOD BENCHMARK

It would be tempting to drop one or the other criterion. For example, Buiter (2005) argues that “achieving fiscal sustainability prior to adopting the euro is essential and it is the only truly necessary condition for euro adoption. It should also be a sufficient condition for Eurozone membership.” But there are two fundamental problems with this proposal. First, it is difficult to measure fiscal sustainability, and second, a radical overhaul of the criteria would require changing some key articles of the treaty.

Ideally, the fiscal criterion should require fiscal sustainability by necessitating that the forecast path of government debt will remain below a certain threshold (as a percent of GDP) in the medium and long run. This would allow automatic stabilisers to operate, and discretionary fiscal stimulus during crisis, but would also necessitate counter-cyclical tightening during good years. It would also consider contingent liabilities of the public sector related to, eg aging and the numerical requirements may be also different in countries facing different fiscal risks.¹¹ However, such a criterion is difficult to formulate in simple terms and the forecasts can always be debated.¹²

As regards changing some key articles of the treaty, this should be possible, but seems highly unlikely. Consequently, any reform should be considered within the legal framework of the current treaty. There is a room for interpretation of the articles of the current treaty. Even more importantly, the treaty includes an obligation for the Council to lay down the details of the convergence criteria referred to in a main article of the treaty, this Council decision replacing the relevant protocol to the treaty. The same obligation exists for the protocol on the excessive deficit procedure (see details in the next section). Consequently, it is possible to strengthen the economic foundations of the numerical requirements of the current four convergence criteria relatively easily, ie with a unanimous decision of the Council.

¹¹ Eg the crisis has underlined that countries with a large financial sector or with rapid pre-crisis credit growth faced experienced more rapid increases in government debt.

¹² An example of longer term projections is presented eg in European Commission (2010); see Graphs I.3.5, I.3.6, I.3.7, and I.3.8 on pages 63-64 for two projections of the government debt to GDP ratio up to 2020: one assuming no consolidation on top of fiscal stimulus withdrawal, and the other assuming an annual 0.5 percentage point of GDP consolidation.

Economic theory does not provide clear guidelines about how to determine the magnitudes, but a few principles can be laid down. A good and straightforward solution would be to relate all criteria to the euro-area average for at least five reasons:

- First, all prospective applicant countries are highly integrated into the euro area, and hence what happens inside matters a lot for those outside. This applies both to the inflation rate and also to the general economic outlook, which has an impact on budget deficits both in the euro area and in applicant countries.¹³
- Second, it would abolish the peculiar possibility that non-euro-area countries or very small countries with which the applicant has virtually no trade may affect the criteria.
- Third, it would alleviate the asymmetry of letting the automatic stabilisers run and helping the economy with discretionary stimulus in euro-area countries while doing the painful opposite of this in applicant countries during a crisis.
- Fourth, it would remove the unfavourable property of business cycle dependence.
- Fifth, as countries in the euro area are declared to have achieved “*a high degree of sustainable convergence*”, the convergence of applicant countries towards the euro-area average seems a natural requirement.

The inflation, interest rate and budget balance criteria should allow some deviation from the euro-area average. NMS are small and open economies characterised by larger cyclical swings, and thus need greater scope for counter-cyclical fiscal policy. Moreover, the need for public sector investment is greater than in old EU member states. With regard to inflation, NMS have a higher potential growth rate, which implies structural price-level convergence as we have argued in Section 2.5, which should be acknowledged.

One option to allow some deviation from the euro-area average is to define the maximum deviation. For example, the budget balance criterion could be the average euro-area balance minus 1.0 percentage points (all measured as a percentage of GDP) and the inflation criterion could be the average euro-area inflation rate plus 1.5 percentage points. (Whether the deviation should be 1.0 or 1.5 percentage points or another similar number should be the subject of

¹³ Concerning the fiscal criteria, the ideal solution would be the assessment of fiscal sustainability as we have already discussed, and our simplified proposal –relating the criteria to the euro-area average– has some drawbacks. For example, the elasticities of revenues and expenditures to economic activity are different across countries. In some of the countries the budget deficit has ballooned not just because of the direct impact of economic activity on budget revenues and expenditures, but also because of the bail-out of the banking system. The accounting practices concerning state-owned enterprises as well as possible privatisation revenues may also have an impact on actual deficit and debt figures. However, in our view the overall impact of these complicating factors are dwarfed by the general impact of economic activity on budgetary positions.

discussion.) Another option is to require that the applicant has better statistics than, say, 25 percent of euro-area members.

To check the rationale of our suggested inflation criterion for the US metropolitan areas, we have also calculated hypothetical violations, when the 1.5 percentage point is added to the average US inflation rate. In contrast to the large number of violations shown in *Figure 1*, in this case the average violation for 1916-2009 is 11 percent, for 1970-89 is 10 percent and for 1990-2008 is 4 percent. Thus US metropolitan areas would reasonably well satisfy our suggested criterion, but seriously violate the criterion currently used in the EU to assess suitability for euro area entry.

The requirement for the ratio of government debt to GDP could simply demand that this ratio does not exceed the euro-area average (or it is lower than in at least 25 percent of euro-area members), unless the ratio is diminishing sufficiently and approaching the euro-area average at a satisfactory pace.

In order to ensure that meeting the reformed criteria better reveals sustainable convergence than the original criteria, the compliance period could be increased from the currently considered one year to the average of the latest two or three years.

Would this change jeopardise the stability and credibility of the euro area? Certainly not. There would still be criteria (but more sensible ones) to keep applicants on their toes. Furthermore, in good times the new criteria would be tougher. For example, when the budget is balanced in the euro area, then the new criterion would (rightly) require a better budget position from the applicants. The most important threat to the stability of the euro area is the lack fiscal sustainability – this is a real threat for many countries currently inside the euro area, but potential applicants have much lower government debt-to-GDP ratios (except Hungary) and are undoubtedly much better prospects in this regard.¹⁴ And in any case the EU's surveillance system needs a fundamental revision to ensure stability and growth in the whole EU.

Furthermore, prospective applicants from the NMS would make up a very small share of the total euro area, and their inclusion would hardly be noticeable in euro-area aggregates. The argument that inflation will be higher in the euro area after admitting countries in which the Balassa-Samuelson effect is persistent, and hence inflation must be lower in old member states

¹⁴ In financially integrated catching-up economies the relationship between the interest rate and the GDP growth rate tends to be more favourable than in advanced economies. For example, in all new EU member states the interest rate was below the GDP growth rate considering the average of 2001-2007, ie before the crisis. While GDP growth will likely be reduced after the crisis and the interest rate may be higher, the relationship between these two variables will arguable remain more favourable than in EU-15 countries (see Bruegel and WIIW, 2010).

in order to meet the ECB's inflation target for the euro-area average, is offset by the magnitudes. According to Darvas and Szapáry (2008), the impact of the proposed modification of the inflation criterion on euro-area average inflation would be less than an additional 0.05 percent per year – a magnitude well within the measurement error of inflation rates.

Would the revision of the convergence criteria undermine the trust in EU rules? Clearly not. The 'flexible' interpretation of the criteria at many previous euro-area admissions (see the next section) should have already undermined public trust in the process of euro-area enlargement. On the contrary, revising the criteria to be more economically rational and to have less scope for discretionary interpretation would even strengthen the trust.

Would it be difficult to reach a consensus among the 27 member states on this particular change? We think not. Countries outside the euro area would certainly support it. Countries inside would feel more comfortable having rules that make more sense. The goal is not to weaken the euro-entry criteria but to make them more sensible. The change should be carefully orchestrated and initiated by euro-area member states or European institutions, not applicant countries.

3. LEGAL OPTIONS UNDER THE CURRENT TREATY FOR INTERPRETING EURO-ENTRY CRITERIA IN ECONOMIC TERMS

A key question is whether the letter of the treaty and the precedents provided by the previous applications of euro-area entry criteria allow a more flexible interpretation of rules in order to require more sensible criteria from future euro-area applicants.

3.1 EURO-AREA MEMBERSHIP: ROOM FOR INTERPRETATION AND FOR REVISION OF MEASUREMENT

First of all it is important to recall that for three countries (Finland, Italy and Slovenia) it is not unambiguous from a legal point of view whether or not the exchange-rate criterion was met. The treaty included and continues to include the following requirement: "the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years" and the protocol added that "...for at least two years before the examination"¹⁵ (without devaluing its currency on the initiative of the member state concerned). The most neutral interpretation of this regulation is that participation in the

¹⁵ All citations of the treaty and the protocol annexed to it are taken from the Lisbon 'Treaty on the Functioning of the European Union. Consolidated version' (Official Journal C 115 of 9 May 2008). The Maastricht and the Nice versions have the same wording, but the numbering of the articles is different.

exchange-rate mechanism (ERM) is required for at least two years before the examination. Neither the treaty, nor its protocol provided any waiver from the requirement for the minimum period of two years. The three countries mentioned did not spend the minimum two-year period prior to the examination in the exchange-rate mechanism. The 3 May 1998 decision of the Council of course recognised this, but decided in any case:

“Italy fulfils the convergence criteria mentioned in the first, second and fourth indents of Article 109j(1); as regards the criterion mentioned in the third indent of Article 109j(1), the ITL, although having rejoined the ERM only in November 1996, has displayed sufficient stability in the last two years. For these reasons, Italy has achieved a high degree of sustainable convergence.”

(Official Journal of the European Communities, 1998, p. 32. The article number refers to the treaty in force in 1999. The first, second and fourth indents cited refer to the criteria on inflation rate, excessive deficit procedure and long term interest rate, respectively.

The decision for Finland used the same wording except that Finland joined the ERM in October 1996.)

For the other nine countries different wording was used, eg for Belgium: “*Belgium has achieved a high degree of sustainable convergence by reference to all four criteria.*” The same wording was used for the other eight countries that had participated for at least two years in the ERM.

Consequently, the Council decision of 3 May 1998 recognised the absence of the two-year period in the ERM, but despite this the Council assessed, based on the recommendation of the Commission and the EMI (European Monetary Institute), that the two countries had a stable exchange rate. One may say that the decision was in line with the spirit of the treaty, but it is far from being obvious whether the letter of the treaty was also fully respected. This ‘flexible’ interpretation of the treaty should be noted as providing a precedent.¹⁶

On other occasions it was rather questionable if the spirit of the treaty was satisfied, though the letter of the treaty was formally respected. Regarding the government budgetary position the letter of the treaty requires the absence of an excessive deficit procedure (EDP), which is decided on the basis of the ratios of government deficit and debt to GDP. For the latter, the treaty allows a discretionary decision if “*the ratio is sufficiently diminishing and approaching*

¹⁶ A possible alternative interpretation is that ERM participation is not required, but only exchange-rate stability. In this case Bulgaria may immediately apply for euro-area membership as it is not a member of the ERM but its exchange rate is fixed to the euro without allowing any volatility.

the reference value", ie 60 percent of GDP, "*at a satisfactory pace*" (Box 1). On 1 May 1998 the Council abrogated the EDP against seven countries that joined the euro area in 1999, the decision being substantiated by the discretionary options allowed by the treaty. However, it was questionable whether, eg the decline of Italy's general government debt-to-GDP ratio from 124.9 percent of GDP in 1994 to 121.6 percent by 1997¹⁷ corresponded to the cited requirement. Similar doubts could be raised for some other countries regarding the abrogation of the EDP.¹⁸

To sum up, the application of the treaty provides three precedents where formal adherence to the exchange-rate criterion was suspicious. There were some occasions where countries were allowed to join by formally meeting all the criteria, but these were the results of questionable exercising of the discretionary options allowed by the treaty with respect to the budgetary criterion.

These precedents are encouraging for the prospects of new applicants, but only if these past 'flexible' practices are also applied in the future.

Having reviewed some key features of the past application of the treaty, let us now look at the flexibility offered by the letter of the treaty and its protocol for future euro-area applicants.¹⁹

1. Inflation. The inflation criterion is benchmarked against "*the three best performing countries in terms of price stability*" (Box 1), and there is nothing in the treaty that would hinder the ECB and the European Commission from interpreting the three best performers as the three countries having inflation rates (1) either below or close to two percent, or (2) the closest to the average inflation rate of the euro area.

2. Excessive deficit. The room for manoeuvre is 'moderate' for not opening an EDP or for abrogating a previously-opened EDP when the budget deficit exceeds three percent (Box 1). However, the phrases "*exceptional*", "*temporary*" and "*close*" are not defined in the treaty, nor in its protocol. EDPs were typically opened for budget deficits somewhat above three percent of GDP²⁰, but this does not at all mean that "*close*" must be defined this way. The crisis is clearly exceptional and under exceptional circumstances, temporariness could last for a few years.

¹⁷ These figures were used in the 1998 assessment, but have been revised somewhat since then.

¹⁸ Some authors, eg Buiters (2005) and De Grauwe (2009), regard these cases as violations of the letter of the treaty as well.

¹⁹ We do not discuss here the non-numerical criteria (eg the current-account balance; see Box 1), because these additional criteria have never been binding constraints of euro-area admission.

²⁰ The second criterion of the EDP refers to gross government debt (Box 1). However, the precedents of letting countries to join with very high ratios must imply that this criterion will not be binding for any prospective applicants having debt ratios above 60 percent but below Italy's and Belgium's approximately 120 percent ratios at the time of their euro area admission.

Consequently, there is some room for manoeuvre, but a proper interpretation of closeness at a time of a deep crisis will require an open attitude similar to past ‘flexible’ practices.

3. Exchange rate. The precedents for the assessment of this criterion must imply that this criterion is not really binding. The ‘flexibility’ shown so far (eg Italy, Finland, Slovenia and Slovakia) should be extended to future applicants. There is, however, an unsolved issue regarding this criterion: the conditions for joining the ERM-II. Without ERM-II membership a country can not join the euro area even if it has a stable exchange rate and meets all other criteria.²¹ There should be clear and transparent criteria for joining the ERM-II.

4. Interest rate. In principle, the long-term interest-rate criterion serves as a means to assess the sustainability of the low inflation rate. In practice, however, this criterion reflects the credibility of the euro-area accession process: when markets attach a high probability to eventual euro-area accession, interest rates will converge, at least to some extent, regardless of the longer-term sustainability of the inflation rate. The two percentage point deviation allowed by the treaty will almost surely also be sufficient for future euro-area applicants where euro-accession prospects are credible. Whenever economic reasoning supports future euro introduction, European policymakers can increase the credibility of applicants’ path toward the euro.

To sum up, there is indeed some room for manoeuvre in the treaty and in its *current* protocol regarding formal inclusion in the euro area. But more importantly, the Council has an obligation to clarify the four convergence criteria and replace the current protocol:

“The Council shall, acting unanimously on a proposal from the Commission and after consulting the European Parliament, the ECB as the case may be, and the Economic and Financial Committee, adopt appropriate provisions to lay down the details of the convergence criteria referred to in Article 140(1) of the said Treaty, which shall then replace this Protocol.”
(Article 6 of Protocol 13)

The same obligation exists in the treaty to clarify the details of the excessive-deficit procedure that will replace the protocol annexed to the article discussing the EDP. In the case of the EDP, some of the procedures have been detailed, but even the Lisbon version of the treaty includes the reference to the Council’s authority to adopt appropriate provisions. It is time to spell out the details of the convergence criteria and of the EDP, to strengthen the

²¹ For example, Bulgaria has a fixed exchange rate to the euro and all official documents emphasise the overriding goal of euro introduction as soon as possible. Yet Bulgaria is not a member of the ERM-II and it is difficult to fathom why for an outsider given the current lack of transparency of entry conditions.

economic rationale of the convergence criteria. In particular, the numerical criteria should be benchmarked against the euro-area average as discussed in the previous section. As has recently been noted by von Hagen and Pisani-Ferry (2009): “*the criteria for joining the euro area were introduced in order to ensure that economic logic prevails over political logic, not that legal logic prevails over economic logic*” (p. 25). It is strongly in the European interest to follow this principle.

3.2 UNILATERAL EUROISATION: NOT ADVISABLE

The Council, the Commission and the ECB have repeatedly ruled out the possibility of unilateral introduction of the euro (as legal tender) on the basis that the treaty provides one and only one way to the euro. Therefore, for political reasons it would not be wise to implement a unilateral move which would earn the clear disapproval of European policymakers, which is the current reality. Furthermore, without ECB support, this would be very difficult to do in technical and practical terms. If the unilateral move did not gain credibility, people could start to withdraw their deposits and various other financial assets in cash euros. The banking system may not be able to supply as much euro cash as required, which may lead to a breakdown of the financial system. To take a Latin American example, FitchRatings (2009) argues that in the dollarised Ecuador a rapid decline in bank deposits or accelerated capital flight, combined with limited access to external financing, could lead to a crisis driven exit from dollarisation.

4. CONCLUDING REMARKS

The economic foundations of the current euro-area entry criteria are fundamentally called into question by the fact that it has been a rule rather than the exception that euro-area members have violated the entry criteria since becoming members, both before the crisis and currently. Adherence to the current interpretation of the criteria is also weakened by the precedent of the ‘flexible’ application of the treaty at the time of certain previous admissions to the euro area. Our finding that many US metropolitan areas would fail to qualify to be members of the US monetary union by applying the currently used inflation criterion to US metropolitan areas is also a serious warning signal. Also, the interest rate criterion became extremely volatile due to the adopted interpretation of ‘three best performer EU member state in terms of price stability’. The expansion of the EU from 15 to 27 members also made the rules tougher and hence, contrary to common perception, keeping euro-area entry rules unchanged violates the equal treatment principle in the economic sense. As Halpern (2003) rightly pointed out, the

‘equal treatment principle’ has three major requirements (legality, fairness, and economic rationality), and a mechanical interpretation of this principle considering certain legal aspects only does not address the requirements of fairness and economic rationality.

Some special characteristics of most NMS, their process of economic and price level catching up and their small and open economies, highlight the internal inconsistency of the criteria, especially in an environment of high level capital mobility. It is also highly unfavourable that a country's ability to meet the current criteria depends on the business cycle: most countries can join only in good times, while the case of Estonia is the opposite. Business cycle dependence does not make sense and meeting the criteria at a certain date does not ensure sustainability.

The crisis has highlighted a serious asymmetry between insiders and outsiders and the stakes are much higher now. During the crisis, European officials did nothing to adapt the entry criteria. This resistance to change has disadvantaged countries that were seeking the stability and credibility offered by eventual euro-area membership. A change in attitudes towards euro introduction would also have boosted confidence.

The reform of the criteria could be done on three levels. First, the inflation and the interest-rate criteria are benchmarked on the ‘three best-performing member states of the EU in terms of price stability’, which has been interpreted as the three EU countries with the lowest, but non-negative inflation rates up to 2009, and ‘the lowest, even if negative, but not lower by a wide margin than the average of the euro-area’ in the 2010 assessment. Apart from the serious drawbacks of considering a measure of the lowest inflation rate countries, this change in interpretation introduced arbitrariness to these two criteria. Nothing would prevent the Commission and the ECB from interpreting it differently, for example, by selecting the three countries that have inflation rates closest to the average of the euro area. Second, there is a way to reform the measurement of the four criteria within the framework of the current Treaty with a unanimous decision of the Council. A good solution would be to relate all criteria to the average of the euro area and simultaneously to extend the compliance period from the currently considered one year to the average of two or three years. Third, a formal Treaty change would enable a more fundamental revision.

Two decades after the criteria were designed and more than one decade since the euro was launched, it is time to reform the criteria and to strengthen their economic rationale. This should be done, of course, in parallel with enhanced surveillance and economic policy coordination, including the reform of the Stability and Growth Pact, to ensure the better functioning of the euro area.

REFERENCES

- Bruegel and WIIW (2010), 'Whither Growth in Central and Eastern Europe? Policy lessons for an integrated Europe', report written by Torbjörn Becker, Daniel Daianu, Zsolt Darvas, Vladimir Gligorov, Michael Landesmann, Pavle Petrovic, Jean Pisani-Ferry, Dariusz Rosati, André Sapir and Beatrice Weder Di Mauro, to appear as a Bruegel Blueprint
- Buiter, Willem H. (2005) 'To purgatory and beyond; When and how should the accession countries from Central and Eastern Europe become full members of the EMU?' In: Breuss, Fritz and Hochreiter, Eduard, (eds.) *Challenges for Central Banks in an enlarged EMU*. European Community Studies Association of Austria Publication Series . Springer-Verlag, New York, p. 145-186.
- Darvas, Zsolt, Andrew K. Rose and György Szapáry (2007), 'Fiscal Divergence and Business Cycle Synchronization: Irresponsibility is Idiosyncratic', in: Frankel, J.A. and C. Pissarides (eds.): *NBER International Seminar on Macroeconomics 2005*, MIT Press: Cambridge, MA, 2007, pp. 261-298.
- Darvas, Zsolt (2008), 'Should the crisis be the trigger for a reshaping of euro-area entry rules?' VoxEU.org, 11 November 2008
- Darvas, Zsolt (2009a) 'Treaty change is needed to make sense of euro-area entry criteria', VoxEU.org, 23 July 2009
- Darvas, Zsolt (2009b) 'The Baltic challenge and euro area entry', Bruegel Policy Contribution 2009/13.
- Darvas, Zsolt and György Szapáry (2008) 'Euro area enlargement and euro adoption strategies', *European Economy – Economic Papers* 304, Directorate-General for Economic and Financial Affairs, European Commission, Brussels. To appear as a chapter in: Buti, Marco, Servaas Deroose, Vitor Gaspar and João Nogueira Martins (eds.), *Euro-The First Decade*, Cambridge University Press, forthcoming.
- Darvas, Zsolt and Jean Pisani-Ferry (2008) 'Avoiding a new European divide', Bruegel Policy Brief 2008/10
- De Grauwe, Paul (2009) 'The politics of the Maastricht convergence criteria', VoxEU.org, 15 April 2009
- Égert, Balázs, László Halpern and Ronald MacDonald, (2006), 'Equilibrium Exchange Rates In Transition Economies: Taking Stock of the Issues', *Journal of Economic Surveys* 20(2), p. 257-324.
- European Commission (2009) 'European Economic Forecast, Autumn 2009', *European Economy* 10/2009, Directorate-General for Economic and Financial Affairs of the European Commission, Brussels.
- European Commission (2010) 'Convergence Report 2010', *European Economy* 3/2010, Directorate-General for Economic and Financial Affairs of the European Commission, Brussels.
- FitchRatings (2009) 'Dollarization in Ecuador: Regime Change?' *Sovereigns Ecuador Special Report*, May 2009
- Halpern, László (2003) 'Stability and Growth in EU Accession Countries', *Transition – The Newsletter About Reforming Economies*, Vol 14, No. 7-9, p. 7-8.
- Lewis, John and Karsten Staehr (2010), 'The Maastricht inflation criterion: What is the effect of European Union enlargement?' *Journal of Common Market Studies* 48(3), 687-708.
- Official Journal of the European Communities (1998), L 139, Volume 41, 11 May 1998
- Official Journal of the European Union (2008), 'Treaty on the Functioning of the European Union. Consolidated version', C 115, 9 May 2008

- Szapáry, György. (2000), 'Maastricht and the Choice of Exchange Rate Regime in Transition Countries During the Run-Up to EMU', National Bank of Hungary Working Paper, No. 7.
- von Hagen, Jürgen and Jean Pisani-Ferry (2009) 'To the Commissioner for Economic and Monetary Affairs: Priorities for your term of office'. In: Sapir, André (ed) 'Memos to the New Commission - Europe's Economic Priorities 2010-2015', Bruegel Blueprint

Discussion Papers published in 2010

- Gábor BÉKÉS - Péter HARASZTOSI: Agglomeration Premium and Trading Activity of Firms. MT-DP 2010/1
- TARJÁN Tamás: Jánossy elmélete az új növekedésemélet tükrében. MT-DP 2010/2
- Holger GÖRG - László HALPERN - Balázs MURAKÖZY: Why Do Within Firm-Product Export Prices Differ across Markets? MT-DP 2010/3
- KOZAK Anita - SERES Antal - SZABÓ Márton: Sikeres kisárutermelők és egy sikeres termelési, értékesítési rendszer a zöldség-gyümölcs ágazatban. MT-DP 2010/4
- András SIMONOVITS: Tax morality and progressive wage tax. MT-DP 2010/5
- Peter CZIRAKI - Peter de Goeij - Luc Renneboog: Insider Trading, Option Exercises and Private Benefits of Control. MT-DP 2010/6
- LACKÓ Mária: A rossz magyar egészségi állapot lehetséges magyarázó tényezői; összehasonlító makroelemzés magyar és osztrák adatok alapján, 1960-2004. MT-DP 2010/7
- Gusztáv NEMES: Environmental Governance in Hungary Rural Development Policies and Social Learning during the Implementation of EU Agri-Environmental Policies - A Case Study. MT-DP 2010/8
- KOVÁCS Ilona: A hazai jövedelemeloszlás és jövedelemegyenlőtlenség mérése és elemzése személyi jövedelembevallási adatok alapján. MT-DP 2010/9
- SERES Antal: A részmunkaidős foglalkoztatás tendenciái és terjedésének tényezői az Európai Unióban és Magyarországon. MT-DP 2010/10
- Ilona KOVÁCS: Measuring and analyzing income distribution and income inequality in Hungary based on data from personal income tax returns. MT-DP 2010/11
- László PAIZS: Asymmetric competition in the setting of diesel excise taxes in EU countries. MT-DP 2010/12
- Mária CSANÁDI: Institutional Reactions to the Impact of Global Crisis at Source and Destination Cities of Migration in China. MT-DP 2010/13
- Mihály LAKI: The Evolution of the Market of the Hungarian Printing Industry after 1989: The End of a Success Story? MT-DP 2010/14
- Jenő KOLTAY: Labour Relations and Multinational Companies in Hungary: between Home Country - Host Country Effects and Global Tendencies. MT-DP 2010/15
- VINCE Péter: A verseny alakulása a liberalizáció után az energiaszektorban. MT-DP 2010/16
- Parantap BASU - Max GILLMAN - Joseph PEARLMAN: Inflation, Human Capital and Tobin's q. MT-DP 2010/17
- László Á. KÓCZY - Martin STROBEL: The World Cup of Economics Journals: A Ranking by a Tournament Method. MT-DP 2010/18
- Zsolt DARVAS - Jakob von WEIZSÄCKER: Financial Transaction Tax: Small is Beautiful. MT-DP 2010/19
- László Á. KÓCZY: Prospects after the voting reform of the Lisbon Treaty. MT-DP 2010/20

Zsolt DARVAS: Fiscal Federalism in Crisis: Lessons for Europe from the US. MT-DP
2010/21