



## **FULFILLMENT OF MAASTRICHT CONVERGENCE CRITERIA AND THE ACCEDING COUNTRIES**

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THE ACCEDING COUNTRIES

Abstract

This paper first touches upon the definition and purpose of the Maastricht convergence criteria, and next analyses the rules, procedures, methodology and interpretation of meeting the Maastricht convergence criteria. It is shown how acceding countries presently fulfill the Maastricht convergence criteria and how the present EMU countries complied with them at a comparable time distance before their own entry in EMU. Some of the related issues, such as monetary and fiscal policy, coordination among economic policies and relationship between nominal and real convergence are dealt with only as much as they have a bearing on the fulfillment of the Maastricht convergence criteria.

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## **Introduction**

In May 2004 ten acceding countries will join the EU and start the formal process of monetary integration, leading ultimately to the adoption of the euro. As a first step, they will have to join the European exchange rate mechanism ERM2. In the period of participation in ERM2, Maastricht convergence criteria which are a precondition for joining the European monetary union (EMU) and adopting the euro, will have to be fulfilled. This paper first touches upon the definition and purpose of the Maastricht convergence criteria, and next analyses the rules, procedures, methodology and interpretation of meeting the Maastricht convergence criteria. It is shown how acceding countries presently fulfill the Maastricht convergence criteria and how the present EMU countries complied with them at a comparable time distance before their own entry in EMU. Some of the related issues, such as monetary and fiscal policy, coordination among economic policies and relationship between nominal and real convergence are dealt with only as much as they have a bearing on the fulfillment of the Maastricht convergence criteria.

## **Definition and purpose of the Maastricht convergence criteria**

Maastricht convergence criteria are measures of readiness of countries for joining EMU (European monetary union) and thus for the adoption of the single currency, the euro. They are defined in the Treaty on European Union of 1992, known as the Maastricht Treaty, so this is how they got their name. They are first defined in the text of the Treaty (Article 121), and further with more precision defined in the Protocols to the Treaty. Formally there are four, but actually there are five convergence criteria, as one of them – government budgetary position – is measured by two convergence criteria. Maastricht convergence criteria can be divided in three monetary and two fiscal convergence criteria. Overall they measure nominal convergence, degree of harmonization of macroeconomic – fiscal and monetary – policies. Countries candidates for joining EMU must comply with all five Maastricht convergence criteria in order to qualify for the adoption of the euro. Apart from nominal convergence there is also real convergence, defined as a catching-up in economic development, measured by the level of GDP per capita, or sometimes as economic reforms, institutional and structural changes needed for the catching-up process. Real convergence is not a formal precondition for joining the euro area, although certain level of achieved real convergence is

welcome or expected. Maastricht convergence criteria can be split into three monetary and two fiscal convergence criteria.

1. Inflation: Annual inflation rate should not exceed the reference value which is defined by the average of the inflation rate of the three EU member countries with the lowest inflation rate by more than 1.5 percentage points. Considering that the level of inflation in the three countries with the lowest level of inflation is changing in time, the reference value of the Maastricht criterion on inflation also changes in time. Currently it is around 2.7%. Candidates for the entry in EMU whose annual inflation rate exceeds this reference value, do not meet the convergence criterion on inflation.
2. Interest rate: Long-term interest rate should not exceed the reference value which is defined by the average long-term interest rates of the three EU member countries with the lowest inflation by more than 2 percentage points. Considering that the level of long-term interest rates in the three countries with the lowest inflation rates is changing in time, the reference value of the Maastricht criterion on interest rate also changes in time. Currently it is around 6.1%. Long-term interest rate is calculated on the basis of the yield to maturity of the ten-year government bonds, which have a significant share in trading on the capital market.
3. Stability of the exchange rate: The currency has to participate for at least two years in the European mechanism of exchange rates ERM2, and respect the normal fluctuations margins of this mechanism, without severe tensions on the foreign exchange market and without devaluations at its own initiative.
4. Government budgetary position: Government budgetary deficit should not exceed 3% of GDP (except in exceptional circumstances)
5. Public debt: Public debt should not exceed 60% of GDP (or, if it is higher, it should be approaching this reference value with satisfactory speed).

First three are monetary, while the last two are fiscal convergence criteria. These five Maastricht convergence criteria are well known in professional circles, while it is much less known that the Maastricht Treaty also mentions additional convergence criteria, such as the position on the current account of the balance of payments, developments in unit labor costs and other price indices, etc. At this moment it is hard to judge their real weight. They, however, certainly give the EU institutions some additional flexibility and discretion when

evaluating readiness of the countries candidates for the EMU which can be activated in the case of need.

Assessment of the compliance with the Maastricht convergence criteria is based on a precisely defined methodologies and procedures and on officially harmonized data. (For more detailed analysis of the methodological aspects of the Maastricht convergence criteria, see Lavrac and Lavrac, 1996). Evaluation is carried out by the European Commission and the European Central Bank in their Convergence reports, which are the basis for the decision of the relevant EU institutions, concretely European Council, after consulting the European Parliament, regarding readiness of the candidates for the adoption of the euro. Assessment of the compliance with the convergence criteria can be carried out at the request of the candidate country, or regularly every two years. Evaluation on fulfillment of the Maastricht convergence criteria is based on the data of the current or previous year. Between an assessment that a country meets the Maastricht criteria and its effective inclusion in the EMU some time, perhaps at least some months will pass, due to demanding administrative procedures. It can be therefore concluded that a country wishing to adopt the euro should have fulfilled the Maastricht convergence criteria considerably earlier, say at least one year before the planned date of the entry in EMU.

Maastricht convergence criteria are meant only for the EU member countries before their entry in EMU. Compliance with these criteria can be, formally speaking, assessed only after joining the EU. Only then the assessment can be official, based on harmonized data and prescribed methodologies, and only then Maastricht criteria have their true content and purpose. Of course, other countries can not be prevented from calculating how close they are to meeting the convergence criteria, if this suits their promotional purposes, such as building up their self confidence at home or respectability abroad. It can be noted that the acceding countries already some years ago proudly reported how close they were to the fulfillment of the Maastricht convergence criteria, at least some, if not all of them. Even some of the non-accession countries, such as Croatia or Albania, some years ago had the best results in meeting the Maastricht convergence criteria, although it was quite obvious that they were very far away not only from EMU but also from the EU. Each presentation of the results regarding compliance with the Maastricht convergence criteria for the acceding countries before their inclusion in the EU can only be informal and is methodologically questionable, so it can be also misleading (For more on this, see De Grauwe and Lavrac, 1999). In this

phase, before their entry in the EU, there is, nevertheless, a purpose of checking compliance with the Maastricht convergence criteria for acceding countries: a) Based on the degree of fulfillment of the Maastricht convergence criteria, acceding countries can formulate their strategies with respect to the speed of entry in ERM2 and in EMU, and b) Based on the degree of fulfillment of the Maastricht convergence criteria these countries can compare themselves with the EU countries, at a comparable time distance before their entry in EMU.

Maastricht convergence criteria have in fact multiple purposes. The underlying idea has been that formation of monetary union is possible only among countries that have reached sufficient level of nominal convergence, which means harmonization, similarity or approximation of basic macroeconomic policies and their results. By selecting candidates for the inclusion in EMU according to the level of their achieved nominal convergence, they can assure that the single monetary policy will be successful and that the single currency will be stable and strong. Before the introduction of EMU, Maastricht convergence criteria also had an important role to play in deciding when actually to create EMU. Delors plan for the establishment of EMU from 1989 stated that EMU could be introduced as early as in 1997, if sufficient number of the EU member countries complied with the Maastricht criteria. If not, it would have to be introduced mandatory at the latest in 1999. As before 1997 it was obvious that almost no EU member countries fulfilled the convergence criteria, EMU could be created only in 1999. Most of the EU member countries in fact had difficulties with meeting the Maastricht convergence criteria also just before 1999, but with great efforts, some accounting manipulations and certain flexibility in the assessment of the fulfillment of these criteria, they finally succeeded in timely complying with these requirements. As a result, eleven EU member countries (and later, in 2001 as the twelfth also Greece) entered newly created EMU. Some academic economists at that time thought that the main purpose of the Maastricht convergence criteria was to prevent the inclusion of “southern”, financially less stable countries in EMU, which would supposedly endanger stability of the euro and quality of the single monetary policy in EMU. In the first phase, only financially more stable countries would join EMU, particularly those gathered around the German mark, while others would follow later, when they financially matured, i.e., fulfilled the Maastricht convergence criteria. If that really was an unspoken main purpose of these criteria, it certainly failed, as these supposedly problematic countries invested a lot of efforts in meeting the convergence criteria, so that supposedly non-problematic countries had more problems with their fulfillment in the end.

### **Some open issues concerning fulfillment of the Maastricht convergence criteria for the acceding countries**

With regard to the Maastricht convergence criteria an interesting question can be raised: Do they make sense only until the inclusion in the EMU or perhaps also beyond that? The answer to this question is not simple. It can be taken separately for monetary and for fiscal convergence criteria. As regards monetary criteria harmonizing national monetary policies is in principle important only until the inclusion in EMU, as after joining the EMU countries lose their own monetary policies. Inside euro area only single monetary policy is operating which should take care of inflation and interest rate of the euro area and of the exchange rate of the euro externally. It would be pointless to inspect how individual EMU member countries now fulfill the monetary convergence criteria, as the essential mechanisms (monetary and exchange rate policies) are no longer in their hands. The inflation rate and the level of interest rates across the whole euro area are now predominantly determined by the operations of the single monetary policy of EMU. It is also true, however, that local inflation rates and interest rates reflect local factors, similarly as among regions within a state. Local inflation rates are affected by local costs of labor, taxes, etc., and local interest rates are influenced by various risks and related premiums. The fact is that inflation rates and interest rates are different among member countries, also as a result of their differing phases of economic cycles, that these differences are substantial and that some of them today would not fulfill the Maastricht convergence criteria on inflation or interest rates.

With regard to the fiscal convergence criteria the matter is somewhat different. In contrast to monetary policy, fiscal policy remains in the hands of the member states, but it should be limited by the common EU institutions, so that over-expansionary national fiscal policies would not spill over into negative consequences for the single monetary policy and stability of the single currency. This is taken care of by the general principle of excessive budgetary deficits, defined in the Maastricht Treaty and by the Maastricht convergence criteria as their concretization which, however, has its effect only until the entry in EMU. As the question how the fiscal position of the member countries would be controlled and restricted after their inclusion in EMU was raised, in 1997 Stability and Growth Pact (SGP) was adopted which sets rules and limitations to the national fiscal policies even after their inclusion in EMU. In other words, Maastricht convergence criteria are relevant before the inclusion in EMU, while their content and purpose after the inclusion in EMU is taken over by SGP which is stricter,

more precise and sanctioned. EU member countries have to prepare Convergence programs where they explain how they aim at fulfilling the Maastricht convergence criteria, while EMU member countries have to prepare Stabilization programs where they explain how they aim at fulfilling the SGP requirements. Some of the EMU member countries have presently serious problems with meeting the SGP requirements. The EU institutions are facing a dilemma whether they should tolerate this, say by flexible interpretation of the SGP rules, to adjust them to realities or to insist on their strict fulfillment. These decisions have an impact on the position of the acceding countries after their joining the EU and before their inclusion in EMU. If SGP is just a “stupid rule”, as the President of the European Commission expressed himself, what could be said about the Maastricht fiscal convergence criteria and how could the accession countries be asked to strictly comply with them?

In the process of inclusion in EMU, the principle is that the same rules will apply for the new member countries, in this case acceding countries, as they applied for the inclusion of present EMU countries. Before the adoption of the euro, they will have to comply with the Maastricht convergence criteria, as they are defined in the Maastricht Treaty. Two issues can be discussed here: First, will some exemption and generous interpretations regarding the fulfillment of the Maastricht convergence criteria, which were given to some EU member countries before their entry in EMU, be also given to the acceding countries? Second, do equal rules make sense even under the changed circumstances? As regards the first, it can be noticed that at the time of the assessment of the compliance with the Maastricht convergence criteria Italy and Finland had not been participating in the European exchange rate mechanism ERM2 for the whole two years, but the stability of their exchange rates was obviously assessed also on the basis of preceding results or future expected developments. Also in the case of both fiscal convergence criteria some member countries were given the benefits of a flexible interpretation, which – it has to be said – is allowed by the rules. Official representatives of the EU emphasize that for the new member countries there will be no exemptions or softening of the rules, the Maastricht convergence criteria will apply in their strict interpretation. Does the principle of equal rules require that all exemptions given to “old” EMU members should be extended also to “new” EMU members? For the moment there is no definite answer to this question.

As regards the second issue it concerns the question whether formally equal rules actual mean the same rules under changed circumstances. Changed circumstances refer to the fact that the

acceding countries are different, transitional economies, with their institutional and structural specifics. In the case of the Maastricht convergence criteria this reflects in the additional problems of meeting the inflation and/or exchange rate stability convergence criterion, mostly due to the Balassa-Samuelson effect on the appreciation of the real exchange rate, as a consequence of the transitional catching-up, or to the already now large net capital inflows which can further increase before the entry in EMU, due to convergence expectations ("convergence play"). For the fiscal convergence criteria we could as well talk about transition-specific requirements of the fiscal policy, such as needs for catching-up in infrastructure and institutional framework. How much this should be taken into account in the flexible interpretation of the fulfillment of the Maastricht convergence criteria for the acceding countries is a matter of balance of power and negotiations between them and the EU. It is not very likely that the acceding countries would succeed with their arguments.

By changed circumstances we mean also changes in the environment, concretely in the EU and EMU. First, it is a fact that some of the EMU member countries do not respect SGP requirements, yet have not been sanctioned according to SGP rules, but given some relief and more time. Is it in such changed circumstances still right to ask acceding countries to respect strictly the prescribed Maastricht fiscal convergence criteria, if EMU member countries themselves do not respect them? Can we in this case speak of the same rules for the "old" and "new" members? And finally, there is a question whether the convergence criterion on inflation should be adjusted to changed circumstances. With the entry of twelve EU countries in EMU the single currency has been adopted and single monetary policy has been in place since. As a matter of fact there are certain (minor) differences in inflation rates among countries, but they are no longer the result of differences in national monetary policies. They reflect other, primarily local factors (such as labor costs, taxes, etc.). To search among the EMU member countries the three with the lowest inflation rate is in such changed circumstances somewhat problematic, as their low inflations are not the consequence of their prudent monetary policies, which should be the message contained in the Maastricht convergence criteria on inflation, but are the result of other, from the viewpoint of monetary policies independent factors. It would be even more problematic if among the three countries with the lowest inflation we would find those EU member countries which are not (yet) in EMU. Their inflation rates do not have a direct relationship to the inflation rate of the euro-area, so there is no good reason why exactly these countries should determine the reference value of the convergence criterion on inflation which the acceding countries should try to

meet. It would probably make much more sense to seek the basis for the reference value of the convergence criterion on inflation simply in the inflation rate of the euro-area as a whole. Additional problem will arise when acceding countries join the EU. No less than thirteen EU member countries will then be outside EMU and it is very likely that some of them with their low inflation (which may also be the result of some macroeconomic imbalances), will determine the reference value of the convergence criterion on inflation, even without this having any connection to the level of inflation in EMU. Additionally intriguing is the question what should be considered as the lowest inflation (or “best performance in terms of price stability” which is the official formulation). Is it 0%, or perhaps even negative inflation, a deflation? We can assume that in three acceding countries, from May 2004 members of the EU inflation would be, due to specific reasons, even negative. Should the acceding countries before their entry in EMU via convergence criterion on inflation direct themselves to this benchmark and try to come close to the negative inflation rate, while the euro-area would be at the inflation rate of say 2%? Such considerations have led some academic authors to suggestions to modify the Maastricht convergence criterion on inflation, so that it would take account of the changed circumstances. By such modifications, and not by formally applying unchanged rules, factually the same rules should be guaranteed also in the changed circumstances. However, as the convergence criteria are defined in the Maastricht Treaty, it is difficult to change them. This would call for a revision of the Treaty (which requires consensus among the EU member countries).

Fulfillment of the Maastricht convergence criteria should be sustainable which means achieved on a long-term and healthy basis. Sustainability of meeting the convergence criteria is needed so that the candidates for the inclusion in EMU would not, just before the assessment of their readiness for the adoption of the euro, manipulate the data, take extraordinary measures and alike, with the purpose to demonstrate the compliance with the convergence criteria exactly on the target date – date of the evaluation – while shortly afterwards they would again start exceeding the Maastricht reference values. Even though the candidates for the adoption of the euro would in this case at the moment of evaluation fulfill the Maastricht convergence criteria, this would not be in line with the idea and content of the convergence criteria. Such a fulfillment of the convergence criteria would not be considered as sustainable, as it would not be achieved on a longer-term and healthy basis. Of course, it remains questionable how to measure sustainability of meeting the Maastricht convergence criteria. Healthy and long-term nature of compliance with the convergence criteria should

probably be judged on the basis of a set of different economic indicators. Even if one should in general subscribe to the principle of sustainability of fulfillment of the convergence criteria, this opens a wide area of subjective judgment and discretion in the evaluation whether the compliance with the convergence criteria is sustainable or not. It is at this moment hard to assess whether the principle of sustainability of meeting the Maastricht convergence criteria will actually have any significant impact in the inclusion of the acceding countries in EMU.

If we take into account the fact that there are three distinct phases of monetary integration, first in the EU, next in ERM2 and finally in EMU, it remains to be seen when exactly the candidates for the euro adoption have to fulfill the Maastricht convergence criteria. Inclusion in the EU in itself does not require compliance with the Maastricht convergence criteria, but with the so-called Copenhagen criteria. The European Commission has in recent years warned the acceding countries not to rush with fulfillment of the Maastricht convergence criteria, but rather to concentrate on meeting the Copenhagen criteria which are the precondition for the inclusion in the EU. Now that the acceding countries have fulfilled the Copenhagen criteria and their entry in the EU is just around the corner, it is again sensible to ask whether these countries should rush to meeting the Maastricht convergence criteria. Monetary part of the convergence criteria after the entry in the EU does not have to be fulfilled yet, but economic policies in general become the matter of common concern and subject to coordination and surveillance from the part of the EU institutions. Fiscal part of the convergence criteria after the entry in the EU also formally speaking does not have to be fulfilled yet. Substantially in fact it would have to be to the large extent already met, as the new EU members will be subject to the excessive deficit rules. This is in the Maastricht Treaty contained general principle of leading sound public finance in the EU, while the Maastricht fiscal criteria are merely its concretization, to test the stability of fiscal policies of the member countries just before their entry in EMU. Also, after their inclusion in the EU, acceding countries will be subject to certain provisions of the SGP.

Formally speaking, even after the entry in ERM2 the Maastricht convergence criteria do not have to be met yet. In fact, the exchange rate stability convergence criterion can not be fulfilled before two-year participation in ERM2. Convergence criterion on inflation at the time of entry in ERM2 does not have to be met, but the inflation rate should be at least close to the reference value of this convergence criterion, so that the exchange rate could be kept within the rules of this mechanism without problems. When exactly after the inclusion in

ERM2 a country should fulfill the Maastricht convergence criteria is in the first place dependent of how long it plans to stay within ERM2. If it wants to participate in ERM2 for just a minimum required period of two years, it should plan to meet the Maastricht convergence criteria shortly after joining ERM2, or at least one year later (due to above mentioned lags related to availability of the data and administrative procedures in between the evaluation of compliance with the convergence criteria and actual inclusion in EMU). Because of this it is possible that the minimum required period of participation in ERM2 is in fact not only two years, but actually proportionally more, as much as these administrative lags would take. Additional delay can result from the fact that at least until now (for eleven EU member countries in 1999 and for the twelfth in 2001) concrete inclusion in the euro-area always happened at the beginning of the year. It is nowhere written that it has to be so also in the future, but there are administrative, statistical and fiscal arguments speaking in favor of this. If it is so and assuming that evaluation of compliance with the convergence criteria would come at an unfavorable time, such as early in the year, the adoption of the euro would have to wait additionally, concretely till the beginning of the next year.

### **Fulfillment of the Maastricht convergence criteria in the acceding countries**

Acceding countries at the moment differently fulfill the Maastricht convergence criteria, as will be shown in the following. For obvious reasons, as they are not yet members of the EU and ERM2, none fulfils the convergence criterion on the exchange rate stability. Some fulfill all other four Maastricht criteria, while others just some of them. Can from this be concluded that those acceding countries which now fulfill more convergence criteria are better candidates which will sooner fulfill all convergence criteria and qualify for the adoption of the euro? On first sight it would seem so, but the matter is more complicated. It is more important to see how large is the gap for the unfulfilled convergence criteria, and even more important, to see what is the expected dynamics of meeting these convergence criteria in the next few years. Economic developments may not always be just in the direction of better compliance with the Maastricht convergence criteria, they can also lead to larger deviations from them (as it already happened with the fiscal convergence criteria in some acceding countries). Even with already fulfilled convergence criteria situation can worsen, so that they fall below prescribed reference values. The acceding countries therefore have to cautiously

plan the fulfillment of the individual Maastricht convergence criteria in the following couple of years and on this basis prepare their strategies regarding the timing of their entry in the euro-area. Those acceding countries which have as their priority quick adoption of the euro have to prepare themselves for the quick fulfillment of the convergence criteria. They should have in mind, however, that particularly quick fulfillment of the Maastricht convergence criteria can at least in the short run mean additional sacrifices in economic growth and employment.

**Table 1:** Fulfillment of the convergence criteria for the acceding countries in 2002

	Fiscal deficit (-) (% GDP)	Public debt (% GDP)	Inflation (%)	Interest rate (%)
Cyprus	- 3,5	59,7	2,8	5,1
Czech.Rep.	- 6,7	26,9	1,4	4,0
Estonia	+ 1,3	5,8	3,6	7,4
Latvia	- 3,0	14,6	2,0	5,3
Lithuania	- 1,7	22,7	0,4	5,2
Hungary	- 9,2	56,3	5,2	7,1
Malta	- 6,2	66,6	2,2	5,7
Poland	- 3,8	41,8	1,9	7,3
Slovakia	- 7,2	44,3	3,3	6,9
Slovenia	- 2,4	27,8	7,5	6,7
Average	- 5,1	39,9	2,7	6,4
Reference value	- 3,0	60,0	2,9	6,9

**Note:** Shaded area shows fulfillment of individual convergence criteria for individual countries.

**Source:** Backé, Thimann et al., 2004, p. 24.

Table 1 shows how the acceding countries comply with the Maastricht convergence criteria. Least problems are with public debt, where all acceding countries meet this criterion (with the exemption of Malta, but even there deviation is minor). This is to a large extent the consequence of the short history of public debt in transition countries and of the fact that in these countries public debt builds-up in a specific way (primarily by taking over by the government of some open liabilities, more than by cumulating budgetary deficits over years, as is usually the case). Concerning the second fiscal convergence criterion, budgetary deficit, the situation is more differentiated. Baltic countries fulfill this criterion, while most problems

with it are in the four larger Central European acceding countries (The Czech Republic, Hungary, Poland and Slovakia). In some of these countries budgetary deficit has reached such proportions that it can not be corrected to the Maastricht reference value in the short run without serious economic and social sacrifices. This is the main reason why these countries adjusted their strategies regarding the timing of the inclusion in EMU. As they do not see realistic possibilities to lower their budgetary deficits shortly, they now plan the adoption of the euro only sometime after 2008.

Concerning inflation rate, the picture is rather diversified. It should be noted that the average inflation rate of the candidate countries is already below the reference value of this convergence criterion. Some of the countries achieved very low levels of inflation, but others still substantially exceed the reference value of this convergence criterion. The highest level of inflation rate in 2002 can be seen for Slovenia, but the data for 2003 would already show somewhat better picture. As far as the interest rate is concerned, most of the acceding countries meet this criterion, and even others are not far away from its reference value. However, for the convergence criterion on the interest rate, more than for the other convergence criteria, it has to be said that the applied methodology is very questionable. Most of the acceding countries do not have representative long-term government bonds which would play a significant role in the capital market, so the best available approximation is taken.

**Table 2:** Fulfillment of the convergence criteria for EMU member countries in 1994

	Fiscal deficit (-) (%GDP)	Public debt (% GDP)	Inflation (%)	Interest rate (%)
Austria	- 5,0	65	2,8	6,7
Belgium	- 5,0	136	2,9	7,8
Finland	- 3,7	59	0,9	8,4
France	- 5,5	50	2,1	7,3
Greece	- 7,8	111	8,2	13,8
Ireland	- 2,0	93	2,8	8,1
Italy	- 9,3	123	4,9	10,4
Luxembourg	+ 2,9	5	2,3	7,2
Germany	- 2,4	49	2,6	6,9
Netherlands	- 3,6	76	2,9	6,9
Portugal	- 4,5	62	5,6	10,4
Spain	- 6,6	61	4,9	10,1
Reference value	- 3,0	60	3,3	9,6

**Note:** Table shows fulfillment of the Maastricht convergence criteria for the present EMU member countries five years before their entry in EMU, i.e. for 1994, except for Greece, where data are for 1996. Shaded area shows fulfillment of individual convergence criteria for individual countries.

**Source:** Bank Austria Creditanstalt, 2004, p. 23.

Table 2 shows how present EMU member countries complied with the Maastricht convergence criteria in a comparable time distance – here we assume that the first acceding countries will join EMU in 2007 – of five years before the inclusion in EMU. Most of these countries, except four “southern” members, at that time had no problems with meeting the convergence criteria on inflation and interest rate. Most of them exceeded the reference value of the public debt, some (Belgium, Italy and Greece) even considerably. Almost all of these countries had at that time problems with meeting the convergence criterion on the budgetary deficit. Some (“southern” countries) even did not meet any of the convergence criteria. More as a curiosity it can be noted that the convergence criterion on inflation presently would not be fulfilled by Greece, Spain, Italy, Portugal and Ireland, criterion on the interest rate would be met by all EMU member countries, reference value of the budgetary deficit would be exceeded in Germany and France and the reference value of the public debt in Belgium, Germany, Italy and Austria. Overall it can be concluded that the acceding countries are at least comparable, if not better than the present EMU member countries in terms of

compliance with the Maastricht convergence criteria at a comparable time distance (approximately five years) before the inclusion in EMU. In this respect they are definitely better prepared for the entry in the euro-area than were the “southern” EU member countries at a comparable time, when they in fact did not meet any of the Maastricht convergence criteria (For a more detailed comparison between the two groups of countries, see CEPS, 2002).

## **Conclusions**

The paper focused on definition and purpose of the Maastricht convergence criteria and on some related issues, such as rules, procedures, methodology and interpretation of their fulfillment. The paper also wanted to answer to the following question: Will the acceding countries be admitted to EMU once they comply with the prescribed Maastricht convergence criteria which are a formal prerequisite before the adoption of the euro? According to the principle of the same rules and taking into account the past practice of entering in EMU, this should suffice. However, beside the Maastricht convergence criteria there are also other, less formal requirements which the European institutions can activate, if needed, which could complicate and delay the inclusion of acceding countries in EMU. There are requirements concerning real convergence (catching-up in economic development or related structural and institutional adjustments), additional – and publicly less known – convergence criteria and, in the first place, flexibility of interpretation of the compliance with the Maastricht criteria, and of its sustainability. All this gives the European institutions a large amount of discretion in deciding whether a country has reached the required convergence or not. From today’s perspective it is difficult to assess to what extent these additional barriers would be activated. Even though their application seems less likely, they can not be excluded either.

Fulfillment of the convergence criterion on exchange rate stability represents a specific problem. The acceding countries can formally speaking not meet this criterion, as they are not members of the EU and therefore can not participate in ERM2. This convergence criterion requires at least two-year participation in ERM2, respecting formal fluctuation bands around the central rate, without severe tensions in the foreign exchange market and without devaluations of the currency at its own initiative. Regarding fulfillment of this convergence criterion there are many ambiguities and open issues, since the rules are not defined precisely

enough. While the rules of participation in ERM2 themselves are rather defined, it is much less clear how the stability of the exchange rate is to be interpreted in practice, when in Convergence reports an assessment on fulfillment of this criterion will be given. Uncertainties remain around the issues such as wider or narrower band of permissible oscillations around the central rate, size and frequency of interventions within the bands and on their borders, frequency of corrections of the central rate, symmetry between appreciation and depreciation of the currency and so on. (For more detailed treatment of these issues see Lavrac, 2003). It can be concluded that most ambiguities and open issues are precisely about the Maastricht convergence criterion on the exchange rate stability. This gives the European institutions a lot of room for interpretation and discretion in evaluation of the fulfillment of this criterion. The acceding countries can more or less just guess what exchange rate policy and what exchange rate movements would still be acceptable within the framework of ERM2, so that after two-year participation in ERM2 they would be assessed as fulfilling this convergence criterion.

Finally, is the fulfillment of the Maastricht convergence criteria indeed crucial for a successful inclusion and participation in EMU? Maastricht convergence criteria are built on the assumption that a certain degree of nominal convergence before the inclusion in EMU is necessary, which is from the point of view of EMU as a whole undoubtedly true. However, from the point of view of an individual country for the assessment of its expected success of inclusion in EMU the following questions are perhaps equally or even more important: Does this country meet the optimum currency area (OCA) criteria? What is the level of its real convergence? Will it be exposed to asymmetric shocks after the inclusion in EMU? Are its markets and policies flexible enough to be able to react properly to these shocks? Will it be able to sustain its competitiveness on the internal market? Seen in this light the Maastricht convergence criteria seem a handy formal and quantifiable measure of readiness for adoption of the euro, but obviously they alone do not tell the whole story.

**References:**

Backe P., Thimann C. et al., 2004. "The acceding countries' strategies towards ERM II and the adoption of the euro: an analytical review", ECB.

Bank Austria Creditanstalt, 2004. "The euro in Eastern Europe »12+8=20«".

Centre for European Policy Studies, 2002. "The euro at 25: Special report of the CEPS Macroeconomic policy group", Brussels.

De Grauwe P and Lavrac V., 1999. "Inclusion of Central European countries in the European monetary union", Kluwer Academic Publishers, Dordrecht.

Lavrac I, in Lavrac V., 1996. "Slovenija in maastrichtski kriteriji konvergence", Delovni zvezek 1996/12, UMAR, Ljubljana.

Lavrac V., 2003. "ERM2 strategy for accession countries", Working paper 2003/19, Institute for economic research, Ljubljana.