

The Enlargement of the European Monetary Union

Rozszerzenie Europejskiej Unii Walutowej

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Abstract

On 1 January 2007, Slovenia adopted the euro. Lithuania - and until early 2006 Estonia - had also intended to join the euro area at this date, but Lithuania was not admitted to do so as its inflation rate lay slightly above the reference value. The adequate interpretation of the convergence criterion on price stability has long been the focus of the discussion on how fast the new member states should adopt the euro. The article takes up this discussion in the light of the convergence reports on Lithuania and Slovenia of May 2006 and considers the state of convergence of the other new member countries that were assessed in regular convergence reports in December 2006 and their prospects to join the euro area.

Keywords: European Monetary Union, enlargement, convergence reports, inflation criterion

JEL: E42, F33, F42

Streszczenie

Słowenia wprowadziła euro z dniem 1 stycznia 2007 r. Litwa, a do początku 2006 r. również Estonia zamierzała przystąpić do strefy euro w tym samym terminie. Nie było to jednak możliwe, jako że inflacja na Litwie nieznacznie przewyższyła wartość referencyjną. Właściwy sposób interpretowania kryterium konwergencji w zakresie stabilności cen od dawna jest jednym z głównych punktów w dyskusji nad tym, kiedy nowe państwa członkowskie powinny wprowadzić euro. Artykuł włącza się w tę dyskusję w świetle raportów o konwergencji Litwy i Słowenii z maja 2006 r., a także analizuje stopień konwergencji innych nowych państw członkowskich, których oceny znalazły się w raportach o konwergencji wydanych w grudniu 2006, i rozważa ich widoki na przystąpienie do strefy euro.

Słowa kluczowe: Europejska Unia Walutowa, rozszerzenie, raporty o konwergencji, kryterium inflacyjne

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1. Introduction

In May 2004, ten countries acceded the European Union. Three of them – Estonia, Lithuania and Slovenia – joined the new exchange rate mechanism (ERM2) shortly thereafter, indicating that they wanted to adopt the euro and become full participants of the European Monetary Union as soon as possible, i.e. at the beginning of 2007. However, only Slovenia introduced the euro at that date. Although in January 2006, Estonia still intended to adopt the euro in 2007, it renounced this plan in April 2006, as it became evident that the country would not meet the inflation criterion at the time of assessment in spring 2006. Lithuania and Slovenia requested country examinations in March 2006, and the corresponding convergence reports prepared by the European Commission and by the European Central Bank (ECB) were submitted to the EU Council on 16 May 2006. The reports on Slovenia stated that the country met all convergence criteria and could adopt the euro, whereas the reports came to the conclusion that Lithuania did not meet the inflation criterion because its inflation rate lay 0.1 percentage point above the reference value. The European Commission recommended that “there should be no change in the status of Lithuania as a Member State with a derogation”, meaning that Lithuania cannot introduce the euro yet. This came as a surprise, as the convergence criteria had been interpreted generously on several occasions in the past and as it was the first time that a country was denied to adopt the euro without this denial being evident beforehand. Moreover, many economists argue that the inflation criterion is not adequately interpreted when applied to new member countries.

At the European Summit on 16 June 2006, Lithuania complained about the rules used to block its application to join the euro area. It was supported by four other new member states, and the Czech Republic, Hungary, Lithuania, Poland and Slovakia produced an unusual joint statement criticizing the way the inflation criterion had been applied by the EU. However the statement was withdrawn in response to pressure from leaders of some of the EU founding states and from the European Commission's president José Manuel Barroso and eventually the summit welcomed the recommendations of the convergence reports (Financial Times 2006). On 11 July 2006 the finance ministers took the final decision and determined the conversion rate for the Slovenian tolar which equals its central parity in the ERM2.

This paper takes up the discussion on the timing of adopting the euro by the new member states and considers the prospects of a further enlargement of the European Monetary Union in view of the

convergence reports on Lithuania and Slovenia and the regular convergence reports on the other EU-10 published in May 2006 and December 2006 respectively. Section 2 briefly surveys the current exchange rate regimes. In section 3, the arguments for an early or a delayed adoption of the euro are considered, the positions of the accession countries and the European Union are summarized, and the adequate interpretation of the inflation criterion is discussed. Section 4 considers the degree of convergence of the EU-10. It also includes some information on Bulgaria and Romania, which acceded the European Union on 1 January 2007.

In the discussion on the timing of the euro adoption, the EU has also called for real convergence in addition to nominal convergence as specified in the Maastricht criteria. This aspect seems to have contributed to the decision on Lithuania and is discussed in section 5. Section 6 concludes.

2. Current exchange rate regimes

Upon accession to the EU, the EU-10 also became members of the European Monetary Union, but member states with a derogation, meaning that they did not adopt the euro at the same time. As a next step towards joining the euro area, a new member state can request to join the ERM2 at any time, which implies the adoption of a fixed exchange rate to the euro with a standard fluctuation band of $\pm 15\%$. Participation in the ERM2 for at least two years without severe tensions is one of the prerequisites for becoming a full member of the European Monetary Union.¹

In 2006, seven of the ten new member countries participated in the new exchange rate mechanism ERM2, and only the largest three of the EU-10, i.e. Hungary, the Czech Republic and Poland, have not joined the ERM2 yet (see Table 1).

Among the three countries who joined the ERM2 on 28 June 2004, just two months after their EU accession, Estonia and Lithuania had currency boards that they have kept as a unilateral commitment in the ERM2, meaning that their exchange rate to the euro is absolutely stable.² Slovenia officially ran a managed

¹ As discussed in section 4.3, the exact range of exchange rate volatility which will still be considered as complying with the exchange rate criterion by EU institutions is not defined precisely. See Feuerstein, Grimm (2004) on the details of the ERM2.

² Although the basic decision for the enlargement of the European Union had already been made when the rules of the ERM2 were laid down in 1997, the characteristics of the accession countries were not taken into account. Soon afterwards, a discussion whether a currency board arrangement should be considered as being consistent with ERM2 emerged. In April 2000, the ECB reached the conclusion that a euro-based currency board will not a priori be considered incompatible with ERM2, if certain conditions are met (European Central Bank 2000a; Feuerstein, Grimm 2004).

Figure 1. Exchange rates of the EU-10, monthly data



Source: Eurostat.

float before participating in the ERM2, but in practice, the country had a crawling peg with a continuous depreciation of the tolar (see Figure 1).

Latvia, Cyprus and Malta started participating in ERM2 in April 2005. Before, Latvia had pegged its currency to the SDR with a fluctuation band of $\pm 1\%$, which it replaced by a peg to the euro at the beginning of 2005, retaining a fluctuation band of $\pm 1\%$. Malta replaced its close peg to a currency basket by a peg to the euro according to the rules of the ERM2, but the Maltese authorities declared that they wanted to keep the Maltese pound at the central rate unilaterally. Cyprus had pegged its pound closely to the euro since 1999 and it continues to do so. (European Central Bank 2006a). Thus less than one year after EU accession, the six smallest of the EU-10 (those with a population of less than 5 million and a share in GDP of EU-25 of less than 0.5% even if measured in purchasing power standards, see table 2) had joined the ERM2.

In November 2005, Slovakia – the smallest of the remaining four new member states with a population of about five million – joined the ERM2, replacing its managed float system.

The three countries which have not joined the ERM2 yet (all having more than 10 million inhabitants) have very different exchange rate regimes. Since 2001, Hungary mimics the ERM2 by pegging the forint to the euro with a fluctuation band of $\pm 15\%$, without however officially participating in it. The Czech Republic runs a managed float while Poland lets the exchange rate of the zloty float freely. These two countries want to participate in the ERM2 for the shortest possible time which means that they will only join the ERM2 when they will be confident to be able to meet all convergence criteria within two years (Czech National Bank 2003; National Bank of Poland 2003). The development of the exchange rates of the EU-10 since the introduction of the euro in 1999 is shown in Figure 1.

3. The discussion on the timing of euro adoption

3.1. Arguments for an early or a delayed adoption of the euro

The main drawback of euro adoption is the risk of asymmetric shocks to which the exchange rate can no longer respond. The traditional theory of optimum currency areas focusses on asymmetric demand shocks and emphasizes that for a member of a monetary union, adjustment can be very costly when labour mobility is low and labour markets lack flexibility (De Grauwe, Schnabl 2004). Tullio (1999) pointed out that transition is not a smooth process and that asymmetric shocks are likely to occur in the period of catching up. This argument calls for caution in the timing of euro adoption.

The empirical evidence on the relevance of asynchronous business cycles is mixed. Nevertheless, in their meta-analysis of 35 studies on business cycle correlation, Fidrmuc and Korhonen (2006) come to the conclusion that many new EU member states, in particular Hungary, Poland, Slovenia and also Estonia, have achieved relatively high degrees of business cycle correlation with the euro area that in several cases exceed that of the smaller peripheral euro area countries.

However, a flexible exchange rate does not only serve as a shock absorber in the case of real shocks hitting the economy. Exchange rate changes in response to financial market shocks may also cause undesired fluctuations in the real economy. Thus not only the risks, but also the benefits of adopting the euro have to be considered. Based on this, many well-known economists have advocated a hard peg of the currencies of the accession countries or an early adoption of the euro (Dornbusch, Giavazzi 1999, Gros 2000; Begg et al. 2000; Kenen, Meade 2003). The

Table 1. *Current exchange rate regimes*

Country	Exchange rate regime before ERM2	Participation in ERM2 since
Estonia	Currency board (continuously in place)	28.6.2004
Lithuania	Currency board (continuously in place)	28.6.2004
Slovenia	Managed float (Crawling Peg)	28.6.2004 (until euro adoption 1.1.2007)
Latvia	Peg to SDR (Peg to Euro since 1.1.2005)	29.4.2005
Cyprus	Peg to euro	29.4.2005
Malta	Peg to basket	29.4.2005
Slovakia	Managed float	25.11.2005
Czech Republic	Managed float	n.a.
Hungary	Peg, mimicking ERM2	n.a.
Poland	Free float	n.a.

Source: own compilation

Table 2. *Size and openness of EU-10*

	Population mln	GDP 1000 mln euro	GDP 1000 mln PPS	GDP per capita PPS, EU25=100	Export quota %
EU 25	461,30	10841,9	10841,9	100	
Malta	0,40	4,5	6,6	70	73
Cyprus	0,75	13,4	14,8	89	47
Estonia	1,35	10,5	18,1	60	80
Slovenia	2,00	27,3	37,4	82	65
Latvia	2,31	12,8	25,4	48	48
Lithuania	3,43	20,6	41,6	52	58
Slovakia	5,38	38,1	69,5	57	77
Hungary	10,10	87,9	143,8	63	66
Czech Rep.	10,22	98,4	174,8	74	72
Poland	38,17	243,4	445,5	50	37

The data refer to 2005.

PPS: purchasing power standards, EU25=100.

Export quota: exports of goods and services divided by GDP.

Source: Eurostat. For the export quota: European Commission (2006f).

argument for this suggestion is that fixed exchange rates are the appropriate regime for small economies which are widely open to trade and financial flows. The problems arising from short and medium term exchange rate fluctuations caused by capital flows are large, whereas the advantages of adjusting the exchange rate are limited, as these countries have little influence on international relative prices (Buitert, Sibert 2006). These arguments are also supported by empirical studies. Borghijs, Kuijs (2004) show that, for the Czech Republic, Hungary, Poland, Slovakia, and Slovenia, empirical results on the basis of a structural VAR suggest that the exchange rate has served as much or more as an unhelpful propagator of monetary and financial shocks than as a useful absorber of asymmetric real shocks. Coricelli et al. (2006) studied the degree of exchange rate pass-through in the Czech Republic, Hungary, Poland, and Slovenia and concluded that changes of the exchange rate only had a small impact on relative prices.

Clearly, the EU-10 are small open economies (see Table 2). The GDP of Poland, by far the largest of them, amounts to only 2.2% of the GDP of the EU-25 if measured by current exchange rates and to 4.1% in purchasing power standards (PPS). The seven of the EU-10 countries who participated in ERM2 in 2006 each have a GDP of less than 1% of the EU-25. In 2005, the share of exports of goods and services in GDP lay between 37% in Poland and 80% in Estonia. In six of the EU-10, the export quota exceeds 60%, which is only true for four of the members of the EU-15 (i.e. the Benelux countries and Ireland). In particular, the three countries with the lowest per capita income in EU-15, Greece, Portugal and Spain, have relatively low export quotas with exports amounting to less than 30% of GDP in 2005. Moreover, the EU is by far the largest trading partner

accounting for more than 65% of exports in all new member countries in Central and Eastern Europe (CE-8). The share of the exports to the euro area exceeded 50% in the Czech Republic, Hungary, Poland, Slovenia and Slovakia. Only in the Baltic states, which have a considerable trade volume with Sweden and among each other, the share of exports to the euro area was lower.³

On average, the EU-10 are more integrated with the EU than the EU-15 countries among themselves. Moreover, the CE-8 already have a differentiated export structure. About half of the exports and imports are intermediate goods, indicating a high degree of integration into the international value-added process (Deutsche Bundesbank 2002).

In addition, the recommendation to quickly adopt the euro is based on doubts over whether ERM2 is a suitable system for the EU-10 to prepare the euro adoption. The experience of the 1990s has shown that in a world of open capital markets, fixed exchange rate regimes with some remaining flexibility are highly vulnerable. The supporters of a hard-peg to the euro argue that participating in the ERM2 exposes the accession countries to the unnecessary risk of exchange rate crises which could damage them severely (Buitert, Grafe 2002; Begg et al. 2002).

3.2. Target dates of the accession countries

The discussion on the euro adoption of the new member countries started well before actual EU accession (De Grauwe, Lavrac 1999; European Central Bank 2000a; 2000b). In the lead-up to EU

³ The data refer to 2005. In Cyprus and Malta, exports to the EU had a share of 72% and 52% in total exports, and the share of exports to the euro area was 52% and 37% respectively. The export shares to the euro area in the Baltic countries were 41% for Estonia, 24% for Latvia and 29% for Lithuania (European Central Bank 2006b; 2006c).

membership, most accession countries expressed their intention to introduce the euro as soon as possible. However, already before acceding the EU, some countries began to envisage a somewhat longer process before adopting the euro (Backe 1999; Backe, Thimann 2004). One of the reasons was that a number of countries had difficult budget situations and realized that complying with the fiscal convergence criteria will only be possible after some time. Moreover, the European Union called for a slower pace and pointed out that the convergence criteria will be strictly applied in spite of the ongoing discussion on the adequate reference value for the inflation criterion (see section 3.4).

Accordingly, most new member countries postponed their target dates for euro adoption, and many of them have done so repeatedly. In November 2005, all EU-10 with the exception of Poland had official target dates (European Commission 2005).⁴ At that date, Estonia, Lithuania and Slovenia intended to adopt the euro on 1 January 2007, whereas the official target date of Latvia, Cyprus and Malta was the 1 January 2008 and Slovakia's target date was 1 January 2009. Hungary and the Czech Republic aimed at a medium term introduction of the euro at the beginning of 2010. However, as will be discussed in sections 4 and 6, many of these target dates turned out to be out of reach and have meanwhile been revised or are under revision.

3.3. The position of the EU and the ECB

The EU has always emphasized that adopting the euro will be the endpoint of a long convergence process. According to the view of both the European Commission and the European Central Bank, the EU-10 should focus on achieving real convergence in the sense of ongoing structural, administrative and economic reforms in the first years of EU membership, and not on joining the euro area yet (European Central Bank 2000a; Padoa-Schioppa 2004; Solbes 2004).⁵

As the EU-10 differ in size, structure and in their current exchange rate regimes, it is acknowledged that the paths towards the euro will be different. The

EU will assess the countries case-by-case, taking their specific situations into account. However, the EU also emphasizes the principle of equal treatment between the new and the current member states. Referring to this principle, the European Commission justifies for instance the unduly restrictive interpretation of the inflation criterion, which is discussed below.

Papademos (2006), the Vice President of the ECB, calls the rigorous fulfillment of the convergence criteria (and thus the possible postponement of full membership of the European Monetary Union) an "insurance policy" for both a country joining the euro area and the euro area itself. However, his explanation of the risks involved remains quite general, and it is not really clear what the fears of the EU about early euro adoption are – in particular for those countries like Lithuania and Estonia who have already shown that their economies can cope with an absolutely fixed exchange rate to the euro.

Of course, the heterogeneity within the euro area will increase, when the CE-8 adopt the euro, making monetary policy more difficult to conduct. However, the economic situation of the EU-10 will have little impact on the ECB's decisions, since they are small and thus have little weight in the euro area's average inflation rate which is the ECB's target. In the case of an asymmetric shock, the EU-10 would have to bear the adjustment costs. As discussed above, there are nevertheless good economic reasons to become a member of the euro area.

The argument that the accession countries will only have little influence on the monetary policy of the ECB is qualified, as they will be represented in the ECB's Governing Council. Ross (2006), a representative of the Bank of Estonia, discusses this issue, pointing out that fears go in both directions. It is sometimes said that central bank governors from the new member states are more "accustomed" to inflation rates exceeding 2%. However, it is also suggested that governors from the new member states could be in favour of higher interest rates, as these would be preferable for their home countries. Ross emphasizes that these arguments should be dismissed, as the members of the Governing Council do not represent their central banks, but the entire euro area.

Moreover, to prepare the EU enlargement, a reform in the structure of the ECB's decision making bodies has been adopted. As soon as the number of full EMU members exceeds 15, a rotation system for the voting rights of the governors of national central banks will be introduced, increasing the weight of the large countries in the Governing Council (Frenkel, Fendel 2003).

⁴ Poland has never declared an official target date. However, the country also had an "as-soon-as-possible-approach" (National Bank of Poland 2003), and in discussions on euro adoption, intended dates for euro adoption were mentioned. For instance, the former Minister of Finance Grzegorz Kolodko said in an interview with the Financial Times (2002) that he thought that Poland would adopt the euro in 2006 or 2007. The IMF country report 2005 said that the Polish government had targeted euro adoption in 2009-2010, while the IMF report 2006 stated that the government wanted to make more progress toward meeting the Maastricht criteria before setting a target date for euro adoption (International Monetary Fund 2005; 2006d).

⁵ The positions of the European Commission, the Council and the ECB on the enlargement of the European Monetary Union are very similar and are not distinguished below.

The views of the European Union and those of the economists favoring an early adoption of the euro also differ with regard to the role of the ERM2. In the opinion of the EU, the EU-10 should not see the ERM2 as a mere waiting room to become a full member of the EMU, but rather as a testing room. The EU regards the ERM2 as a mechanism fostering real and nominal convergence, providing at the same time the flexibility that may still be needed. Thus, it may be advantageous to participate in the system for more than two years. Moreover, the EU states that the ERM2 may help to find the appropriate exchange rate at which to join the euro area (Padoa-Schioppa 2002). There are, however, doubts whether this reasoning applies. The exchange rate will rather be determined by market expectations about the conversion rate than on the basis of fundamentals.

3.4. The discussion on the inflation criterion

The criticism of the EU position focuses on the adequate interpretation of the criterion on price stability, as this criterion is the major obstacle to adopting the euro for countries with sound fiscal policies and a stable euro exchange rate.

The formulation in the Treaty (Art. 121(1)), together with the protocol on the convergence criteria requires "... a rate of inflation ... that does not exceed by more than 1 1/2 percentage points that of, at most, the three best-performing Member States in terms of price stability." The rigid application of this criterion is widely criticized on various grounds.

The reference value is calculated based on the inflation rates of all member countries of the EU, including those outside the euro area. It is difficult to see why adopting the euro should depend on the inflation of countries that do not belong to the euro area (Gros 2006). In the last years, there has always been at least one country outside the euro area among the EU member countries with the lowest inflation rate. However, even if the criterion was based on euro area countries only, it may be unduly restrictive. In spite of the common monetary policy, inflation rates vary among euro area countries, and some countries may experience particularly low inflation because of a local recession or changes in indirect taxes for instance (Gros 2006).

Typically, the reference value is close to the euro average inflation rate, and in September 2004, the reference value was below the inflation rate of the euro area. Ironically, this was due to the very low inflation in Lithuania (European Commission 2006c). In 2004, seven of the twelve countries belonging to the euro area had an inflation rate above the reference value and would not have been allowed to adopt the euro.

The convergence criteria were created with respect to the start of EMU before the euro was introduced. However, a single currency has a single inflation rate and the ECB targets inflation for the euro area as a whole. It is thus arguable that the suitable benchmark is the average euro area inflation rate (Kenen, Meade 2003; Gros 2006). In the convergence reports of May 2006, the data of March 2006 were used and the relevant inflation rate of the euro area (based on 12-month averages) was 2.3%, which would have resulted in a reference value of 3.8%, well above Lithuania's inflation rate of 2.7%.

Moreover, the more countries are members of the EU, the more likely it is that the three countries with the lowest inflation rates are outliers, which makes the criterion much stricter than before. The EU is aware of this possibility and did for instance not include Lithuania into the group of best-performers when the country had a negative inflation rate (European Central Bank 2004). The EU has thus interpreted "best-performing countries" as the countries with the lowest, but still positive inflation rates.

Buiter and Sibert (2006) challenge the view that the "best performing" countries are those with the lowest inflation rate. They argue that this is not consistent with the ECB's own definition of price stability, which is an inflation rate close to but below 2%, and the best-performers should be chosen using this definition. In March 2006, Denmark, Germany and France had an inflation rate of 1.9%, which would have resulted in a reference value of 3.4%.

An additional reason, why the strict interpretation of the inflation criterion is not adequate for the new member countries is the Balassa-Samuelson effect. For the transition countries, a trade-off between exchange rate stability and low inflation may arise due to relative price adjustments. During the catching-up process, prices of non-tradable goods tend to rise relative to tradable goods, amounting to an appreciation of the equilibrium real exchange rate leading either to nominal appreciation or to higher inflation. The change in relative prices is mainly due to faster productivity growth in the sector of tradable goods. Estimates of the Balassa-Samuelson effect range between 1 to 2.5 percentage points per year (Deutsche Bundesbank 2001; Buiter, Grafe 2002; Buiter, Sibert 2006). Moreover, further adjustments of administered prices and increases of VAT and excise taxes due to EU harmonization contribute to higher inflation without causing pressure on the exchange rate. Buiter and Sibert (2006) therefore suggest that the inflation criterion should be adjusted for the Balassa-Samuelson effect.

In contrast, the EU emphasizes that alternative benchmarks from which to measure the allowable excess of 1.5 percentage points would not comply with the Maastricht criteria and the principle of equal treatment, implying that the inflation criterion is very difficult to meet for countries for which the Balassa-Samuelson effect is relevant. However, this approach can be criticized, as equal treatment should not mean identical treatment but equivalent treatment, taking into account the changes brought about by the creation of EMU (Kenen, Meade 2003).

Occasionally, some accession countries try to oppose the restrictive interpretation of the inflation criterion. In addition to the withdrawn statement on the European Summit in June 2006 that is mentioned in the introduction, recent examples include Tanel Ross (2006), Bank of Estonia, and an article authored by the Governor of the Czech National Bank, Zdenek Tuma (2007) in the Financial Times. Moreover, the IMF country report said that the Estonian authorities planned to hold further discussions with EU institutions to seek an interpretation of the Maastricht inflation criterion that would be better suited to conditions in a rapidly converging economy (International Monetary Fund 2006b).

4. The state of convergence in the New Member Countries

For a changeover to the euro, the new member states have to comply with all the convergence criteria specified in the treaty. As discussed above, the criterion on price stability requires that a country's inflation rate must not exceed the average of the inflation rate of the three best-performing EU member states by more than 1.5 percentage points over the period of one year preceding the examination. In addition, a country must fulfil the condition of nominal interest rate convergence saying that the long-term interest rates must not exceed by more than 2 percentage points that of the three best-performing countries with respect to price stability. The fiscal criteria require that the ratio of the general budget deficit to GDP must not be above 3% and the ratio of sovereign debt to GDP must not exceed 60% unless this ratio is sufficiently diminishing and approaching the reference value. The relevant data for these criteria are compiled in Tables 3a and 3b. Furthermore, a country has to show a high degree of exchange rate stability by participating in the ERM2 for at least two years without devaluating and without severe tensions.

Table 3a. *State of convergence of EU-10*

Country	Inflation Rate (HICP)					Long-term interest rates 2005	Current account	
	2001	2002	2003	2004	2005		2004	2005
Cyprus	2.0	2.8	4.0	1.9	2.0	5.16	-5.1	-5.7
Czech Rep.	4.5	1.4	-0.1	2.6	1.6	3.51	-6.1	-2.1
Estonia	5.6	3.6	1.4	3.0	4.1	3.98*	-13.0	-11.0
Hungary	9.1	5.2	4.7	6.8	3.5	6.60	-8.5	-6.8
Latvia	2.5	2.0	2.9	6.2	6.9	3.88	-13.0	-12.7
Lithuania	1.6	0.3	-1.1	1.2	2.7	3.70	-7.7	-7.5
Malta	2.5	2.6	1.9	2.7	2.5	4.56	-8.1	-10.6
Poland	5.3	1.9	0.7	3.6	2.2	5.22	-4.3	-1.7
Slovakia	7.2	3.5	8.4	7.5	2.8	3.52	-3.4	-8.6
Slovenia	8.6	7.5	5.7	3.7	2.5	3.81	-2.1	-1.1
Ref. Value	3.1	2.9	2.7	2.2	2.5	5.38	n.a.	n.a.

Table 3b. *State of convergence of EU-10 (continued)*

Country	Budget deficit (% of GDP)					Total debt (% of GDP)	
	2001	2002	2003	2004	2005	2004	2005
Cyprus	-2.3	-4.4	-6.3	-4.1	-2.3	70.3	69.2
Czech Rep.	-5.7	-6.8	-6.6	-2.9	-3.6	30.7	30.4
Estonia	-0.3	0.4	2.0	2.3	2.3	5.2	4.5
Hungary	-3.4	-8.2	-6.3	-5.3	-6.5	56.3	57.7
Latvia	-2.1	-2.3	-1.2	-0.9	0.2	14.5	12.1
Lithuania	-2.1	-1.5	-1.3	-1.5	-0.5	19.4	18.7
Malta	-6.4	-5.5	-10.0	-5.0	-3.2	74.9	74.2
Poland	-3.7	-3.2	-4.7	-3.9	-2.5	41.9	42.0
Slovakia	-6.5	-7.7	-3.7	-3.0	-3.1	41.6	34.5
Slovenia	-4.1	-2.5	-2.8	-2.3	-1.4	28.7	28.0
Ref. Value	-3.0	-3.0	-3.0	-3.0	-3.0	60.0	60.0

*As the Estonian government did not issue 10-year government bonds, the indicator for Estonia is based on bank lending rates (interest rates on new EEK-denominated loans to non-financial corporations and households with maturity over 5 years).

The data on the budget deficit and on total debt are based on ESA95 (European System of Accounts). National definitions may deviate. The data were retrieved from Eurostat's internet pages on 12 January 2007.

The fiscal data for Hungary and Poland do not yet take into account Eurostat's decision on the classification of funded pension schemes and will be revised in April 2007 at the latest. See section 4.3.

Source: Eurostat. For the current account data: European Commission (2006a; 2006b; 2006d)

According to the treaty, the European Commission and the ECB report to the European Council, at least once every two years, or at the request of a member state with a derogation, on the progress made in the fulfilment of the Maastricht criteria for the adoption of the euro by the member states.

The first convergence reports covering the ten new member countries⁶ were adopted in October 2004. Following the request of Lithuania and Slovenia for an examination, the European Commission and the ECB published their respective Convergence Reports on 16 May 2006. For the other EU-10 countries, the second regular convergence reports were published on 5 December 2006. On the following pages, we examine the state of convergence of the EU-10 countries in view of the 2006 convergence reports. In addition, we briefly discuss the initial position of Bulgaria and Romania, which both joined the European Union on 1 January 2007.

4.1. The assessment of Lithuania and Slovenia

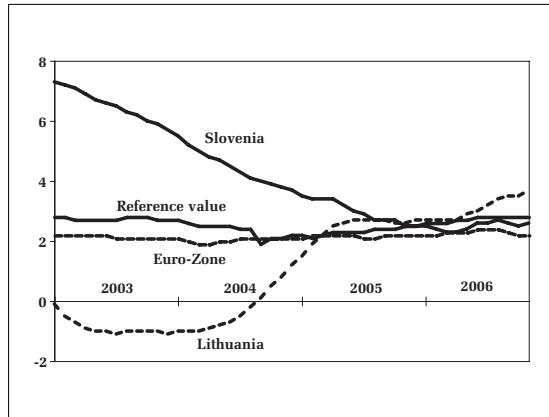
The convergence reports on Lithuania and Slovenia were published in May 2006, after both countries had submitted requests for an assessment in March 2006, thereby, expressing their intention to adopt the euro at the beginning of 2007. Apart from the criterion on price stability which was slightly violated by Lithuania, both countries fulfilled the convergence criteria with ease.

Price stability criterion

For the assessment of the price stability criterion, the convergence reports use the 12-month average inflation based on the harmonized consumer price indices HCPI. In March 2006, the countries with the lowest inflation were Sweden, Finland and Poland, defining a reference value of 2.6%. The Slovenian inflation rate of 2.3% stayed below this critical value, whereas the Lithuanian inflation of 2.7% was slightly higher. On this basis, the European Commission recommended that Lithuania should not be admitted to the euro area, but should keep its status as a member state with a derogation.

Interestingly, one year earlier, the outcome would have been the other way around (see Figure 2). In March 2005, the 12-month average inflation was 2.2% in Lithuania, which was equal to the reference value, while in Slovenia, inflation was 3.4%. And from September to November 2004, Lithuania belonged to the “best-performers”.

Figure 2. Inflation rates in Lithuania and Slovenia



Source: Eurostat.

Moreover, if the convergence reports had been written one month later, Lithuania would have fulfilled the inflation criterion, which shows that the decision was indeed on a razor-edge: in April 2006, Lithuania's 12-month average inflation continued to be 2.7%, while the reference value⁷ had risen to 2.7%. Remarkably, this information was released by Eurostat (2006) on 17 May 2006, one day after the publication of the convergence reports.

However, when assessing the sustainability of price stability, the European Commission and the ECB did not focus on past data, but on inflation forecasts. Average inflation in 2006 was expected to rise to 3.3% in Lithuania, while it was expected to be 2.4% in Slovenia (European Commission 2006a; 2006b). Actually, Lithuania has not fulfilled the price stability criterion since May 2006, while Slovenia's inflation rate has continuously been below the reference value. Until November 2006, the 12-month average inflation rate increased to 3.7% in Lithuania and to 2.6% in Slovenia, while the reference value rose to 2.8%. Among other reasons, the increasing inflation rate in Lithuania is due to a sharp rise of import prices of gas at the beginning of 2006 after the expiration of a multi-year agreement with a major gas supplier. The main impact of the gas price increase on the inflation rate will occur with a delay, as the prices for distributed heat are regulated.

Moreover, the harmonization of excise taxes on fuel, tobacco and alcohol is not yet complete and taxes will have to be increased within the next few years to reach the minimum EU levels. While these price increases are one-off price shocks, second-round effects on wages are expected as output growth

⁶ In addition to the new member countries, the regular convergence reports in October 2004 and in December 2006 also covered Sweden.

⁷ Strictly speaking, the reference value increased from 2.63% to 2.67% (resulting from the inflation rates of the best performers Sweden, Finland, and Poland of 0.9%, 1.0% and 1.5% in March 2006 and 1.1%, 1.0% and 1.4% respectively in April 2006).

is buoyant and labour markets are tightening. In its autumn forecasts, the European Commission (2006f) has estimated inflation to rise to 4.6% in 2007, and to fall again to 3.3% in 2008.

Some of the factors exerting upward pressure on inflation are also present in Slovenia. Indirect taxes will be increased and the strong growth in demand may cause upward pressure on wages and prices. Nevertheless, the EU Commission's inflation forecast for Slovenia was moderate, and these expectations have basically materialized.

Budget deficit and total government debt

Fiscal policies are sound in both countries, with Lithuania having both a smaller budget deficit than Slovenia (-0.5 % and -1.4 % of GDP in 2005) and a lower government debt-to-GDP ratio (18.7% and 28.0% in 2005, see Table 3b).

As some of the inflation risk is due to the strong growth in demand and output – in particular in Lithuania – the convergence reports call for adequately tightened fiscal policies to reduce potential demand pressures in the economy. In view of the low budget deficits this reasoning may seem somewhat puzzling, but when considering the structural deficits, it becomes comprehensible. In Slovenia, the structural deficit was expected to rise from 1.4 percentage points in 2005 to 1.8 percentage points in 2006. In Lithuania, the structural deficit deteriorated in 2003 and 2004 and improved again in 2005 (European Commission 2006a; 2006b). However, in 2006 fiscal policy resulted in a positive demand stimulus again, thereby acting procyclically and contributing to inflationary pressures (International Monetary Fund 2006c).

Exchange rate criterion

Both countries had participated in the ERM2 for 22 months at the time of the publication of the Convergence Reports. As the exchange rate criterion requires participation in the ERM2 “for at least two years before the examination”, this criterion was not fulfilled if interpreted literally. However, this rule was applied with generosity from the very beginning, when Italy joined the euro area in 1999 although it had participated in the ERM2 for 16 months only at the time of assessment in March 1998. Actually, this issue is hardly mentioned in the Convergence Reports published in May 2006.

With its currency board arrangement, Lithuania maintains an absolutely fixed exchange rate to the euro, thereby naturally fulfilling the requirement on the stability of the exchange rate. However, also the Slovenian tolar's exchange rate was kept within a

very narrow range of less than 0.2% around the central parity after Slovenia had joined the ERM2, although until then the exchange rate regime had been characterized by a crawling peg with a continuous – albeit small – depreciation against the euro.⁸

Long-term interest rate criterion

Moreover, the long-term interest rates are significantly below the reference value. The average of the long-term interest rates in the period from April 2005 to March 2006, which was used in the convergence reports, was 3.7% in Lithuania and 3.8% in Slovenia, while the reference value was 5.9% and the long-term interest rate in the euro area was 3.4%.

Additional factors

The convergence reports discuss some additional factors mentioned in Article 121(1) of the Treaty, i.e. the results of market integration and the development of the balance of payments. In particular, they point out that Slovenia's industrial structure is similar to that of the euro area, while in Lithuania, differences remain considerable in this respect. The two countries also differ in their balance-of-payments situation. While for Slovenia, the current account is broadly balanced (with a deficit of 1.1% of GDP in 2005), Lithuania had a large deficit of 7.5% of GDP in 2005. Although roughly half of Lithuania's deficit was financed by FDI, whereas Slovenia had only little inflow of FDI, Slovenia appears in a better light in this respect. There is no convergence criterion on the balance of payments a country has to comply with when adopting the euro, but these aspects might play a role in the overall assessment of a country.

4.2. State of Convergence in Estonia

In addition to Lithuania and Slovenia, Estonia joined the ERM2 already in June 2004. Until early 2006, Estonia intended to adopt the euro at the beginning of 2007. However, in early 2006 it became evident that Estonia did not fulfil the inflation criterion, and on 27 April 2006, the government stated that the new objective to become member of the euro area was 1 January 2008 (Estonian National Changeover Committee 2006). Meanwhile, it is clear that euro adoption has to be further postponed (see below and section 6).

⁸ The instruments that were used in Slovenia to stabilize the exchange rate are described in the Convergence Report of the European Central Bank (2006c).

Price stability criterion

In 2005, the inflation rate was 4.1%, which was well above the reference value of 2.5%, meaning that Estonia violated the criterion on price stability. While in June 2006, forecasts still indicated that Estonia will be able to meet the inflation criterion in time to join the euro in 2008, in autumn 2006, both the European Commission and the Bank of Estonia forecasted that inflation will remain above 4% until 2008, implying that Estonia will not be able to adopt the euro before 2010 (Euroveeb 2006a; European Commission 2006f; Bank of Estonia 2006).

The expected rise in the inflation rate is mainly due to the raising of excise taxes.

Fiscal criteria and long-term-interest rate

Moreover, the country has run a budget surplus over the past years and therefore meets the fiscal requirements with ease. As, due to its low indebtedness, Estonia has not issued any government bonds with a maturity of 10 years, the indicator for assessing the interest rate is based on bank lending rates with maturity over 5 years. This indicator was 3.98 % in 2005 and thus clearly below the critical value.

Exchange rate criterion

Estonia introduced a currency board in 1992 and since then, it has maintained an absolutely fixed exchange rate to the Deutschmark and later to the euro. In a certain sense, it has had a monetary union with the euro area for a long time, and it has proven that it can cope with any problems that might arise from not being able to adjust the nominal exchange rate. Estonia formally participates in the ERM2 since June 2004 (although that makes no difference for its monetary policy), and clearly meets the exchange rate criterion.

Additional factors

The Estonian economy is highly integrated with the European Union which applies to both product and financial markets. A less favourable characteristic is the large current account deficit which amounted to 11% of GDP in 2005. However, as a large part of it is financed by FDI and Estonia's economy is growing fast, the current account deficit need not be a major problem and may reflect a successful catching-up process (European Commission 2006d; European Central Bank 2006a).

4.3. The State of convergence in the remaining EU-10 countries

In this subsection, the state of convergence of the remaining seven new EU member countries is briefly discussed. These are the four countries that entered ERM2 in 2005, i.e. Latvia, Slovakia and the Mediterranean countries Cyprus and Malta, as well as the three countries not participating in ERM2 yet, i.e. the Czech Republic, Hungary and Poland. In addition to Tables 3a and 3b, the source for the data, forecasts and further information cited in this section is the December 2006 convergence report including the technical annex and the autumn forecasts of the European Commission (2006d; 2006e; 2006f) and the European Central Bank (2006c) convergence report, unless otherwise stated.

Price stability criterion

As discussed in section 3.4, the price stability criterion is difficult to meet for the new member countries if they have a stable euro exchange rate, and the way the criterion is applied to the fast-growing countries in the catching-up process is widely criticized.

In 2005, four of the seven countries considered here, i.e. Malta, Cyprus, the Czech Republic and Poland, had an inflation rate below the reference value of 2.5%, whereas in 2004, only Cyprus had met the criterion. In the Czech Republic and in Poland, currency appreciation had a dampening effect on inflation. The convergence reports of December 2006 referred to the 12-month average inflation of October 2006. While Cyprus, Poland and the Czech Republic continued to meet the price stability criterion, Malta's inflation rate was 3.1% and thereby higher than the reference value of 2.8%. However, this rise in inflation was mainly due to an increase in regulated prices for energy in late 2005, and the inflation rate is expected to return to a position close to the reference value in early 2007.

Latvia, Slovakia and Hungary missed the criterion in 2005, but compared to 2004, Hungary and Slovakia were able to reduce their inflation rates substantially.

The Latvian inflation rate was below 3% in 2003, but above 6% in the years 2004 to 2006, and is expected to remain above 5% in 2007 and 2008. The rise in inflation was mainly due to one-off factors like the rise in the prices of unprocessed food due to poor crops and higher energy and administered prices, but the sustained inflation increasingly reflects upward pressures from labour cost development against the background of buoyant economic activity and increases in excise taxes (Bank of Latvia 2006; European Commission 2006d).

Budget deficit and total government debt

In 2003, six of the seven countries considered here showed a budget deficit above the threshold of 3% of GDP, and the European Commission opened excessive deficit procedures for these countries in July 2004. Of the EU-10, only the three Baltic states and Slovenia did not have an excessive deficit and have met the fiscal criteria since their EU accession.

Cyprus reduced its deficit from 6.3% in 2003 to 2.4% already in 2005. The forecasts for Malta's budget deficit are below 3% for the years 2006 to 2008, thus the country is expected to meet the respective criterion in the near future. Both Cyprus and Malta have debt-to-GDP ratios above the reference value of 60%, but as these ratios have started to decline after peaking in 2004, the criterion on total debt is fulfilled. Accordingly, the European Commission decided to abrogate its decision on the existence of an excessive deficit in Cyprus in July 2006.

Both the Czech Republic and Slovakia had budget deficits exceeding 3% in 2005. However, Slovakia is expected to achieve a budget deficit of 3% by 2007, while the European Commissions forecasts for the Czech Republic are 3.5% for 2006 and 3.6% for 2007.

Poland had a budget deficit of 2.5% of GDP in 2005, and the deficit is expected to fall slightly in 2006 and 2007. There is only a very small difference between the actual deficit and the structural balance, which was also below 2% in 2005 and is not expected to rise. Nevertheless, Poland will not meet the criterion on the budget deficit in 2007, as according to a decision of Eurostat in March 2004, funded pension schemes are classified outside the government sector and the data has to be revised accordingly in March 2007 the latest. Contributions to a funded pension scheme do not count as government revenue and pensions paid by the scheme are not government expenditure. As funded schemes accumulate capital and are, therefore, in surplus at the beginning, the budget deficit is larger when they are not classified in the government sector than if they were included (European Commission 2006e). For Poland, this effect is currently about 2% of GDP, and considering these costs of the pension reform, the budget deficit was 4.4% in 2005 and is expected to be 4.2% in 2006 and 4.0% in 2007. Thus in spite of a deficit that is currently below 3% and has improved since 2003, Poland is further considered to be in a situation of an excessive deficit.

Hungary has the highest budget deficit of the EU-10, and the deficit is expected to remain high. While all the other CE-8 countries have debt-to-GDP ratios well below the reference value, Hungary's debt-to-GDP ratio meanwhile exceeds 60%. The data for

Hungary are also affected by eurostat's decision on the classification of funded pension schemes and the new classification increases the deficit by about 1.5% of GDP. Including the costs of pension reform, the budget deficit is forecasted to exceed 10% of GDP in 2006 and to amount to 7.4% in 2007.

Long-term interest rate criterion

Until 2005, all countries, except Hungary, had achieved a long-term interest rate below the reference value. The favourable development of long-term bond yields in the preceding years was due to a continuing fall of inflation rates and to lower risk premia based on further legal reforms and on the EU-accession. Hungary, which has problems with all the other convergence criteria, too, had an average long-term bond yield of 6.60% in 2005 while the reference level was 5.38%.

Exchange rate criterion

As the seven countries considered in this subsection do not meet the requirement of a two-year participation in the ERM2, they do by definition not comply with the exchange rate criterion. Thus, the discussion has to focus on the question how stable the euro exchange rates of the various currencies have been over the last years, and whether considering the fluctuations, these countries would have met the exchange rate criterion. However, such an assessment is hardly possible, as the exchange rate criterion is not well specified. The formulation of the criterion reads: "... the observance of the normal fluctuation margins provided for by the exchange rate mechanism ... for at least two years ..." (Art. 121(1) of the Treaty), but it is not really clear whether this means a fluctuation band of $\pm 2.25\%$ (which clearly was meant when the Treaty was formulated) or the widened band of $\pm 15\%$ (which is usually understood now).⁹ In the convergence reports of 1998 and 2000, the European Commission also took the narrow 2.25% band into account. A country that really needs to make use of the $\pm 15\%$ band in the ERM2 would probably not be considered as meeting the criterion. Figure 1 shows the development of the exchange rates of the new EU member states.

Within the ERM2, there were no severe tensions in 2005 and 2006. In particular, Cyprus, Malta and Latvia, which joined the ERM2 in April 2005, have kept their exchange rates very close to the central rate since their entry. The Slovak koruna, which takes part in the ERM2 since late 2005, showed

⁹ For a discussion of the interpretation of the exchange rate criterion see Feuerstein, Grimm (2004).

somewhat greater fluctuations and it appreciated by more than 10% in the second half of 2006. As a result, it traded between 0.8% weaker and 10.7% stronger than the central parity during the year 2006. In those four countries a high degree of exchange rate stability was also achieved before participating in the ERM2. The Latvian currency depreciated by an amount of 15% against the euro from 2003 to the beginning of 2005, but this was due to its peg to the SDR.

The three largest EU-10 countries, namely the Czech Republic, Hungary and Poland, operate under more flexible exchange-rate systems (see section 2) and thereby show a higher volatility in their exchange rates. From the beginning of 2004 to the end of 2006, the Czech koruna has continuously become stronger, adding up to an appreciation of around 20% which partly was a reversal of the depreciation in 2003. The development of the Polish currency was similar, but underwent somewhat larger fluctuations. The zloty showed a large appreciation of about 25% between early 2004 and early 2006 after having depreciated in the years 2002 and 2003 by more than 30%. In 2006, the fluctuations of the zloty were smaller.

During the two years before the assessment in the convergence reports 2006, i.e. between November 2004 and October 2006, the Czech koruna appreciated against the euro by about 10% and the Polish zloty appreciated by about 8%. With an appropriately chosen hypothetical central parity, both currencies would have stayed within the fluctuation band of $\pm 15\%$.

Hungary mimics the rules of ERM2 and keeps its exchange rate within a margin of $\pm 15\%$. The central parity is 282.36 HUF/EUR, although with the exception of one day in summer 2006 (30 June 2006), the forint has always been stronger for more than six years. By defining this central rate, Hungary has created some room for a future depreciation and demonstrates that it will not allow a strong appreciation of the forint (Feuerstein, Grimm 2004). While the exchange rate was fairly stable in 2005, the forint depreciated by about 10% in the first half of 2006 and appreciated by this amount again in the second half of 2006.

To summarize, the countries participating in the ERM2 have very stable euro exchange rates with the exception of Slovakia which had a maximum deviation from the central parity of 10.7% in 2006. The three countries which do not yet participate in the ERM2 show a higher volatility of their exchange rates. However, it seems likely that after their entry to the ERM2, these countries will be able to keep their exchange rates close to the central rate, too, and that the exchange-rate criterion will not be an obstacle to the adoption of the euro.

Additional factors

In their assessments in the convergence reports, the ECB and the European Commission take additional factors into account, such as the development of the balance of payments, foreign direct investments (FDI) and labor market structures. Here, only the balance of payments is briefly discussed.

When looking at recent performance, particular attention has to be paid to the relatively large current account deficit of Latvia and Malta with current account deficits of 12.7% and 10.6% in 2005, respectively.

Moreover, in 2005, Cyprus, Hungary and Slovakia had high current account deficit levels of above 5%. These large deficits also have to be observed seriously, as they possibly signal some risk to the sustainability of external positions. However, the deficits may also reflect the catching-up of the EU-10, "where capital inflows allow financing of high-return investments that it would not have been possible to undertake solely on the basis of domestic savings" (European Central Bank 2006a).

In contrast, Poland and the Czech Republic, which operate under flexible exchange-rate regimes, had almost balanced current accounts in 2005 with a deficit of 1.7% and 2.1%, respectively, after deficits of 4.3% in Poland and 6.1% in the Czech Republic in 2004.

4.4. Summary for the EU-10

Slovenia, the first of the EU-10 countries to adopt the euro, is the only country which meets all convergence criteria and it has an almost balanced current account. In contrast, Hungary violates all requirements, and fiscal consolidation is expected to last several years. According to the forecasts in autumn 2006, Malta and Cyprus might meet all criteria in spring 2007. The target date for adopting the euro is 2008 in both countries.

Slovakia missed the criteria on inflation and on budget deficit in 2005 and 2006, but according to current forecasts, the country may meet the convergence criteria in 2008.

The Czech Republic and Poland, the two largest countries of the new EU member states, do not meet the exchange rate criterion and have budgetary problems, but they meet the inflation criterion and attained small current account deficits in 2005. The nominal appreciation of the Czech koruna and the Polish zloty may have helped to achieve the relatively low inflation rates. Estonia, Latvia and Lithuania failed to fulfill the price stability criterion, but the three Baltic countries do not have problems with the other requirements.

A comparison of these two groups illustrates the Balassa-Samuelson effect: the Baltic countries that maintain a fixed euro exchange fail to meet the price-stability criterion, and the somewhat higher inflation amounts to a real appreciation of the currency. In the Czech Republic and Poland, which have flexible exchange rates, the currencies appreciated nominally and inflation was low.

4.5. Bulgaria and Romania

On 1 January 2007, Bulgaria and Romania joined the European Union and became member states with derogation. Below, their degree of convergence is briefly discussed using information published in the European Commission's (2006f) autumn forecasts and by Eurostat, as no convergence reports have been published yet.

The GDP per capita of Bulgaria and Romania was 33% and 34% of the EU average in 2005 respectively, if measured in purchasing power standards. Thus, in terms of per capita incomes they still lie significantly below Latvia, which shows the lowest per-capita income among the EU-25 countries, with a level of 48% of the EU average in 2005 and 41% in 2003, the year before EU accession. The degree of openness measured by the export to GDP ratio was 60% in Bulgaria and 33% in Romania in 2005.

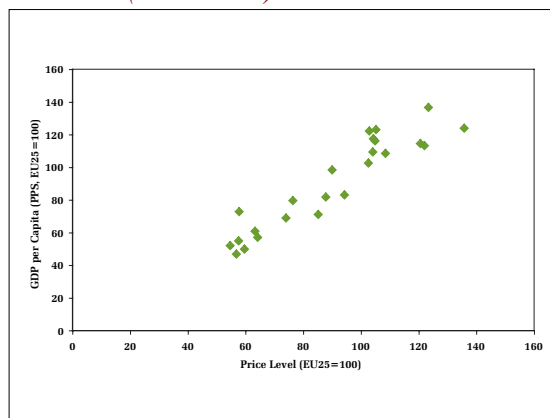
Whereas Bulgaria introduced a currency board in 1997 and since then has had single-digit inflation rates, Romania has achieved macroeconomic stabilization only in the last years. Romania's exchange rate approach is a managed float (International Monetary Fund 2006e). Between 1999 and 2003, the leu depreciated continuously and the exchange rate more than tripled. Since mid-2004, the exchange rate shows fluctuations, but appreciates on average. In the course of 2006, the leu appreciated by about 10%.

Romania's inflation rate was 9.1% in 2005, which was the first year of a single digit rate. It is estimated to further decrease to 6.8% in 2006. Bulgaria's inflation rate was 5% in 2005, after 6.1% in 2004 and 2.3% in 2003. It is estimated to rise to 7.0% in 2006 but to fall again to 3.5% in 2007.

Bulgaria runs a budget surplus since 2004, which amounted to 2.4% of GDP in 2005. Romania had a small government deficit of about 1% in 2004 and 2005. Although Romania's budget deficit is forecasted to widen and Bulgaria's surplus is forecasted to shrink in 2007, neither of the two countries is expected to have an excessive deficit in the near future.

Both countries have a large current account deficit, amounting to 11.8% of GDP in Bulgaria and to 8.5% in Romania in 2005 and expected to be above 10% in the years 2006-2008 in both countries.

Figure 3 GDP per capita and price level in the EU 25 (EU25 = 100)



The diagram depicts the EU countries except Luxemburg, which is an outlier, as GDP per capita is very high due to the large number of people working in Luxemburg but not living there.

Source: Eurostat, the data refer to 2005.

Bulgaria intends to join the ERM2 with its currency board shortly after EU accession and to adopt the euro in 2009-10 (International Monetary Fund 2006a). However, the country could find itself in a similar situation as the Baltic countries, having sound fiscal policies and a hard peg to the euro, but difficulties in complying with the strictly interpreted inflation criterion.

5. Discussion

From the very beginning, views have differed about how soon the accession countries should become members of the euro area. By and large, accession countries have intended to adopt the euro as soon as possible (see section 3.2), whereas the EU has considered the adoption of the euro as the endpoint of a long process involving nominal and real convergence. Gertrude Tumpel-Gugerell (2003), Member of the Executive Board of the European Central Bank, explicitly stated that "acceding countries are required to reach a high level of real and nominal convergence prior to adopting the euro." She defines real convergence as similar per-capita income levels and the narrowing of existing gaps in price and wage levels, in price structures and in price dispersion ratios. However, besides the requirements on fiscal policy the Maastricht criteria deal with nominal convergence and not with real convergence. There is no convergence criterion on per-capita income.¹⁰

The per-capita income and the relative price level are, however, closely linked (see Figure 3), and

¹⁰ Many economists have the opinion that a similar per capita income is no precondition for a common currency. (Buitert, Sibert 2006a). This view is also advanced by the IMF-representatives Mody and Rosenberg (2006).

in the catching-up process of a low-income country, the currency appreciates in real terms. The inflation criterion, combined with the exchange-rate criterion, can thus be used to retard changeover to the euro of low income countries. In practice, the unduly strict interpretation of the criterion on price stability (see section 3.4) denies the adoption of the euro to countries which have an inflation rate slightly above the euro area, even when they have a stable euro exchange rate. Applied in this way, the criterion does not assess nominal convergence as intended in the Maastricht Treaty, but it seems to be used as a proxy to measure real convergence. In view of these considerations, the decision of the EU to admit Slovenia but not Lithuania to the euro area appears in a new light. Slovenia is the richest country among the CE-8 and has a per capita income (measured in purchasing power standards) of 82% of the EU-25 average, which is above Portugal (71%) and within the range of Greece (84%). In contrast, the per capita income in Estonia and Lithuania amounts to 60% and 52% of the EU-average. Slovenia's price level equals 76% of the EU average and over time, it will probably have a smaller upward adjustment than Estonia and Lithuania, where the price levels amount to only 64% and 55%, respectively, of the EU average.¹¹

However, although for a country in the catching-up process, it is difficult to comply both with the inflation and with the exchange rate criterion, the combination of both criteria do of course measure the degree of real convergence only roughly.

Firstly, the argument only applies to countries that are indeed catching-up and fast-growing. Countries with a low growth in spite of a low per-capita income would not experience a real appreciation and would have less difficulties to comply with the inflation and the exchange rate criterion at the same time. Secondly, the exchange rate criterion allows for the nominal appreciation of a currency in the two years before the assessment, and this can be a strategy for euro adoption. However, it is no solution to the "Maastricht dilemma" for the countries committed to hard pegs to the euro (De Grauwe, Schnabl 2005).

Alternatively, the new member countries would have to conduct contractionary policies and undergo a temporary recession to lower inflation and fulfill the Maastricht criteria at the time of assessment (Buiter, Grafe 2002). Moreover, there may be incentives to influence the inflation rate by the timing of one-off measures, as for instance changes of indirect taxes or administered prices – a policy that looks peculiar but was discussed for instance by the

IMF staff in the country report for Estonia (International Monetary Fund 2006b).

It remains difficult to comprehend why the two Baltic countries, Estonia and Lithuania, which until early 2006 intended to adopt the euro on 1 January 2007 are not allowed to adopt the euro yet. Both countries have had an absolutely fixed euro exchange rate for many years and thus have proven their ability to abstain from changes in the nominal exchange rate to adjust to asymmetric developments. In the past, the convergence criteria were interpreted with flexibility and countries were admitted generously to the European Monetary Union if there was a corresponding political will. Obviously, this time the EU did not want to create another precedent and was intent on demonstrating that the convergence criteria will be applied strictly.

6. Conclusion and outlook

On 1 January 2007, Slovenia was the first new EU member country to introduce the euro. Furthermore, Joaquín Almunia (2006), Member of the European Commission, pointed out that from now on, there should be new members of the euro area each year.

According to the state of convergence and the forecasts at the end of 2006, the Mediterranean countries Cyprus and Malta may comply with all convergence criteria in spring 2007 and their target date of adopting the euro in 2008 may be realistic. Also Slovakia's target to introduce the euro in 2009 seems not to be out of reach, although attaining that objective still requires some effort.

The three largest EU countries, the Czech Republic, Hungary and Poland have not participated in the ERM2 yet. These countries still need fiscal consolidation and are not expected to meet the criterion on the budget deficit in the near future. In particular, Hungary has a large budget deficit. Poland's difficulties to meet the fiscal criterion are related to Eurostat's decision to classify funded pension funds outside the government sector. Without the costs of the pension reform, the budget deficit would be below the reference value. As a consequence, the changeover of their national currencies to the euro is expected to take place only beyond 2010. Accordingly, the Czech Republic and Hungary abandoned their target date of 2010 in the second half of 2006, while Poland never had an official target date for the euro adoption (Czech National Bank 2006; Magyar Nemzeti Bank 2006).

The situation of the Baltic countries is particularly remarkable. Estonia, Latvia and Lithuania have run a sound fiscal policy for many years now, and they keep an absolutely stable

¹¹ The data refer to 2005. Source: Eurostat.

exchange rate to the euro. For these countries, the strict interpretation of the inflation criterion is particularly relevant, as they meet all the other convergence criteria with ease. While at the beginning of the year 2006, Estonia's and Lithuania's target date was 2007 and Latvia's 2008, the expected time of euro adoption has shifted by several years in 2006. Currently, the Baltic states do not have official target dates, but as forecasts indicate that the inflation criterion will not be met in the near future, the dates discussed are 2010 or later. (Rimsevics 2006; Government of the Republic of Lithuania 2006; Euroveeb 2006b). The Latvian Minister of Finance

Oskars Spurdzins said that the country may meet the convergence criteria only in 2012 or 2013, and the Latvian President Vaira Vike-Freiberg proposed that the Baltic states should adopt the euro at the same time. The Baltic finance ministers are expected to meet in 2007 to discuss cooperation in changing currencies (Baltic Business News 2006). It may thus happen that Estonia, which has had a currency board for 15 years and was long expected to be one of the first accession countries to introduce the euro, will finally be one of the last of the ten countries that became members of the European Union in 2004 to join the euro area.

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