THE EURO – WHEN AND HOW: THREE PERSPECTIVES*

Kateřina Šmídková**

I. Introduction

As the date for EU enlargement approaches, the gates of the Eurozone will be opened to the ten accession countries – Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, Slovenia, Hungary, Malta, and Cyprus. The pivotal question now is how and when these new EU countries will enter through these gates, leaving their former national currencies behind. In fact, three incumbent EU members with developed economies – Denmark, Sweden and the UK – have not yet opted to take this route. Whatever scenario is chosen in the end, one thing is clear: the Eurozone will expand within the medium-term horizon of 10 to 15 years. In effect, this will be a massive institutional project, where the actual number of member countries will increase by 67%. Naturally, this expansion will complicate the coordination and decision-making processes, and this includes monetary policy.

Enlarging the Eurozone will also be a large-scale economic project, regardless of what the current European GDP figures suggest at this time. Europe's GDP will increase by only 5% following EU enlargement in 2004 but GDP per capita will actually decline by 12%. It is important, in particular, to look at the substantial rise in dissimilarities or variance inside the EU when determining the economic effects of enlargement. Per capita GDP for the existing EU member states is approximately twice as large as the average per capita GDP of the ten accession economies, and the difference in the average price levels is very similar. These large gaps will complicate coordination of economic policies – as well as the sharing of monetary and exchange rate policies.

In view of the institutional and economic magnitude of Eurozone enlargement, the effects on EU member states – old members as well as new – may in no way be taken lightly. It is, therefore, important to repeatedly confront the issue: "When and how to introduce the euro". In essence, there are two scenarios for the timing of Eurozone enlargement: "rapid and extensive" or "gradual and slower". In addition, there are two basic ways to bridge the interim period between EU entry and Eurozone entry: inflation targeting or using the exchange rate to stabilise the economy. This article presents three different perspectives for looking at both problems: the perspective of accession economies, the European perspective, and the standpoint of economists who can contribute the results of their empirical studies to the overall discussion.

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** Kateřina Šmídková, Adviser to the Board, Czech National Bank (smidkova@cnb.cz). The author would like to thank to Ray Barrell and Dawn Holland from the National Institute for Economic and Social Research in London for the opportunity to draw on the output of the joint research project. The views and opinions in this paper are those of the author and do not necessarily reflect the views of the Czech National Bank.

II. The perspective of accession economies

According to currently available information, the ten new members as a group would like to introduce the euro relatively quickly after the EU entry. Table 1 present their initial positions related to their euro-strategies. The accession economies give a variety of reasons for supporting rapid and extensive enlargement of the Eurozone, some of which are political in nature.

The accession economies understand the introduction of the euro as a signal that they will become full-fledged members of the "European club", and they believe that they are now morally entitled to full membership. They would also like to start contributing to the future shape and character of European monetary policy.

Many of the reasons that the accession economies give in favour of quickly adopting the euro are based mainly on the experiences from the transition period. The countries have learnt that in the case of international financial turbulence, excessive exchange rate volatility can damage their financial sector. The costs of exchange rate and financial crises in the past significantly complicated balancing of the public finances in some accession economies.

The accession economies consider the euro to be a defence or shield against the negative effects of potential financial turbulence that could force them to abandon the existing exchange rate regime. Such a situation could be very costly, especially for countries with a currency board regime. Table 2 gives a summary of current monetary policy strategies of the ten countries.

After joining the EU, the accession economies also foresee the possibility of a certain period of accelerated FDI inflow similar to that which occurred in the mid-1990s, and they want to avoid the costs associated with sterilisation policy that some of them they had to pay in the past.

In addition, it is often said that the euro strengthens fiscal discipline, which has been insufficient in some accession economies, and that it increases the credibility of domestic, independent monetary policy, which has not had an opportunity to develop in countries using exchange rate stability throughout the entire transition period.

In contrast, no accession country builds the reasoning of its strategy around the forward-looking arguments. Specifically, a strategy is not typically selected according to whether or not it would help them combat deflation and subsequent economic slowdown. The ten new economies, after all, do not have a significant amount of experience with this yet.

Some of the accession countries also say that real convergence in their case is already far enough along that, if the euro were adopted, a loss of economic policy autonomy would not be painful. This, of course, is only valid for some countries. The majority of the accession economies will still need independent economic policies to cope with the convergence process.

Table 1 – Euro-strategies: Initial positions (as of 2002)

Country	Pre-announced date of entry
Cyprus	As soon as possible
Czech Republic	2007-2010
Estonia	As soon as possible
Hungary	2007-2009
Lithuania	As soon as possible
Latvia	2006-2007
Malta	As soon as possible
Poland	2007
Slovenia	As soon as possible
Slovak Republic	2008-2010

Notes: In 2002, timing of the eurozone entry was not announced officially by the ten countries. The dates quoted here were taken from speeches of national officials or pre-accession economic programmes and so they should not be understood as "hard" commitments made by these countries.

Table 2 – Monetary policy: Current strategies (as of 2002)

Country	Monetary policy
Cyprus	Money targeting & +/- 15% band
Czech Republic	Inflation targeting & managed floating
Estonia	Currency board
Hungary	Inflation targeting & +/- 15% bands
Lithuania	Fixed exchange rate
Latvia	Currency board
Malta	Fixed exchange rate
Poland	Inflation targeting & managed floating
Slovenia	Inflation targeting & floating
Slovak Republic	Inflation targeting & managed floating

Notes: Strategies reported here were described by national central banks in their official reports in 2002. In several cases, central banks reported that they prepare a change in the strategy after joining the EU.

III. The European perspective

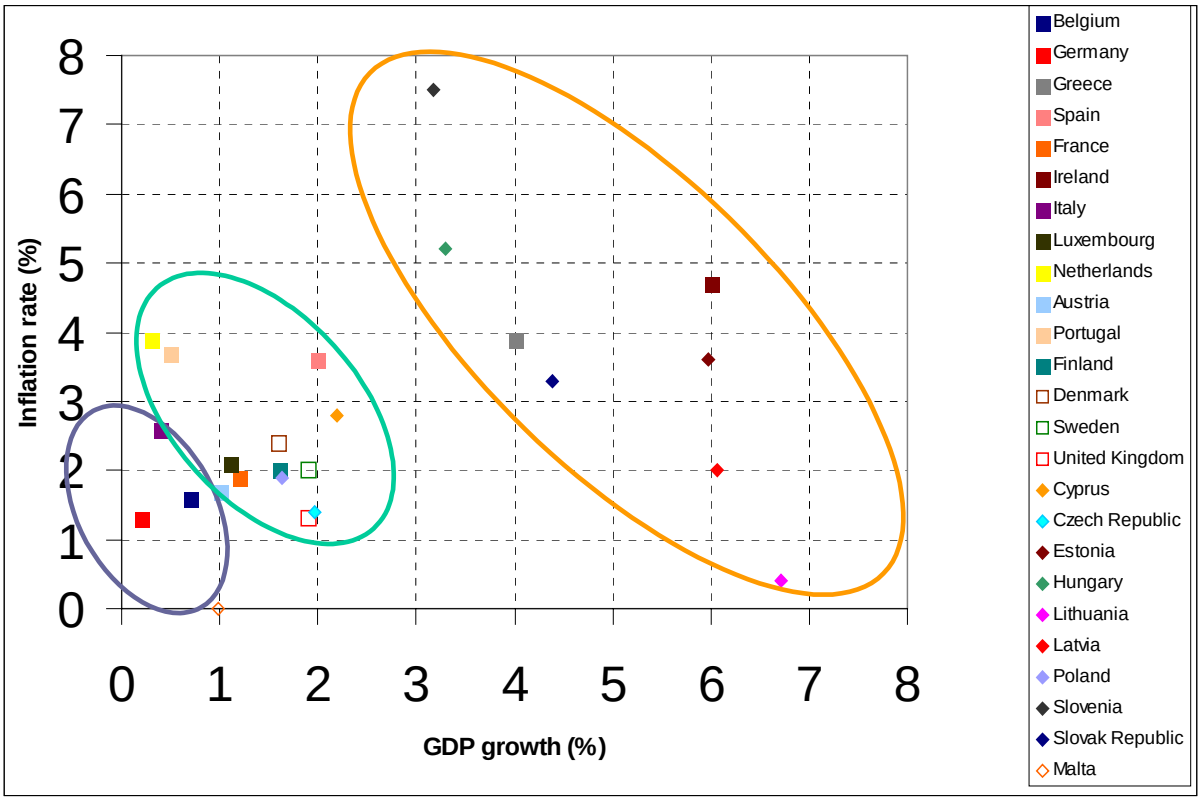
While the accession economies as a whole are sending a signal that they want to entry the Eurozone as quickly as possible (and even immediately), this issue is more complicated from the European perspective. First of all, it must be realised that the history of the Eurozone is relatively short. As opposed to EU enlargement, which actually began 30 years ago with the signing of accession agreements with Malta and Cyprus, no party has had a sufficient amount of time to prepare for massive Eurozone enlargement. The criteria for Eurozone entry were defined only ten years ago, and the European Central Bank has been in existence for only five years. The euro itself was put in circulation just two years ago. Therefore, everything surrounding the euro is significantly less settled. The existing Eurozone members have focused in particular on establishing the credibility of the new currency. From their standpoint, Eurozone enlargement will come at a later time.

A second important factor from the European perspective is the fact that up to now the monetary decision-making process could rely on the governors representing all participating national central banks. Rapid and direct Eurozone enlargement could substantially complicate decision-making on European rates. It would increase the gap related to the needs of economic policy objectives for the member countries, and in turn, raise the tension inside the Eurozone. The debate concerning rapid Eurozone enlargement increases the pressure on institutional reform, which would emphasise the majority principle for voting on policy rates. Institutional reforms will still be implemented for some time to come.

Even if institutional reforms are carried out, rapid Eurozone enlargement would not resolve the problem related to the economic dimension of the enlargement project. Let us consider the following example. If all 13 contenders were to now join the Eurozone, the majority principle would probably lead to a debate on cutting interest rates, because 58% of the European population would be satisfied with interest rate settings and 33% of the population would need a cut in rates. On the other hand, 36% of the Eurozone members would need higher nominal rates. The discrepancy between decision-making according to the majority principle and national economic problems would, therefore, be significant.

Picture 1 illustrates that - in our example - the rapidly enlarged Eurozone would consist of three groups of countries needing three different interest rate settings according to their economic development. The first group would include three countries with low inflation and growth that would welcome cuts in nominal rates. This group would only include existing Eurozone members. The second group would consist of 13 countries that are content with the current settings of European rates. This group would recruit three of the new accession countries and seven existing member countries. The group would also include the three current EU members that have not yet adopted the euro. The third group contains countries that would need higher nominal rates in view of their higher inflation and growth rates. Only two existing member countries would belong to this group, and the remaining six would come from the ten accession countries.

Picture 1 – Example with the rapidly enlarged Eurozone



Notes: Data on inflation and GDP growth for 2002 have been taken from the Eurostat database. A harmonised price index is not available for Malta, therefore, the inflation value in the picture is zero.

Picture 1 is, of course, based on current data, but the extent of real convergence to be achieved by the ten accession economies before catching up with the other EU member countries is so great that disharmony between the majority and national principle will last at least another decade. Another complication is the fact that three of the most developed EU members are still not members of the Eurozone, and as was seen in the September 2003 referendum in Sweden, they may not be members for a long time to come. If these three countries were to adopt the euro before the ten accession countries, it would help stabilise the Eurozone. It would, in fact, strengthen the group of countries whose economic development is in line with the current settings of monetary policy rates.

While the accession economies as a group are in a hurry to get in the Eurozone, from the European standpoint, the question of "The euro: when and how?" can be answered as follows: As soon as the Eurozone resolves its own initial problems and as soon as the accession countries achieve real convergence[1]. The accession countries should not expect miracles from the euro and should try to resolve economic problems prior to the entry.

[1] The distance that the accession countries still have to go until they reach the level of a developed EU country is analysed in Šmídková (2001).

IV. The researchers' point of view: An empirical analysis

Both perspectives – the national and the European – offer cogent arguments, so it is not an easy task to decide whether to enlarge the Eurozone at a rapid pace or not. Economists may contribute the results of their empirical analyses to the debate. The empirical analysis, of course, cannot cover all aspects of the discussion, but it can be a useful starting point for deciding when and how to introduce the euro. From the standpoint of economists, the growth rate of the standard of living is a relevant criterion when timing of the Eurozone entry is discussed. If rapid Eurozone entry, or on the other hand, careful, prudent timing allows for rapid standard of living growth, the empirical analysis simply indicates it as an appropriate timing strategy regardless of the political arguments. Understandably, political arguments are also important for the debate, and therefore, the analysis should be looked upon as a point of departure for the discussion only. In addition, the empirical results are often model-dependent and this should also be kept in mind.

In this section, the results of three studies are shown that developed out of a relatively extensive international project. The work focused on the issue of timing for Eurozone entry, the exchange rate regime choice for the interim period after EU entry and before adopting the euro, and on the estimates of the fundamental real exchange rates which could be useful when setting central parity for the exchange rate band prior to entering the ERMII. The work relies on models of three accession economies: the Czech Republic, Hungary and Poland. The macro-econometric models were estimated from a panel of data and then incorporated into the NIGEM model which models all important economies and connects them with the help of trade and financial flows. The empirical analysis was possible here to carry out in a consistent model framework.

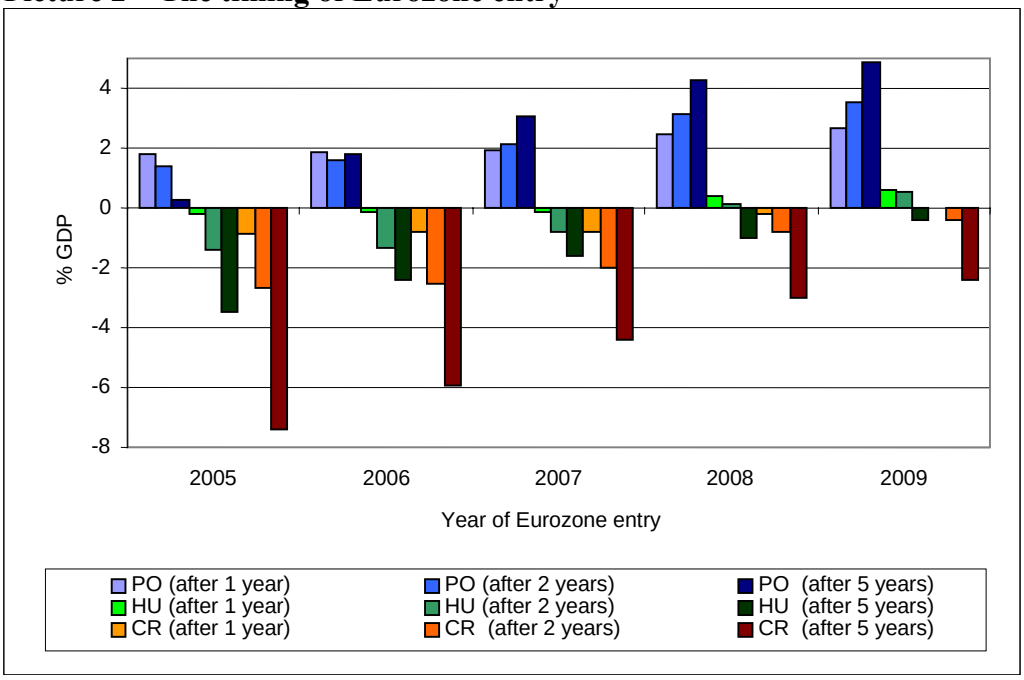
When analysing the issue of timing for Eurozone entry, the models were first used to project the baseline scenario for a period of ten years. The baseline scenario was based on the assumptions that a country does not entry the Eurozone and continues to target inflation. Following this, comparison simulations were carried out in which the domestic exchange rate was fixed to the euro in a certain year between 2005 and 2009. A recommendation for appropriate timing for Eurozone entry was derived from the relative costs of the specific scenarios. The relative costs were measured in percentage of GDP[2].

Picture 2 provides a comparison of relative costs in relation to the baseline scenario for all three countries in every year between 2005 and 2009 for a period of one, two and five years after accession. Although we could have doubts about the accuracy of the individual figures, the results, in which the three analysed countries react to adopting the euro differently, are considered to be robust. Although the Czech Republic, Hungary and Poland belong to the same geographical region, the timing of their entry should be set on an individual basis according to the characteristics of their specific economies, and they should not attempt at all costs to adopt the euro at the same time.

According to the empirical analysis, Poland would benefit from adopting the euro – even if adopted very quickly and prior to completing real convergence. If the euro is adopted later, the benefits are greater. Hungary would lose out at first by adopting the euro at an overly rapid pace. If the exchange rate were fixed around 2007, these costs would slowly disappear. Quickly adopting the euro is most costly for the Czech Republic, and the economic costs associated with adopting the euro would disappear the slowest over time.

[2] An empirical analysis focusing on the timing of Eurozone entry is the subject of a study by Barrell, Holland, Šmídková (2003a).

Picture 2 – The timing of Eurozone entry



Note: The comparison of relative costs in relation to the baseline simulation scenario was made in % of GDP always 1, 2, and 5 years after Eurozone entry. Country abbreviations: PO = Poland, HU = Hungary, and CR = Czech Republic.

With the help of the same system of models, another empirical analysis was carried out focusing on the exchange rate regime choice for the interim period after EU entry and before Eurozone entry. The analysis was based on the consideration that the accession countries should choose between inflation targeting and medium-term stabilisation based on the ERMII mechanism, according to which stabilisation strategy better protects it from the effects of economic shocks[3]. The results of both empirical analyses are summarised in Table 3.

Table 3 – Results of the empirical analysis

	Poland	**Hungary**	**Czech Republic**
Appropriate timing for Eurozone entry	Rapid	Somewhat rapid	Cautious
Appropriate stabilisation strategy for the interim period	Exchange rate (EMRII)	Exchange rate (ERMII) or inflation targeting	Inflation targeting
Factors influencing the results	Closed economy with a high risk premium	Open economy but flexible economy	Open economy but not very flexible

According to the empirical analysis based on the models in the NIGEM system, Eurozone entry could be rapid for Poland, somewhat rapid for Hungary and should be more or less cautious for the Czech Republic. The ERMII could fulfil the role of a stabilisation policy instrument in Poland. Hungary could use both strategies with similar results. The most beneficial for the Czech Republic would be inflation targeting. Why are the results of the

[3] The empirical analysis focused on the exchange rate regime choice for the interim period after EU entry and before Eurozone entry is described in Barrell, Holland, Šmídková (2003b).

empirical analysis different for the three accession economies? It is because the models capture some of the differences in the characteristics of each economy.

Poland is a relatively closed economy where appreciation of the real exchange rate slows down GDP growth less than in open economies. The share of foreign trade in GDP is lower. In addition, Poland had a high-risk premium in the past, and so higher credibility of European monetary policy allows for substantial rate cuts. Both of these factors lead to the conclusion that adopting the euro is not costly for Poland in relation to a slowdown in convergence, at least in our model.

Hungary is more open than Poland, and this is why GDP growth is slowed down more by real exchange rate appreciation. However, Hungary has, according to our estimates, a relatively flexible economy that can adjust relatively quickly to shocks, which substitutes to a large degree for a floating exchange rate. The Czech Republic has the most open economy though, according to our estimates, also the most inflexible economy. Fixing the exchange rate in combination with the loss of independent monetary policy would lead to the highest relative loss in relation to GDP.

The estimates of fundamental real exchange rates (FRER) could become an important source of information during the discussion on introducing the ERMII exchange rate band or on setting the central parity band. FRERs show the values of the real effective exchange rates that would be in line with the chosen set of important economic variables. According to FRER methodology, important economic variables include domestic and foreign growth, FDI inflow, and the level of foreign indebtedness[4]. As in the past two cases, here it also allows for the use of the NIGEM model system to estimate the FRER in a consistent framework and also to perform simulations of FRER values for the upcoming period. Since FRER calculations are sensitive to a variety of assumptions, it is better to compare the values of real effective exchange rates with the bands that capture the results of the extensive sensitivity tests rather than to compare them with the baseline FRER estimate alone, which is less robust. Picture 3 shows the FRER estimates for the koruna as an example.

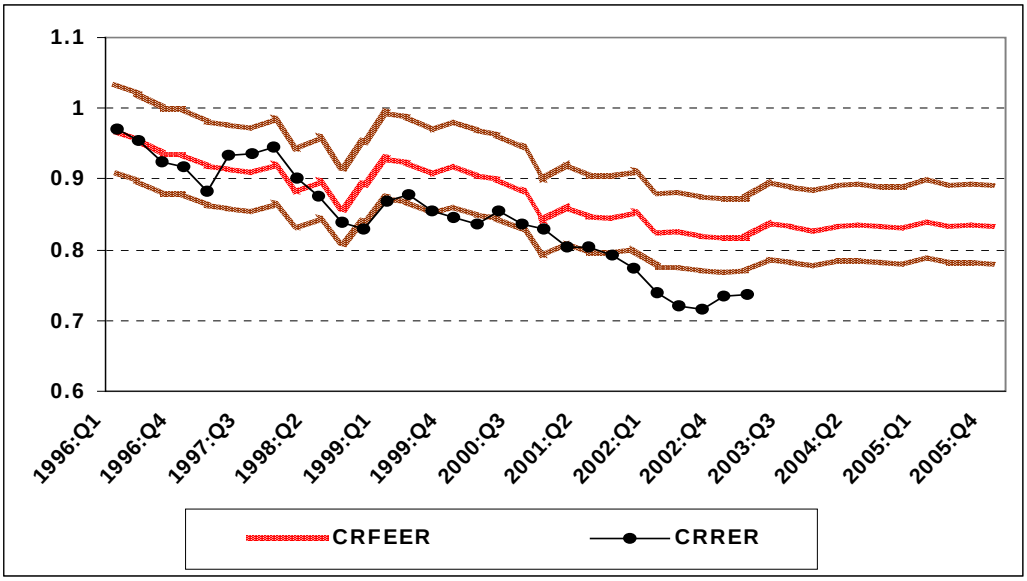
ERMII central parity is usually set in line with exchange rate market values, and therefore, the question of timing for fixing parity is very important. The calculated FRER values may be compared with real exchange rate values. It may then be assessed whether or not the competitiveness of the domestic economy would be threatened by introducing an exchange rate band due to overvaluation of the currency or whether or not domestic financial assets would depreciate due to strong undervaluation of the currency. In both cases, introducing an ERMII band could be problematic. FRER estimates for the medium term could also show how easy it would be to meet the Maastricht criteria focused on maintaining low inflation and a stable exchange rate simultaneously. If FRER estimates are unstable, this parallel stabilisation could be difficult.

The results of the FRER estimates for the Czech Republic, Hungary and Poland are again different, even though the economies are similar from a geographical aspect. The FRER estimates indicated that the koruna was overvalued in 2002 in a range of 5%, and that in the medium term horizon, the trend of real appreciation is expected to continue, but at a slower tempo than in the past. In the case of the forint, the appreciation signals in 2002 were stronger (approximately 15%). According to the FRER estimates, the zloty in 2002 was relatively strongly overvalued (in a range of 30%). In the medium term, the zloty estimate is the least stable in the group of the three central European currencies.

[4] The empirical FRER estimates for accession economies, including methodology, are described in Smidkova, Barrell, Holland (2002).

The differences in the FRER estimates for the three accession economies can again considered to be a robust result. As pointed out earlier, this is caused by the different characteristics of the three economies. With the FRER estimates, this involves in particular the difference in the structure of trading partners and in certain condition variables. An important role in FRER estimates is played by the ability of an economy to attract FDI, which increases productivity, and foreign indebtedness, which can create financial limitations and slow the process of real convergence. FDI inflow in the past being relatively high and foreign indebtedness not being so limiting as in the case of Poland can explain why in the Czech Republic the koruna experienced relatively low overvaluation in 2002 and why the FRER estimates were relatively stable in the medium term.

Picture 3 – Estimate of the fundamental koruna exchange rate



Note: The basic estimate of the fundamental koruna real exchange rate (along with the band expressing the uncertainty associated with the estimate) is given as CRFEER. The observed values of the real effective koruna exchange rate are expressed as a CRRER variable.

VI. Conclusions

The conclusions from the empirical analysis indicate that the accession economies are different in nature, and for this reason, the appropriateness of rapid or slow Eurozone entry as well as the appropriateness of alternative stabilisation strategies for the interim period between EU entry and Eurozone entry must be assessed separately for each economy. The accession economies should not compete with each other to be the first new Eurozone member without considering their specific economic situation.

Rapid entry could be beneficial for a country that does not have an established tradition of domestic monetary policy or for a country that has made significant progress with real convergence. More prudent timing for Eurozone entry would be better for a country that has a credible monetary policy, that still has a significant amount of real convergence in front of them and that does not have a very flexible economy. The Czech Republic, for the most part, belongs to this second group of countries.

The empirical analysis, therefore, tends to support the view that it would be more beneficial to expand the Eurozone at a gradual pace. Slower and gradual Eurozone enlargement would also be more beneficial from the European perspective. If the Eurozone countries are too diverse, there will be a problem with internal stability – even after implementing institutional reforms, which should change the principle of decision-making on European rates over to the majority principle.

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