Hermann Remsperger: Convergence and divergence in the European monetary union

Address by Prof Dr Hermann Remsperger[1], Member of the Directorate of the Deutsche Bundesbank, delivered at the conference "Conflict potentials in monetary unions" held in Kassel, 25 April 2001.

* * *

The subject of convergence and divergence in the monetary union has many facets. Some of them impinge directly on the issue of the appropriate monetary strategy for the euro area. After all, there have already been calls for relaxing the stability standard of the Eurosystem because of the structural differences between the countries participating in EMU. In addition, the eastward enlargement of the European Union foreseeable in the next few years has already sparked off a debate on whether the conditions for participation in EMU laid down in the Maastricht Treaty attach enough importance to the aspect of convergence in real terms. I shall, however, not try to answer that question until the final section of my address.

I shall start with a brief glance back at the convergence process in the run-up to monetary union, and then draw your attention to the differences in growth and inflation rates that still exist in the monetary union. From the monetary policy standpoint, what interests me most are the reasons for those differences. Only in that way, after all, can one verify whether such differences constitute conflict potential for the single monetary policy.

I. Convergence in the run-up to monetary union

In retrospect, it must first of all be recalled that the road to European monetary union was mapped out in the Maastricht Treaty of December 1991. The Treaty specifies the conditions for participating in monetary union. They include, in particular, proof of a high degree of sustainable convergence (Article 121 (1) of the EC Treaty). That entails a high degree of price stability, a convergence of long-term interest rates, a lastingly sustainable government financial position and exchange-rate stability. By the application of those criteria, which were defined more precisely in an additional protocol, it was intended to ensure that only countries which had already duly displayed their willingness and ability to pursue long-term anti-inflation policy should participate in monetary union.

Consequently, the second half of the nineties was marked by the efforts of the EU member states to meet the convergence criteria. The first convergence assessment took place at the end of 1996. Progress towards convergence was then manifest mainly in combating inflation. Already in 1996, the reference value for the inflation rate was undershot by ten member states. In the other five member states (Greece, Italy, Portugal, Spain and the UK), the pace of inflation had slackened distinctly. By contrast, the consolidation of government finances remained unsatisfactory. Thus, the financial deficit of the majority of countries overshot the reference value of 3 % of GDP. The level of government debt was above the reference value of 60 % of GDP in no fewer than eleven countries. As a result, the European Council decided in December 1996 that the conditions for the launch of the single currency had not yet been met, and that EMU should therefore not be launched until the beginning of 1999.

The convergence assessment required to that end took place in the spring of 1998, on the basis of the economic statistics for the year 1997. By that time, the pace of price rises in all EU countries other than Greece had dropped below 2 %, so that the ceiling of 2.7 % for the inflation rate was no longer much of an obstacle. Greater convergence had also been achieved in exchange-rate movements and in long-term interest rates. Hence almost all attention was focused on the question of which countries could be said to have a sustainable government financial position.

In 1997 only Greece overshot the reference value for the budget deficit, but the reference value for the level of debt was still exceeded by eleven countries. The scale of the overshootings ranged from a few percentage points to a debt level of over 120 % of GDP in the case of Italy and Belgium. After long discussions, the European Council decided on May 2, 1998 to launch a monetary union consisting of

[1] I would like to thank Christina Gerberding and Axel Jochem for their valuable contributions to this paper.

eleven member states. Of the four EU nations not taking part, Denmark, Sweden and the UK had previously declared that they would not join EMU on January 1, 1999. Greece met none of the convergence criteria.

II. Differences in growth and inflation rates since the launch of monetary union

1. Scale and progress of the divergences

Since January 1, 1999, the European Central Bank has been responsible for longer-term price movements in the euro area. But the single monetary policy does not rule out the possibility of individual member states' inflation rates diverging from one another. As a matter of fact, a number of statistical indicators show that the inflation differentials between the member states of EMU have widened somewhat again since the high-spot of the convergence process. Thus, the spread between the highest and lowest inflation rate according to the Harmonised Consumer Price Index, which had been 0.7 percentage point in January 1998, rose to an average of 2 percentage points during 1999 (between Ireland with 2.5 % and Austria with 0.5 %). Last year, the spread between the average annual inflation rates increased to as much as 3.5 percentage points (between Ireland with 5.3 % and France with 1.8 %). However, the maximum spread might be said to overstate the differences between inflation rates, inasmuch as it looks only at the two countries with the largest inflation differential. If, instead, one measures divergence by the weighted standard deviation of the inflation rates of the EMU countries, one is led to conclude that inflation differentials have remained essentially unchanged since the launch of monetary union, after they had previously diminished substantially during the convergence process.

The divergence in growth rates between the individual EMU countries continues to be considerable. Thus, the expansion of real GDP last year in the three countries with the highest growth rates (Ireland, Luxembourg and Finland) averaged 8 %, which was 5 percentage points above the average pace of growth in the three countries with the lowest rates of expansion (Germany, France and Italy). However, this measure of divergence is again somewhat qualified by the observation that it is mainly the growth rates of some smaller countries which diverge rather strongly from the average. On the contrary, the growth rates of the large countries are much closer to one another.

2. The reasons for the divergent trends

Some of the remaining differences in growth and inflation rates are unquestionably due to differences in the position of individual economies in the business cycle, and hence may presumably be rated as transitory. Asynchronous national business cycles may be caused by country-specific shocks. A good example of such a shock is provided by the interest-rate-convergence process in the run-up to monetary union. The convergence prior to the launch of monetary union contributed to divergences afterwards. Whereas the interest-rate level hardly changed at all in the low-interest-rate countries Germany, Austria and the Netherlands, in countries such as Ireland, Portugal and Spain interest-rate convergence implied a considerable relaxation of monetary conditions. Hence the interest-rate-convergence process exerted the impact of an asymmetrical demand shock, whose effect was reinforced by the fact that, in a number of high-interest-rate countries, the real rate of interest fell even more sharply than the nominal interest rate.[2]

However, in a monetary union there are also forces that work towards a reduction of cyclical divergences. For instance, it is to be expected that a "shock-induced" acceleration of price rises will lessen the competitiveness of the economy in question, and thus trigger an adjustment process that ultimately reduces the growth advantage.

Asymmetrical shocks are not the only potential cause of cyclical divergences in a monetary union. Differences in growth and inflation rates may also be due to divergences in the responses of individual economies to cross-country shocks. An example of that is provided by the differing degrees to which the member states of the monetary union were affected last year by the dramatic upturn in oil prices and the weakness of the euro. Some of the inflation differential related to this shock is undoubtedly attributable to differences in trading patterns and in energy consumption. For instance, the share of

[2] This argument can be traced back to Sir Alan Walters. See Favero, C. et al. (2000): One Money, Many Countries, Monitoring the European Central Bank, 2, CEPR, London, p. 3.

imports from non-euro- area countries varies between less than 10 % of GDP in Italy, France and Spain, via nearly 12 % in Germany, to almost 40 % in Ireland.[3] Divergent economic policy responses to the oil-price rises in individual countries may – in themselves – have actually enhanced the inflation differentials.

Whether the economic structures of the countries participating in EMU will converge in the longer run or whether monetary union will tend to exacerbate existing differences, is difficult to say. Sceptics point out that the integration process in Europe has been accompanied by increasing specialisation on the part of individual countries. That has meant that the differences in production patterns have tended to increase.[4] Advocates of the "convergence hypothesis" argue, notwithstanding that assertion, that monetary union enhances competition between the participating economies. That obliges national governments to adjust the institutional rules of their tax and social security systems, and of the goods, labour and financial markets. On the whole, EMU has already led to a *rapprochement* of financial market structures in the participating countries. Mention should be made in this context of the creation of an EMU-wide money market, of the rapid growth of the euro-denominated bond and equity markets and of progressive consolidation in the banking sector. Still there can be no talk of completely integrated financial markets, if only because of the persistent differences in the regulation of property rights and in accounting rules.

Differences in institutional regulations are not only one potential cause of divergent responses on the part of individual economies to "one-off" events; they may also cause the longer-term trend growth rates of the countries participating in a monetary union to diverge from one another. For instance, the slower growth of some larger EMU member states may owe something to heavy tax burdens and to inadequate reforms on the labour market. This is where national governments must take action.

The growth differentials in EMU may likewise reflect in part the economic catching-up process of those economies whose income level remains distinctly below the EMU average. Countries in the process of catching up are typically marked by sharp advances in productivity in the tradable goods sector. The acceleration of productivity growth is normally mirrored in corresponding wage rises. If such wage rises are transferred to the non-tradable goods sector without corresponding increases in productivity being recorded there, then that results in the general price level in the country in question going up faster than in the advanced countries. Put simply, the catching-up process leads to a *rapprochement* of living standards. Such convergence in real terms is then linked with divergence in rates of inflation via what is known as the "Balassa-Samuelson effect".

3. The implications for monetary policy

From what I have said so far, it follows that there may be a potential for divergences in growth and inflation rates between the individual member states of a monetary union.

If the inflation rate in specific member states of EMU exceeds the stability standard of the ECB, such overshooting has to be offset by correspondingly lower inflation rates in the other countries. Whether that poses problems for the countries at the bottom end of the "price range" depends firstly on the scale of the overshooting and secondly on the weight assigned to the inflation rate of the "problem" countries in the EMU-wide inflation rate. Viewed in these terms, higher inflation rates run by smaller countries present less risk of conflict than similar trends in large countries.

As you know, against the background of the current differences in inflation rates, and those expected for the future, there have been calls for the ECB to interpret its stability standard more leniently than in the past. Failing this, there would be a risk of "too little" inflation being left over for the countries that are growing more slowly. Specifically, the ECB Governing Council has already been recommended to extend the spread of its definition of price stability to 0 to 2½%. Behind this recommendation are model calculations which suggest that in future the countries of the euro area will have very different inflation rates. According to those calculations, the longer-term inflation rate in Germany will run almost 1 percentage point below the EMU-wide inflation rate. In this case, given an orientation to the 2 % mark for the euro area as a whole, an inflation rate of only 1% would be left for Germany.

---

[3] Cf. ECB Monthly Bulletin, August 2000, p. 61.

[4] Cf. Klüver, A. and G. Rübel (2001): Industrielle Konzentration als Kriterium für die Geeignetheit eines einheitlichen Währungsraums (Industrial concentration as a criterion of the suitability of a single monetary area). Eine empirische Untersuchung der Europäischen Union von 1972 bis 1996, Jahrbücher für Nationalökonomie und Statistik, 221, 1 pp. 68-86.

Because of the likely overestimation of the "true" rate of inflation by the measured rate, and the rigidities on the German labour market, Sinn and Reutter regard that value of 1% as too low. In their study, they recommend the raising of the stability standard in the euro area by one-half of a percentage point, in order that the German inflation rate is not obliged to turn out lower than would be consistent with the Bundesbank's old stability standard.[5]

When assessing such policy recommendations, it must, however, be borne in mind that they are based not least on the extrapolation of differences in rates of productivity growth observed in the past. But historic figures for a specific range of countries cannot readily be applied to the future, since the pattern of catching-up and advanced countries may have changed significantly in the interim. For instance, Finland and Ireland have meanwhile reached a level of per capita income which is above the EMU average.[6] Today, only Greece, Portugal and Spain can be identified as definite candidates for catching-up. In the year 2000, their per capita income was still 33%, 25% and 18% below the EMU average, respectively.

Moreover, it is to be kept in mind that, in the member states of EMU, there are wage differentials between the non-tradable and the tradable goods sector. They may well weaken the Balassa-Samuelson correlation.[7] After all, it is not impossible that countries in the process of catching up make greater productivity gains than hitherto, not only in the tradable goods sector but also in the non-tradable goods sector, because, for instance, they are pursuing a systematic policy of opening up and deregulating markets. That, too, would qualify the Balassa-Samuelson effect.

A simple and hypothetical back-of-the-envelope calculation shows that an inflation differential of two percentage points between the three catching-up candidates Greece, Portugal and Spain and all other member countries would raise the EMU-wide inflation rate by 0.3 percentage point.[8] To prevent an overshooting of the ECB stability standard, average inflation in the other member states would have to be kept at a maximum of 1.7%.

All in all, differences in inflation rates, which are likely to persist for some time, should not be a reason for the ECB to revise its definition of price stability upwards. In the first place, the ceiling of just under 2% provides sufficient leeway for a certain Balassa-Samuelson effect. Secondly, the main reason why a redefinition of the stability standard should not be contemplated is that an increase might adversely affect the credibility of monetary policy in EMU. For the rest, it is to be expected that the divergences in inflation rates due to catching up will diminish because a large part of the catching-up process is in the past.

The monetary policy of the Eurosystem is geared to safeguarding price stability in the euro area as a whole. Hence it is neither required nor able to influence growth and inflation differences within the monetary union. If economic problems arise from catching-up processes and cyclical divergences, that presents a challenge, rather, to national economic policy-makers. In such cases, not only structural and wage policy but also fiscal policy must be brought into play.

Some observers think that the European Stability and Growth Pact might exacerbate cyclical divergences because it hampers unduly the stabilising role played by national fiscal policy. This argument fails to take sufficient account of the fact that the Pact requires EMU member states to aim, over the medium term, at a budget "close to balance or in surplus". It is exactly the accomplishment of that objective which creates sufficient leeway for the automatic stabilisers to fulfill their role without endangering the budget-deficit ceiling of 3% of GDP, even under economically difficult circumstances.

However, the Stability and Growth Pact does not contain any mechanism that might force countries, at times of cyclical overheating, to run budget surpluses or to work towards greater wage restraint. In such cases the "Resolution on economic coordination in Stage Three of EMU" adopted in December 1997 draws attention to the instruments for coordinating national economic policies provided for in the Maastricht Treaty. Such instruments include the mandate of the Ecofin Council to monitor both

---

[5] Cf. Sinn, H.-W. and M. Reutter: Die Mindestinflationsrate für die Euro-Länder (The minimum inflation rate for the euro member states), ifo-Schnelldienst 35-36/2000, p. 23.

[6] In the year 2000, per capita Irish GDP was 14 %, and Finnish per capita GDP 0.6 %, above the EMU average.

[7] This is the conclusion reached, for instance by Alberola, E. and T. Tyrväinen (1998): Is there Scope for Inflation Differentials in EMU?, Bank of Finland Discussion Papers 15/98.

[8] In this calculation, it is assumed for the sake of simplicity that the share of those three countries in the HCPI for the euro area is constant, at 15 %. If the share of those countries in consumer spending in EMU rises in the course of the catching-up process, then the impact of inflation due to catching up on EMU-wide inflation must be put a little higher.

economic performance in the member states and the compatibility of national economic policies with the economic policy guidelines of the EU. If the Council decides that the policies of any country infringe the jointly agreed guidelines, it may issue the appropriate recommendations to the member state in question, and publish them as well (Article 99 (4), EC Treaty). The Ecofin Council took advantage of that option last February, to censure the budget policy of the Irish Government and to request it to moderate the overheated pace of business activity. The Irish Government rejected that criticism, and refused to amend its budget plans, pointing out that it was running a large budget surplus and had a low level of government debt.

As we all know, the Irish inflation rate has no significant impact on EMU-wide price rises because of that country's small share in the aggregated series. However, the Irish case did make plain that no binding mechanisms exist for the eventuality of overheating in any one country pushing up area-wide inflation, thus compelling the other member states to adopt a monetary stance which is, by their standards, too restrictive.

III. The implications of an enlargement of the monetary union

The debate on convergence and divergence in the monetary union has acquired a further dimension as a result of the projected eastward enlargement of the EU. From the monetary policy angle, the question arises as to which problems may be posed by the accession of countries that are at very different stages of economic development. With respect to the eastward enlargement of the EU, there will be a "threefold heterogeneity"[9] in per capita GDP: the size disparities within the group of candidates; the divergences between that group as a whole and the EU; and, moreover, the differences in size among the present EU member states.

In this connection, it is being debated, not least, whether the convergence criteria specified in the EC Treaty will suffice to assess the sustained economic *rapprochement* of the EMU candidate countries with the existing monetary union. In the light of the comparatively low per capita incomes in the formerly socialist transition economies of central and eastern Europe, there are fears that the above-mentioned Balassa-Samuelson effect might engender a greater divergence of inflation rates within an enlarged EMU.

In the present composition of the monetary union, the differences in inflation rates are running within a range of several percentage points. A gap of 1½ percentage points from the three best-performing countries in terms of price stability in the convergence assessment therefore obviously provides no adequate guarantee that no major tensions will arise again afterwards. As long as the country in question pursues a monetary policy of its own, it can curb inflation to such an extent that it will meet the criterion at the time of the convergence assessment. But the problem of diverging price movements may also crop up later – namely, when the country is no longer pursuing an autonomous monetary policy tailored to its specific needs.

If this problem case arose after the enlargement of the monetary union, the advanced core countries, given a definite union-wide stability objective, would be faced with greater pressure for monetary restrictions than before. Along with insufficiently flexible merchandise and labour markets, that might pose risks to the economy. That, in turn, would increase the political pressure on the ECB to relax its present stability objective.

A glance at the movement of the relative prices of the principal candidates for admission to the European Union bears out the supposition that, besides monetary factors, real economic catching-up processes contributed to the fact that those countries' inflation rates were all running above the EU average. In the Czech Republic and Hungary, for instance, the prices of non-tradables rose between 1995 and 2000 about 2 percentage points faster each year than the overall cost of living. A similar picture is presented by Poland and other transition economies. It must be admitted, though, that the scale of the real appreciation varies considerably, both between the individual countries and over time. At the same time, it is conspicuous, however, that the price indices for non-tradables and for the overall cost of living in Germany and in France moved virtually in parallel during that period.

Besides the long-term movement of relative prices, the scale and correlation of short- and medium-term fluctuations provide evidence of the progress made in convergence between the present and the potential members of EMU. According to the classical theories of optimum monetary areas,

[9] Cf. BHF-Bank, EU-Osterweiterung: Jenseits von Nizza (EU enlargement: beyond Nice) in Wirtschaftsdienst dated 20.1.2001.

countries should combine into a monetary union only if they are subject to largely parallel disruptions. The flexibility of the labour markets is crucial to this criterion, too. The faster and more smoothly wages adjust to new conditions, the easier it is to prevent unwelcome repercussions on the real economy.

In the assessment of cyclical convergence, as in the appraisal of the longer-term catching-up process, one may have recourse to the movement of sectoral price indices. For instance, the relative prices of non-tradables in Poland, the Czech Republic and Hungary between 1995 and 2000 exhibit much greater volatility than the corresponding indices in Germany or France. Moreover, the disruptions in Poland and Hungary mostly seem to have run in the opposite direction to the business cycles in Germany.

Empirical studies of price adjustments during economic catching-up processes have shown that differences in per capita incomes may be only a very rough indicator of potential structural disparities in inflation rates within a monetary union.[10] What seems to make better sense is an analysis and appraisal procedure based on a direct comparison of the price and cost movements of tradables and non-tradables in the individual countries. The inclusion of such indices in the convergence assessment is wholly consistent with the EC Treaty, which inter alia calls explicitly in Article 121 for "the development of unit labour costs and other price indices" to be taken into account.

In my opinion, the provisions of the EC Treaty are therefore suited to the assessment not only of nominal but also – at least to some extent – of progress towards real convergence. I do not subscribe to the view that the present regulations have only applied to the old EU countries, but are completely unsuitable for gauging the degree of convergence of the emerging economies.

But I do not ignore the problems associated with direct recourse to the approach of price and cost analysis. Problems arise, above all, if the relevant indicators are distorted by special factors of the transition process. Thus, high domestic price stability may – among other things - also reflect still incomplete liberalisation and wide-ranging government regulation.

Even so, I come to the conclusion, by and large, that, notwithstanding the special economic situation of the central and eastern European transition economies, no new convergence criterion needs to be devised for assessing the candidates for admission to EMU. Instead, the provisions on convergence assessment specified in Article 121 of the EC Treaty, including their real economic elements, should be complied with meticulosity. In this connection, such inflation risks should be heeded as may arise, owing to real convergence in the economic catching-up and adjustment process, from existing divergences in price and cost patterns. That means that the movements of unit labour costs and other price indices must be included in the assessment. Special attention must also be paid to the relative prices of non-tradables, for they include evidence of the degree of real convergence and of future inflation risks. The EC Treaty explicitly emphasises that an accession country has to have achieved a sustainable high degree of price stability.

As has recently been reconfirmed in Malmö, it will be necessary to insist already at the time of the eastward enlargement of the European Union on the *acquis communautaire* of the European Union being adopted as far as possible by the new members. In other words, the number of exceptional and transitional arrangements will have to be kept down to a minimum. The essential economic conditions for joining the European Union include a functional market economy and the ability to withstand the competitive pressure exerted by the single market.

All these requirements do not constitute any new obstacles on the long way to monetary union. They are consistent with the existing Treaties. At the same time, strict compliance with them takes due account of the fear that structural differences in inflation rates in the euro area might increase if emerging economies were to join the monetary union too early.

I want to conclude with the statement that the catching-up process of accession countries can be promoted by foreign direct investment. The transfer of technology and knowledge, which is connected to foreign direct investment, helps to enhance overall economic productivity and tends to reduce inflationary risks. It is hence an encouraging fact that - by the end of 1999 - German investors have been engaged in the potential accession countries with around 20 billion Euro.

[10] Cf. Alberola, E. and T. Tyrväinen (1998) op. cit. and de Grauwe, P. and F. Skudelny (2000): Inflation and Productivity Differentials in EMU, CES Discussion Paper Series 00.15.