

# **EFN REPORT ON THE EURO AREA OUTLOOK**



**SPRING 2003**

## **About the European Forecasting Network**

The European Forecasting Network (EFN) is a research group of European institutions, founded in 2001 and co-financed by the European Commission. The objective of the EFN is to provide a critical analysis of the current economic situation in the Euro area, short-term forecasts of the main macroeconomic and financial variables, policy advice, and in-depth study of topics of particular relevance for the working of the European Monetary Union. The EFN publishes two semi-annual reports, in the spring and in the fall. Further information on the EFN can be obtained from our web site, [www.efn.uni-bocconi.it](http://www.efn.uni-bocconi.it) or by e-mail at [efn@uni-bocconi.it](mailto:efn@uni-bocconi.it) .

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# Executive Summary

**Economic recovery is still very slow**

This is the Third Report of the European Forecasting Network on the Euro area. Although on each occasion we started at the pessimistic end of the spectrum of forecasters, we are yet again revising downwards our forecasts for 2002 and 2003. Growth of 0.8% in 2002 will be followed by only 1.2% in 2003 and 2.1 % in 2004. This anaemic recovery from the downturn in 2001 has been exacerbated by a series of negative shocks including rising oil prices and the considerable uncertainty about the prospects of the Iraq war that have depressed consumption, investment and world trade. Moreover, the pre-occupation with a ceiling for the inflation rate of 2% has meant that the ECB has had to be rather cautious in its policy choices. The effects of the mildly expansionary monetary policy are balanced by the behaviour of unit labour costs and the output gap. Overall, our forecast for HICP inflation is 2.4% for 2003 and 1.8% for 2004, not too far from the recent years' average of 1.9%. A target of 2% in the HICP with a symmetric error margin of plus or minus 1% would have allowed the ECB to be more relaxed in its setting of monetary policy and to give greater weight to short run movements of output.

**Monetary and fiscal policy have not been very helpful**

At the same time, the pro-cyclical fiscal policies of several countries, most noticeably France and Germany, when the business cycle was in upswing during 1999 and 2000, combined with the requirements in the Stability and Growth Pact, left these countries in a vulnerable position once a downturn started.

This highlights the difficulties of reforming the SGP. It is easy to see good reasons for adopting a more flexible approach that addressed more explicitly the need to combine short term sensitivity to the business cycle with longer term commitment to reducing overall debt levels in order to create room in the future to cope with the general ageing of the population. The problem is one of implementation. In the present climate many governments would use such a reform as a further excuse for postponing the structural reforms that are needed.

A number of commentators have pointed to the Code for Fiscal Stability that guides fiscal policy in the United Kingdom. This has been suggested as a possible template for fiscal policy in Europe as an alternative to the Stability and Growth Pact. The problem again is

**Problems in reforming the Stability and Growth Pact**

that the Code would be a 'one size fits all' rule. The code suits the UK because the starting point was a relatively low and easily sustainable level of debt in relation to national income. There is also a need to rebuild a seriously depleted public sector capital stock. The use of the 'Golden Rule' - that over the course of the business cycle current expenditure is not financed by borrowing - is in direct conflict with the expectation of the SGP that the general government balance be close to balance or in surplus. To finance net capital expenditure by borrowing implies a persistent deficit into the medium term, and would in any case require a strict classification of investment expenditures to prevent "creative accounting".

**Fiscal rules should be different for different countries**

The recent proposals from the EC to strengthen budgetary coordination by giving more emphasis to the cyclically adjusted position and to the sustainability of total debt, goes some way towards improving the flexibility of the system, but it still falls short of the need to tailor fiscal policy to the particular circumstances of different countries that start from radically different debt levels.

**10 new members will join the European Community**

Notwithstanding the short run difficulties of economic recovery, there are a number of medium term developments that are of much more importance for the evolution of the Euro area and require careful analysis. In particular, in 2004 10 new members will join the European Union. Although this will initially raise total EU GDP by only about 9%, it will raise the population by almost 20%. There is also a considerable dispersion of per capita incomes within the group of new member countries, with Cyprus at 80% of the EU average, but Latvia at only a third of EU levels and Poland at 40%. In the longer term, we expect the extension of the Single Market to increase the process of economic convergence though, as we note later, there will remain considerable dispersion in incomes especially at the regional level that may require particular transfer policies. Furthermore, many of the accession countries have large agricultural sectors, which could necessitate substantial modifications in the current agricultural subsidization policies. Finally, it is worth remembering that the substantial heterogeneity of the accession countries will make 'one fits all' rules very difficult to implement and call for a careful tailoring of policies.

**Their heterogeneity requires a careful tailoring of policies**

Because of their importance, three chapters of this report are devoted to the analysis of, respectively, the expected impact of accession on the current members of the European Union, the macroeconomic outlook and the main challenges for the accession countries, and the economic consequences of

accession at a regional level.

**The impact of accession on the current members of the European Union is small, but output growth will be boosted among the new members**

We use a general equilibrium approach to look at the impact on product and labour markets of the enlargement to 25 member states. We find that the effects on existing members are minor but there is a significant boost to the output of the accession countries.

Specifically, we consider a scenario that combines economic integration with farm support in accessing countries. All countries contribute to the Common Agricultural Policy (CAP) according to their GDP, a sum which is augmented by EU tariff revenues on agricultural products. This amount is then shared among incumbent and accessing countries in proportion of their agricultural output, as follows: current member states immediately receive the full amount, whereas accessing countries receive only 30% in 2005 and progressively increase their share up to 100% in 2012 on a linear basis.

It turns out that the impact on Euro area GDP is close to zero, whereas it reaches 7% for all the accession countries bar the Baltic States, who would be worse off. This is probably due to their different pattern of sectoral specialisation and trade.

According to the simulation results, the fear that integration will be harmful for EU15 unskilled worker is not well founded. On the contrary, the market enlargement and the following reallocation have in fact practically no impact on their wages. Accession countries show a rather differentiated pattern: in Poland and Hungary unskilled labour is worse off, especially in the short term, due to the adverse influence accession has on these countries' agricultural sector. In the other countries, characterised by a more diversified industrial structure, the result is the opposite.

**There are no adverse effects in the EU15 for unskilled labour**

With reference to economic policy in the accession countries, on the basis of their economic outlook we identify the following two problem areas:

- The need for fiscal restraint.
- The interaction between monetary and fiscal policies, and the role of an independent central bank.

**The main macroeconomic challenges for accession countries**

The fiscal balances of four Central European candidates for EU membership—Poland, Hungary, the Czech Republic and Slovakia—have deteriorated considerably over the last two years. The reasons for the widening of state and consolidated budget deficits have differed among the countries. Some of the excessive increases in expenditures stemmed from outlays

**Fiscal Policy has been too expansionary for structural or cyclical reasons. Medium-term expenditure ceilings should be introduced.**

related to the implementation of pension, health care, and educational reforms. The new members of NATO also found that increased security comes at a cost, as the alliance required upgrades to military installations and equipment. Furthermore, the economic slowdown across the region that hit in late 2001 and early 2002 brought tax revenues below expectations and resulted in short-term liquidity problems for the public sector. Finally, the governments in Hungary and the Czech Republic introduced extensive fiscal packages to stimulate their struggling economies through large-scale investment and current spending programs. A major programme of fiscal consolidation should be outlined, possibly with the introduction of medium term expenditure ceilings.

**Inflation targeting is difficult with too expansionary fiscal policy**

The expansionary fiscal policy has usually been accompanied by tight monetary policy to fight inflation. In some countries, most notably in Poland, this mix of restrictive monetary and expansionary fiscal policies led to a large inflow of speculative portfolio capital and to at least a temporary overvaluation of the local currency, reducing the availability of domestic credit needed to spur growth in capital investment and the construction sector. In addition, high interest rates on domestic credit encouraged local companies to seek financing abroad, rapidly increasing foreign indebtedness.

**In the medium-term this can put strong political pressure on the central banks, whose independence needs to be protected**

The tight monetary policies of the central banks are generating significant political opposition. The governments see the independent central banks as obstacles to achieving higher rates of economic growth, reducing unemployment rates, etc. More radical parliamentarians are putting forward proposals for legislation either to widen the number of operational goals of the central bank to include promoting economic growth, or to seriously amend the system of appointing new members of the monetary policy bodies so as increase the influence over their decisions of parliaments and governments. This approach could lead to inter-institutional animosities and dramatically reduce the ability of the central banks to fulfil their constitutional duties. The most drastic examples of such conflicts are the developments in Poland and Hungary. In both cases, the central banks have come under fire from the government and the employers' organisations for "allegedly" keeping interest rates too high.

The European Commission and other EU representatives, on several occasion, have already addressed the need to maintain full central bank independences in the accession countries – the continuation and stiffening of this approach would be, in

**National disparities decrease in the Union, but differences between regions in the poorest countries increase**

our view, warranted.

A further challenge for macroeconomic policy in the accession countries, but also for the EU, is the existence of substantial regional disparities. Previous experiences of enlargement (Greece, Spain and Portugal in the eighties) have shown that there is indeed convergence towards the EU average per capita income, but some regions converge more rapidly than others, so that within specific countries there can be an increase in regional income disparities. Regions that start off relatively poor as compared to their national average end up relatively poorer. Therefore, during the integration process, inequality among countries in the EU-12 has decreased, but differences between regions in the poorest countries have increased, in spite of the existence of structural funds.

**What are the best - worst performing regions?**

The best performing regions, in terms of GDP per capita (GDPpc), have a diversified sectorial structure, in which high tech industries and knowledge intensive services (especially credit and insurance services) play important roles, are close to the European core, with substantial R&D expenditure and have relatively qualified labour forces. In contrast, there are regions with a low degree of diversification in their sectorial structures (and thus a greater sensitivity to asymmetric shocks), relatively high levels of specialisation in the Agricultural sector and mature low tech industries (such as Textiles and Clothing, Paper and printing or Non-metallic minerals and mineral products) in the initial period, are far from the European core, with low investment in R&D and with a preponderance of low-skilled labour. These regions have lost ground after 15 years of integration, and are caught in a poverty trap.

**Which accession regions will benefit from integration?**

Coming to the accession countries, the regions that are closer to the big European markets and the European Core (especially the border regions) and are highly specialised in knowledge-intensive services (in particular, Services of credit and insurance) are clearly better positioned than the others in terms of GDP per capita, and are more likely to benefit from integration. The opposite is found in those candidate regions far from the European Core and highly specialised in Agricultural products.

**A new regional policy within an enlarged EU should be created**

In the light of past experience, the maintenance of the current policy could mean that internal regional disparities in candidate countries will continue or even rise after enlargement. But the main worry is the persistence of polarisation. So a great deal of work remains to be done in order to create a new regional policy within an enlarged EU.

However, prior to defining a structural framework for regional support, the EU would need to decide on its main social, political and economic goals. In this sense, a relevant question

**Regional policy faces a trade-off between equity and efficiency**

arises: should the prime objective of regional policy move towards economic efficiency and competitiveness or does a valid rationale also lie in providing support for regions which will always be disadvantaged by geography or economics? Then, regional policy faces a trade-off between equity and efficiency.

Priority focused on achieving equity would imply policy measures addressed to backward regions. In this sense, results obtained from this analysis would suggest some possible measures that could contribute to reduce the regional disparities: specific measures designed to speed up the adjustment of industrial structures and to encourage the development of new undertakings; promoting product differentiation and increasing competitiveness in sectors such as Agricultural and traditional areas (Textiles, Food, Paper among others) and thus to combat their lower value added; increasing investment in inter-regional infrastructures in order to improve the accessibility of the poorest regions; increasing R&D spending in order to promote the innovation and its diffusion; and implementing effective human capital policies in backward regions. Additionally, measures addressed to these less developed regions could also benefit to the most prosperous regions (for instance, in the form of imports). On the contrary, if efficiency would be the main goal, promoting growth at the most prosperous regions would be the key point. In this case, it could be expected a spillover effect on less favoured regions (favouring equity in the longer run).

**In 2000 Europe was thought to be largely immune to a US downturn...**

The economic impact of the enlargement on the Euro area should be analyzed jointly with other possible external shocks, such as a large US slowdown similar to the one that took place recently. At the end of 2000 it was widely believed that the impact of a US downturn on Europe could be quite limited - the Euro area, after all, approximates a closed economy and sophisticated multi-country econometric models (the IMF's Multimod was then a leading example), which take full account of the trade linkages between economies, indicated that the spillover from the US to Europe would be relatively small. In the event, the US downturn in 2001 seems to have heralded a relatively severe drop in output growth in Europe, too.

**...But it was not**

Forecasts compiled in the Autumn of 2000 for output growth in the Euro area for the following year gave an impression of continued buoyancy which was to be rudely betrayed by reality. The European Commission's November 2000 forecast for growth in the Euro area in the calendar year 2001, at 3.2%, was quite representative of general opinion. The latest

**Should we still  
closely monitor the  
US?...**

**...Yes, because shock  
transmission is fast  
and powerful, mostly  
due to financial  
integration**

data puts the 2001 Euro area growth rate at only 1.4%. The period of relatively asynchronous business cycle experience in the 80s and 90s seems to have given way to a highly synchronous downturn at the beginning of the new decade.

For Euro area policy-makers the significance seems obvious: if spillovers from the US economy are highly significant for the Euro area, policy will need to track and anticipate the US economy and policy measures can be brought forward promptly on this basis. If, on the other hand, the spillovers are small then the Euro area policy makers can treat the Euro area as a closed economy and US developments can be given lesser weight.

We find that the transmission of US shocks to Europe is fast and powerful, with about 50% of the size of the US shock being transmitted to European countries within a year. Whereas traditional multi-country models base their transmission channels solely on trade factors and produce evidence of a small spillover, it seems that a number of other channels must be active since our findings embody fast and sizable transmission. It must be significant that financial integration in the world economy has increased and that a large proportion of production comes from firms which are multinational in character. The increasingly high correlation of stock market indices round the world suggests that one channel of transmission of a shock mainly affecting the US is through this route; at the same time, monetary policy in other countries has to take the setting of US monetary policy into account. The behavior of the foreign exchanges may capture the markets' assessments of individual country exposure. We provide evidence on what the most important channels of transmission are and point to a broad "financial channel" as being an important conduit for the transmission, with special reference to exchange rates and interest rates.

*Additional details on the topics considered in this report can be found in a set of annexes available on the web site of the European Forecasting Network, [www.efn.uni-bocconi.it](http://www.efn.uni-bocconi.it)*

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# Chapter 1

## Euro Area Outlook and Forecasts



**High uncertainty prevents quick recovery but...**

**...easing of tensions in the Middle East are assumed in the second part of the year.**

**Forecasts for GDP growth are 1.2% for 2003 and 2.1% for 2004**

### ***Economic outlook for 2003 and 2004***

Uncertainty about the Iraq crisis has called the global economic recovery into question. During the winter of 2002/03 this uncertainty was reflected in weak stock markets, strong movements in the oil market and of exchange rates. Should the oil price remain at high levels over a prolonged period of time or go up even further, increasing production costs would squeeze profits of firms and impair the purchasing power of consumers. Immediately after the beginning of the war in Iraq the oil prices dropped significantly, but they have increased since then. While the appreciation of the euro versus the dollar has dampened the effects of the oil price hike, a continuation of this process will harm exports, which have been an important source of growth in the Euro area during the last few years.

Very high oil prices and a continuing depreciation of the dollar are however not expected to continue much further into 2003 and 2004. Instead, we believe that the current oil price level reasonably reflects the present risks for world oil supply and that the exchange rate for the dollar is partly determined by expectations about the possible future costs of the US engagement in the Middle East. At 1.10 the Euro is indeed approaching the bottom value of what is generally considered to be its long run equilibrium exchange rate. Thus, further price and exchange rate movements are not the main driving forces for our forecasts; as the oil price is assumed to fluctuate around 24.5 for the remainder of 2003 and 23.5 US dollar per barrel for 2004.

Our forecasts for GDP growth are 1.2 and 2.1% for 2003 and 2004 respectively. These forecasts hinge on the assumption that political uncertainty in the Middle East will decrease rapidly. In particular, we expect that the war in Iraq will not lead to significant disruptions in the world economy. In the second half of 2003, economic recovery in the major world regions will gain momentum slightly. Expansionary fiscal and monetary policies will stimulate

economic activities in the US. In Japan, sustained growth is still hampered by the lack of structural reforms. It should be noted however that, in some world regions economic activity has remained robust, in particular in Central and Eastern Europe as well as Southeast Asia. Summing up, the stimulus for the Euro area from world trade is expected to gain momentum, though only very gradually, over the forecast horizon.

**Global economic recovery will gradually stimulate Euro area activity**

The expected sluggish economic recovery in the US is likely to affect the Euro area countries to different degrees. Each country benefits not only directly from the economic recovery in the US by its bilateral trade linkages, but also due to the linkages with the other countries which are also positively influenced by the US expansion. Furthermore, international trade is not the only channel of business cycle transmission. A further source of shock propagation is the increasing interdependence of capital markets, which are currently very adversely affected by the uncertainty in the world economy. In addition, the investment decisions of multinational companies are also important. Therefore, an overall measure of the influence of economic developments abroad on the domestic economy is required. France and Germany, for example, depend to a larger degree on external economic developments than Italy and Spain. If the growth rate of industrial production in the US increases by one percentage point, the cumulative gain in the growth rate of industrial production after the adjustment processes have run their course amounts to more than 0.8 percentage points in France and Germany. The corresponding figures for Spain and Italy are somewhat lower. For 2003 we forecast a 2.2% rate of growth for the annual average of the industrial production in US and only 0.8% for the Euro area.

**The end of the Iraq crisis will restore investor and consumer confidence**

Improvements in the global economy in the course of 2003, expected to arise after the end of the Iraq crisis, will help to restore investor and consumer confidence. In the last two years over-capacity has already been reduced considerably, and the increase in demand will encourage companies to invest more. In addition, the financing conditions will be supported by low interest rates in the Euro area. Furthermore, the rise in unit labour costs will be significantly lower than in previous years. Capital obsolescence, especially of new technologies and in the rising share of ICT goods in capital stock which depreciate very rapidly, could reinforce such a process. Investment activity is also supported by the pick up in demand. However, persistently high unemployment will mean that private consumption will only accelerate at a low pace.

The forecasts of the main macroeconomic aggregates are summarised in table 1.1

**Table 1.1: Economic outlook for the Euro area**

	2000	2001	2002	2003: 1st half		2003: annual		2004: annual	
				Point Forecast	Interval Forecast	Point Forecast	Interval Forecast	Point Forecast	Interval Forecast
					0.6		0.6		1.4
GDP	3.5	1.4	0.8	1.1	1.7	1.2	1.8	2.1	2.8
Potential Output	2.9	2.8	2.1	2.1	2.4	1.9	2.3	1.9	2.4
Private Consumption	2.5	1.8	0.6	1.0	1.8	1.0	1.8	2.0	3.1
Government Consumption	2.0	2.1	2.5	1.9	2.2	1.8	2.1	1.3	1.7
Fixed Capital Formation	4.9	-0.6	-2.5	-0.6	1.3	0.9	2.9	4.3	6.5
Exports	12.6	2.8	1.2	3.7	5.8	3.3	5.6	6.3	9.0
Imports	11.3	1.5	-0.3	3.7	6.2	4.0	6.7	7.7	10.9
Unemployment Rate	8.5	8.0	8.3	8.7	8.8	8.8	8.9	9.0	9.4
NAIRU	9.1	8.6	8.2	8.2	8.3	8.2	8.4	8.6	9.0
Labour Costs	3.2	3.3	3.6	3.1	3.5	3.0	3.4	3.0	3.6
Labour Productivity	1.3	0.4	0.1	1.0	1.6	1.3	1.8	2.1	2.6
HICP	2.1	2.4	2.2	2.3	2.8	2.4	3.1	1.8	2.8
Industrial Production	3.5	0.4	-0.8	0.3		0.8		2.0	

Percentage change in the average level compared with the same period a year earlier, except for unemployment rate and NAIRU that are expressed in levels. Point forecasts and 80% confidence bounds are taken from EFN forecasting models and based on 2000 stochastic simulations.

Based on data up to 27 March 2003.

**Exports will be hampered by sluggish external demand and the Euro appreciation**

**Forecasts for inflation are 2.4% for 2003 and 1.8% for 2004**

The recent pronounced appreciation of the Euro, together with sluggish demand on export markets, started to take its toll. In the fourth quarter of 2002, exports stagnated. We expect that also in the first half of the current year Euro area exports will be hampered by these factors. With increasing world demand and the fading out of the effects of the Euro appreciation we expect Euro area exports to gain momentum in the second half of the year. Our forecast, however, hinges on the assumption that the war in Iraq will only be rather short and that repercussions on the world economy remain limited.

In this context, the monetary factors pushing up inflation are compensated by the deviation of prices from the trend in unit labour cost and the transitory effects due to the output gap, changes in unit labour costs, etc. Therefore, our inflation forecasts, 2.4% in 2003 and 1.8% in 2004, tend to their mean level which turns out to be constant in the recent years at about 1.9%.

### ***Comparison with alternative forecasts***

The forecasts presented above are obtained by the EFN macroeconomic model, described in detail in the Spring 2002 report. Table 1.2 reports a comparison of the EFN forecasts of the main macroeconomic aggregates with alternative forecasts, notably those of the European Commission, the OECD, and Consensus Economics Inc.

For 2003, the EFN forecast for GDP growth is close to the consensus forecast, while the other forecasts are higher. The divergences can be ascribed partly to the different information sets. In particular, the Commission and the OECD published their forecasts at a time when a more optimistic outlook for the world economy prevailed. Anticipations of revised IMF and Commission forecasts indicate much lower values, in line with the Consensus ones. In particular, the EFN forecast for private consumption is pessimistic, reflecting mostly higher unemployment. This in turn implies a lower contribution of private consumption and – due to the demand effect – capital formation to GDP growth in 2003. This lack of domestic demand causes a slower rise in imports and therefore a larger contribution of net exports is therefore implied. For 2004, we expect a negative contribution from net exports to GDP growth, and, compared to the Commission and the OECD, a more subdued recovery of domestic demand. The increase of working days in 2004 is expected to have only a negligible effect on the economic performance.

**Table 2: Comparison of EFN Forecasts with alternative Forecasts**

	EFN		EU		OECD		Consensus	
	2003	2004	2003	2004	2003	2004	2003	2004
GDP	1.2	2.1	1.8	2.6	1.8	2.7	1.1	2.1
Private Consumption	1.0	2.0	1.7	2.3	1.5	2.5	1.2	1.9
Government Consumption	1.8	1.3	1.4	1.6	1.6	1.4	1.4	1.3
Fixed Capital Formation	0.9	4.3	2.0	4.0	1.6	3.1	0.2	2.8
Unemployment Rate	8.8	9.0	8.3	8.0	8.5	8.3	8.7	8.5
Consumer Prices (HICP)	2.4	1.8	2.0	1.8	1.9	1.8	1.8	1.6
Industrial Production	0.8	2.0					1.0	2.7

EU: European Commission, European Economy, No. 5, 2002; OECD: OECD Economic Outlook, No. 72, December 2002; Consensus: Consensus Economics Inc., Consensus Forecasts, March 2003

**Table 3: Comparison of spring forecast with previous outlooks**

	Actual	Spring 2003	Autumn 2002		Spring 2002	
	2002	2003	2002	2003	2002	2003
GDP	0.8	1.2	0.9	2.2	1.2	2.2
Private Consumption	0.6	1.0	0.5	1.4	1.8	2.1
Government Consumption	2.5	1.8	1.7	1.2	1.5	0.9
Fixed Capital Formation	-2.5	0.9	-1.7	2.3	-1.4	0.2
Exports	1.2	3.3	1.7	8.7	2.3	9.1
Imports	-0.3	4.0	0.1	8.6	2.1	8.3
Unemployment Rate	8.3	8.8	8.3	8.6	8.4	8.1
HICP Inflation	2.2	2.4	2.3	2.1	2.0	2.2
World Trade	2.2*	6.1	4.6	10.2	1.7	10.3

\* estimate

Our inflation forecasts are higher than all the alternatives in Table 2 possibly due to the fact that the former incorporates the impact of the increases of the international crude prices occurring up to March 2003.

### ***Forecast comparison with previous outlook***

**Over time the growth rates of GDP have been revised downward**

Table 3 shows a comparison between our spring forecast for 2002 and 2003 with the forecasts in the previous reports and with the actual outcome in 2002. In autumn 2002, no forecast for 2004 was published. Over time the growth rates of GDP and all expenditure aggregates have been slightly revised downwards, except for government consumption. The changes can be explained partly by data revisions and the longer time span of available data, implying a different starting point of the forecast. In addition, the outlook concerning the recovery of the world economy has become more pessimistic. This is reflected in the lower predicted growth rate of world trade. Accordingly, the forecast for exports has been revised downwards. Due to the weaker domestic demand in the Euro area, imports are expected to increase at a slower pace. It should be kept in mind that especially the data at the end of the sample are subject to revisions in the future.

The inflation forecasts are higher than in previous reports mainly due to the changes in the expectations of crude oil prices.

### ***Structural factors hamper growth***

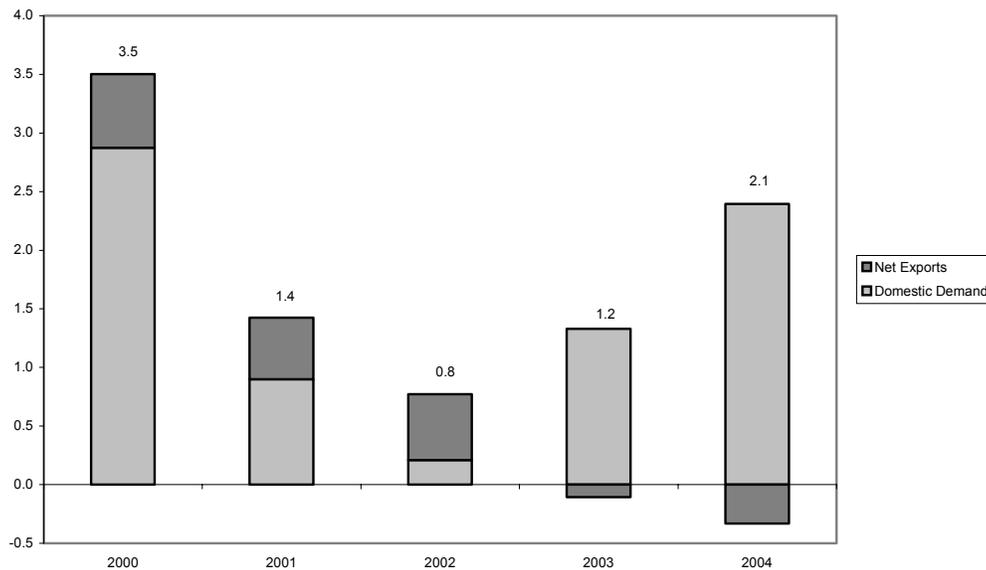
**Restoring confidence is important but policies to foster long-term growth are also required**

The Euro area will be able to benefit from its large size only if domestic conditions permit it to do so. In 2003 and 2004, domestic factors will be the driving force of GDP growth (see figure 1.1). It is however striking that potential output growth of the Euro area is continuously decreasing over the years in our forecast horizon. Similarly, the NAIRU remains extremely high and productivity gains are limited. In total, despite the fact that domestic demand will recover gradually, compared to the last economic upswing, domestic demand will remain subdued. The lack of private investment is critical in this regard, as it hampers capital accumulation and potential GDP. Therefore, policies devised to strengthen long-term growth are required.

**Fiscal and monetary policy can play only a minor role in the current context**

In the current situation, supporting domestic demand implies restoring confidence of consumers and investors. Fiscal and monetary policy measures could be embedded in a comprehensive political strategy. But the requirements of the Structure and Growth Pact (SGP) and the already low levels of

**Figure 1.1 Contributions to GDP growth**



Percentage points; figures above the columns indicate overall GDP growth; 2003 and 2004: EFN forecasts

the interest rate cast doubts on the efficacy of traditional economic policy

**Structural reforms are needed**

Thus, structural reforms are at stake. For instance, restoring confidence in the pension systems, by adapting their design to the ongoing ageing of the labour force could restore consumer confidence. Moreover, since private consumption growth is hampered by high unemployment in the Euro area, any progress on the front of employment, for example, reforms to bring more flexibility to the labour market, may translate into additional demand and thus additional growth. In the same way, increasing integration of goods and services markets and deregulations of formerly sheltered industries would stimulate employment and overall growth in the long run.

***The labour market***

**Wages grow faster than productivity**

Since 2000, labour productivity has been growing slower than wages, lowering profit margins and investment. Consequently, the creation of employment having come to a halt, we expect the unemployment rate to rise to 9.0% over the next two years.

According to OECD estimates, the bulk of unemployment is

**A less centralized bargaining would help...**

long-term and caused by microeconomic factors, such as unfavourable institutional structures, especially in labour markets. Because much of the wage bargaining process is centralised, wages and labour costs are not flexible enough to reflect labour market conditions adequately. Sector-wide agreements ignore heterogeneity at the level of the individual firm, while opening clauses are not easy to apply.

**...but incentives for low income work should be strengthened to promote social cohesion**

However, one should also stress that reforms of factor markets are currently in progress in Europe, and thanks to the internal market programme, the deregulation of goods and services markets is precisely what Europe has embarked upon. While the pace of reforms needs to be maintained, simplistic recommendations should be avoided, since social cohesion is a necessary condition for long run growth. This is particularly true in episodes of slow down of the economy, where safety nets are required to ease adjustments.

**A later retirement age would benefit potential output and the fiscal budget**

As far as potential output is concerned, early retirement is exerting a negative impact on labour supply and potential output. Trying to generate a higher participation rate of the elderly by introducing a later retirement age is one strategic policy that could be adopted to offset these effects. This would also serve to ease the pension squeeze evident in many Euro area countries, since contributions for social security can hardly be increased repeatedly.

### ***Inflation differentials, real interest rates and monetary policy***

**Inflation differentials across countries are still substantial...**

This report forecasts annual harmonized consumer price inflation for 2003 over the upper limit of the inflation range considered to be compatible with price stability by the ECB. Among member countries, however, inflation rates for 2002 differed considerably, varying from 1.3% in Germany to 4.7% in Ireland and for 2003 this variation is forecast from 1.0 to 4.5%. This phenomenon is due partly to structural convergence processes, and partly to differences in the strength of demand among member countries.

**...and lead to real interest rate differentials**

Data from financial markets show however that inflation rates are not expected to converge significantly any time soon. On the other hand, nominal interest rates are uniform in the Euro area so that low inflation countries experience higher real interest rates, and this in turn limits spending decisions and leads to upward pressures on prices (vice versa for higher inflation countries).

On the other hand higher inflation countries typically start from lower price levels and increase the quality of their products faster than other countries of the Union in order to

**A quality corrected HICP inflation would help cross country comparisons and be the proper target for the ECB**

remain competitive. Since the HICP does not correct practically for quality increments, it could be the case that estimates of inflation in lower-price countries is upwardly biased. These biases should be corrected but data on quality of goods and consumers satisfaction on services are required. After this correction the true inflation would be smaller in the lower price countries implying a partial convergence of real interest rates. A more accurate measurement of the HICP would help the conduct of the monetary policy and the indexing of wages to the proper inflation rate.

## Chapter 2

# The Impact of Enlargement on the Current and New Member States

### *The main issues raised by enlargement*

**Is enlargement good for EU economies from an economic point of view?**

**The major concerns are institutional conflicts due to the larger number of countries, social competition and massive relocation of industries, the implementation of the Common Agricultural Policy**

**The analysis of these issues requires a general equilibrium framework**

Ten new members will be welcomed into the European Union from 1 May 2004. In this section of our report we ask whether this is good news for current member states from an economic point of view, while taking as given the historical opportunity to achieve the unification of Europe on the basis of common values such as democracy, competition and social welfare.

There is a concern within the EU about the forthcoming enlargement. Three issues are at stake. Firstly, accession will involve a large number of countries which will potentially give rise to institutional conflicts. Secondly, these countries exhibit incomes per capita much lower than the per capita incomes of current member states, raising the thorny subject of social competition and the fears of massive relocation of industries or massive migrations. Finally, the agricultural sector represents a disproportionate share of GDP in certain accessing countries, which raises the issue of the CAP (Common Agricultural Policy) and whether or how it will be adjusted or not in order to take account of the new member states. However, these impacts should be smoothed by the fact that liberalisation of markets is an ongoing process. EU industries are already confronted by the competition of East European producers, and adjustments there have already taken place. In the same way, convergence of accessing countries will reduce the competitive pressure and enlarge the markets opened to incumbent countries' producers.

These are typically issues that have to be tackled by considering general equilibrium mechanisms. Such an approach allows us to take into account fully the relationships between goods markets and factor markets, while simultaneously accounting for the sizes of the countries considered, since this is a very important determinant of the magnitude of the impacts to be expected.

There have been many studies adopting such a methodology. Bchir & Maurel (2002), Lejour & Nahuis (2002) or Maliszewzka (2002) all raise the issue of integration aspects going beyond the reduction of formal tariffs. Full entry means accession to the internal market (and thus reduction in border formalities or decisions taken by firms on a different geographical scope, for instance) and eventually expected migration flows. Bchir & Maurel develop three scenarios,

namely trade integration, economic integration, and economic convergence in line with TFP catch up. Lejour & Nahuis start by assessing the impact of the accession on the internal market by estimating gravity equations at the industry level. This first step is used as an input in a second step in which this trade potential is used in a computable general equilibrium (CGE) model of the world economy. Maliszewska focuses on single market-related mechanisms.

**The future of agricultural policies is crucial**

As far as agriculture is concerned, the final impact relies on the type of assumption made on transfer payments and farm support granted to accessing countries. Assumptions can range from zero to full benefit. In the latter case one could either redistribute the shares of the pie, or increase the size of the pie with constant shares (Frandsen & Jansen, 2001; Bchir & Maurel, 2002). A key assumption is the magnitude of the output changes in accessing countries when farm support is introduced, namely the elasticity of production. Reciprocally, any general increase in the output in agriculture should be constrained by the availability of arable land and other resources used. Depending on the set of assumptions made, the change in output can be either limited or very large.

Summing up, although it is rather elementary to compute how the EU budget will be affected by this enlargement, it is much more difficult to assess how the economies of incumbent member states will be affected at the macro-economic as well as the sectoral level.

**Will EU labour intensive industries loose from enlargement?**

Given the very large gap in per capita income and factor endowment, one natural concern is that the EU enlargement will dramatically alter the specialisation pattern in the continent, with existing EU members bearing the high re-allocation costs. In particular, a clear risk commonly envisaged is that labour intensive industries will relocate massively to new member states (whose wages are on average 15% at current exchange rates or one fourth at Purchasing Parity levels of EU levels). Such a dramatic shift would possibly harm collar workers who would face a drastic reduction in wages or (more probably, given the characteristics of EU labour market) mounting unemployment.

**How good is enlargement for accessing countries from an economic point of view?**

The potential impact on CEECs should be different since these economies will join a hugely integrated area, which is much more than simply joining a free trade arrangement. It is very difficult to draw a precise picture since previous episodes of enlargements do not provide comparisons. For instance, combining transition and enlargement can have interesting outcomes associated with imperfect competition mechanisms: Boeri & Oliveira-Marins (2002) point out that taking into account the “love for variety” of consumers profoundly affects conclusions. Confronting the consumers with a huge variety of products, as compared to the previous situation of planned economies, has translated into an initial and large trade deficit

**EU is already CEECs main trade partner, and the production structure of CEECs economies is changing quickly**

in differentiated goods, to be balanced by large exports of the homogeneous goods. In the same way, it is difficult to assess a priori what the behaviour of firms will be, following on a dramatic change in the scale of their playing field, in terms of investment, mark ups etc.

East-West trade patterns have already changed dramatically within a decade. The European Union is already the CEECs main trading partner, absorbing roughly 68% of their total exports. Of course, given the difference in economic size, the reverse is not true: only 4% of EU total imports come from these countries. With the exception of agriculture and antidumping, accession countries have been granted free access to the European market. The reverse is not true however, as some accession countries still keep some forms of import restriction. However, as a consequence of transition to a market economy and ongoing integration to the rest of Europe, accession countries' economies are undergoing a deep change in production structures. The fast diversification of production is resulting in a marked increase in intra-industry trade.

### ***General equilibrium dimensions of enlargement***

As far as the EU15 economies are concerned, the big difference in size with respect to the accession countries and the pronounced asymmetry in the trade structure hint at a very limited impact of trade integration.

In contrast, the effects on new members will be enormous. At this stage, accession countries have already reaped the short-term benefits from previous trade agreements with the EU, as they have traded with it without barriers for the last seven years. However, the medium run adjustment is likely to have at least two adverse consequences for them. First, the removal of the remaining trade barriers will entail a deterioration in their terms of trade. The second, and probably more important consequence, is that a higher exposure to international competition will harm those sectors still showing large inefficiencies. Huge and painful adjustments are expected, noticeably in sectors characterised by large increasing returns to scale. This would probably call for some policy actions in order to smooth the negative impact on income. After that, however, the efficiency gains are expected to increase overall welfare.

**The impact of integration will be much bigger in CEECs than in the EU15**

In order to analyse the integration dynamics and quantify its effects it is essential to take into account a wide range of transmission channels. Moreover one has to control for the general equilibrium effects of the changes in production trade patterns, the role played by market structures (i.e. the type of competition) and the degree of factor specificity (which is very important for agriculture).

In order to meet these needs we carry on the analysis using MIRAGE (see Bchir et al. (2002) for a detailed description of the model), a Multi-region, multi-sector CGEM, devoted to trade policy analysis.

The simulation with MIRAGE provides results at the sectorial level for the Euro Area as a whole, and for a selected group of accession countries. The variables analysed are trade patterns, structure of employment and wages by qualification level, structure of employment, activity and firms' number and size.

### ***Simulation exercise and policy conclusions***

**Enlargement means both scrapping barriers and a change in consumers' and firms' behaviour**

Enlargement has at least two different meanings: firstly that of trade liberalisation accompanied by the breaking-up of residual tariffs and non-tariff (essentially anti-dumping) protection. The new members will apply the same common external tariff as the existing EU countries. Secondly it will mean economic integration, in line with the completion of the Single market. Firms, both in the EU15 and the CEECs, will take their production decision taking into account an enlarged market of 25 members. Products from the CEEC will be regarded by consumers as belonging to the same quality ladder as EU15 ones. The end of market fragmentation will make for stronger competition, pushing mark-ups down. On average, firms' sizes will increase. The magnitude of these effects is bound to vary greatly across industries, with the type of competition within sectors playing a crucial role.

**In a scenario with economic integration and farm support...**

We focus here on a scenario that combines economic integration with farm support in accessing countries. In both scenarios, the common agriculture policy remains unchanged and accession countries do not benefit of it.

In this scenario all countries contribute to the CAP according to their GDP, a sum which is augmented by EU tariff revenues on agricultural products. This amount is then shared among incumbent and accessing countries in proportion to their agricultural output, as follows: current member states receive immediately the full amount, whereas accessing countries receive only 30% in 2005 and increase progressively their share up to 100% in 2012 on a linear basis.

**...Results suggest small effects on existing members and big impact on accession countries**

The simulations confirm a tiny impact of accession on EU members and an overall huge and beneficial impact on accession countries. Chart 1 shows that the effects on Euro area GDP are close to zero, whereas they reach 7% for all the accession countries bar the Baltic States, who would be worse off. This is probably due to their different pattern of sectoral specialisation and trade. According to the simulation results, the fear that integration will be harmful for EU15 unskilled worker is not well founded .

**CEECs will also  
experience  
large swings in  
relative prices  
and real  
exchange rates**

The market enlargement and the resulting reallocation have in fact practically no impact on their wages, as shown in Chart 2. Accession countries show a very differentiated pattern: in Poland and Hungary unskilled labour is worse off, especially in the short term, due to the adverse influence accession has on these countries' agricultural sector; in the other countries, characterised by a more diversified industrial structure, the outcome is the opposite.

Our simulation shows that full accession to the EU market by CEECs will entail large swings in relative prices and real exchange rates. Such a phenomenon should be taken into account by the accession countries for their decisions on exchange rate arrangements, and especially on the timing of the adoption of the Euro. While the adoption of a common currency will help to boost trade and economic integration (see for example Frenkel and Rose (2002)), the quick loss of monetary freedom could be harmful for countries undergoing big macroeconomic and structural adjustments. This should be interpreted as a warning against the proposal of quick adoption of the Euro or "euroisation" put forward by some authors. By the same token, countries which adopt a monetary policy based on inflation targeting should take into account the big adjustment in relative prices likely to be brought about by market integration.

Accession: Effects on GDP

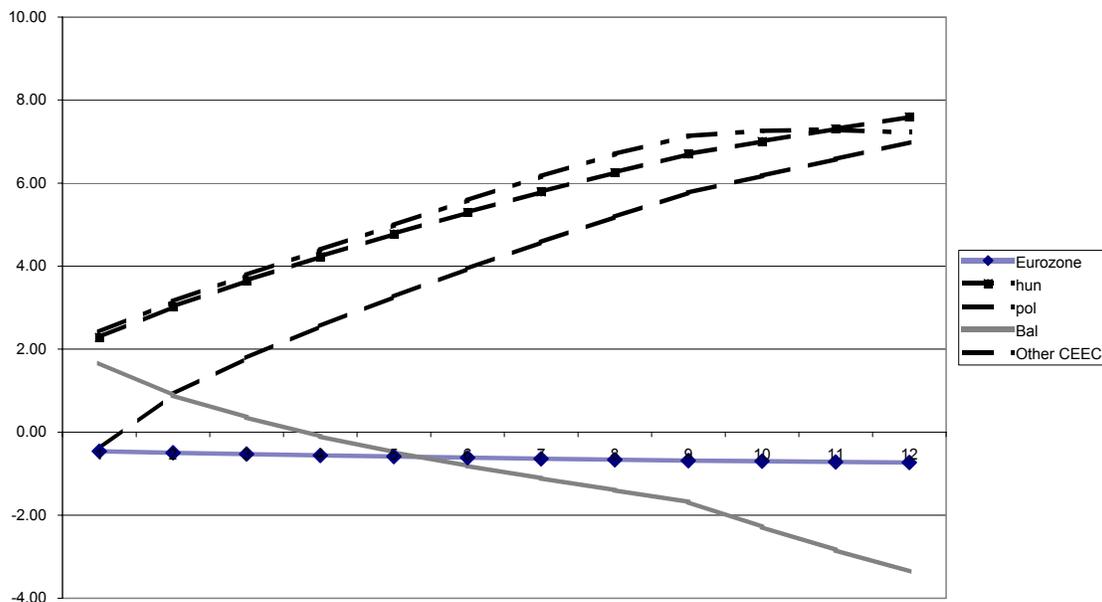


CHART 1

Accession: Effect on non-skilled wages

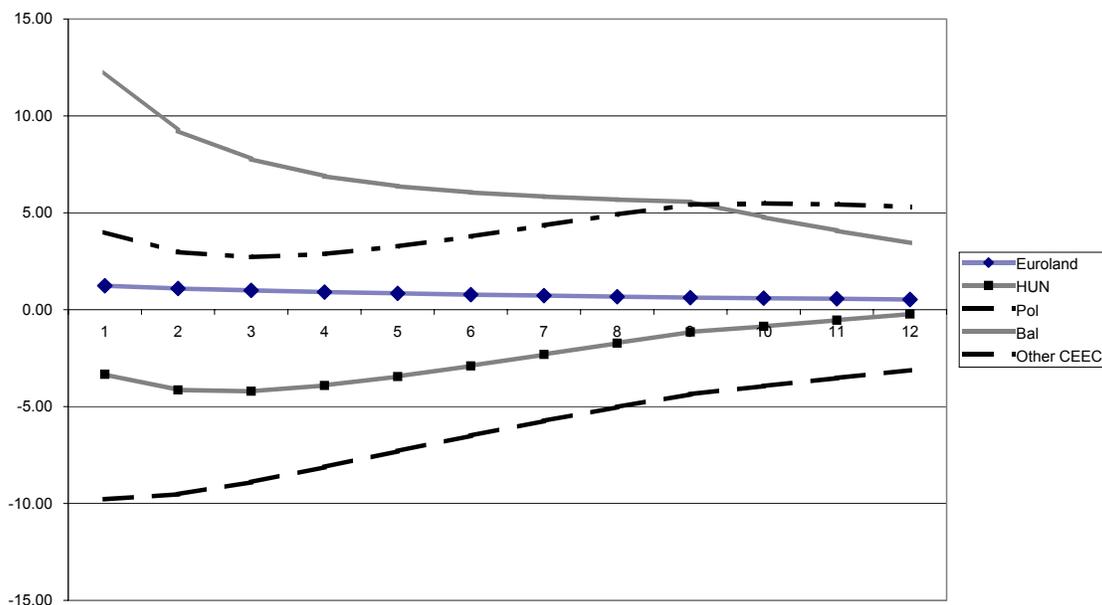


CHART 2

## Chapter 3

# Macroeconomic Policy Challenges Facing EU Accession Countries

This summary paper should be viewed as accompanying the country reports for the 10 EU accession countries in the Annex. These reports provide a general overview of the accession countries, their economic and demographic size, key characteristics of their economies as well as our assessment of their short-term outlook. The discussion below concentrates on a review of the key macroeconomic challenges these countries will be facing in the following years.

### *Introduction*

With the accession to the EU of the ten new members scheduled to take place on May 1, 2004, the attention of policy-makers, both in current member-states and in the accession countries, is shifting rapidly from the political and organizational aspects of accession towards the economic challenges facing future members. This is especially true in light of the fact that all of the new members are likely to join the Economic and Monetary Union (EMU), most likely within the next four to six years. In these discussions, the macroeconomic challenges facing the accession countries and their impact on the possible future changes in EU policies are taking an increasingly important place. Indeed, EU membership is only the first of the many major milestones that the accession countries will be facing in the next several years.

This brief report identifies the following two problem areas:

- The need for fiscal restraint
- The interaction between monetary and fiscal policies; and the role of an independent central bank.

### *Promoting Fiscal Restraint*

Developments in the area of public finance in the accession countries clearly constitute the biggest challenge, in particular for the largest economies in the group. The fiscal balances of four Central European candidates for EU membership—Poland, Hungary, the Czech Republic and Slovakia—have deteriorated considerably over the last two years. The reasons for the widening of state and consolidated budget deficits have

**What are the main medium-term macroeconomic challenges for the accession countries?**

**The need for fiscal restraint**

**The deterioration of public finances is due to structural reforms and cyclical factors**

differed among the countries. Some of the excessive increases in expenditures stemmed from outlays related to the implementation of pension, health care, and educational reforms. The new members of NATO have also found that increased security comes at a cost, as the alliance required upgrades to military installations and equipment. Furthermore, the economic slowdown across the region that hit in late 2001 and early 2002 resulted in tax revenues that were below expectations and resulted in short-term liquidity problems for the public sector. Finally, the governments in Hungary and the Czech Republic introduced extensive fiscal packages to stimulate their struggling economies through large-scale investment and current spending programs.

In addition to the short-term factors worsening deficits in the region, regional budgets are suffering from the effects of past decisions taken without proper assessment of their consequences. This applies in particular to Poland, where the past two coalition governments competed in offering entitlements to large portions of the population without taking into account the impact of future claims on public funds. In the Czech Republic and Slovakia, the lack of proper supervision of the banking system and the indirect method of dealing with “bad loan” problems still haunts the national governments.

**Policy makers in the accession countries consider the fiscal criteria in the Maastricht treaty too stringent for their current conditions**

In many cases, decisions to increase government spending from already high levels were made with the full understanding that the resulting build-up of deficits and, in consequence, of net public debt for the next several years. The argument used by some of the local policy-makers in the region (some of whom continue to support this view) is that while reductions in the budget deficits should be undertaken, this process should not ignore the developments in the real economy. In brief, if the movement toward greater fiscal constraint threatens to bring about a significant slowdown in economic growth, such restrictive policy should be reviewed and adjusted as appropriate. Notably, the governments of the three largest accession countries, Poland, the Czech Republic and Hungary, stated recently that while accession to the EMU in the shortest possible time would be desirable, their policies with respect to fiscal deficits will take into account a variety of factors.

The actions on the part of the national governments with respect to public spending clearly confirm that such an approach is being applied. Although the fiscal position of accession countries has been affected by an economic

**The Socialist government in Hungary approved a 50% increase in wages of public sector employees as of October 2002**

slowdown that can be at least partially linked to the weakness of the global economy, the widening of the budget deficits was due mostly to excessive spending rather than to an unanticipated shortfall in budgetary revenues. In some cases, decisions made in the years 2001-2002 will have long-lasting consequences for budget balances. In the most glaring example, the Socialist government in Hungary approved a 50% across-the-board increase in wages of public sector employees as of October 2002. This will not only permanently increase the public wage component of the state budget by 20% for 2003 and beyond, but will also launch a wave of similar demands for increases in wages by workers employed by state-owned companies, and could also cause a ripple effect on the private sector wages. Similar decisions could destabilize the fiscal position of some accession countries even further.

**The fiscal restraint could be implemented with a system of medium term expenditure ceilings**

With budget revenues dependent on tax collections that, in turn, reflect the pace of economic growth, economic policy should focus on reducing expenditures. A way of reducing expenditures gradually without dampening economic growth is the implementation of a system of medium-term expenditure ceilings. Such ceilings, usually applied for periods of between three and five years, would set the maximum amounts of spending for all levels of expenditures that are relatively fixed and can be predicted. These ceilings apply to spending by all branches of the government including off-budgetary funds. The ceilings can then be reviewed every three to five years, and the spending levels monitored regularly to determine the availability of funds within the preset budget. Such maximum spending targets can be flexible from year-to-year, allowing departments and agencies to roll over unutilized funds from to the next. Such a system of Departmental Expenditure Limits (DELs) is successfully applied in the United Kingdom. In addition, under the so-called Golden Rule in the British system, the government is allowed to borrow only to invest and not to finance current spending.

In many of the largest accession countries, the large share of fixed costs in the budget, mostly related to social spending, limits room for manoeuvring by the governments. Sometimes the only hope left is for much stronger growth that would boost tax revenues and close the budget gap. Moreover, the willingness of national governments to reduce deficits is countered by the need to maintain at least the appearance of an intact social safety net.

**Inflation targeting is difficult with expansionary fiscal policy and can lead to too high interest rates**

**The need of restrictive monetary policy in the medium term could undermine the independence of central banks**

### ***Interaction of Monetary and Fiscal Policies***

The interaction between fiscal and monetary policies and the issue of independence of the central bank are becoming increasingly important as accession countries prepare for entry into the EU. In the recent past, decisions on the part of many regional governments to loosen fiscal policy have been accompanied by tight monetary policy to fight inflation. In some countries, most notably in Poland, this mix of monetary and fiscal policies led to a large inflow of speculative portfolio capital and to at least a temporary overvaluation of the local currency. This reduced the availability of domestic credit needed to spur growth in capital investment and the construction sector. In addition, high interest rates on domestic credit encouraged local companies to seek financing abroad, rapidly increasing foreign indebtedness.

The tight monetary policies of central banks are becoming the subject of economic and political debate. The governments of the accession countries see the independent central banks as obstacles to achieving higher rates of economic growth and reducing unemployment rates. More radical parliamentarians are putting forward proposals for legislation either to widen the number of operational goals of the central bank to include promoting economic growth, or to amend seriously the system of appointing new members of the monetary policy bodies to increase the influence over their decisions by parliaments and governments. This approach could lead to serious confrontations, and dramatically reduce the ability of the central banks to fulfil their constitutional duties. The most drastic examples of such conflicts are the developments in Poland and Hungary. In both cases, the central banks have come under fire from the government and the employers' organisations for "allegedly" keeping interest rates too high.

The European Commission and other EU representatives have already addressed in several occasions the need to maintain full central bank independence in the accession countries – the continuation and stiffening of such approach would be, in our view, warranted.

## Chapter 4

# The Enlargement and the Spatial Distribution of Economic Activity.

### *Introduction*

**The accession of new countries: a new regional challenge**

One of the biggest challenges facing the European Union's regional policy is the accession of several new countries. Conditions in many of these Eastern European countries are worse than in the least developed regions of the 15 existing Member States. Moreover, the accession of these countries is likely to have a substantial effect on the geographical distribution of economic activity in the rest of the regions of the European Union. The economies of the Candidate countries are characterised by a predominance of primary and secondary activities, with high levels of industrial concentration in specific locations, insufficient human capital and infrastructure endowments, and a low level of participation of small firms.

Here we discuss the lessons that we have learnt from the latest additions to the EU, in order to be able to predict the scenarios that may arise from the enlargement scheduled from mid-2004. The experience gained from the past may aid our analysis of potential effects of the fifth enlargement. In particular, three questions are considered:

**What can we learn from previous enlargements of the EU?  
What policy actions should be implemented in the future?**

- What effects have previous enlargements had on both the spatial distribution of economic activity and on the evolution of inequalities?
- Could the experience of the traditional periphery regions in Greece, Portugal or Spain during integration shed light on the potential consequences of integration for the central and eastern regions of Europe?
- What policy actions should be implemented in the future?

**The evolution of regional disparities after previous enlargements has been analysed**

To attempt to answer these questions we have analysed two main topics: the evolution of regional inequality and the spatial distribution of economic activity. We have calculated inequality measures to describe the evolution of regional disparities following upon the previous enlargement. We have also calculated specialisation and concentration indexes in order to highlight the effects of enlargement on the spatial distribution of activity in the EU. Both sets of results may allow us to determine whether there is a relationship between

**The effects of enlargement on the spatial distribution of activity in the EU have been studied**

**Income differences among member states have fallen over time**

**Global disparities between regions of EU-12 also decreased during integration process but...**

**...Stagnation of disparities between regions during the nineties**

regional wealth measured in terms of GDP per capita and sectorial specialisation. With this aim in mind, we compile a regional and national database for EU-15 and for Candidate countries with a high degree of sectorial detail, from 1985 to 2001. Our main source was the EUROSTAT REGIO Database, complemented with data from National Statistical Offices.

### ***Empirical evidence from previous enlargements***

To analyse the evolution of disparities in terms of GDP per capita we applied a range of measures of inequality:  $\sigma$ -convergence, Gini index, polarisation index and estimated kernel density functions. The results can be summarised as follows.

First, income differences between member states have fallen over time. However, inequality between regions has persisted into the last decade, in spite of the considerable efforts of the EU to increase funds and to eliminate these disparities. (The European budget for 2000-2006 has risen by nearly 30%).

Second, as regards the evolution of disparities only for regions in countries that joined the EU in the eighties (Greece, Spain, Portugal), the analysis shows that regions in these countries tended to increase their differences and to polarise their behaviour towards their own group's average value. Thus, in spite of the stagnation of disparities between EU-15 regions during the nineties, considering these regions alone we find an increase in the degree of polarisation. This has been caused by the behaviour of the better-positioned regions in the selected countries, which have moved towards the average levels for EU-15, while the relative positions of the poorest regions in those countries have not improved (in spite of the existence of structural funds). This has created a so-called development trap.

The best positioned regions at the beginning of the period were the Spanish regions of Balearics, Navarre, the Basque Country, La Rioja, Madrid, Catalonia and Aragon, and Lisbon in Portugal. The worst placed were the Greek regions of Voreio Aigaio, Dytiki Ellada and Ipeiros, the Spanish region of Extremadura and most Portuguese regions (with the exception of Lisbon). At the end of the period the situation has not changed; the initial gaps persist. Nonetheless, during the period analysed (1985-1999), a degree of convergence between regions is observed. In general terms, some of the poorest regions in 1985 such as Kritiki, Voreio Aigaio, Atikki, and particularly Notio Aigaio, Norte and Algarve, grew more than the average. The reverse was the case with some of the best positioned regions in 1985.

**The polarization between regions in countries that joined the EU in the eighties has increased**

However, some of richest (poorest) regions at the beginning of the period grew more (less) than the average, leading to an increase in the degree of polarisation. For instance, Madrid, Lisbon, Catalonia showed notable growth rates (higher than the average), while Ionia Nisia, Dityki Ellada, Peloponnisos and Centro grew less than the average (despite their gap in 1985). In addition, Anatolikki Makedonia and Sterea Ellada, regions with very low growth rates, fell several places in the rankings by the end of the period, showing a below average level of GDP per capita (GDPpc) in 1999, whereas in 1985 their GDPpc had been above average.

A question that arises from the above section is this: what characterises the regions that have improved so markedly in comparison with other regions in the same countries during the integration process? In order to identify the main characteristics of regions that improved (deteriorated) more than expected in terms of GDPpc, we studied the relation between relative GDPpcs at the end of period (and growth) and certain structural variables for this group of regions, such as R&D expenditure as a percentage of GDP, a peripheral index, wages per employee, degree of overall specialisation, sectorial structure and distance from the European Core. The main conclusions can be summarised as follows.

**What characterizes the regions that have improved so markedly in comparison with other regions in the same countries?**

There seems to be a marked negative correlation between the relative GDPpc in 1999, the level of sectorial specialisation in 1985 and the level of relative specialisation in the Agricultural products sector and in mature industries such as Textiles and clothing (also in 1985). This is the case of some Greek regions (Ionia Nisia, Peloponnisos, Atikki, Kritti, Ipeiros, Anatoliki Makedonia and Dityki Makedonia) and the Portuguese regions of Algarve or Alentejo. It should also be said that in regions that deteriorated over time, such as Alentejo, Ionia Nisia, Peloponnisos and Sterea Ellada, the relative degree of specialisation increased between 1985 and 1995.

On the other hand, there was a notable positive correlation between the relative GDPpc in 1999 and R&D expenditure as a percentage of GDP, the degree of specialisation in medium and high tech industries (such as Chemical products, Transport equipment and, especially, in Metal machinery, equipment and electrical goods) and, in particular, the degree of specialisation in knowledge-intensive services such as Services of credit and insurance institutions. In addition, regions with higher wages per employee in 1990 presented high levels of GDPpc at the end of the period. A possible explanation would be that this variable may reflect the presence of a better qualified labour force in the richer regions. Finally, there seems to

**Regions with a diversified sectorial structure, with high tech industries, relatively high R&D expenditures and qualified labour force were able to benefit from integration and to improve their initial relative positions.**

**Regions with high levels of specializations in the agriculture sector and mature low tech industries, with low R&D expenditures and preponderance of low-skilled labour were caught in a poverty trap**

be a clear negative link between the relative level of GDPpc and the distance from the European Core throughout the period (despite the improvements in infrastructures, which reduced the importance of physical distance).

As regards the link between the growth rate and regions' characteristics, we should stress the negative relation between growth rates and the distance from the European Core, the level of specialisation at the beginning of the period and the relative level of specialisation in Agricultural products and in mature industries such as Textiles and clothing products and Paper and printing products. The reverse was found in the case of R&D expenditure in 1990 and also with the relative level of specialisation in all the services sectors (including non-market services). In addition, no relation was detected between growth rates and the peripheral index or wages per employee.

It therefore seems that regions with a diversified sectorial structure, in which high tech industries and knowledge intensive services (especially credit and insurance services) played important roles, close to the European core, with substantial R&D expenditure and with relatively qualified labour force were able to benefit from the integration process and to improve their initial relative positions. Regions with a low degree of diversification in their sectorial structures (and thus a greater sensitivity to asymmetric shocks), relatively high levels of specialisation in the Agriculture sector and mature low tech industries (such as Textiles and Clothing, Paper and printing or Non-metallic minerals and mineral products) in the initial period, far from the European core, with low investment in R&D and with a preponderance of low-skilled labour showed the worst relative positions in term of GDPpc after 15 years of integration, being caught in a certain poverty trap. This was so despite changes in their sectorial structures (such as reducing the weight of the Agriculture sector in the GDP) and the existence of structural funds during this period.

### ***Empirical evidence for Candidate Regions***

GDP per capita growth for eastern countries reached an average figure of 7,49% over 1995-2001 (as against 6,14% in EU-15). Accession to the EU is expected to provide a solid basis for accelerated economic growth, with greater trade integration playing a leading role. This would enable these countries to bridge the considerable income gap with the European Union, as GDP per capita averages only 46% of the EU-15 level, with substantial disparities between Bulgaria (21,14%) and the Czech Republic (75,87%). Taking all these facts into account, it is worth asking the question of what would happen at regional level in candidate countries.

**In accession countries a heterogeneous regional pattern is detected in GDPpc**

As regards the spatial distribution of GDP per capita, a heterogeneous regional pattern is detected. There are marked differences between two groups: one comprising Lithuania, Latvia, some regions of Bulgaria, Poland and Romania, and a second one made up by regions of the Czech Republic, Slovak Republic, Slovenia and Cyprus. Comparison of GDP per capita distribution between 1995 and 1999 reveals an increase in inequality and polarisation at a regional level, even though the allocation of Funds to these candidate regions during these years increased over the period. As for concentration, analysis of the candidate regions for 1995 showed that Agricultural, fishing and forestry products and Fuel and power products were the most concentrated sectors, showing higher values than the EU-15 countries, while the reverse was the case for Manufactured products and Market services. As far as specialisation was concerned, Romanian regions (among the poorest regions of the Candidate countries), together with Prague and Ostravosko presented the highest levels; the least specialised were certain regions of Poland and Slovakia, and Lithuania, Latvia and Estonia.

**Inequality and polarisation between candidate regions increased between 1995-1999**

To define the main characteristics of better (worse) positioned regions in terms of GDPpc, we studied the relation between relative GDPpc at the end of the period and certain structural variables such as a market potential index, degree of global specialisation, sectorial structure and distance from the European Core. This analysis suggests that the regions that are closer to the big European markets and the European Core (especially the border regions) and highly specialised in knowledge intensive services (in particular, Services of credit and insurance) are clearly better positioned than the others in terms of GDPpc, and are more likely to benefit from integration. In contrast, candidate regions far from the European Core and highly specialised in Agricultural products show the lowest GDPpc levels in their group, and are potentially those with most to lose from integration (at least, in the first stages of the process). Finally, we should note that regions far from the EU core, with a low level of sectorial diversification and a high level of specialisation in Agricultural products, showed the lowest growth rates (1995-1999).

**Taking into account the results of previous enlargements, it could be possible that polarisation between candidate regions increases after some years of integration**

### ***Policy guidelines and reflections before enlargement***

The results presented here show that large regional disparities persist, especially between regions in countries that joined the EU during the eighties. In addition, the poorest regions are still highly specialised in sectors such as Agriculture which, far from generating rapid development, create poverty traps. Hence, the allocation of Structural funds does not seem to have provided a final solution to eliminate regional disparities (Martin, 1999, Cappelen et al, 2001, Potratz, 2002), although

**Those candidate regions with better accessibility to the EU core and to the bigger markets, with a high dotation of human capital and more specialised in sectors with high value added are the potential winners of new enlargements**

**In the light of past experience, the maintenance of the current regional policy could mean that internal regional disparities will continue or even rise after enlargement**

**Regional policy faces a trade-off between equity and efficiency**

backward regions could have worsened their relative position without these Funds. For example, the fifth periodic report of the European Commission, 1994, on the situation and the socio-economic development of the European regions pointed out that the existence of the Structural Funds had increased a 0.5% the GDP growth of the four Cohesion countries: Ireland, Greece, Portugal and Spain.

At the present time the EU is preparing for the entry of new candidate regions with large internal disparities which have actually increased in recent years in spite of cooperation programs. In this regard, enlargement conditions the future policy options open to the less developed regions in EU-15. Direct foreign investment in Central and Eastern regions (especially in the border regions), and the presence in these regions of lower wages in those sectors where the periphery of the EU-15 is more specialised may cause the current situation of the European periphery to deteriorate. In addition, many regions which at present benefit from Objective 1 funds will be excluded when candidate regions are admitted, not as a result of any real improvement in their situation but for solely statistical reasons.

In the light of past experience, the maintenance of the current policy could mean that internal regional disparities in candidate countries will continue or even rise after enlargement. But the main worry is the persistence of polarisation. So a great deal of work remains to be done in order to create a new regional policy within an enlarged EU. However, prior to defining a structural framework for regional support, the EU would need to decide on its main social, political and economic goals. In this sense, a relevant question arises: should the prime objective of regional policy move toward economic efficiency and competitiveness or does a valid rationale also lie in providing support for regions which will always be disadvantaged by geography or economics? Then, regional policy faces a trade-off between equity and efficiency.

Priority focused on achieving equity would imply policy measures addressed to backward regions. In this sense, results obtained from this analysis would suggest some possible measures that could contribute to reduce the regional disparities: specific measures designed to speed up the adjustment of industrial structures and to encourage the development of new undertakings; promoting product differentiation and competitiveness in such sectors as Agricultural and traditional areas (Textiles, Food, Paper among others) and thus combat their lower value added; increasing investment in inter-regional infrastructures in order to improve the accessibility of the poorest regions; increasing R&D spending in order to promote the innovation and its

**A great deal of work remains to be done in order to create a new regional policy within an enlarged EU**

diffusion; and implementing effective human capital policies in backward regions. Additionally, in line with Guersent (2001), measures addressed to these less developed regions could also benefit to the most prosperous regions (for instance, in the form of imports). On the contrary, if efficiency would be the main goal, promoting growth at the most prosperous regions would be the key point. In this case, there could be spillover effects on less favoured regions, favouring equity in the longer run (Martin, 1999).

## Chapter 5

# Shock Transmission in a Changing World

**In 2000 Europe was thought to be largely immune to a US downturn...**

**...But it was not**

**If US spillovers are large, policy makers need to track and anticipate the US economy**

**What was then the source of the Euro area slowdown?**

The object of this section is to explore the changing transmission of shocks between one economy and another with specific reference to the transmission of the last US downturn to Europe. The “state of the art” at the end of 2000 suggested that the impact of a US downturn on Europe could be quite limited: the Euro area, after all, approximates a closed economy and sophisticated multi-country econometric models (the IMF’s Multimod was then a leading example), which take full account of the trade linkages between economies, indicated that the spillover from the US to Europe would be relatively small. In the event, the US downturn in 2001 seems to have heralded a relatively severe drop in output growth in Europe, too.

Forecasts compiled in the Autumn of 2000 for output growth in the Euro area for the following year gave an impression of continued buoyancy which was to be rudely betrayed by reality. The European Commission’s November 2000 forecast for growth in the Euro area in the calendar year 2001, at 3.2%, was quite representative of general opinion. The latest data put the 2001 Euro area growth rate at only 1.4%. The period of relatively asynchronous business cycle experience in the 80s and 90s seems to have given way to a highly synchronous downturn at the beginning of the new decade. A careful discussion of this turn of events, and the puzzles it raises, can be found in the issue of the IMF’s *World Economic Outlook* for October 2001.

For Euro area policy-makers this is a significant problem: if spillovers from the US economy are highly significant for the Euro area, policy will need to track and anticipate the US economy and policy measures can be brought forward promptly on this basis. If, on the other hand, the spillovers are small then the Euro area policy makers can treat the Euro area as a closed economy and US developments can be given lesser weight.

We evaluate, using econometric techniques, whether the Euro area slowdown is due to there being a greater element of “common shock” in the European and American economies than had been supposed, or the spillovers from the US to Europe are larger and transmitted more quickly than the knowledge embodied so far in multi-country models allows for. The two possibilities are not wholly mutually exclusive, of course.

We jointly model the output growth rates of the US, Germany and, by turn, one of the other large European economies (i.e. one of France, Italy, UK and Spain). The US and Germany represent the two economies which are likely to offer a “pole of attraction” for the other European economies and are the economies with whose business cycles they might form an “affiliation”.

**We consider different types of shocks...**

We consider three types of shock: a common shock (denoted COS), a purely idiosyncratic shock (PIS) and an idiosyncratic shock with contemporaneous spillover (SIS). The distinction between the three is that a common shock is conceived of as one which is shared, contemporaneously, by all the economies under consideration; a purely idiosyncratic shock is one that originates in one of the two anchor economies, but is not shared by others (though other economies will of course eventually import some effects), whilst an idiosyncratic shock with contemporaneous spillover is one in which the main shock is located in one of the anchor economies but has some immediate spillover to other economies. We then evaluate the dynamic response of the European countries to these shocks.

**...and allow their effects to depend on the status of the economy**

The next stage introduces the notion of “transition variables”: these are variables which condition the response of an economy to a shock. They influence the propagation or transmission mechanism which translates the shock into a persistent process for output dynamics. An example would be the structure of trade; a shock in an external economy (say, the US) could be expected to have different effects on other economies depending, *inter alia*, on their relative involvement in trade with the US. Another transition variable is the structure of the labour market, where relative labour market rigidity is commonly perceived as leading to more persistent effects on unemployment and output in the face of a shock. A further example is provided by financial variables, such as exchange rates, interest rates, stock market indices and the like, the level of which could be expected to influence the size of the pass-through from the shock to the real economy.

**Financial variables are particularly important to understand shock transmission**

We identify threshold values such that the response of output to a shock can be different in the two regimes corresponding to “above” and “below” threshold values of the transition variable. We evaluate information from a large “bank” of transition variables and find that the financial variables are the most important, partly because they display greater variability through time than the structural variables. Over the past 20 years, changes in the values of financial variables may have altered the transmission mechanism in such a way that a US shock (PIS or SIS) has come to have a greater effect on the

**The slowdown in Europe originates mainly from to the US recession, and the transmission passes more through financial integration than the traditional trade channel**

European economy.

We then evaluate in more detail the 2001 slowdown. In particular, using our models with the financial threshold variables we compute the effects of a 3% cut in the US growth rate on the major European economies. The resulting values are then compared with the actual figures.

We find that the effects on Europe depend on the chosen transition variable, but on average they are about 50% of the size of the US shock. Thus, the growth slowdown in Spain and Italy can be fully explained by the US shock, while national reasons are also important in the case of France and Germany.

In summary, the transmission of the US shock to Europe can in the main be explained as the result of a fast and powerful transmission of a shock arising in that country. Whereas traditional multi-country models base their transmission channels solely on trade factors and produce evidence of a small spillover, it seems that a number of other channels must be active since our findings embody fast and sizable transmission. It must be significant that financial integration in the world economy has increased and that a large proportion of production comes from firms which are multinational in character. The increasingly high correlation of stock market indices round the world suggests that one channel of transmission of a shock mainly affecting the US is through this route; at the same time, monetary policy in other countries has to take the setting of US monetary policy into account. The behavior of the foreign exchanges, another relevant transition variable from our analysis, may capture the markets' assessments of individual country exposure.