

Chapter 1

Managing diversity*

The euro area encompasses a diverse group of economies. Some are among the wealthiest in the world, others are behind in terms of living standards. Some are booming, others have been weathering a long slump. Some sectors are flexible and quick to adapt to changes in the global economy, others remain rule-bound and rigid. Managing such diversity is a challenge. Adopting the single currency has brought considerable benefits to the euro area's members by ensuring macroeconomic stability, boosting trade and deepening economic integration. Despite stark divergences in economic performance, price levels in member countries are converging on average rather than diverging. However, these divergences mean that a common monetary policy will not suit all countries all the time. The members face different shocks and respond to them in diverse ways. The solution is to undertake structural reforms to make economies more flexible and resilient. These include making wages more responsive to local economic conditions, boosting employment flexibility and labour mobility, reducing the stickiness of inflation by enhancing competition, and creating an efficient, pan-European financial market. The more flexible and integrated product, labour and financial markets become, the smoother the ride inside the monetary union will be. These reforms will not only promote faster adjustment to shocks, they will help overcome the main problem that many euro area countries face: slow potential growth.

* This chapter is based on information up to 29 November 2006.

Recent economic performance

The conditions for an economic recovery have been in place for more than two years, but the bounce-back has been late and, until recently, lacklustre. World demand has been buoyant, generating strong demand for the euro area's exports. However, it has taken a surprisingly long time for a normal export-led recovery to take hold. The usual pattern is for higher exports to bring about a pick-up in investment, and for employment to follow thereafter; improved job prospects and higher disposable incomes should boost consumption; and that should generate growth in the domestically oriented industries such as services. The first link in this chain – a rise in corporate investment – is now in place. There are signs that the other links are forming as well.

After growing by just 1.5% in 2005, GDP rose at a rate of around 3½ per cent in the first half of 2006 (Table 1.1 and Figure 1.1). This is the first time in more than five years that growth has exceeded its potential rate for two quarters in a row. Activity grew at its potential rate in the third quarter as well. The upswing has been widespread, with almost all member states growing at an above-potential pace. Growth in export volumes since 2003 has been robust and to a large extent reflects dynamic demand from Asia and the ten new EU member countries (Figure 1.2). The recovery has now broadened beyond the export sector, with business investment picking up briskly in the first half of 2006. However, private consumption has been relatively muted so far, albeit with considerable variation across euro area countries. Inflation has remained well anchored around 2% despite large increases in energy prices. Rising energy costs are putting pressure on the prices of a wide range of goods and services but the feed-through has been muted compared with past oil shocks. Recent trends in inflation are explored in more detail in Chapter 2.

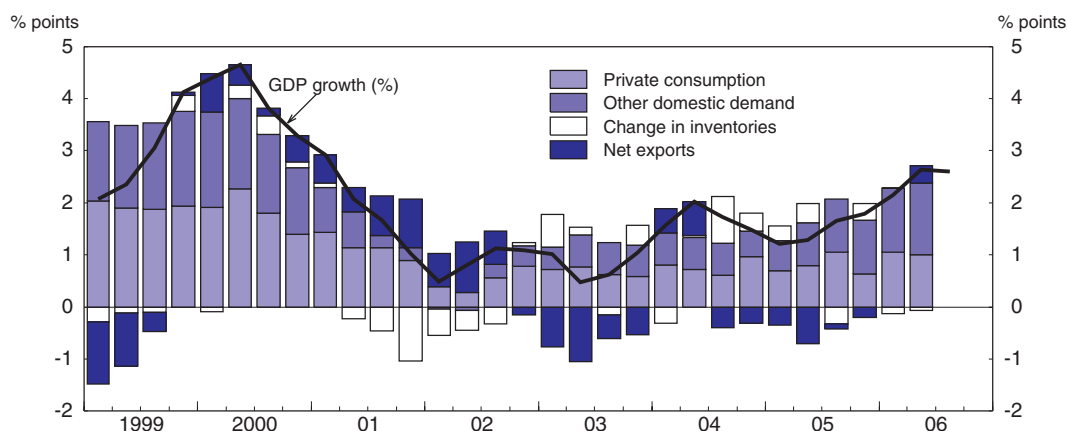
Table 1.1. Demand and output
Percentage change relative to the previous quarter, at annual rates

	2005				2006	
	Q1	Q2	Q3	Q4	Q1	Q2
Private consumption	0.0	1.4	2.7	0.3	2.8	1.1
Government consumption	0.5	2.6	2.8	0.9	3.1	1.4
Gross fixed investment	2.1	4.8	4.8	1.5	3.6	8.8
Public	4.1	8.0	-2.5	-4.6	6.7	3.8
Residential	0.6	7.5	4.9	6.6	-1.9	3.9
Non-residential	0.1	3.8	3.9	1.9	3.1	6.5
Final domestic demand	0.5	2.4	3.1	0.7	3.1	2.7
Stockbuilding ¹	0.3	0.1	-1.0	1.7	-1.5	0.6
Total domestic demand	0.8	2.5	2.1	2.4	1.5	3.3
Net exports ¹	1.0	-1.0	0.3	-1.1	1.8	0.3
GDP at market prices	1.7	1.6	2.4	1.4	3.2	3.6

1. Contribution to GDP growth.

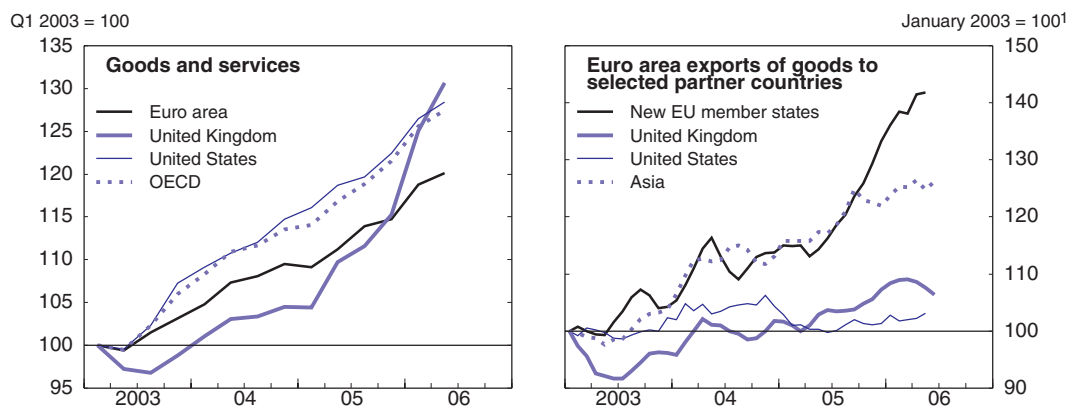
Source: Eurostat and OECD (2006), *OECD Economic Outlook: Statistics and Projections* – online database.

Figure 1.1. **Contributions to GDP growth**
Change relative to the same period of the previous year



Source: Eurostat.

Figure 1.2. **Export performance**
Export volumes



1. Seasonally adjusted, three-month moving averages.

Source: Eurostat; ECB calculations and OECD (2006), *OECD Economic Outlook: Statistics and Projections* – online database.

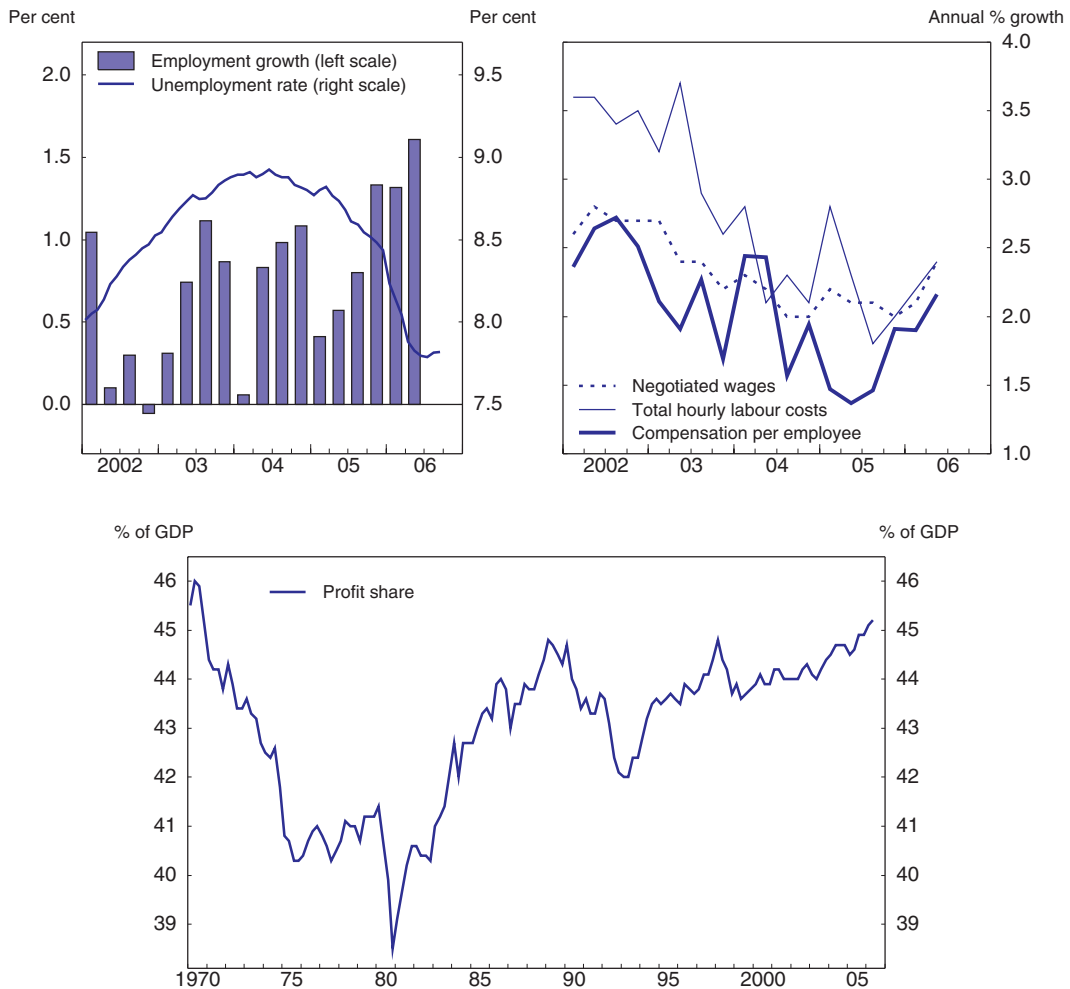
The labour market is improving slowly. The pace of job creation picked up towards the end of 2005 and has continued at moderate rates so far in 2006 (Table 1.2 and Figure 1.3). This has driven the unemployment rate below 8% for the first time since 2001. However, employment growth has been uneven across industries, countries and job types. All the job growth in 2004 and 2005 was in the service sector, while industrial employment (excluding construction) has fallen every quarter since 2001. Comparing across countries, employment growth in the three largest economies (1.2% in the year to June 2006), has been about half the pace recorded in the smaller ones. Comparing job types, part-time employment appears to have been the driving force behind the labour market improvement. By one estimate,¹ of the 5 million jobs created since 2001, seven out of eight were part-time positions. That helps explain why the unemployment rate has fallen most for females and younger workers, although at 16% the unemployment rate for under-25s still has a long way to go.

Table 1.2. **Employment growth**
Percentage changes compared with the previous period, seasonally adjusted annual rates

	2004	2005	2005				2006	
			Q1	Q2	Q3	Q4	Q1	Q2
Whole economy	0.7	0.8	0.4	0.6	0.8	1.3	1.3	1.6
<i>of which:</i>								
Agriculture and fishing	-1.7	-1.7	-5.7	0.5	0.1	0.4	-2.4	3.5
Industry	-0.6	-0.1	-0.5	-0.5	-0.4	0.7	0.0	0.7
Excluding construction	-1.4	-1.2	-1.9	-1.7	-0.6	-0.9	-0.9	-0.2
Construction	1.4	2.5	3.0	2.4	0.2	4.4	2.4	2.8
Services	1.4	1.2	1.1	0.9	1.3	1.6	2.0	1.8
Trade and transport	0.9	0.8	1.6	-0.3	0.2	1.6	1.4	1.7
Finance and business	1.9	2.1	1.7	1.7	2.8	4.5	2.5	4.0
Public administration	1.5	1.2	0.5	1.6	1.4	0.2	2.3	0.8

Source: Eurostat.

Figure 1.3. **Labour market indicators**



Source: ECB; Eurostat and OECD, *Main Economic Indicators* – OECD online database.

Why has it taken so long for the recovery to take hold?

There are several reasons why the recovery was slow in coming, and the short-term outlook depends on the extent to which these factors will continue to play a role. The most obvious factor has been a string of economic and political shocks. Each time it has looked like a recovery might get under way, the euro area has been hit by another negative shock. These include an appreciation of the real effective exchange rate by 8% per annum from 2002 to 2004, a tripling of oil prices since 2002 and political uncertainties. The increase in oil prices has had a direct impact on real household incomes while uncertainty has kept households and firms cautious. In this climate, it is understandable that they took a “wait and see” attitude before making major expenditure commitments.

Investment in the major economies has been muted

Business investment in the euro area as a whole from 2003 to 2005 was slightly (but not dramatically) below the level expected on the basis of past behaviour.² However, investment in the three biggest euro area economies was significantly weaker than expected, with investment in the smaller countries correspondingly higher. This may reflect a greater degree of political and economic uncertainty in the largest economies that hopefully will dissipate as the recovery takes hold and if the political winds continue to shift in favour of structural reforms. On the other hand, it may indicate a shift of investment within the euro area towards the more dynamic members of the Union. However, there has been little diversion so far towards the new EU member states.

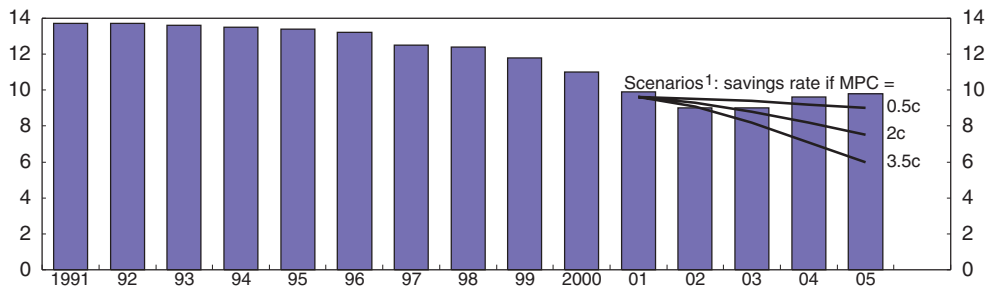
The household saving rate has been rock solid

Economic and political uncertainty and worries about the sustainability of the welfare system may also have encouraged greater precautionary savings. The household saving rate has been stable, in contrast to the United States and the United Kingdom, where it had declined, so consumption has not cushioned the downturn as much as it might have done. This is surprising given the low level of interest rates and the large increases in house prices in several member countries. For example, if the wealth effect of house prices had been as strong as in the United States, then (other things being equal) the saving rate would have declined by up to 3.5 to 4 percentage points since 2002, adding considerably to consumption and to growth (Figure 1.4). While consumer confidence has picked up sharply since late 2005, retail sales figures as of the middle of 2006 suggest that household spending remains fairly subdued.

The surprising degree of wage moderation has not fed through to jobs as much as expected

A third factor is wage moderation. Wage growth has averaged around 2% per annum over the past couple of years, implying no increase in real wages. However, this has not fed through to employment by as much as expected, so household incomes and consumption have been held back. Slack in the labour market has contributed to wage moderation but does not explain it all. The main area where past econometric relationships have broken down in euro area models is their wage equations: real compensation has been much weaker than expected after taking unemployment and productivity growth into account. The mirror image of wage restraint is a rise in the profit share to a level not seen since the early 1970s (Figure 1.3).³ The largest increases (i.e. the greatest wage moderation) have been in Austria, Germany and Spain. However, there have been falls in the profit share in France, Finland, Italy and Portugal.

Figure 1.4. **Household saving rate**
Per cent of disposable income, December quarter



1. Saving ratio scenarios take account of the increase in house prices since 2001 and assume a marginal propensity to consume (MPC) out of additional housing wealth of 3.5 cents per euro (which is the rule of the thumb in the United States), 2 cents per euro and 0.5 cent per euro of extra housing wealth. They assume a partial adjustment (error correction) speed of 0.3 per quarter and include the impact of the decline in long-term real interest rates over the period, with a semi-elasticity of 0.2.

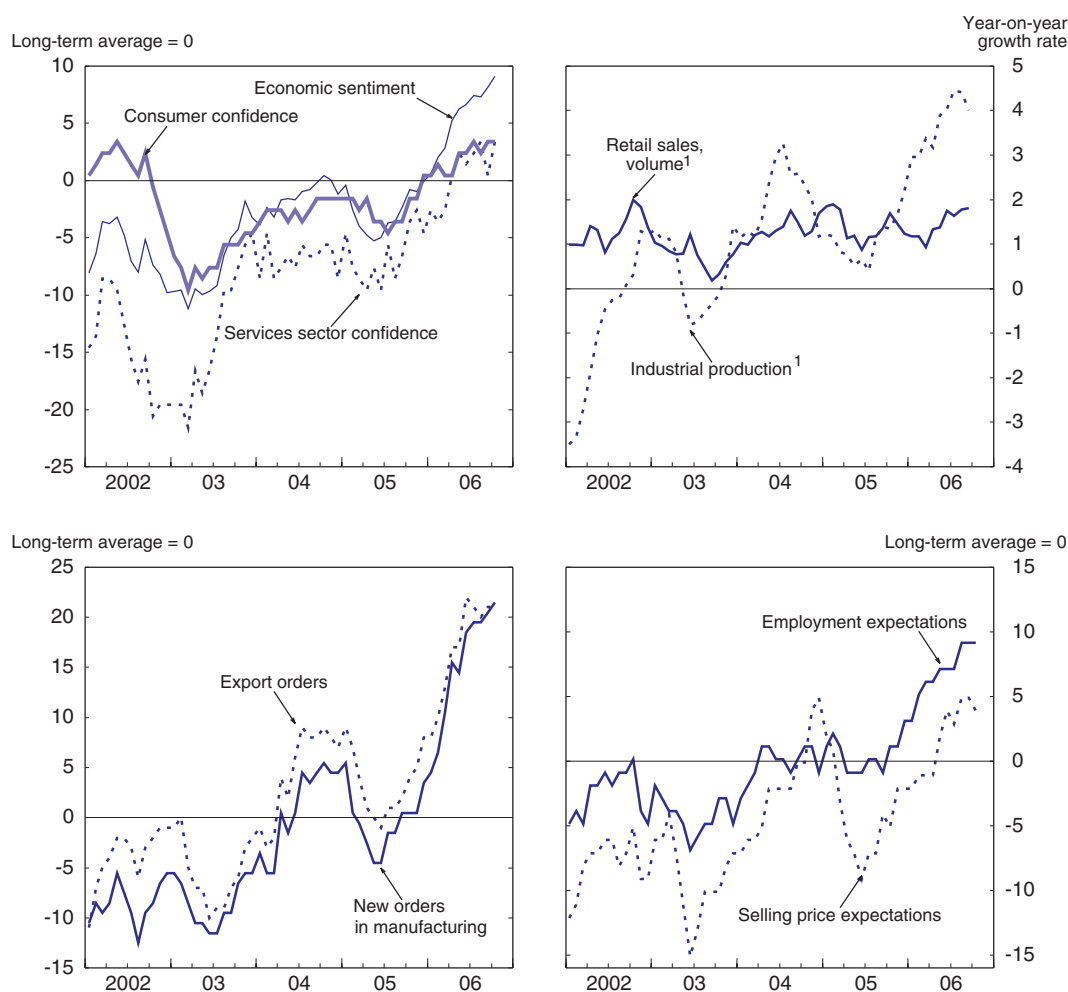
Source: Eurostat and OECD calculations.

One explanation is that competitive pressure stemming from globalisation has enabled firms to keep a lid on wage demands with the threat to move jobs offshore. If this has driven down workers' reservation wages, it implies that the structural rate of unemployment is lower than previously thought.⁴ While this may have played a role, it is difficult to square with profits at a thirty-year high, so perhaps employees offered up more wage moderation than firms had expected. A second explanation is that the admittedly piecemeal labour market reforms are starting to pay off by reducing wage pressures, and that may have reduced wage persistence at the aggregate level. If so, inflation inertia should be lower as well, implying that the monetary policy transmission mechanism would have become more powerful. A less optimistic explanation is that potential productivity growth is lower than believed. The OECD's estimate of trend productivity growth is around 1¼ per cent per annum. This is in line with estimates by other organisations, but actual labour productivity growth has exceeded this level only twice from 1995 to 2005, and in one of those years it only just scraped over the bar.

The recovery should continue, but it is fragile

Short-term indicators point to a continued recovery (Figure 1.5). While survey indicators have softened a little since their peak in the middle of 2006, they are still at fairly robust levels. Business and consumer confidence remain above their long-term average, incoming orders are strong and employment expectations are healthier than they have been for many years. All in all, the latest information points to growth rates in the near term at or slightly above potential (i.e. growth of a little over 2% at an annual rate), but almost certainly less than the impressive pace of the second quarter.

The latest projections in *OECD Economic Outlook No. 80* are for the recovery to broaden and for output to grow at rates of around 0.6% per quarter through 2007 and 2008 (Table 1.3). Domestic demand will play an increasing role in the recovery. Employment should continue to grow at a relatively modest pace and improved job prospects will be the catalyst for a long delayed pick-up in household consumption. Business investment should continue to grow at relatively strong rates as firms carry on implementing the investment plans that had been on hold for the past year or two. The growth path will not be smooth, however, as consumption will be shuffled around in response to German's value-added tax (VAT) increase in

Figure 1.5. **Short-term indicators**

1. Seasonally adjusted, three-month moving averages.

Source: EC Business Survey; Eurostat.

January 2007 (although there are large uncertainties about the overall impact of this measure). Under the baseline scenario, economic slack should be eliminated by the end of 2008.

This encouraging scenario hinges on a number of assumptions. The main domestic proviso is that the special factors discussed earlier start to abate and allow household demand to pick-up. The recovery will become self-sustaining only if consumption growth picks up. The main external assumption is that the slowdown in the United States proves to be mild and temporary and does not trigger a significant reduction in global growth. Various other factors could knock the recovery off track. The OECD *Economic Outlook* No. 80 projections assumed unchanged oil prices at around \$60 per barrel. Any increase much beyond that would deliver another jolt to household incomes and confidence and could undermine the recovery in private consumption. Conversely, a reduction in oil prices, as has occurred since July, would be good for growth and at the same time take a great deal of pressure off monetary policy. Second, an easing in house price growth following from higher interest rates could hold back activity. It would have little direct impact on consumption because, as noted above, wealth effects are negligible in the euro area, but even a levelling off in house

Table 1.3. **Short-term outlook**
Percentage change

	2002	2003	2004	2005	Projections ¹		
					2006	2007	2008
Private consumption	0.9	1.2	1.4	1.4	1.8	1.7	2.3
Government consumption	2.3	1.8	1.2	1.3	2.2	1.6	1.7
Gross fixed investment	-1.5	1.1	1.8	2.7	4.6	4.2	3.2
Total domestic demand	0.4	1.5	1.6	1.8	2.4	2.2	2.4
Net exports ²	0.5	-0.7	0.1	-0.3	0.2	0.1	0.0
Real gross domestic product (GDP)	0.9	0.8	1.7	1.5	2.6	2.2	2.3
Output gap	0.1	-1.1	-1.3	-1.8	-1.2	-0.9	-0.5
Inflation: harmonised CPI	2.3	2.1	2.2	2.2	2.2	1.9	1.8
Inflation: harmonised underlying	2.4	1.8	1.8	1.4	1.4	1.9	1.8
Employment	0.6	0.4	1.0	1.0	1.4	1.2	1.2
Unemployment rate (% of labour force)	8.2	8.7	8.9	8.6	7.9	7.4	7.1
Current account balance (% of GDP)	0.6	0.5	0.8	0.0	-0.3	-0.1	-0.1
Government net lending (% of GDP)	-2.6	-3.1	-2.8	-2.4	-2.1	-1.5	-1.4
Government debt (% of GDP)	68.1	69.3	70.0	70.8	69.9	68.6	67.5

1. Projections are based on the OECD Economic Outlook No. 80.

2. Contribution to GDP growth.

Source: OECD (2006), OECD Economic Outlook: Statistics and Projections – online database.

prices would reduce construction activity with potentially large impacts in those countries currently experiencing construction booms. Third, euro area exporters could find themselves under pressure if the euro were to appreciate sharply – a scenario that could be triggered by a slide in the US dollar as markets react further to the enormous US current account deficit. This is discussed in more detail in Chapter 2. Finally, the main up-side risk is that pent up investment demand (and possibly consumption demand as well) could come on stream faster than expected now that the recovery is more solid.

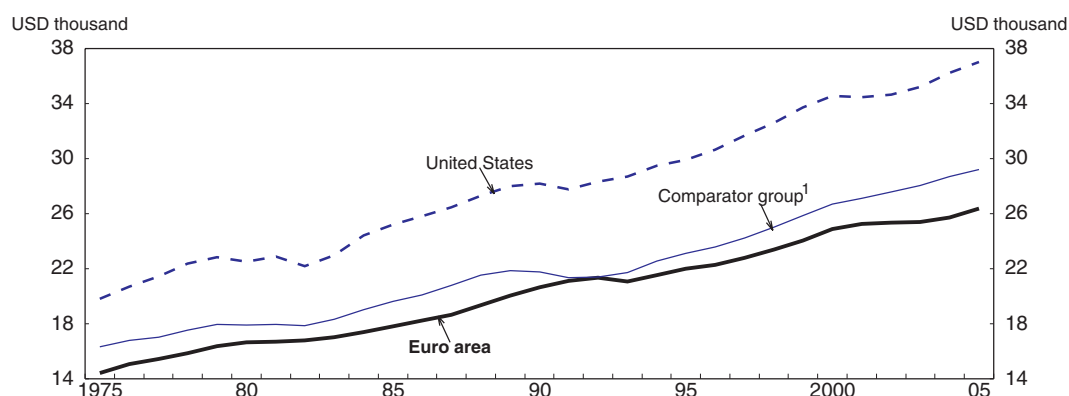
Potential output growth has been disappointing

With activity firming, attention can shift back to the euro area's Achilles heel: slow potential growth. Trend growth in GDP per capita in the euro area is estimated to be close to 1½ per cent per annum, compared with around 2% in the United States or even more in other high-performing economies. The long-standing growth differential has led to a widening income gap. In 2005, GDP per capita in the euro area was a full 29% below the US level (Figure 1.6). Even the euro area's best performer in terms of per capita income (the Netherlands) was 18% below the US average.⁵ Only three US states, Arkansas, Mississippi, and West Virginia have a per capita income level below the euro area average.⁶

Various growth accounting exercises have attempted to explain this growth differential.⁷ Their main conclusions are as follows:

- Labour productivity growth slowed in the late 1990s while it rose sharply in the United States. Capital deepening has been lower than in the US, especially for information and communication technology (ICT) products, while growth in multifactor productivity (MFP) slowed in the euro area but accelerated in the United States.
- Growth in labour input from 1995, whether measured by total employment or hours worked, has been almost identical in the two regions, although the timing has been different. Job growth in the US outstripped the euro area in the second half of the 1990s but employment fell back again after the bursting of the dotcom bubble in 2001.

Figure 1.6. **The income gap**
GDP per capita at constant prices and in 2000 PPPs



1. Australia, Canada, Denmark, New Zealand, Sweden and the United Kingdom.

Source: OECD, *National Accounts of OECD Countries* – online database.

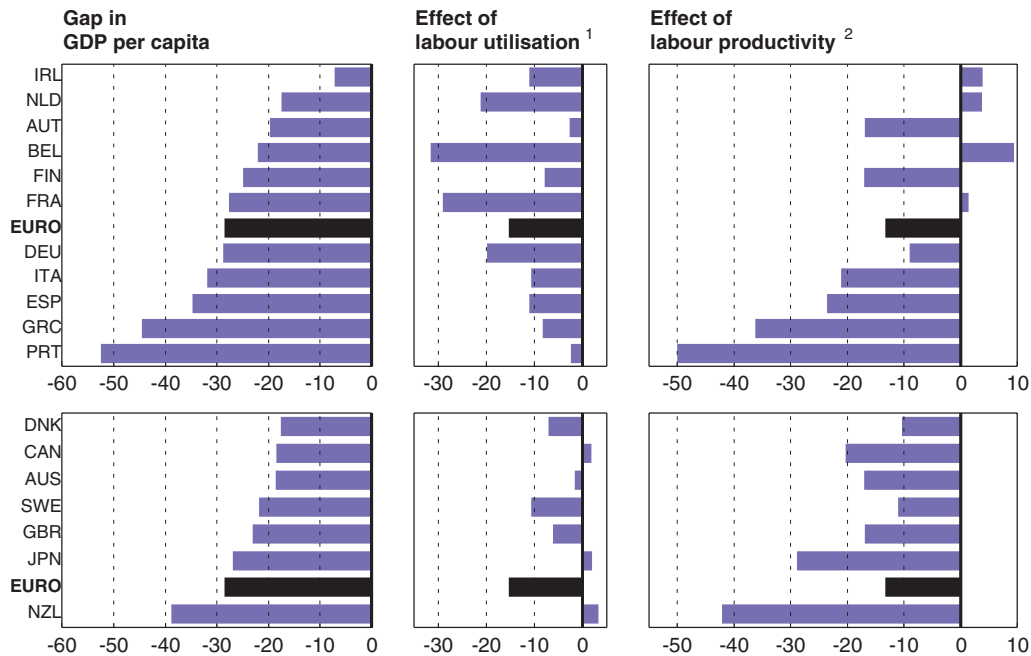
Although *growth* in labour input has been the same, the *level* of hours worked per capita remains about 15% lower than in the United States.

- The labour force participation rate has risen by 5 percentage points since 1995 in the euro area due to growing numbers of female workers, and the unemployment rate has fallen by 2 percentage points. In contrast, these rates have been stable in the United States. Thus, job growth in the euro area has gone some way to reducing the shortfall in labour market performance while in the United States it went to absorb its much faster increase in working-age population.

These large differences in labour supply and productivity suggest that sources of growth in living standards are being wasted in the euro area. Low labour input accounts for about two-thirds of the income gap (Figure 1.7). This is influenced by distortions stemming from tax and benefit systems and labour market institutions (OECD, 2006). The technology gap is also a worry. It points to barriers to innovation and competition. Low potential growth is important for euro area policymakers not just because it is a wasted opportunity to raise living standards. An acceleration of productivity may be the only way to save some member states from years of relative economic stagnation. Countries such as Italy and Portugal whose wages have outstripped productivity by a wide margin will need to bring their competitiveness back into line. They can do this by keeping wage increases below the rate of inflation, but that can take many years and, as Germany has shown, it is a difficult and painful process. The easier way is to boost productivity. Moreover, growth and fiscal performance are linked. Countries with lacklustre growth tend to breach the Maastricht deficit limit year after year, whereas the faster-growing ones are close to balance or in surplus (Chapter 3).

These problems will be magnified by demographics. Ageing populations will weigh on potential growth going forward. On the assumption that labour productivity growth and age-specific employment rates remain unchanged, growth in potential output per capita will slow over the next few years, falling below 1% per annum next decade and to just ½ per cent per annum in the 2020s (Table 1.4). Of course, extrapolating the low growth of the past decade is bound to produce a bleak outlook for the future. But it highlights the point that member states will need to take further steps to boost labour supply and productivity growth in order to avoid falling further behind.

Figure 1.7. **Differentials in GDP per capita and their decomposition**
 Percentage point differences in PPP-based GDP per capita relative to the United States, 2005



1. Hours worked per capita.

2. GDP per hour worked.

Source: OECD, Productivity database, September 2006, www.oecd.org/statistics/productivity.

Table 1.4. **Long-term scenarios**

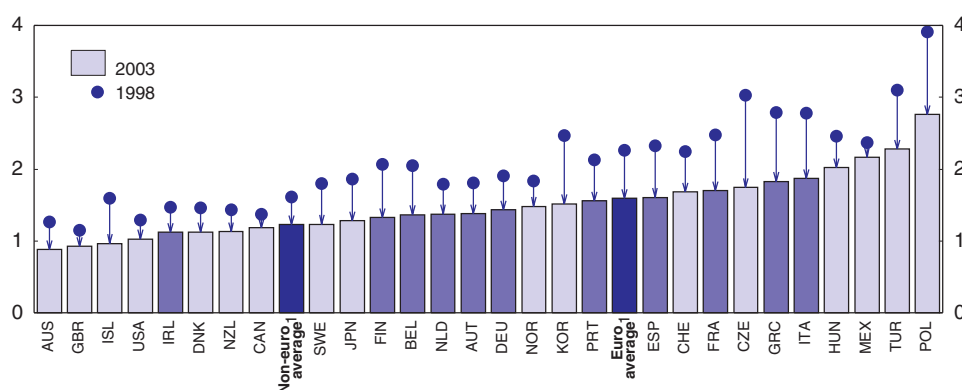
	Annual average growth rates				
	1995-2000	2000-05	2005-10	2010-20	2020-30
Euro area					
Potential employment	0.9	1.0	0.5	-0.3	-0.7
<i>Contribution from:</i>					
Working age population	0.2	0.3	0.2	-0.2	-0.6
Trend labour force participation	0.7	0.6	0.3	-0.1	-0.1
Structural unemployment	0.0	0.0	0.0	0.0	0.0
Potential labour productivity	1.2	1.0	1.1	1.1	1.1
Potential GDP	2.1	2.0	1.5	0.8	0.4
Population	0.3	0.5	0.2	0.1	0.0
Potential GDP per capita	1.9	1.5	1.3	0.7	0.4
United States					
Potential employment	1.4	0.7	0.6	0.3	0.4
<i>Contribution from:</i>					
Working age population	1.4	1.2	1.2	0.3	0.3
Trend labour force participation	-0.2	-0.2	-0.2	0.0	0.0
Potential labour productivity	1.8	2.0	2.0	2.0	2.0
Potential GDP	3.3	2.8	2.6	2.3	2.4
Population	1.2	1.0	0.9	0.8	0.8
Potential GDP per capita	2.1	1.8	1.7	1.5	1.6

Source: OECD (2006), *OECD Economic Outlook: Statistics and Projections* – online database and OECD calculations, assuming unchanged policies and labour productivity growth.

To be sure, there has been progress in structural reform in the euro area over recent years. Between 1998 and 2003, the OECD indicators of product market regulation for the euro area improved more than was the case for the non-euro countries (Figure 1.8). However, in terms of the overall level of regulation, the euro area in 2003 was at about where the non-euro-area countries were in 1998, which indicates that, while progress is being made, governments need to continue the reform process with vigour as the target is moving down. There has also been some labour market reform targeted at specific labour market groups or contract types (OECD, 2006). There has been relatively little progress on one of the areas that matters most for countries in a monetary union – the need to improve wage setting institutions in order to increase the responsiveness of aggregate wages to shocks and allow for more wage differentiation to reflect local conditions. In addition, the strictness of employment protection legislation for regular contracts has hardly changed. All in all, the steps that have been taken, especially if they are built upon over coming years, should deliver a pick-up in potential output growth and a reduction in the structural rate of unemployment. The OECD estimates that the euro area’s potential output growth is still around 2% per annum and the structural unemployment rate has fallen by just 1 percentage point since the introduction of the euro, and is in the 7½ to 8% range.

Figure 1.8. **Product market regulation**

Index scale of 0-6 from least to most restrictive



1. Weighted average.

Source: OECD, Product Market Regulation database (www.oecd.org/eco/pmr).

Is monetary union fostering economic union?

European monetary union is a bold experiment as the euro area encompasses countries with wide differences in potential growth rates, unemployment rates, flexibility of markets and levels of income per person, not to mention fundamental differences such as size and language. This raises several questions. Are member states converging? Are their economies becoming more integrated? When does diversity become a problem? What are the right policy options? And has monetary union sharpened incentives to embark on structural reforms (Box 1.1)?

Are members converging?

Differentials in growth and inflation are inevitable in any monetary union. They can arise from differences in the fiscal stance, sector-specific or region-specific shocks,

Box 1.1. Has monetary union helped or hindered structural reform?

Differences in product and labour market regulations go a long way towards explaining differences in trend growth rates and resilience among euro area members. They are also hampering economic integration. This begs the question of whether monetary union worsens the problem by getting in the way of structural reforms. On the one hand, well-functioning markets and stronger supply incentives would offer scope to better exploit the benefits of the euro stemming from increased price transparency and lower transaction costs. Given these benefits, the adoption of the single currency should have created strong incentives for euro area countries to undertake reforms even if a supporting monetary policy reaction cannot be taken for granted. Moreover, there is the TINA (There Is No Alternative) or “reform or die” argument: flexible product and labour markets are needed for individual economies to cope with shocks when fiscal policy is constrained. On the other hand, the main argument why reform may become more difficult in a monetary union is that the upfront costs may be larger. Going it alone can be costly as monetary policy is not available to boost demand and crowd in the extra supply. If the benefits of reform take longer to appear under EMU, they may not be undertaken at all. A second reason for pessimism is that monetary union removes the threat of an exchange-rate crisis. Financial markets become less effective at punishing bad policies (although this argument implicitly assumes that devaluation punishes countries rather than saves them, and that is far from evident). Ultimately it is an empirical matter whether the positive or negative effects dominate. Euro area countries have undertaken more comprehensive and far-reaching reforms than other OECD countries over the past decade. This may reflect the greater need for reform rather than the effects of EMU *per se*. The evidence suggests that reform intensity has fallen since the advent of EMU in 1999 while there has been little or no slowdown elsewhere. This is consistent with the (tentative) evidence of Duval and Elmeskov (2005), who find that a lack of monetary autonomy tends to reduce the probability of structural reform on average.

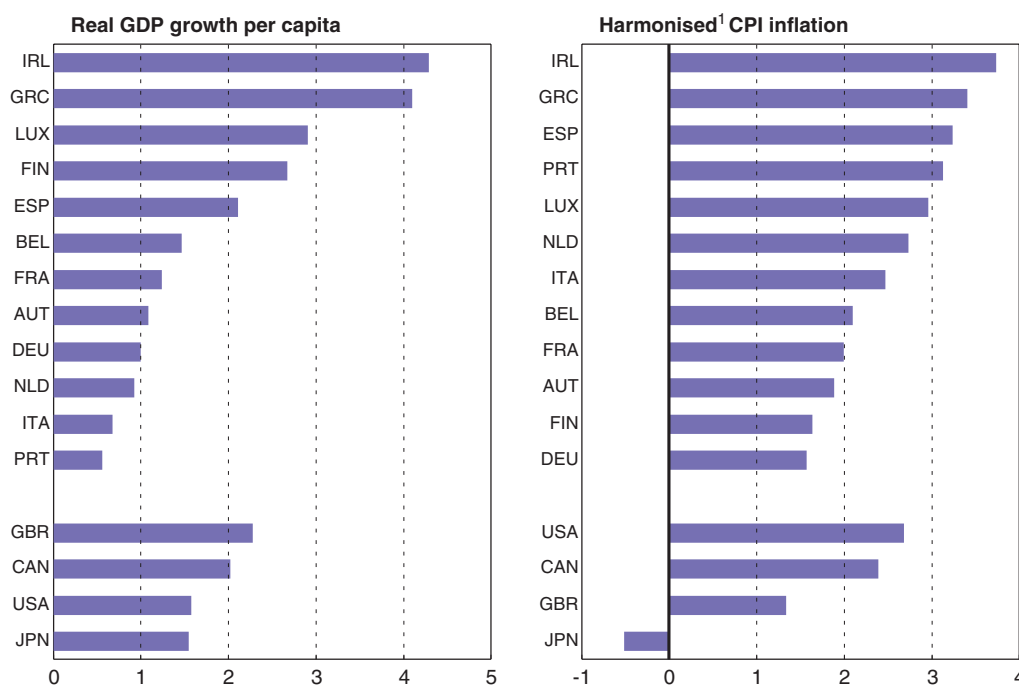
However, it is fair to say that the evidence on this point is not strong and any effect of EMU is likely to be marginal compared to the larger political barriers to structural reform. But whether it has helped or hindered, it has certainly raised the stakes. Nevertheless, the empirical evidence does lead to some positive policy advice. First, member countries should seize the opportunity to undertake reforms well before reaching the point of economic crisis. Second, they should put their fiscal houses in order. This would give extra room to help crowd in expenditure and would improve the credibility of the overall reform process. International experience suggests that the benefits of structural reform seldom materialise until the budget situation has been brought under control. At the very least, fiscal stabilisers should be allowed to work fully by avoiding pro-cyclical fiscal policies. Third, financial market reforms that make it easier for people to borrow against their future incomes can bring forward the long-term benefits of reform. Fourth, monetary policy should be willing to partially accommodate serious structural reforms in the euro area countries, provided four conditions are met: i) a prevailing low and stable inflation environment; ii) a credible commitment to implement a series of reforms; iii) a prudent estimate of the impact of these reforms on potential output at the euro area level; and iv) clear signs of downward pressure on area-wide inflation if demand does not autonomously expand in line with increased potential output. Finally, econometric and historical evidence shows fairly convincingly that policy packages are more effective than piecemeal reforms, probably because they put vested interests at loggerheads with each other: each group loses in some areas but gains in others. The evidence also suggests that reforms to product markets, which may be easier politically, can pave the way for labour market reforms later on.

different exposures or responses to common shocks, income convergence dynamics, diversity in preferences, the direct impact of administered price changes or indirect tax measures, and so on. Growth in per capita GDP since 1999 has ranged from over 4% per annum in Ireland to around ½ per cent in Portugal while average inflation has ranged from 3.8% to 1.5% (Figure 1.9). Comparing through time and with other monetary unions:

- Differences in the year-on-year growth rates across euro area members are larger than those within the United States and across the regions of Italy, Germany and Spain, but are a little lower than within Australia and Canada (Table 1.5).⁸
- The dispersion of per capita GDP growth rates across euro area countries has had no noticeable trend either upwards or downwards over the past 35 years. What is different now, however, is that the big three are all in the bottom half of the distribution. For this reason, growth disparities may be more visible now even if they are no larger than they used to be. The dispersion of output gaps has fallen sharply over the same period, implying that countries are moving more in step with each other.⁹
- Growth differentials have become more persistent. The dispersion of *trend* growth rates, measured by a five-year moving average of actual growth, has increased steadily and is considerably higher than in other regions (Table 1.5). The dispersion of *potential* growth rates per capita, measured using a production function approach, has also increased over time.

Figure 1.9. **Divergences in growth and inflation**

Average annual growth rates, 2000-05, per cent



1. Except for Canada, Japan and the United States where it is CPI inflation.

Source: OECD, *National Accounts of OECD Countries* – online database and *OECD Economic Outlook: Statistics and Projections* – online database.

Table 1.5. **Dispersion of real GDP¹ growth rates**
Unweighted standard deviation, percentage points, average over periods

	Dispersion of year-on-year growth rates		Dispersion of trend growth (5-year average growth)
	1980-2005 ²	1999-2005 ³	1999-05
Australia (8 regions)	2.0 (1.8)	2.1 (1.9)	1.1 (0.7)
Canada (10 provinces)	2.2 (2.2)	2.0 (2.0)	0.9 (1.1)
Euro area (12 countries)	2.0 (1.7)	1.9 (1.6)	1.6 (1.3)
United States (8 regions)	1.5 (1.3)	1.3 (1.1)	0.7 (0.4)
Italy (20 regions)	1.6	1.2	n.a.
The former West Germany (11 Länder)	1.1	1.0	n.a.
Spain (18 autonomous communities)	1.7	0.8	n.a.

1. Figures in brackets show dispersion in per capita GDP growth rates.

2. 1991-2005 for Australia, 1982-2005 for Canada, 1981-2003 for Italy, 1980-2004 for Germany, 1981-2004 for Spain and 1981-2005 for the United States.

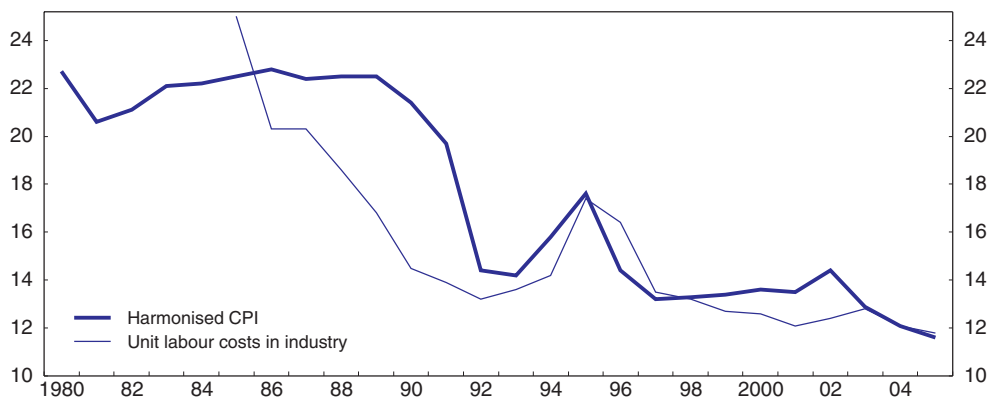
3. 1999-2003 for Italy and 1999-2004 for Germany and Spain.

Source: Australian Bureau of Statistics; Statistics Canada; Eurostat; Census Bureau; Bureau of Economic Analysis and ECB, *Occasional Paper*, No. 45, May 2006, Table 1.

Inflation differentials are also not especially large but are persistent:

- Inflation differentials fell sharply through the 1990s, and have been relatively stable since 1999. The dispersion of inflation rates is slightly larger than in Australia, Canada and the United States, although the difference is not large.¹⁰ However, inflation differentials are substantially more persistent in the euro area. Most euro area countries have had inflation either persistently above or persistently below the euro area average since 1999.¹¹ This degree of persistence appears to be a unique feature of the euro area, and is much more evident in services than in goods.
- So far, inflation differentials have not led to a widening in absolute price levels or unit labour cost levels. The higher-inflation countries have tended to be the ones that had relatively low price levels to begin with (Figure 1.10). Thus, it partly reflects the natural price level convergence that would be expected within a monetary union, even if the pace of convergence has slowed.

Figure 1.10. **Dispersion in levels of prices and unit labour costs**
Coefficient of variation of relative levels, per cent

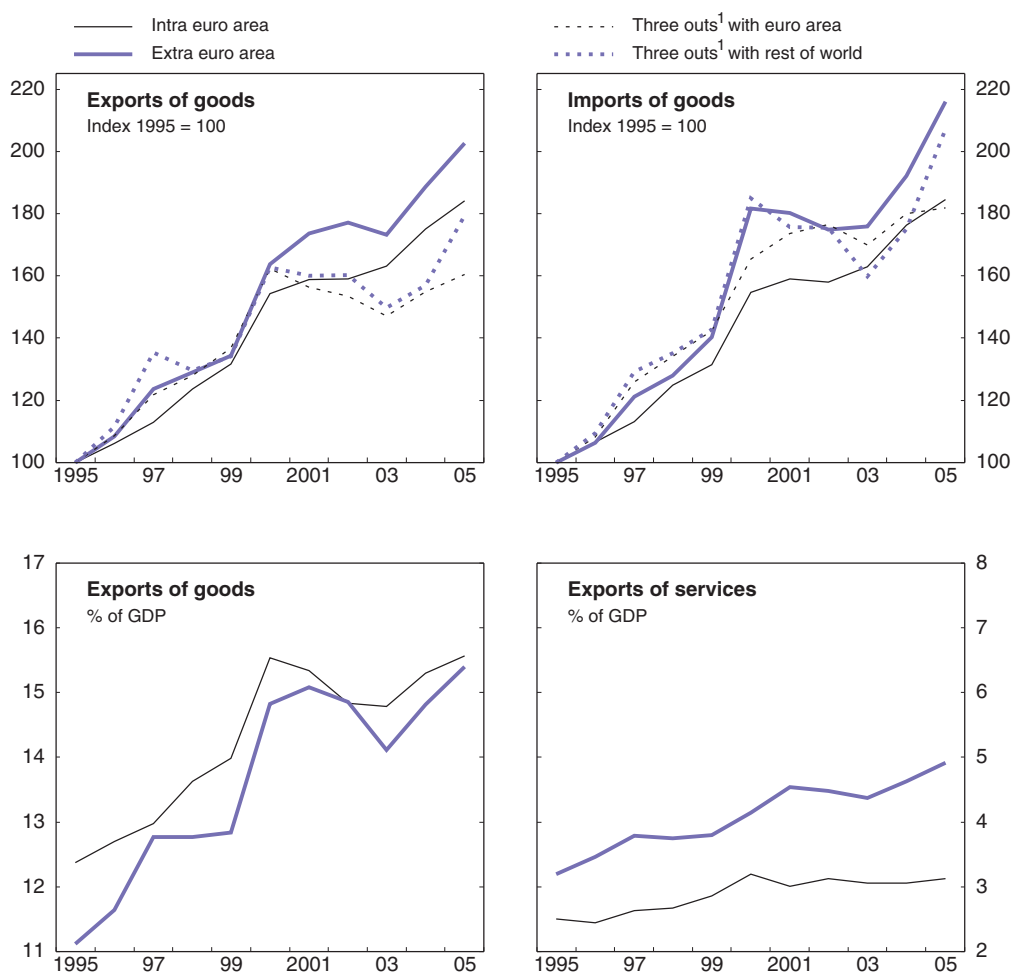


Source: OECD calculations based on Eurostat data and OECD, *Main Economic Indicators* – OECD online database.

Monetary union has encouraged stronger links through trade

Internal trade in goods has continued its long-term trend increase as a share of GDP (Figure 1.11), although trade with the rest of the world has grown even faster, mainly because economic growth has been stronger elsewhere. The increase has not been smooth, with swings in the exchange rate affecting both extra and intra-euro area trade. Baldwin (2006) reviewed the available empirical evidence and concluded that Economic and Monetary Union (EMU) has probably boosted euro area trade by around 5 to 15% so far and that the long-run effects may be greater still. However, not all of this can be attributed to reduced trade costs and greater price transparency brought about by the single currency. The largest trade boost is seen among countries that already had stable currencies and strong trade integration (especially the Benelux countries, but also Spain) while geographically peripheral countries, such as Greece, Portugal and Finland, have benefited by less. In addition, most studies estimate that EMU boosted extra-euro-area trade by nearly as much as intra-euro-area trade. This might be because the euro has reduced trade

Figure 1.11. **Internal and external trade**



1. The three original "outs": Denmark, Sweden and the United Kingdom.

Source: Eurostat.

costs across the board, and by reducing the fixed costs of entering foreign markets it may have increased the number of firms involved in exporting. In that sense, exporting to another euro area member may be a stepping stone to third countries as well. This fixed-cost-of-trade hypothesis has some support from evidence that the trade impact has been largest in industries with imperfect competition and increasing returns.

Internal trade in services, however, has been disappointing. At just 3% of GDP, the level is low especially as much of it is tourism and therefore reflects natural endowments rather than economic policies. Moreover, trade has barely grown over the past five years. Exports of services outside the euro area are considerably higher and have grown more quickly. This points to the need to remove barriers to internal trade in services within the euro area and the European Union more broadly. In this respect, the prospective Services Directive would be a positive element, although more ambition would have been desirable.

Financial markets are also becoming more integrated

Financial markets have become considerably more integrated since the adoption of the euro, although progress differs considerably across market segments (see the 2002 *Survey* for a review of financial market integration at that time).¹² In general, wholesale or over-the-counter markets are nearly fully integrated. Markets in which small retail investors are important remain more fragmented, often because national laws on investor and consumer protection are difficult to bring into line. More specifically:

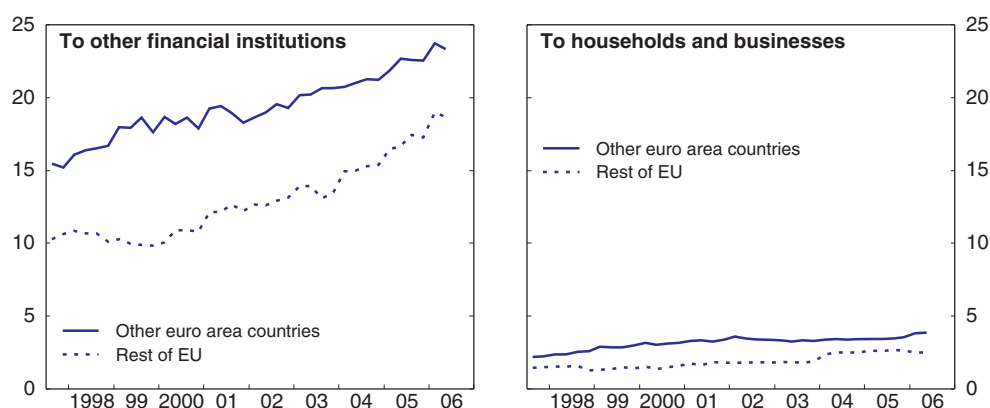
- The *unsecured short-term money market* has been essentially fully integrated since the introduction of the euro. “Spreads” (more accurately: the standard deviation of cross-country rates) on inter-bank lending rates are currently just 1 basis point.
- The *secured money market* also shows a relatively high degree of integration. “Spreads” on one-month and 12-month repos (repurchase agreements) used by the ECB to conduct monetary policy are 1 to 2 basis points. However, integration of clearing and settlement infrastructures for securities is incomplete and problems remain in guaranteeing cross-border collateral.
- The enhancement of financial markets is also evident in the *interest rate derivatives market*. The euro interest rate swap market is now the largest of its type in the world.
- *Government bond markets* are nearly as integrated as money markets. Yield differences now largely reflect perceived credit risk rather than quantity or market microstructure issues. Bond betas that measure the co-movement between a country’s bond rate and German yields are close to 1.0, meaning that yields move almost exactly one-for-one.
- *Corporate bond yields* are almost entirely determined by the sector- and credit-risk characteristics of the issuer, with country factors playing a minor role (Baele et al., 2004). Underwriting fees on corporate issues have fallen substantially since 1999 and are similar to levels in the United States. The euro-denominated corporate bond market has expanded significantly, with the outstanding stock amounting to 75% of GDP in 2005, up from 32% in 1998. Even so, it has plenty of room to grow: the US corporate bond market is roughly three times the size as a share of GDP.
- *Off-balance-sheet securitisation markets* remain under-developed. New issues of asset backed and mortgage backed securities in the euro area in 2004 amounted to around € 240 billion, a fifth of the US market size. There is no integrated European securitisation market. Each country has its own instruments, and the UK alone accounts for around half of outstanding assets (IMF, 2005). However, on-balance-sheet securitisation through

the sale of covered bonds (*e.g.* *Pfandbriefe* in Germany and similar schemes elsewhere) is more common than in the United States. In this type of securitisation, credit risk and cash flow risk remain with the issuing bank. This has been the most common form of securitisation in euro area countries because historically there have been tax and regulatory obstacles to genuine sale securitisation.

- *Equity markets* are more fragmented than fixed interest markets but they appear to have become more integrated. The degree of home bias has declined, but to a large extent has been replaced by a euro bias.
- *Wholesale banking* and capital market related activities have become more integrated in the past few years. For example, of the loans between financial institutions in the euro area, 23% are across borders, up from 15% in 1997 (Figure 1.12).
- The main challenge is *retail banking*. It is mostly segmented along national lines, especially for smaller customers. Cross-border retail bank lending is just 3.5% of total lending, and while it edged up from 1997 to 2001, the proportion has not increased since then (Figure 1.12, right panel). To the extent that products in different countries can be compared, interest rates are far from having converged. The cross-country standard deviation of interest rates on consumer loans has been fluctuating between 80 and 100 basis points in recent years, and the corresponding figure for mortgage loans has varied between 40 and 60 basis points. Notwithstanding methodological differences, the dispersion of mortgage rates across US regions appears to be lower than between euro area countries (ECB, 2005). While the industry has undergone aggressive consolidation, almost all of this activity reflects mergers within countries rather than across borders. Less than 10% of M&A activity in the banking industry over the past 20 years has been across borders (Walkner and Raes, 2005), and most of that has been at the wholesale rather than the retail level, although there does appear to have been a pick-up in 2005 and 2006. The market share of foreign banks is low overall, although it varies across the union.¹³

Figure 1.12. **Cross-border lending by financial institutions**

In per cent of total lending

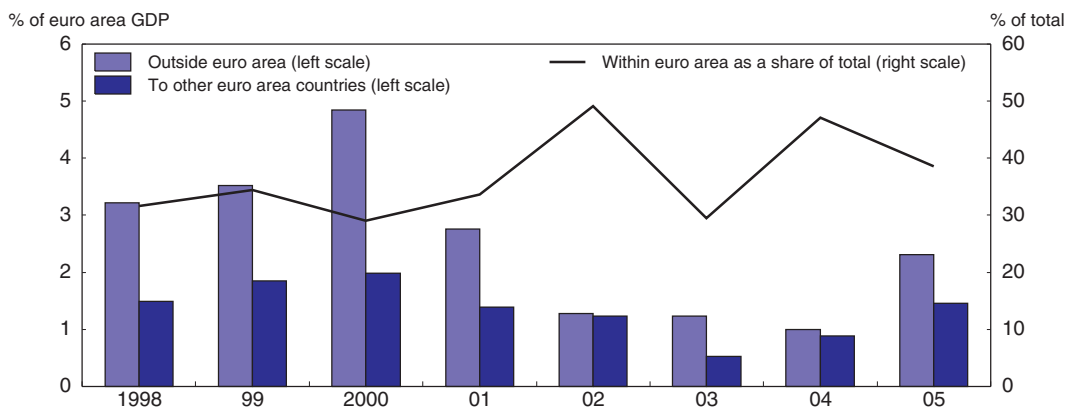


Source: ECB.

Direct investment linkages are lagging behind

Statistics on foreign direct investment (FDI) show at best a slight increase in integration across the euro area. Of foreign investment by euro area firms, the share going to another euro area country has increased slightly, to around 40% although total FDI flows are lower than in the boom years at the turn of the millennium (Figure 1.13). Of the investment that goes outside the euro area, around a third has gone to the three original euro “outs” (the UK, Sweden and Denmark). The ten new EU members still receive relatively little. In 2004 and 2005, they received around 4½ per cent of the euro area’s foreign investment, although this is up from 2½ per cent in the previous three years. In absolute terms, FDI into the ten EU members amounted to just € 16 billion in 2005 (0.2% of the euro area’s GDP, or 3% of their GDP).

Figure 1.13. **Foreign direct investment outflows from euro area countries**¹
Per cent of euro area GDP



1. Excluding Belgium and Luxembourg.

Source: Eurostat.

The union will become more diverse as new members join

Ten countries joined the European Union in May 2004 (another two, Romania and Bulgaria, will join at the start of 2007). The combined GDP of the new ten countries amounts to around 7% of the euro area’s current output, which as a group makes them slightly larger than the Netherlands. In population terms they are more significant: their total population is 74 million, which is about 30% of the euro area’s and roughly halfway between France and Germany. They are diverse in terms of their level of economic development. GDP per person (adjusted for purchasing power) in Slovenia and Cyprus is around three-quarters of the euro area average, which puts them on par with Greece and well ahead of Portugal (Table 1.6). At the other end of the spectrum, per capita GDP is less than half the euro area average in Latvia, Lithuania and Poland. They are heavily integrated with other EU countries: on average, three-quarters of their trade is with the EU.

At some point they are required to join the euro area because EU membership implies EMU membership, and they have not been given permanent opt-outs like Denmark and the United Kingdom. In practice, they can delay this as long as they like by choosing not to join the ERM II exchange rate mechanism (this is how Sweden, which does not have an opt-out, stays out of the currency union).

Table 1.6. **Summary indicators for EU-10 countries**

	Unit	Period	Cyprus	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Malta	Poland	Slovak Republic	Slovenia
Background information												
Population	Million	2005	0.7	10.2	1.3	10.1	2.3	3.4	0.4	38.2	5.4	2.0
GDP in euros	% of euro total	2005	0.2	1.2	0.1	1.1	0.2	0.3	0.1	3.0	0.5	0.3
GDP in PPPs	% of euro total	2005	0.2	2.2	0.2	1.8	0.3	0.5	0.1	5.7	0.9	0.5
GDP per capita in PPPs	Euro area = 100	2005	77.9	69.1	52.6	58.3	44.1	48.1	65.5	46.8	52.2	76.2
Comparative price level of GDP	Euro area = 100	2004	87.4	52.0	55.9	57.4	48.4	47.2	66.1	46.9	50.9	71.1
Trade share with EU25	Per cent	2005	68	83	77	72	76	62	63	76	82	72
Convergence criteria												
HICP inflation, 12-month % change ¹	Per cent	April 06	2.0	1.9	4.1	3.1	6.9	2.7	2.7	1.4	3.3	2.3
Net lending, general government	% of GDP	2005	-2.4	-2.6	1.6	-6.1	0.2	-0.5	-3.3	-2.5	-2.9	-1.8
Gross debt (Maastricht definition)	% of GDP	2005	70.3	30.5	4.8	58.4	11.9	18.7	74.7	42.5	34.5	29.1
10-year interest rate ²	Per cent	April 06	4.1	3.9	4.0	7.0	3.6	3.9	4.2	5.0	4.3	3.7
Other information												
HICP excl. energy, 12-month % change	Per cent	April 06	0.7	0.7	2.6	2.6	6.0	1.9	1.9	0.5	1.5	1.0
Current account balance	% of GDP	2005	-5.9	-2.1	-10.5	-7.3	-12.5	-7.0	-13.1	-1.5	-5.5	-1.1
Unit labour costs, annual average growth	Per cent	2000-05	3.8	6.7	3.8	9.0	-0.7	2.6	2.2	-9.1	4.6	2.5
Labour productivity, annual average growth	Per cent	2000-05	1.0	3.8	6.4	3.9	6.3	6.5	-0.7	7.6	4.3	2.8
Unemployment rate, 15-64 year olds	Per cent	2005	5.5	8.0	8.1	7.2	9.0	8.4	7.4	18.0	16.3	6.7
Minimum wage	% median ³	2004	..	37	30	45	35	40	39	45
Unemployment benefits (first month)	% APW		..	50	50	64	50	25	..	40	60	63
ERM-II entry date (planned or actual)			April 05	No date	June 04	No date	April 05	June 04	April 05	No date	Nov. 05	June 04
Targeted date of euro adoption			2007-08	Postponed	Postponed	Postponed	Postponed	Postponed	2008	Postponed	2009	1 Jan. 07
Exchange rate system			In ERM-II	Managed float	In ERM-II (with unilateral € currency board)	Pegged to €	In ERM-II	In ERM-II (with unilateral € currency board)	In ERM-II	Free float	In ERM-II	In ERM-II

1. Reference value: 2.65% (for year to April 2006).

2. Reference value: 6.2%.

3. Percentage of average wage for Estonia, Latvia and Slovenia.

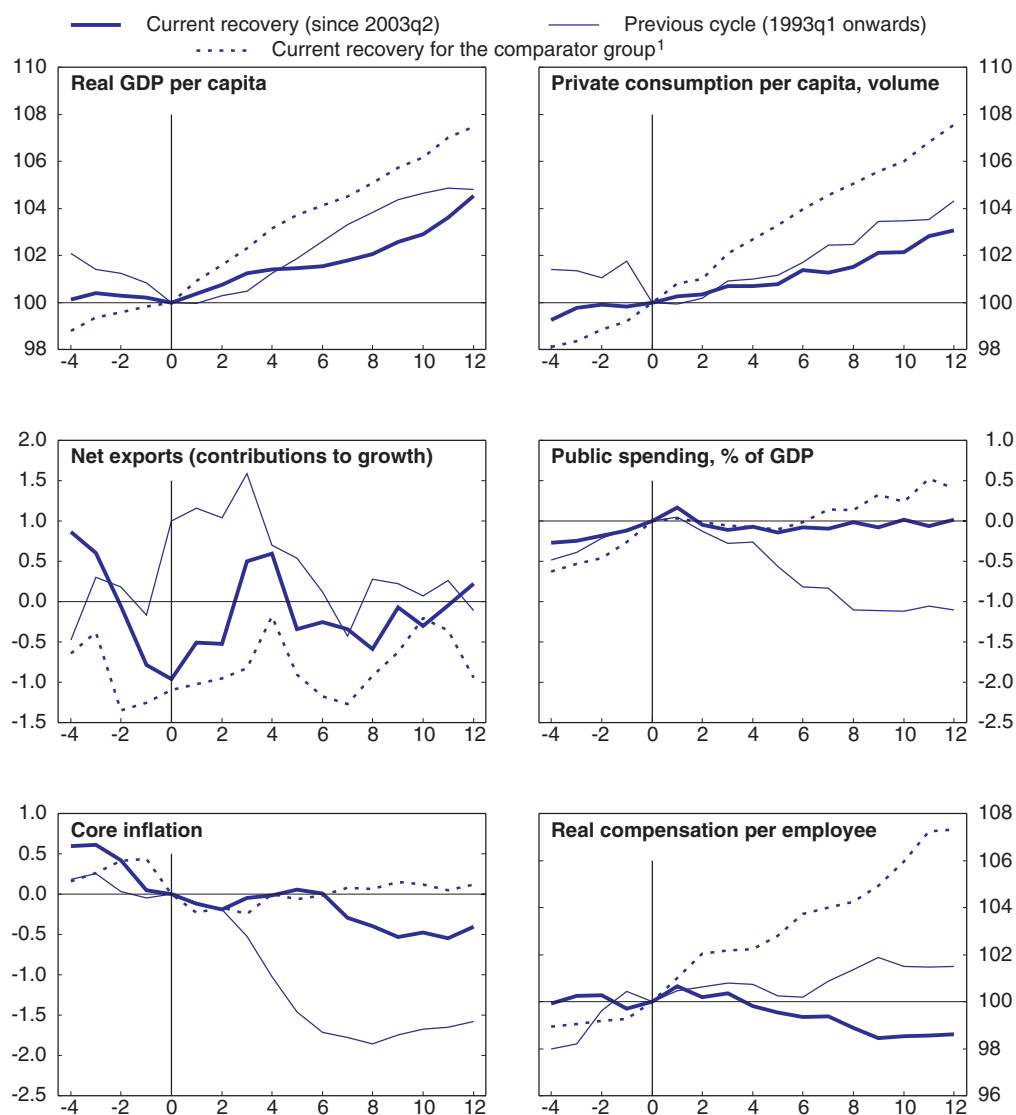
Source: Eurostat; Boeri, T. and P. Garibaldi (2006), "Are Labour Markets in the New Member States Sufficiently Flexible for EMU?", *Journal of Banking and Finance*, No. 30; OECD (2006), *Employment Outlook*.

Deciding on the right time to join the currency union is difficult. It will depend on the degree of economic and financial stability, whether the annual inflation rate exceeds the average of the three best-performing EU countries by less than 1.5 percentage points in the year prior to the examination of their entry application, the extent of trade and FDI linkages, the degree of business cycle synchronisation and whether the economy is often hit by country-specific shocks that would make it costly to give away monetary policy. Even when they judge that they are ready to join, they must still get over the hurdle of the Maastricht convergence criteria in a sustainable way (Annex 1.A1). When measured on the Maastricht criteria, the degree of nominal convergence differs substantially across countries. Slovenia is well within all the convergence limits, and in the summer of 2006 was accepted into the club, so the euro area will have 13 members from 1 January 2007. Lithuania's bid was rejected on the grounds that its inflation rate remained above the reference value (2.7%) and was expected to rise further, while Estonia refrained from requesting a convergence examination. Inflation in seven of the ten countries was above the reference value at the time of Slovenia's examination, but in most cases it was fairly close. Five new member states are still subject to an excessive deficit procedure (the Czech Republic, Hungary, Malta, Poland and Slovakia). Cyprus and Malta are well above the 60% debt ceiling as well, and Hungary is borderline. All other countries have debt levels well under the limit.

While they are less developed than current euro area members, their labour markets tend to be more flexible so in that respect they should have fewer problems with the single currency. An index of employment protection legislation is available for the four central European countries that are also OECD members; it is less stringent than for any euro area member except Ireland. Statutory minimum wages are on the low side, and in any case wage floors are rarely enforced in the private sector (Boeri and Garibaldi, 2006). Wage bargaining arrangements in most countries are decentralised with little use of wage indexation (the main exception is Slovenia with centralised bargaining and indexation, albeit forward-looking). Unemployment benefit replacement rates are low in the Baltics but are closer to the euro area average in Hungary, Slovakia and Slovenia. The main weakness in some of the new member countries is a high tax wedge, but they should be able to reduce it as they broaden their tax bases. The poor employment outcomes in many new members have more to do with low skill levels, especially among older people, and the high rate of structural change they are experiencing. In most cases their product markets are comparatively liberal, although less so in Hungary and Poland.

The gains from the single currency are being offset by a lack of resilience

The period since the turn of the millennium has revealed a striking difference between countries that have reformed and those that haven't. Some comparatively large shocks to demand, supply and financial markets have been shrugged off by the reforming economies while they have led to persistent weakness in the others. On average, the euro area is in the second camp. The latest recovery has been considerably more sluggish than in the more flexible economies (Figure 1.14), in large part because domestic demand was slower to rise in the euro area. The latest recovery has also been weaker than during the previous upswing, especially in Germany, Italy and the Netherlands. This insufficient degree of resilience¹⁴ is partly explained by some of the special factors listed earlier in this chapter. But as Chapter 2 shows, the euro area is intrinsically less resilient and monetary policy takes longer to bring the economy back to equilibrium. Duval (2007) shows that this is related to product and labour market rigidities. He finds that employment protection legislation and product

Figure 1.14. **A comparison of recoveries**

1. Unweighted average of Canada, the United Kingdom and the United States.

Source: Eurostat and OECD (2006), *OECD Economic Outlook: Statistics and Projections* – online database.

market regulation tend to increase output gap persistence, while high levels of household mortgage debt – which are typical of deregulated mortgage markets – appear to reduce it. There is also some evidence that decentralised wage bargaining and co-ordinated wage bargaining help absorb the initial impact of shocks, while sectoral wage bargaining tends to amplify their effects. Various other policy and institutional factors are not robust across all specifications, perhaps because they are highly correlated among themselves. However, synthetic indicators of policies and institutions are found to significantly affect the persistence of output gaps. In a stylised model of Europe and the United States, Drew *et al.* (2004) show that Europe's relative lack of resilience can be well explained by nominal and real rigidities in labour and product markets combined with shallower financial markets and a

greater susceptibility to credit constraints. In addition, differences in the monetary and fiscal policy stances also have to be taken into account.

Lower resilience may lead to lower trend growth

There may be self-reinforcing mechanisms at play so that what starts out as a temporary downturn ends up with protracted or permanent effects – what Phelps (1994) called a structural slump. Hysteresis channels in the labour market are well understood, although they tend to affect the level rather than the growth rate of employment and output. They include a ratcheting up of structural unemployment due to insider-outsider dynamics, a loss of morale and skills by the unemployed, stigmatisation of the jobless which reduces their subsequent employment prospects and a reduction in regional labour mobility, especially if house prices are flat or falling. Most of these effects should wane in the long-term, although labour market withdrawal by older workers is effectively permanent if they leave the workforce through early retirement or disability schemes. Once on a disability benefit, almost nobody goes back to work (OECD, 2003) – which is why some countries have put in place reforms to restrict inflow and stimulate the use of remaining work capacity.

There may also be product market hysteresis effects that could have a persistent impact on potential growth by affecting the drivers of innovation and productivity growth. For example:

- Cash-strapped firms may reduce spending on R&D due to borrowing constraints in a downturn (Aghion and Howitt, 2006).
- Similarly, government expenditure in growth-enhancing areas such as education, public R&D support and infrastructure investment may be crowded out by increased transfer spending (see Chapter 3).
- When there are sunk costs to investment, investing in a growing economy is less risky because it is easier to expand capacity than to cut it. A prolonged slump may therefore reduce investment through the uncertainty channel over and above the normal output and cash-flow channels.
- Entrepreneurship and innovation may fall for a similar reason. People may be less willing to gamble on starting a new company. Less firm turnover leads to lower productivity growth through the creative destruction process (OECD, 2001).
- Workers may also become more risk averse, lowering employment turnover. New blood and fresh ideas are important drivers of innovation at the firm level.
- Firms can hoard labour for a short while, but in a long slump employees with firm-specific skills will have to be laid off. If firms know that recessions tend to be drawn out, they will have less incentive to invest in the human capital of their workforce.
- Governments may put off growth-enhancing reforms and fiscal consolidation until better times.

Self-reinforcing mechanisms can work in the positive direction as well. For example, strong growth in Ireland and Spain has enabled them to spend more on infrastructure and R&D. It has also attracted immigration, which gives a further boost to growth.

Summing up: making monetary union a smoother ride

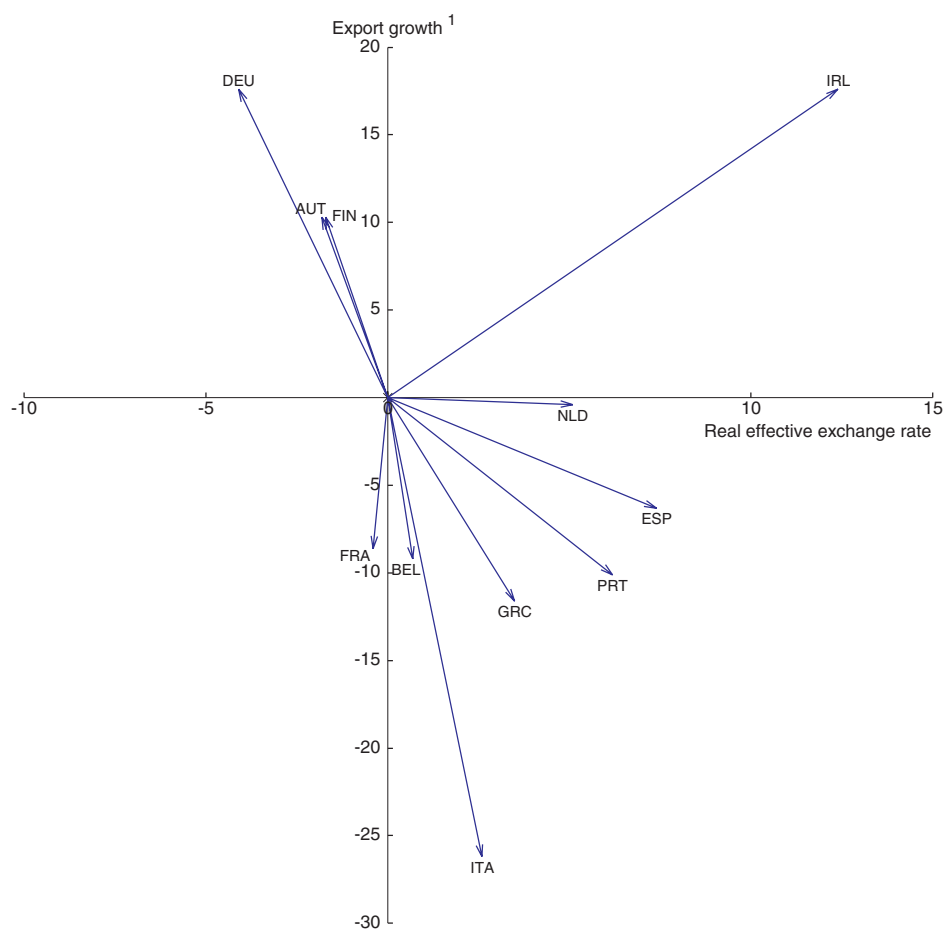
Concerns about divergences across the euro area should be kept in perspective because price levels are converging on average, not diverging, and economies are becoming more integrated. But there clearly are issues for some euro area members. Moreover, the

convergence process is seldom one where countries land smoothly on their long-run equilibrium path and then settle down to grow at normal, average rates. Instead, theory¹⁵ and evidence¹⁶ give reasons to expect countries to overshoot. Ultimately, whether differences in growth or inflation are a problem depends on what is behind them, and that must be assessed on a country by country basis. The contrast between Portugal and Ireland is instructive. Both countries have had higher-than-average inflation since 1999 so their real exchange rates have appreciated. In Ireland this was backed by strong productivity growth, so it still managed an impressive export performance (Figure 1.15) – i.e. its real exchange rate appreciation was warranted. The opposite is true of Portugal. If anything, it needs a lower real exchange rate because its clothing industry has been hard hit by competition from Asia. A construction boom and a poorly timed fiscal expansion have stymied the adjustment process, and its export performance has suffered.

Competitiveness problems show up clearly when comparing unit labour costs. While the overall dispersion of unit labour cost levels appears to be stable or declining

Figure 1.15. **Real effective exchange rate and gross exports**

Cumulative change from 1999 to 2005



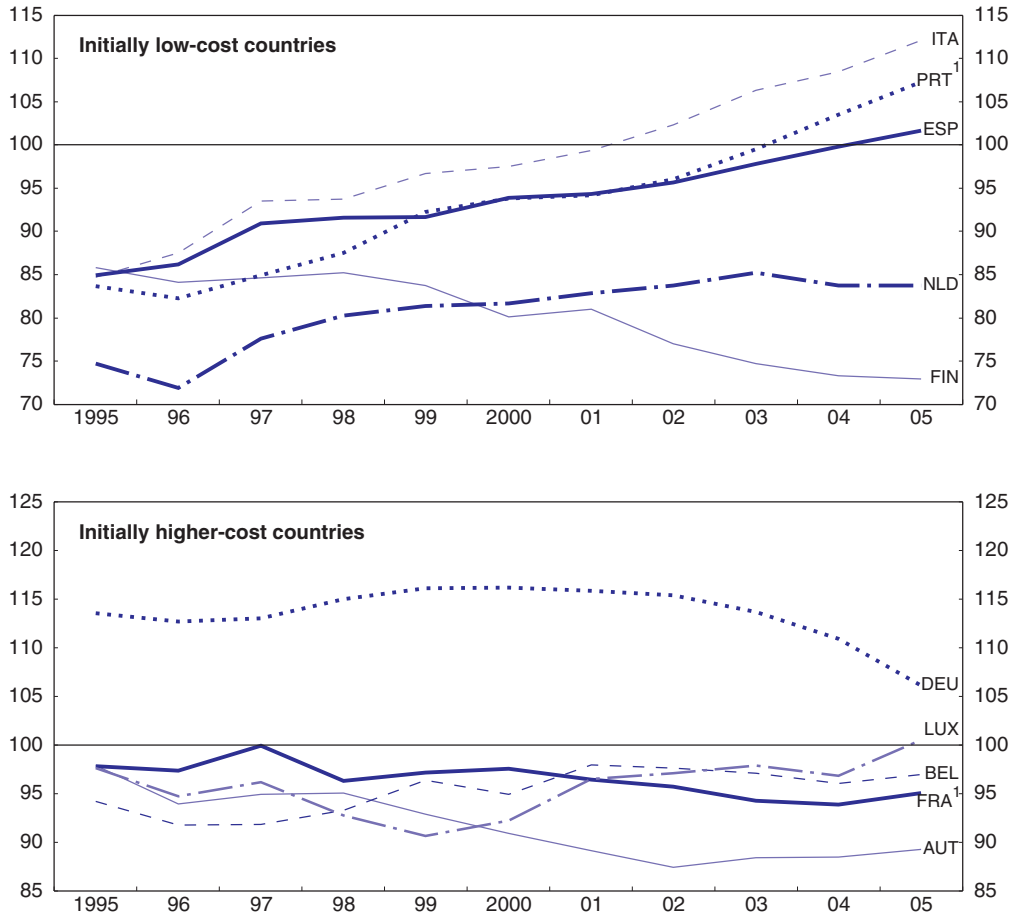
1. Excess over euro area average.

Source: Eurostat and OECD (2006), *OECD Economic Outlook: Statistics and Projections* – online database.

(Figure 1.10), patterns differ markedly across countries. Italy, Portugal and Spain used to have relatively low unit labour costs; Italy and Portugal have now overshot considerably, and on current trends Spain will follow suit shortly (Figure 1.16).

Figure 1.16. **Relative unit labour cost levels in industry**

Euro area = 100



1. Extended using total-economy unit labour costs for Portugal (2003-05) and France (2005).

Source: OECD, *Main Economic Indicators* – OECD online database and OECD *Economic Outlook: Statistics and Projections* – online database.

An additional problem is that regional divergences are combined with institutional and structural features that make them harder to deal with. These include limited labour mobility, the absence of a significant fiscal transfer mechanism and largely decentralised responsibility for fiscal and structural policies. Divergences have also been magnified by pro-cyclical fiscal policies (Chapter 3). With an urgent need for fiscal consolidation across the union, fiscal policy is off the table as an active demand management tool (over and above the automatic stabilisers). There is not much left apart from each economy's in-built equilibrating mechanisms, especially the competitiveness channel. In principle, it should work as follows. Excess inflationary pressures, which are more likely to be generated within the sheltered sectors of the economy, create cost pressures that spill over to affect

the competitiveness of the export sector. Competitiveness losses translate into a negative contribution of external demand to growth. As exports get crowded out, job losses and (maybe) lower wage growth in those industries will reduce domestic demand, which will feed back eventually on the sheltered sectors as well, reducing inflation and thus allowing for offsetting competitiveness gains. However, if there is one big lesson to be learned from the first eight years of monetary union it is that this balancing mechanism is slow to act. The feedback is delayed and out of sync with the driving forces of activity, so countries can have domestic booms that over-shoot for several years before hitting a competitiveness wall. The result can be boom-bust cycles rather than stable growth.

To deal with this problem, labour and product markets need to be flexible and tightly integrated with other members of the union (EC, 2005 and Ahearne and Pisani-Ferry, 2006). More progress on structural reforms is needed to bring this about. Countries that are slow to reallocate labour and capital, that are poor at absorbing shocks and that have inflation rates that respond weakly to economic developments can survive in the monetary union but will have a rough ride. The priority should be to make member economies more resilient to shocks and quicker to respond to macroeconomic policy – in other words, to strengthen the built-in balancing mechanisms. Most of the action is required at the national level:

- Policy should focus on boosting wage flexibility. A shift away from sectoral bargaining towards enterprise agreements, and linking wage developments to productivity, would help firms deal with shocks by adjusting wages rather than employment, would insulate exporters from developments in other sectors, and would increase the incentive for the workforce to boost productivity because they could share in the gains. Elements that cause wage rigidities such as administrative extension (where specific wage agreements are extended to larger parts of the economy) and implicit or explicit indexation should be abolished, or at least it should be ensured that wage developments are closely aligned to productivity. Welfare reforms could also make wages more responsive to labour market conditions, especially through stricter eligibility and job search conditions combined with better job-search assistance.
- Greater employment flexibility would improve the member economies' responses to permanent shocks. This calls for an easing of employment protection legislation for regular contracts in those countries where it hinders the adjustment to permanent shocks and where it has led to a high degree of labour market segmentation. Barriers to labour mobility should also be lowered through promoting pension portability and recognition of qualifications.
- Reducing inflation inertia is also important. When output is below potential, inflation falls by less in the euro area than in most OECD countries (Cournède *et al.*, 2005). Studies by the Eurosystem's Inflation Persistence Network found that prices change less frequently in the euro area than in the United States and that implicit pricing contracts and strategic interactions among competing firms are the main sources of price stickiness for producer prices. Inertia in services price inflation is particularly high. To deal with this, euro area governments need to boost competition by cutting unnecessary product market regulations and lowering barriers to internal trade. Better functioning markets would deliver lower sacrifice ratios for monetary policy since less of an output deceleration would be needed to curb inflation.

- Finally, financial market liberalisation would improve the monetary policy transmission mechanism through the housing channel, but this is a double-edged sword. The ability to borrow against housing wealth can magnify cyclical divergences if for example households' expectations overshoot into "irrational exuberance", but they assist consumption smoothing and are therefore stabilising when expectations are more rational. Wealth effects also make monetary policy more powerful. A large body of empirical research has found that the effect of monetary policy on consumption is weaker in the euro area than in the United States and this is partly related to institutional features of housing and mortgage markets in Europe.¹⁷ Greater competition in retail banking and a reduction in regulatory barriers to mortgage equity withdrawal would make monetary policy more powerful overall and would make the response of economies to interest-rate changes more similar across the euro area. At the same time, it would help if some countries phased out the special tax incentives they give to housing since countries with higher tax breaks tend to have bigger swings in house prices.

Notes

1. See the Central Bank of Ireland's *Quarterly Bulletin*, July 2006. The difficulty is that statistical revisions in Italy, Germany and Spain along with the expansion of government subsidies and job creation schemes in some countries make it difficult to be sure how much of the job growth has been in full time versus part-time positions. Around a fifth of the workforce now works part time.
2. This is based on econometric work by the OECD. The ratio of real business investment volume to GDP was modelled as a function of the profit rate, short-term real interest rates and an accelerator term. The equation was cointegrated and had relatively stable coefficients. The forecasts referred to in the text were dynamic out-of-sample forecasts starting in the first quarter of 2003. Details are available on request.
3. The profitability improvement appears to have occurred in all the main sectors. The ratio of net income to sales of a sample of around 2 000 listed non-financial corporations shows an increase across the board since 2003. The biggest improvements have been in manufacturing and utilities, with wholesale and retail trade showing the smallest rise. The income-to-sales ratio is clearly cyclical in all sectors, but eyeballing the figures suggests that the rise in profitability in 2004 and 2005 is more than merely cyclical. See Box 5 of the European Central Bank's June 2006 *Monthly Bulletin* for details.
4. The OECD's estimate of the NAIRU currently is 7½-8%.
5. Excluding Luxembourg. Ireland's GDP per capita is higher but this is not a good measure of living standards due to the high foreign ownership of its export sector. A better measure for Ireland is Gross national product (GNP) per capita, which is below the Dutch level.
6. This comparison is done at market exchange rates because PPP estimates are not available at the state level.
7. See the 2005 *Survey* and the references therein, and the OECD's productivity database at www.oecd.org/statistics/productivity.
8. Perhaps a better measure of integration is the extent of risk sharing across countries, which can be proxied by the dispersion of consumption. Unfortunately, little data is available on which to make such comparisons. However, consumption dispersion across the eight Australian states is marginally lower than across the twelve euro area countries even though GDP dispersion is higher.
9. The dispersion of output gaps also fell outside the euro area. In principle, the spread could fall either because individual output gaps become smaller on average or because gaps have become more synchronised. In the euro area, both effects have been at play. Among other countries, average gaps have shrunk but there has been no increase in synchronisation (Benalal et al., 2006).
10. The standard deviation of inflation rates in the euro area has been around 1 percentage point since 2000, compared with around 0.8 across the 14 US Census regions, 0.6 across Canadian provinces and 0.4 across Australian states. Divergences across regions within individual European countries is also lower than divergences among euro area countries.

11. Differing exposure to external shocks, such as oil prices and exchange rates have played their part as well. For example, the depreciation of the euro from 1999 to 2001 was significantly more inflationary in Ireland and the Netherlands while Portugal and Greece tend to be more exposed to oil price shocks because of their relatively high oil intensity of output.
12. Twice a year, the ECB publishes on its website indicators of financial integration in the euro area (see www.ecb.int/stats/finint/html/index.en.html#info).
13. In 2005, the share of assets of subsidiaries in another euro area country was around 14% of total bank assets. The share of assets of branches in another euro area country was around 3% (see the ECB's indicators of financial integration).
14. Resilience refers to the ability to absorb shocks and to recover more quickly following an adverse one. Being resilient – avoiding long periods away from equilibrium following negative shocks – has important implications in terms of welfare. It enables an economy to minimise the risk of hysteresis and the permanent or long-lasting output losses associated with it. Avoiding a sharp and persistent fall of output is therefore of great importance.
15. For example, see Lane (2004).
16. See Sala-i-Martin (1996) and Weber and Beck (2005).
17. For example, see the Eurosystem's work summarised in Angeloni et al. (2003), Boone et al. (2004) and Catte et al. (2004).

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ANNEX 1.A1

Entry criteria for the euro area

The entry criteria are laid down in the Maastricht Treaty and its Protocols and each country is examined by the European Commission and the ECB in their Convergence Reports at least once every two years or at the request of an EU member state with a derogation.^{1, 2} The criteria for entry into the euro area were designed to ensure that there is sufficient nominal convergence between the member state concerned and the euro area as a whole to promote smooth function of the union following entry.

The inflation criterion

The first criterion is that a member state should have a price performance that is sustainable and an average rate of HICP inflation, observed over a period of one year before the examination, that does not exceed by more than 1.5 percentage points that of, at most, the three best-performing EU member states in terms of price stability. At the time when Slovenia and Lithuania were assessed in May 2006, the three “best performers” in terms of price stability were Sweden (with 0.9% inflation), Finland (at 1.0%) and Poland (at 1.5%). The comparison is made relative to all EU members, not just the existing euro area members, and on this occasion included two non-euro area countries. The reference value was established as the average of these three (1.1%) plus 1.5%, equalling 2.6%. The benchmark varies, but has averaged 2.5% since 1998 and has been in the range of 2-3% over most of that period.

At the time of the May 2006 assessment (which was based on March 2006 HICP data) three of the current 12 euro area members had average rates of inflation that were above the reference value. Catching-up economies are expected to have a steady appreciation of their real exchange rate as productivity and price levels converge to those of their more mature trading partners. This increase in the relative price level is usually attributed to differences in relative productivity growth between tradables and non-tradables (the Balassa-Samuelson effect), but it could be caused by other factors as well.³ Somewhat higher-than-average inflation is therefore seen as not putting competitiveness at risk. Estimates of the magnitude of this effect vary widely between studies and countries.

It has been claimed that a country can temporarily meet the inflation reference value with a bout of unemployment and excess capacity (or by manipulating taxes or regulated prices), but that inflation would then need to rise back to its equilibrium level. This has been dubbed the “weigh-in” effect, after boxers who slim down for the weigh-in and bulk up afterwards. For the countries that joined the ERM in the late 1990s inflation was close to or below 2% at the weigh-in, but has risen to 3% on average since then (Brook, 2005). On the

other hand, this effect was very small for the area as a whole, with the inflation rate at weigh-in at 1.7%, rising to an average of 1.9% in the years after euro adoption, thereby illustrating that the disinflation effort that preceded the adoption of the euro had been durable. In any case, the Maastricht assessment implies an evaluation of the sustainability of the low level of inflation that has been reached, implying that an inflation reduction caused by temporary measures might not pass the test.

The exchange rate criterion

The Treaty refers to the exchange rate criterion of Article 121 as “the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, without devaluing against the currency of any other member state”. Article 3 of the Protocol on the convergence criteria stipulates: “The criterion on participation in the exchange rate mechanism of the European Monetary System [...] shall mean that a member state has respected the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System without severe tensions for at least the last two years before the examination. In particular, the member state shall not have devalued its currency’s bilateral central rate against any other member state’s currency on its own initiative for the same period.”

It is sometimes claimed that the exchange rate stability criterion can potentially conflict with the other criteria. In that line of reasoning, it is not possible simultaneously to target both a stable exchange rate and stable inflation while maintaining free capital mobility. This has been referred to as the “Impossible Trinity”. But it has also been argued that applying the “Impossible Trinity” to the case of EMU misses the point on the Maastricht criteria, the criteria being there to test whether a member state can cope with the challenges of a single market with full capital mobility without a monetary policy that is specifically geared to contain inflation in this country. The Maastricht criteria would therefore test whether a country can achieve a low and sustainable inflation level without the use of active monetary or exchange rate policies – both instruments being unavailable in monetary union.

The criteria for judging exchange rate stability have been further clarified in the March 2003 Athens Declaration by the ECOFIN. While the standard fluctuation bands of the ERM II are $\pm 15\%$, the assessment in the context of Maastricht will “focus on the exchange rate being close to the central rate while also taking into account factors that may have led to an appreciation”. In this respect, the width of the fluctuation band within ERM II shall not prejudice the assessment of the exchange rate stability criterion.

The fiscal criteria

The convergence criterion dealing with the government budgetary position is defined in Article 121(1) of the Treaty as “the sustainability of the government financial position: this will be apparent from having achieved a government budgetary position without a deficit that is excessive as determined in accordance with Article 104(6)”. Furthermore, Article 2 of the Protocol on the convergence criteria states that this criterion means that “at the time of the examination the member state is not the subject of a Council decision under Article 104(6) of this Treaty that an excessive deficit exists”. The budgetary convergence assessment is thus directly linked to the excessive deficit procedure specified in Article 104 of the Treaty and further clarified in the Stability and Growth Pact. The existence of an excessive deficit is determined in relation to the two criteria for budgetary

discipline set in Article 104(2), namely on the general government deficit and debt. Failure by a member state to fulfil the requirements under either of these criteria can lead to a decision by the Council on the existence of an excessive deficit, in which case the member state concerned does not comply with the budgetary convergence criterion.

Should a member state consolidate its fiscal position before joining the union? The thinking in the first phase of monetary union was essentially a political economy one: countries would be more likely to improve public finances if their membership depended on it. Once in the union, the Stability and Growth Pact would keep fiscal policies in check (Bohn, 2006). Economic arguments point in a similar direction. It may be best to undertake the fiscal consolidation prior to euro membership. While fiscal consolidation may be contractionary (although there is certainly no one-to-one relationship), there may be an offsetting expansionary impulse from both the decline in long-term interest rates which is often associated with the short- to medium-term prospect of adopting the euro, and positive confidence effects (European Commission, 2003). From the point of view of macroeconomic stability, some authors have argued that it is best if these occur at the same time (Bohn, 2006). Moreover, for countries with high debt levels, the decline in interest rates will help the fiscal consolidation by lowering debt servicing costs.

The interest rate criterion

Over a period of one year before the examination, the average nominal long-term interest rate should not exceed by more than 2 percentage points that of, at most, the three best-performing countries in terms of price stability. The interest rate criterion is used to assess the durability of the convergence achieved by a country. For countries with a credible peg to the euro, such as a currency board, the spread on long-term interest rates will largely reflect the market's assessment of default risk. For the others, the spread will also be influenced by expectations of future inflation (or devaluations), weighted by the probability that the country adopts the euro.

Notes

1. The relevant Treaty text and interpretation is at <http://europa.eu/scadplus/leg/en/lvb/l25014.htm>. There are some technical and legal criteria as well, including central bank independence, that are not discussed here.
2. The Council reaches a decision after examining the convergence reports submitted by the Commission and the ECB and consulting the European Parliament. It decides, on a qualified-majority basis and on a proposal from the Commission, which member states can adopt the euro. It also sets the irrevocable conversion rate between the national currency in question and the euro. This decision is taken unanimously by the country in question and the existing euro area member states based on a proposal from the Commission and after consulting the ECB.
3. There are other explanations of why low-income countries have low price levels. These include differences in factor endowments (the Kravis-Lipsey-Bhagwati effect), the hypothesis that services are a superior good (Dornbusch, 1998), differences in product market competition and productivity in the distribution sector (MacDonald and Ricci, 2005), pricing to market behaviour of exporters, imperfect capital mobility across sectors within a country (Altissimo et al., 2005), and differences in net foreign asset positions (Lane and Milesi-Ferretti, 2000).

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Glossary

APW	Average production worker
CPI	Consumer price index
ECB	European Central Bank
EDP	Excessive deficit procedure
EMU	Economic and Monetary Union
EMS	European Monetary System
ERM	Exchange rate mechanism
ERM II	Exchange rate mechanism II
EU	European Union
FDI	Foreign direct investment
HICP	Harmonised index of consumer prices
ICT	Information and communication technology
GDP	Gross domestic product
M&A	Mergers and acquisitions
MFP	Multifactor productivity
MPC	Marginal propensity to consume
MTO	Medium-term objectives
NAIRU	Non-accelerating inflation rate of unemployment
PPP	Purchasing power parity
R&D	Research and development
SGP	Stability and Growth Pact
VAT	Value-added tax

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The Secretariat's draft report was prepared for the Committee by David Rae and Boris Cournède under the supervision of Peter Hoeller.

The previous Survey of the euro area was issued in September 2005.

BASIC STATISTICS (2005)

	Euro area	United States	Japan
LAND AND PEOPLE			
Area (thousand km ²)	2 456	9 167	395
Population (million)	313.6	296.4	127.8
Number of inhabitants per km ²	128	32	323
Population growth (1995-2005, annual average % rate)	0.4	1.1	0.2
Labour force (million)	147.9	149.3	66.5
Unemployment rate (%)	8.6	5.1	4.4
ACTIVITY			
GDP (billion USD, current prices and exchange rates)	9 947.6	12 397.9	4 559.0
Per capita GDP (USD, current prices and PPPs)	29 848	41 789	30 541
In per cent of GDP:			
Gross fixed capital formation	20.5	19.5	23.2
Exports of goods and services	20.2	10.5	14.3
Imports of goods and services	19.1	16.2	12.9
PUBLIC FINANCES (per cent of GDP)			
General government:			
Revenue	44.5	32.7	30.3
Expenditure	47.5	36.6	37.0
Balance	-2.4	-3.7	-5.2
Gross public debt (end-year)	77.5	61.8	173.1
EXCHANGE RATE (national currency per euro)			
Average 2005		1.24	136.9
October 2006		1.26	149.7

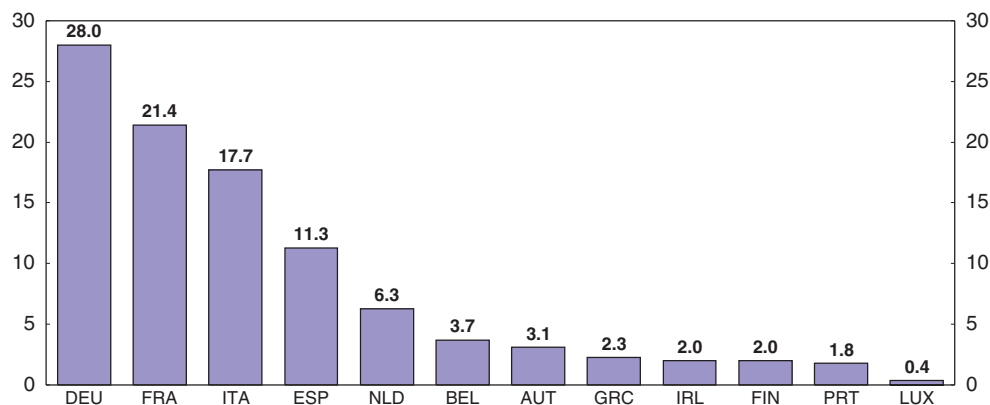
EURO AREA – EXTERNAL TRADE IN GOODS (main partners, % of total flows, in 2004)

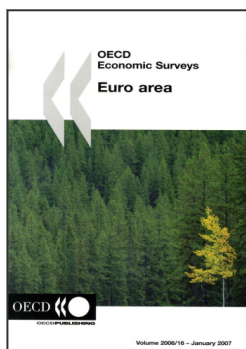
	Exports	Imports
Denmark, Sweden, United Kingdom	22.9	17.4
New European Union member countries	11.0	9.8
Other Europe	16.8	15.9
OECD America	17.4	12.6
OECD Asia/Pacific	5.5	8.6
Non-OECD dynamic Asian ¹ and China	7.8	14.4

1. Chinese Taipei; Hong Kong, China; Indonesia; Malaysia; Philippines; Singapore and Thailand.

SHARE IN EURO AREA GDP

Current market prices, 2005





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