QUARTERLY REPORT ON THE EURO AREA

Volume 4 N° 2 (2005)

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EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ECONOMIC AND FINANCIAL AFFAIRS

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EDITORIAL

Although growth in the euro area was in line with our expectations in the first quarter, activity turned out to be disappointingly slow in the second quarter. Surging oil prices and the loss in momentum of the global manufacturing boom have both taken their toll on business and consumer confidence in the euro area.

While the Commission's spring forecast for 1.6% growth in the euro area this year may ultimately prove to be a little optimistic, there are a number of reasons to be confident that we will see a pick-up in growth towards the second half of the year. There are early signs that the soft patch in the global economy is coming to an end and that world trade is growing again. The recent fall in the external value of the euro will, of course, also work in favour of our exporters. Monetary and financial conditions remain supportive of growth and are now being accompanied by signs of increasing confidence in survey data. All in all, growth is likely to gradually return to potential during the course of the year.

When we look at the individual Member States of the euro area, there are of course differences in their economic performance. In recent months, increased differences in quarterly growth rates and the composition of growth (particularly between the four largest euro area Member States – Germany, France, Italy and Spain) have attracted considerable attention. This topic and the related policy challenges have been debated extensively since the creation of the euro. This report therefore devotes a special focus section to the character and causes of growth differences in the euro area and their consequences for economic policy under Economic and Monetary Union (EMU). The related issue of Member States' housing markets and their link with economic performance is examined separately.

Concerning growth differences, we should be aware that quarterly data tend to be quite volatile and may therefore overstate the true size of growth differences. In fact, annual total growth differences in the euro area in the past few years have not been higher than in previous cycles, and they are of the same order of magnitude as differences across US states and German Länder.

Growth differences are a natural and inevitable feature of any large monetary union. They may reflect different demographic developments or differences in economic structures. They may even be desirable if they reflect an increase in the per capita income levels of catching-up countries. In addition, growth differences may simply result from dissimilar business cycles, which may be exacerbated by inadequate macroeconomic policies. On this front much progress has been made. Member States' business cycles have become more closely aligned over the last few years, thanks to the positive impact of economic integration and better overall macroeconomic management across countries. This is good news for EMU, as monetary unions work best when their members enjoy a high degree of cyclical synchronicity.

I see little cause for complacency, however, as growth differences have persisted over time and become entrenched. Indeed, a remarkable persistence can be observed in the relative growth performance across countries. Those Member States that grew rapidly or slowly in the nineties are the same ones that grew rapidly or slowly in recent years. This does not seem to be attributable to faster growth among catching-up economies. Overall, although total growth differences across euro area Member States are not high in comparison with previous cycles, the dispersion of potential output growth is at a historically high level.

Turning to the possible sources of growth differences, our analysis reveals a variety of temporary and longer-term factors. Firstly, common disturbances such as fluctuations in the oil price or the exchange rate of the euro have affected Member States in different ways, due to differences in their economic structures, their degree of economic openness and their geographical and sectoral specialisation. Secondly, the launch of EMU may itself have had a temporarily differentiated impact. Indeed, the exchange rates fixed for some Member States appear – in retrospect – not to have been fully in line with fundamentals. Furthermore, the falling risk premium on real interest rates as a result of the Maastricht convergence process spurred domestic demand in a number of Member States. Thirdly, lax budgetary policies in some Member States during the good times of the late nineties hindered the free play of automatic stabilisers during the recent downturn. Fourthly, differences in the transmission of monetary and fiscal policy could contribute to the observed cyclical differences. Finally, from a longer term perspective, divergences across Member States in the relative contributions of labour, capital and productivity developments to growth have played a role.

In some respects, the real issue here is not that differences have appeared across countries, but the fact that they have been absorbed only slowly. The response of relative prices and wages to economic shocks – the so-called competitiveness channel – has been very gradual in the euro area, leading to drawn-out cycles of overheating and overcooling.

I believe that getting to grips with growth differences in the euro area is a matter of priority for economic policies. A failure to act now will have costly repercussions later, as a Member State that does not absorb a shock rapidly, may endure a protracted period of low growth. This is unwelcome as it could trigger a damaging spiral of falling potential growth due to weak investment, eroding skills and rising levels of economic inactivity amongst the working age population. An extended period of below-potential growth will also weigh heavily on consumer and investor expectations and may also create severe budgetary difficulties.

A number of practical steps could be taken to tackle growth differences in the euro area. On the macroeconomic side, it is essential that automatic budgetary stabilisers are able to function fully in the face of certain types of economic disturbance. Implementing the reformed Stability and Growth Pact with rigour and credibility will create room for manoeuvre for fiscal policy to play its role in smoothing growth differences. On the microeconomic side, a further effective integration of product, labour and capital markets would help EMU to function more smoothly by encouraging a closer alignment of national business cycles. Finally, action is needed in order to boost the competitiveness channel and the responsiveness of prices and wages through policies to raise productivity and foster competition in product markets, and by reconsidering the process of wage determination.

In short, and as expected, EMU entails a fundamental shift in the economic policy framework. In the absence of national interest and exchange rates, it is paramount that national economic policies increase resilience in the face of economic shocks and promote adjustment to long-term trends. The persistence of growth differences in the euro area suggests that some Member States need to boost their adjustment mechanisms via accelerated economic reform, deeper trade and financial integration, and sounder budgetary situations. Member States that have followed this advice have learned not only to live with, but also to prosper under, EMU. Other Member States, until they follow suit, will continue to pay a high self-imposed price for their lack of reform.

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I. Economic situation in the euro area

Economic growth in the euro area was disappointing during the first half of the year. A global deceleration in the manufacturing sector and surging oil prices took their toll on business and consumer confidence and activity. GDP growth rebounded in the first quarter as projected in the Commission's spring forecasts. However, contrary to expectations, the pick-up was entirely attributable to net trade with domestic demand showing broad-based weakness. Furthermore, available survey data suggest that activity slowed again in the second quarter. For 2005 as a whole, the growth projections presented in the Commission's spring 2005 forecasts now appear to be somewhat on the high side. Nevertheless, there are early signs that the soft patch in the global economy may be coming to an end and that world trade picked up again in the second quarter. Monetary and financial conditions remain quite supportive and the recent weakening of the external value of the euro should provide further support to euro-area exports. Conditions seem therefore to be in place for a recovery of activity in the euro area with growth gradually returning to potential during the remainder of the year. Both hard data and surveys have come in better than expected in recent weeks, supporting this scenario. As to inflation, recent developments in oil prices and the euro pose an upside risk to the short-term outlook but labour cost pressures and inflation expectations remain so far contained.

1. Recent economic developments and short-term prospects[1]

Robust but uneven growth in the first quarter

As projected in the Commission's spring 2005 economic forecasts, euro-area GDP grew by 0.5% q-o-q in the first quarter of 2005. This was the fastest quarterly rate since the first quarter of 2004. The composition of growth was, however, less encouraging as regards the sustainability of the internal upswing, since growth was driven entirely by net trade, and domestic demand did not grow at all. In addition, the growth rebound can be partly attributed to the fact that working day corrections may have exaggerated the extent of the deterioration of activity in Germany in the last quarter of 2004.

The change in net trade was due to a sharp fall in imports of goods and services in line with the stagnation of final demand, while exports continued to grow, albeit at a slower rate. The vigour of net trade might be considered surprising in view of expectations from economic theory that the strength of the euro

Table 1: **Euro-area growth components**

	2004 Q2	2004 Q3	2004 Q4	2005 Q1	Carryover to 2005	Forecast (1)	
						2005 (2)	2006 (2)
% change on previous period, volumes							
GDP	0.4	0.3	0.2	0.5	0.9	1.6	2.1
Private consumption	0.1	0.3	0.6	0.3	0.9	1.6	1.8
Government consumption	0.7	0.9	0.2	-0.2	0.6	1.4	2.0
Gross fixed capital formation	0.4	0.5	0.8	-0.7	0.2	2.8	3.7
Changes in inventories (% of GDP)	-0.2	0.1	0.0	0.0	0.0	1.1	0.9
Exports of goods and services	2.7	1.0	0.3	0.2	1.6	5.4	5.9
Imports of goods and services	2.7	2.4	0.9	-1.1	1.3	6.0	6.4
% contribution to change in GDP							
Private consumption	0.0	0.2	0.4	0.2	0.5	0.9	1.0
Government consumption	0.1	0.2	0.0	0.0	0.1	0.3	0.4
Gross fixed capital formation	0.1	0.1	0.2	-0.1	0.0	0.6	0.8
Changes in inventories	0.1	0.3	-0.2	0.0	0.0	0.0	0.0
Net exports	0.1	-0.5	-0.2	0.5	0.1	-0.1	-0.1

(1) Annual change in %. (2) European Commission Spring 2005 Forecasts.
Source: Commission services.

[1] The cut-off date for the statistics included in this issue was 12 July 2005.

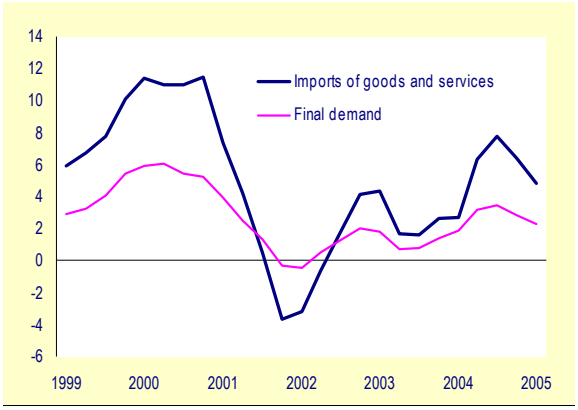
Table 2: **Selected euro-area and national leading indicators, 2004-2005**

	SENT. IND[1]	BCI[2]	OECD[3]	PMI Man.[4]	PMI Ser [5]	IFO[6]	NBB[7]	ZEW[8]
Long-term average	100.9	0.00	2.79	52.1	54.2	95.6	-9.5	34.5
Trough in latest downturn	88.1	-1.25	-0.76	42.9	46.7	87.3	-26.5	-10.4
July 2004	100.0	0.57	3.03	54.7	55.3	97.1	4.1	48.4
August 2004	100.9	0.49	2.54	53.9	54.5	95.9	-2.1	45.3
September 2004	100.9	0.51	2.28	53.1	53.3	95.7	-1.1	38.4
October 2004	101.5	0.54	1.98	52.4	53.5	95.9	-0.5	31.3
November 2004	100.9	0.39	1.85	50.4	52.6	94.3	-6.6	13.9
December 2004	100.2	0.44	1.44	51.4	52.7	96.4	-5.3	14.4
January 2005	100.8	0.40	1.15	51.9	53.4	97.5	-5.0	26.9
February 2005	98.8	0.21	0.78	51.9	53.0	96.3	-11.4	35.9
March 2005	97.5	-0.09	0.20	50.4	53.0	94.6	-9.4	36.3
April 2005	96.5	-0.28	-0.45	49.2	52.8	93.6	-15.9	20.1
May 2005	96.1	-0.37	-0.87	48.7	53.5	92.3	-16.1	13.9
June 2005	96.3	-0.40		49.9	53.1	92.9	-14.4	19.5

1) Economic sentiment indicator, DG ECFIN. 2) Business climate indicator, DG ECFIN. 3) Composite leading indicator, six monthly change. 4) Reuters Purchasing Managers Index, manufacturing. 5) Reuters Purchasing Manager Index, services. 6) Business expectations, West Germany. 7) National Bank of Belgium indicator for manufacturing. 8) Business expectations of financial market analysts, Germany.

should be reflected in an adverse effect on extra-euro-area trade flows. However, the fact that the growth rate of exports remained positive, in spite of world trade shrinking in the first quarter, would suggest that the negative effects of the past appreciation of the euro have largely petered out.

Graph 1: **Imports and final demand, euro area**
(y-o-y change in % – 1999Q1 to 2005Q1)



Source: Commission services.

The weakness in domestic demand in the first quarter was broad-based: private consumption growth was halved compared to the previous quarter, while government consumption, inventories and investment all decreased in the first quarter.

The below-average pace of private consumption growth paralleled a slight deterioration of consumer confidence during the first quarter. Surveys reveal that consumers became more pessimistic about employment prospects once again, against a background of a high but relatively stable unemployment rate. First-quarter surveys also revealed perceptions on the part of consumers of slightly stronger price trends. Such perceptions may have been influenced by the fact that euro–dollar exchange rate movements provided less shelter against rising oil prices in US dollars in the first quarter of the year. However, these results appear to be at odds with the actual evolution of annual HICP inflation in the first quarter, which was considerably lower than the fourth-quarter average due to favourable base effects. The apparent discrepancy between perceived and measured inflation may stem from the fact that respondents to the consumer survey probably assign excessive weight to the most recent price developments.

The strong decline in gross fixed capital formation needs to be qualified. A detailed breakdown of first-quarter gross fixed capital formation by branch is not yet available for the euro area. However, estimates produced by the Commission services estimates based on national data releases reveal the key negative role played by the German and Italian construction sector. Euro-area construction investment is likely to have diminished as bad weather contributed to a further weakening of construction investment in Germany and weak sentiment depressed construction in Italy – notwithstanding substantial growth in Spain in France.

Euro-area investment in equipment, on the other hand, probably rose for a fourth consecutive quarter. The recovery in equipment investment over the last four quarters was modest, at an average pace of 0.9% q-o-q. Notwithstanding favourable financing conditions and the improved corporate balance-sheet situation, the strength of the recovery is still being held back by the stagnation of final demand and, possibly, by more long-term factors related to the slowdown of the growth in total factor productivity in the euro area.[2] While Germany, Spain and France all contributed positively to euro-area growth in investment in equipment, it went down in Italy.

Finally, growth was also uneven from a Member State perspective, with growth in the first-quarter ranging from 2.4% q-o-q in Greece, 1.0% in Germany, 0.9% in Spain to 0 or less in Belgium, the Netherlands and Finland, and a technical recession in Italy (see also the Focus section on "Growth differences in the euro area" in this issue). In the case of Germany, however, there are indications that first-quarter growth was artificially strong and fourth-quarter growth artificially weak as a result of statistical effects linked to the correction for the number of working days.

The euro area did not escape the global deceleration in the industrial sector

In the first quarter, the gross value added of the industrial sector increased faster than total gross value added (0.7% q-o-q against 0.4%). However, the increase in industry followed a decline of similar magnitude in the previous quarter, suggesting that it might only be linked to working-day adjustments. The industrial sector has been affected by the worldwide soft patch which has led to an outright contraction in world trade during the first quarter. Developments in euro-area manufacturing confidence indicators suggest that the bout of manufacturing weakness persisted during most of the second quarter.

In the midst of the industrial slowdown, the services sector is sustaining GDP growth. The industrial sector's share in the gross value added of the euro-area economy (21% in 2004) is dwarfed by the services sector (71%).[3] Value added in market services grew twice as fast as industry over the last four quarters (2.1% y-o-y against 1.0% y-o-y). Compared to the industrial sector, the service sector is less sensitive to developments in the international environment. As a result, the short-term outlook for the services sector remains healthy. The services confidence indicator and the forward-looking elements of the survey (demand and employment) have eased somewhat, compared to summer 2004. Nevertheless, in contrast to the industry survey results, the services indicators remain well above the levels recorded in the first half of 2003, before the recovery set in.

The recovery is under pressure from rising oil prices…

After retreating somewhat in April and May, oil prices have resumed their upward trend, with Brent approaching USD 60 per barrel in the beginning of July 2005. This compares to the assumptions of USD 51 per barrel for 2005 and USD 48 for 2006 made in the Commission's spring 2005 forecasts. Futures prices imply higher prices for delivery in coming months, peaking around February 2006, and declining very gradually afterwards. This profile corresponds to an average price of USD 54 per barrel in 2005 and USD 59 per barrel in 2006 (respectively 6% and 23% higher than assumed in the spring forecast).

The recent surge in oil prices seems to find its origin in renewed concerns about demand rising more rapidly than supply, contributing to an even tighter market. The limited spare production capacity has left the oil market vulnerable to shocks, which could drive prices even higher.

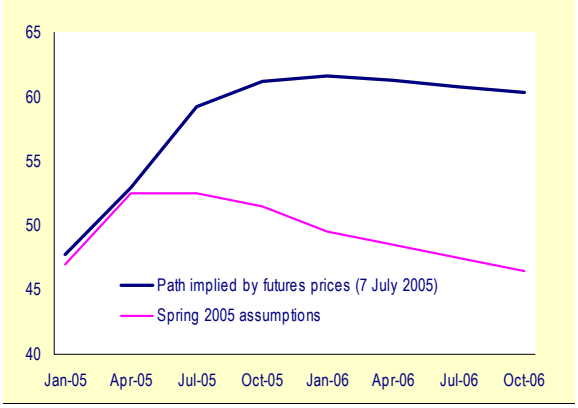
If it is maintained, the recent sharp rise in oil prices will somewhat dampen growth prospects in 2005 and 2006. However, the Commission's spring 2005 forecasts were already based on the

[2] See 'Structural factors weighing on the investment recovery', Quarterly Report on the Euro Area, Volume 4 No. 1 (2005).

[3] The shares of construction and agriculture are respectively 6% and 2% of the total. The service sector can be further broken down into a market and non-market component accounting, respectively, for 49% and 22% of GDP.

assumption of rising oil prices and the additional brake on growth from recent developments in oil markets should not be overstated. Simulations suggest that a permanent 15% increase in oil prices (which broadly corresponds to the average difference in 2005-2006 between the oil price forecast provided by futures markets and the baseline in the spring forecast), would lower euro-area GDP growth by around 0.2 pp in 2005 and 0.1 pp in 2006. Euro-area inflation would be only marginally higher (0.1 pp in 2005 – no effect in 2006).[4]

Graph 2: **Oil price assumptions in the Spring Forecasts and futures prices** (US$/barrel – 2005Q1 to 2006Q4)



Source: Commission services.

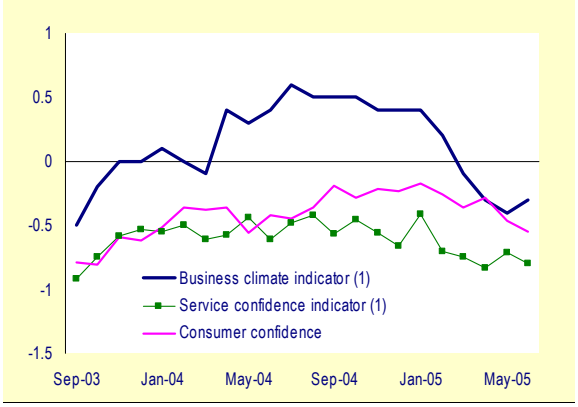
Any additional inflationary pressure from higher oil prices would, however, reduce the room for manoeuvre of monetary policy and would retard the growth of real disposable income. Survey results suggest that the rise in oil prices may already be affecting consumers' perceptions of their disposable income since their price expectations have increased somewhat in the past months. Moreover, consumers' growth expectations have deteriorated to their lowest level since autumn 2003. As a result, consumer confidence dropped somewhat in May and June, suggesting a weaker outlook for private consumption. This marked the end of a six-month period during which consumer confidence stayed fairly stable, while the business climate indicator declined continuously.

[4] Results from simulations with DG ECFIN's Quest model. These calculations take into account the repercussions stemming from global trade, with lower demand from oil-importing countries counterbalanced somewhat by higher demand from the oil-exporting countries, which benefit from the higher price of oil.

…but the weaker euro and a stronger world economy should support the recovery during the second half of 2005

After reaching a high of USD 1.36 at the end of 2004, the euro exchange rate depreciated, to a monthly average of about USD 1.22 in June 2005. If the bilateral exchange rate were to remain stable at this level during the rest of 2005 and 2006, the annual averages for 2005 and 2006 would be, respectively, 4% and 8% below the spring forecast assumptions.

Graph 3: **Confidence indicators, euro area** (monthly data – Sep 2003 to Jun 2005)



(1) Normalised.
Source: Commission services.

The effect of the euro depreciation on euro-area growth and inflation depends on the source of the shock to the exchange rate. Under the assumption that the rise in the value of the dollar is caused by a risk premium shock, [5] simulations with the European Commission's Quest model indicate that a 5% depreciation of the euro against the US dollar would add 0.3 pp to inflation in 2005 in the euro area (and 0.2 pp in 2006). The depreciation would also add 0.2 pp to euro-area GDP growth in 2005 (zero effect in 2006).

In addition to the recent depreciation of the euro, another factor which should support the euro-area economy during the next few months is the likely recovery of the world economy during second half of the year. As discussed later in this issue, there are early signs that the trade

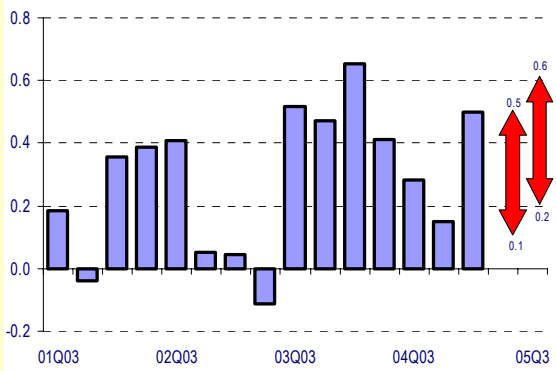
[5] Reflecting a shift in preferences of international investors to dollar-denominated assets.

slowdown that began in spring last year may now be coming gradually to an end.

Supporting the scenario of a progressive pick-up of activity in the euro-area during the second half of the year is the fact that most manufacturing indicators have recently come in better than expected. Regarding hard data, euro-area industrial new orders increased in April for the first time this year and available data at the Member State level show a further increase in Germany in May. Moreover, after two months of contraction, industrial production increased again in April (0.6% m-o-m). The rise could actually have been stronger if it had not been held down by a sharp contraction in the volatile energy sector. Some of the most recent business survey results also show tentative signs of a somewhat better outlook. In June, the index for inventories improved, ECFIN's Business Climate Indicator picked up slightly after five months of steady decline and the Purchasing Managers' Index for manufacturing recovered to just below 50. However, the short-term prospects for euro-area manufacturing sector remain fragile as some parts of the manufacturing survey remain lacklustre. For instance, manufacturers' expectations regarding their selling price remain depressed, which, in combination with rising input prices, does not bode well for profit margins.

Overall, although the first-quarter performance of euro-area GDP was as projected in the spring forecast, subdued business and consumer confidence during the second quarter suggest that annual growth in 2005 may turn out somewhat lower than foreseen. The mid-point estimates of the latest indicator-based forecast of quarterly GDP growth[6] are below the quarterly rates of the spring forecast: 0.3% q-o-q in the second quarter and 0.4% in the third, against 0.5% for both quarters in the spring forecast. Should these mid-point values materialise and should the last quarter of the year be in line with the spring forecasts, the projection for annual GDP growth in 2005 would be cut by 0.3 pp to 1.3%. The scenario of a return to potential growth in the second half of the year is supported by the very recent improvement in survey indicators for the manufacturing sector and the sustained growth of the services sector.

Graph 4: **GDP growth, euro area**
(q-o-q changes in % – 2001Q3 to 2005Q3)



(1) ECFIN's indicator-based forecast model.
Source: Commission services.

Risks to the central scenario of the spring forecast remain

The return to potential growth is subject to risks linked to the international environment and consumer confidence. Regarding the international environment, the global imbalances are the main (downside) risk. Consumer confidence could be an upside risk, if an excessive reaction to rising energy prices is avoided. Finally, investment in equipment and in construction are subject to specific risks.

The evolution of the capacity utilisation rate in manufacturing casts a shadow on the outlook for equipment investment. At 80.9% in April 2005, capacity utilisation has fallen back to its April 2002 level, increasing the potential for the corporate sector to meet any additional demand through a higher utilisation rate of existing capacity instead of triggering new investment.

Construction investment, on the other hand, may surprise on the upside in the short-term. Indeed, among the sources of the construction boom in many countries is the rapid rise in housing prices fuelled by very low real interest rates. This seems to be true especially for Spain, where the real interest rate is close to zero or negative. In contrast, real interest rates are higher in Germany as inflation is lower. However, the medium-term

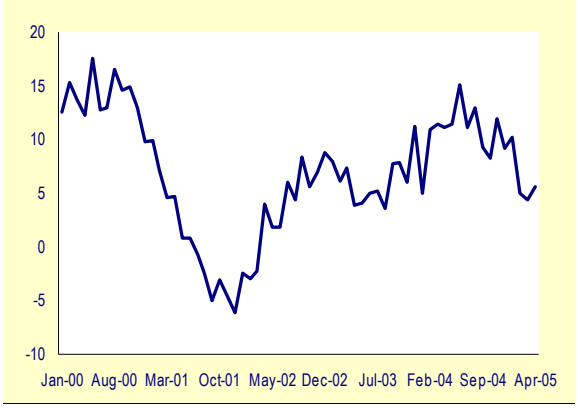
[6] http://europa.eu.int/comm/economy_finance/indicators/euroareagdp_en.htm

risk is on the downside, since local house prices have reached unsustainable levels in many Member States (see also the Focus section on "Housing and the business cycle" in this issue).

Early signs that the soft patch in the global economy may be coming to an end

After the period of strong growth observed in late 2003 and early 2004, the global economy has decelerated gradually since spring 2004. The year-on-year rate of increase in world trade, as estimated by CPB Netherlands bureau of economic policy analysis, peaked at around 15% in mid-2004 and has since been on a declining trend, falling below 5% at the end of the first quarter of 2005. However, a significant rebound in trade volume was registered in April which saw the strongest m-o-m growth since June 2004 (Graph 5).

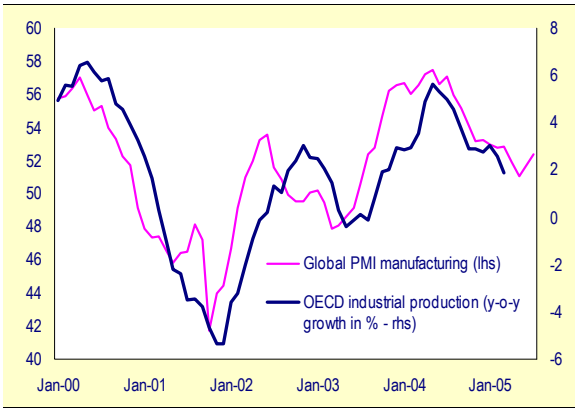
Graph 5: **World trade**
(y-o-y % change in volume–Jan 2000 to April 2005)



Source: CPB Netherlands bureau of economic policy analysis.

According to the latest reading of the quarterly World Economic Survey from May 2005, the world economic climate deteriorated for the fifth consecutive quarter, but remained above its long-term average. However, the global Purchasing Managers' Index for manufacturing, which had been on a declining trend for much of the last year, bounced back in June (Graph 6). Together with more positive news from the US and Japanese economies, these developments could be an early sign that the soft patch in the global economy is gradually coming to an end.

Graph 6: **Developments in global manufacturing**
(Jan 2000 to May 2005)



Source: OECD, EcoWin.

The ***US economy*** is in the fourth year of a cyclical upturn with growth continuing at a solid rate. Following 3.8% annualised growth in the first quarter, the expansion has apparently slowed somewhat in the second quarter following an inventory correction and a general cooling down of activity in the manufacturing sector. Growth continues to be based on robust domestic demand for both consumer and capital goods. Recent improvements in consumer confidence and the ISM business surveys may bode an end to the second quarter "soft patch", although rising energy prices may still weaken domestic demand more substantially. Foreign trade has so far contributed negatively to growth, but the latest monthly data suggest an improving export performance. Consumer spending is supported by solid growth in real disposable personal income (up 3.2% over the twelve months to May), partly a result of continuing moderate improvement in the labour market (1.5% growth in payroll employment in the twelve months to May). The wealth effect from continued house price inflation (12.5% between 2004 Q1 and 2005 Q1) appears also to support consumer spending. Households have further reduced their saving out of income in 2005, resulting in a saving rate of 0.75% of disposable personal income in the first five months of the year compared to 1.3% in 2004.

Headline inflation (the y-on-y increase in the overall consumer price index) was 2.8% in May. Core inflation is considerably lower due to the exclusion of energy prices. The Federal Reserve's favourite inflation measure – the core price index

for personal consumption expenditure – has only increased by 1.6% over the past year. However, in the first five months of this year, this measure of core inflation has risen to an annual rate of 2.2%. The Federal Reserve considered pressures on inflation to be elevated when it raised its target for the federal funds rate to 3.25% on 30 June. This was the ninth 25 basis-point increase in the policy rate since June 2004.

In spite of rising short-term rates, overall financial conditions continue to be relatively accommodative since long-term rates have fallen since June 2004. The trends in the so-called 'twin deficits' have recently diverged. While the current account deficit has continued to rise and reached 6.4% of GDP in the first quarter of 2005, the fiscal deficit of general government has fallen to 3.1% of GDP in the same quarter, mainly due to higher tax revenues. Higher-than-expected tax revenues have continued into the second quarter and will provide some further cyclical improvement of the budget deficit.

Japanese output growth accelerated from 1.4% in 2003 to 2.7% last year, the fastest rate since 1996. This happened despite the economy experiencing a technical recession in the middle of 2004. In the first quarter of 2005, the Japanese economy rebounded strongly with GDP growing at 4.9% (annualised rate) thanks to a significant recovery in domestic demand. Both private capital and private consumption expenditures increased rapidly after several quarters of weakness. By contrast, net external trade subtracted 0.1 pp from overall growth, partly reflecting declining exports. The strong performance of the Japanese economy at the beginning of 2005 should however be seen in the light of temporary contractionary factors that dampened growth at the end of last year, when the country was hit by an earthquake and unusually adverse weather conditions.

Also, the strong rebound in growth is partly explained by the GDP deflator, which showed a decline in prices of 1% y-on-y. Core deflation is decelerating very slowly, partly due to one-off factors. Given the very slow pace of deceleration of underlying deflation, the year-on-year change in core CPI is unlikely to settle firmly into positive territory before the turn of the year. The Bank of Japan has committed itself to keeping in place the current quantitative framework, which implies zero interest rates, until deflation has clearly come to an end.

Looking ahead, the Japanese economy is expected to continue to expand moderately in 2005. Recent data releases suggest that domestic demand might be more resilient in the coming quarters with the global economic environment remaining supportive of GDP growth. Indeed, the increase observed in May in the proportion of full-time workers combined with unemployment trending downwards might result in higher household income and consumer spending at some point. On the corporate front, the high level of capacity utilisation and strong increase in profits should support business investment spending. Moreover, the June Tankan survey report indicated a broadening of business confidence for the second and third quarter of this year. Given the strong performance registered in the first quarter of 2005, the Commission forecast for 2005 GDP annual growth of 1.1% is probably on the low side.

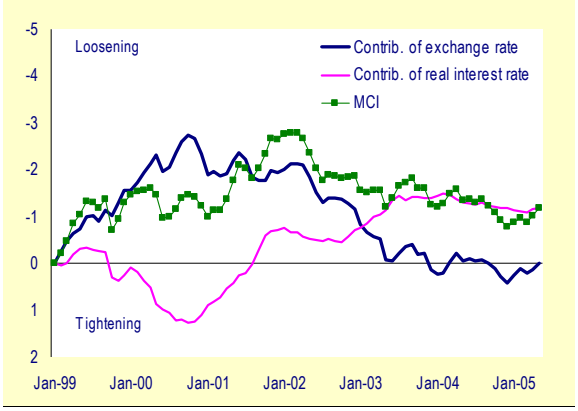
China's GDP continued to grow at a strong pace in early 2005, growing by 9.5% in the first quarter. Economic indicators in April and May suggest that this trend has likely continued in the second quarter. The source of growth has partially shifted away from investment towards net exports and, to a lesser extent, consumption. Import growth decelerated sharply in the first five months of 2005, partly due to the very strong import growth last year, but also due to a slowdown in investment growth and an increase in domestic capacity. Faster urban and rural income growth has been an important support to consumer spending. While investment growth has decelerated in many overheating sectors (essentially the metal industry), it has accelerated in bottleneck and government-supported sectors, such as energy generation, utilities and transport. Investment in the real estate sector has continued to be very strong, despite government measures to curb it. Notwithstanding higher raw material and energy costs, inflation continues to be moderate, averaging 2.8% in the first quarter of 2005 and decelerating to 1.8% in May. The Commission expects growth to remain robust at 8.6% in 2005.

Regarding other emerging economies, GDP growth in the ***rest of Asia*** looks likely to moderate in the coming quarters, with Asian exports trending down as growth decelerates in the USA and China, two key export markets for final and intermediate goods. Growth in ***Latin America*** is expected to slow down somewhat from the historically very rapid growth registered in 2004, partly as a result of monetary tightening, the expected deceleration in global growth and the gradual end to the post-crisis rebound in some countries. Rising oil prices should sustain growth in oil-exporting countries, such as those in the ***Commonwealth of Independent States*** and ***the Middle East***.

Monetary and financial conditions

Monetary conditions in the euro area, as measured by the Monetary Conditions Index (MCI), continued to improve in the second quarter of 2005 (Graph 7). Movements in the MCI were driven by exchange rate changes as real short-term rates have been close to zero, well below the average level registered in the 1990s, for more than two years.

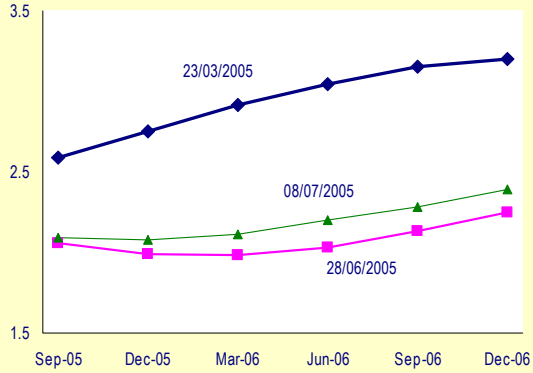
Graph 7: **Euro-area monetary conditions**
(inverted scale – Jan 1998 to May 2005)



Source: Commission services.

In June, market expectations, as derived from future contracts, started to price in the possibility of a rate cut. However, since the beginning of July, these market expectations have begun to dissolve slightly, as recent indicators pointed to an acceleration of economic activity. Still, compared to the end of March, there has been a large shift of market expectations. At the end of March markets still expected four rate hikes by 25 basis points each until the end of 2006 (Graph 8).

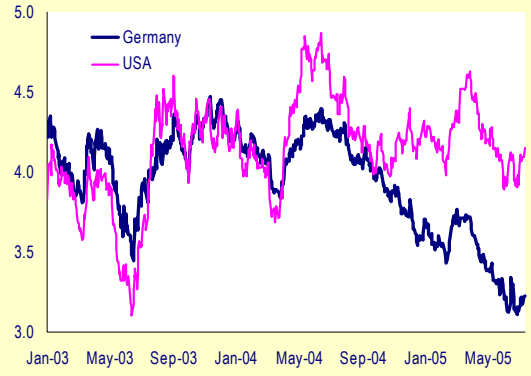
Graph 8: **3-month Euribor future implied rates (LIFE)**
(in %)



Source: Commission services.

In the USA, the Federal Reserve has raised interest rates by 225 basis points since 30 June 2004, bringing the target for the federal funds rate to 3.25 percent. Financial markets still expect a further tightening over the coming months, albeit at a slower speed. Market expectations as derived from future contracts are now pricing in one or two more steps by 25 basis points each before the end of the year.

Graph 9: **10-year government bond yields**
(daily data – 1 Jan 2003 to 12 July 2005)



Source: Commission services.

Since the end of the first quarter of 2005, long-term government bond yields in the euro area and the USA have declined further. At the beginning of June, the yields on 10-year government-bonds had reached levels below that

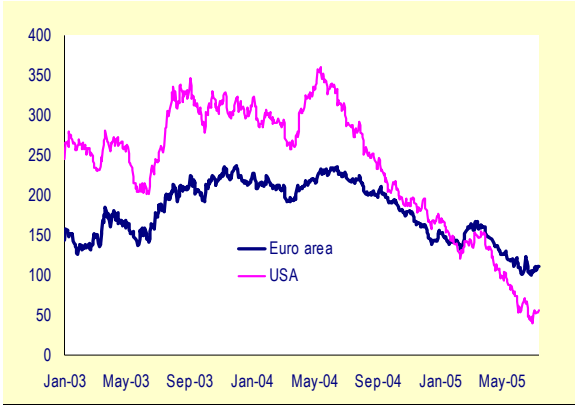
of February when Greenspan called the level of long-term bond yields a "conundrum". In recent weeks, long-term bond yields re-bounced slightly.

In the euro area, government bond yields have reached historically low levels with the German government bond yield falling to 3.10% on 27 June. On 12 July, it stood at 3.23%. The recent decline seems to be mainly driven by weaker-than-expected leading indicators and lower inflation expectations, the latter in spite of the recent surge in oil prices. Developments in indicators of inflation expectations derived from financial markets (such as break-even inflation rates) suggest that market participants' inflation expectations have significantly eased since the end of April. Furthermore, in June, speculations about the prospects of an ECB rate cut contributed to the decline of bond yields. With short-term interest rates fairly stable, the decline of bond yields led to a flattening of the yield curve also in the euro area.

In the USA, the interest rate hikes by the Federal Reserve and the decline of government bond yields also resulted in a sharp flattening of the yield curve. On 12 July, the US 10-year government bond yield stood at 4.15%. Three factors seem to have contributed to the further decline of US government bond yields: softer macroeconomic data at the beginning of May; a flight to quality due to speculation about hedge funds' losses in credit markets following the downgrading of Ford and General Motors and lowered inflation expectations.

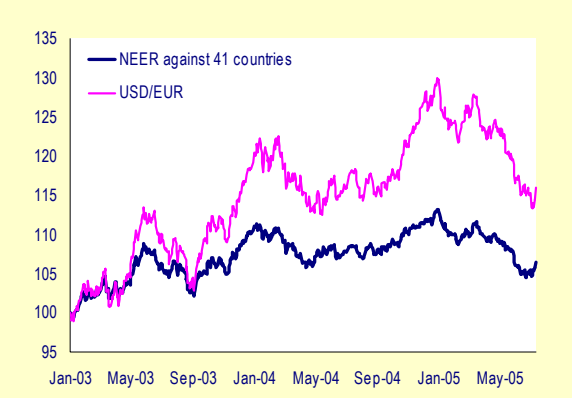
While recent developments can be explained by the factors mentioned above, additional factors have been put forward to explain the structurally low level of government bond yields on both sides of the Atlantic. These include a slowdown in global growth, Asian central bank buying; pension fund buying in order to better match long-term liabilities with long-term assets; higher demand for fixed-income assets from an ageing population; and a predominance of short positions on the part of bond investors, who have been forced to cover as the "conundrum" failed to resolve itself in their favour.

Graph 10: **Yield curve** (10-year minus 3-month interbank) (daily data– 1 Jan 2003 to 12 July 2005)



Source: Commission services.

Graph 11: **Nominal effective and bilateral USD/EUR exchange rate** (1/1/03=100 – 1 Jan 03 to 12 July 05)

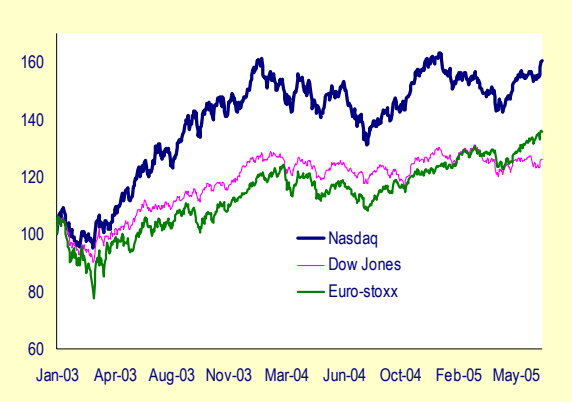


Source: Commission services.

In the second quarter of 2005, the euro exchange rate resumed the downward trend against the dollar that had started at the beginning of the year. Over the quarter, the euro lost more than 7% against the US dollar, declining from 1.30 USD/EUR at the end of March to 1.21 USD/EUR at the end of June. After reaching a 14-months-low of 1.19 USD/EUR on 5 July, the euro re-bounced and stood at close to 1.22 on 12 July. While the weakening of the euro was heightened by the results of the French and Dutch referenda, it also reflected the continuing uneven prospects for domestic demand across the euro area, and the still relatively strong cyclical factors supporting the US dollar. With speculations about an ECB rate cut and the

Federal Reserve's hiking cycle, interest rate differentials have become the dominant theme in currency markets this year, helping the dollar stage an unexpected rally.

Graph 12: **Stock indices** (index 1/1/03=100)
(daily data– 1 Jan 2003 to 12 July 2005)



Source: Commission services.

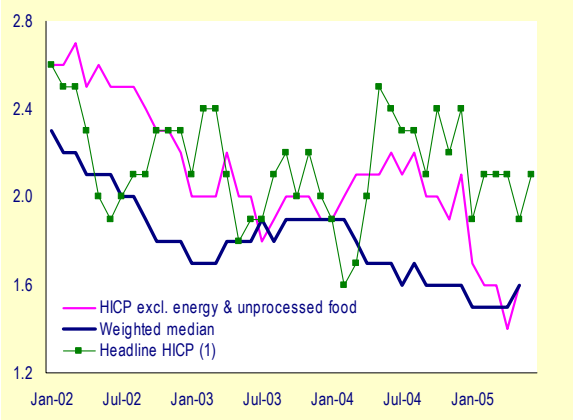
Global stock markets suffered sharp declines in mid-April, as concerns mounted in the USA over corporate profits and global growth prospects. A round of soft economic indicators undermined investor confidence, as indicators of consumer confidence, import prices and regional manufacturing disappointed market participants. Within a few days, stock markets in the USA and the euro area lost between 4 and 5%. Since then, however, stock markets have recovered after recent data releases indicated better-than-expected economic activity in the USA. In the euro area, stock markets withstood weaker-than-expected leading indicators and even continued to rise after the "no" votes in France and the Netherlands, due to robust corporate profit growth and historically low levels of risk-free interest rates. European exporters' stocks also profited from the recent fall of the euro exchange rate. In June, stock markets in the US, Japan and euro area had more than offset the losses of the second half of April. After the London bombings, global stock markets initially lost around 4% but re-bounced in the course of the day, closing with a loss of less than 1%. Stock markets in the US even closed with some gains. On 12 July, the EuroStoxx was some 15% above its 2004 average level.

2. Recent developments in inflation

Headline inflation is close to 2%

In 2005, euro-area annual HICP inflation has remained relatively stable. Headline inflation rose from 1.9% in January 2004 to 2.4% in December (Graph 13). It subsequently fell to 1.9% in January 2005. Since then, headline inflation has remained flat at 2.1%, except for a brief downward blip to 1.9% in May.

Graph 13: **Headline and core HICP inflation, euro area**
(y-o-y changes in % – Jan 2001 to May 2005)



(1) Flash estimate for June.
Source: Commission services.

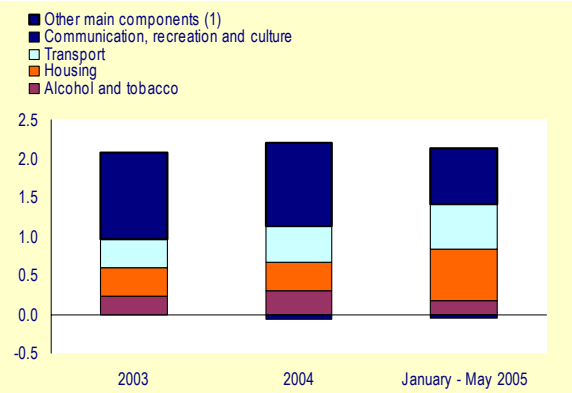
Among the main components to headline HICP, the highest annual rates of inflation in recent months were observed in housing, alcohol and tobacco, transport and education.

- Housing inflation has continued to rise recently from an average annual rate for 2004 of 2.5% to 3.7% in January and 4.7% in April, but has come down slightly to 4.3% in May. For May this equates to a contribution of about 0.6 pp to total HICP (Graph 14).
- Inflation in alcohol and tobacco products has come down significantly since last year, from an average of 8.1% in 2004, to 7.5% in January and 3.9% in May (a contribution of about 0.2 pp). The deceleration is attributable to base effects related to increases in tax rates in 2004.
- Transport prices are growing at high and rising rates. While the annual rate of inflation for that component averaged 2.3% in 2004, it stood at 3.2% in January and rose to 4.2% in

April (0.6 pp contribution). In May it fell back again to a rate of 3% (0.5 pp). These developments largely reflect recent fluctuations in oil prices.

- The education component has shown continually high inflation rates in the past few months (3.4% from January to May). However, due to its small weight in the consumption basket its contribution to overall inflation was less than 0.1 pp in May.

Graph 14: **Contribution from main components to headline HICP** (y-o-y inflation, euro area in %)



(1) The "Other main components" are food, clothing, household equipment, health, education, hotels and restaurants, and miscellaneous.
Source: Commission services.

Core inflation is falling

While headline inflation has been relatively stable, core inflation has declined. Core inflation can be measured in a number of different ways. The most commonly used measure of core inflation is headline inflation excluding energy and unprocessed food, two elements that have traditionally been very volatile. A second measure of core inflation is the so called *weighted median of inflation*.

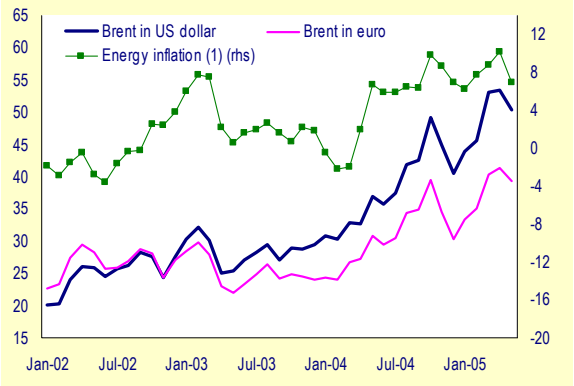
Graph 13 shows the developments of these two core inflation measures together with headline HICP. The two measures have recently shown somewhat different trends. Core inflation (measured as HICP without energy and unprocessed food) accelerated during the first half of 2004. It then experienced an almost uninterrupted fall from mid-2004 to April 2005 before rebounding slightly in May to 1.6%. In contrast, core inflation, as measured by the weighted median, has experienced an almost uninterrupted decline since the beginning of 2004, falling from a level of 1.9% in January 2004 to 1.5% in January 2005. It has remained at this level for four consecutive months. In May, weighted median inflation rose slightly to 1.6%.

Some inflationary pressure from oil prices

The recent surge in oil prices has driven up euro-area energy inflation (Graph 15). Changes in oil prices affect euro-area HICP inflation in different ways.

A change in oil prices affects headline inflation directly via the HICP's energy component, which accounts for about 9% of the consumption basket. In the first five months of 2005 energy HICP inflation was 8.0%. This corresponds to an average contribution of 0.7 pp to headline HICP.

Graph 15: **Oil prices and energy inflation in the euro area** (Jan 2002 to May 2005)

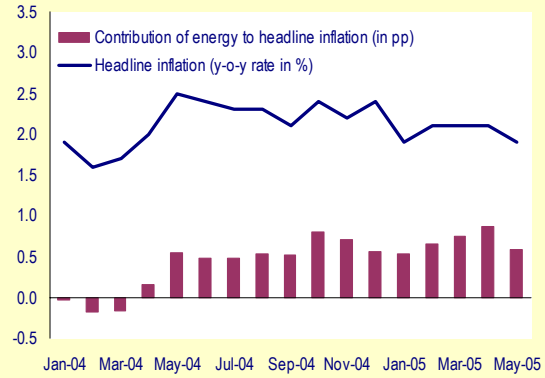


(1) Y-o-y changes in % in the energy component of the HICP
Source: Commission services.

Oil price changes can also affect inflation indirectly via their impact on the production costs of sectors using energy. The indirect pass-through of higher oil prices in the transport services sector is generally relatively rapid. Inflation in transport services has also risen rapidly in the recent months. However, evidence of indirect effects in producer price inflation remains limited. There have not, so far, been any significant signs of pass-through of higher energy costs into consumer good prices. The year-on-

year inflation in the consumer good sector even decelerated during the first quarter of 2005 (Graph 17).

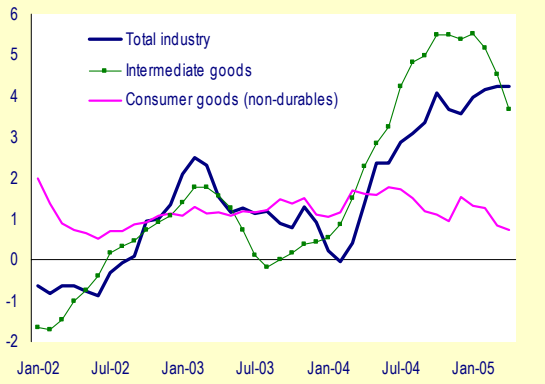
Graph 16: **Contribution of energy to headline HICP inflation, euro area** (Jan 2004 to May 2005)



Source: Commission services.

Two factors can explain the limited extent of cost increases observed so far. First, it takes time for cost increases to be transmitted down the production chain. Second, the past appreciation of the euro and modest growth of unit labour costs have partly offset the impact of higher oil prices.

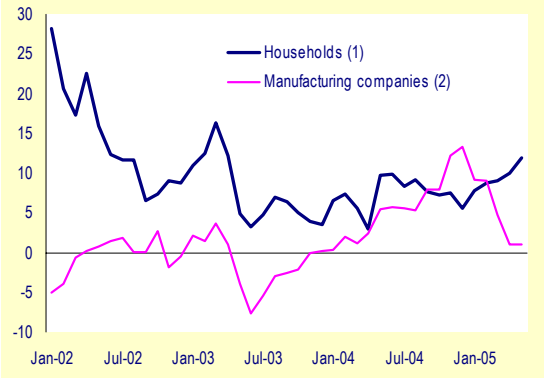
Graph 17: **Producer price inflation in the euro area** (y-o-y changes in % – Jan 2002 to April 2005)



Source: Commission services.

Finally, an oil price change can affect inflation via changes in inflation expectations in the economy. Second-round effects on inflation from this source have so far been limited. Despite a continued rise in oil prices in 2004, there is only limited sign of inflationary effects from changes in inflation expectations. For instance, according to DG ECFIN's *Business and Consumer Survey*, inflation expectations remain relatively contained despite a modest rise for households (Graph 18).

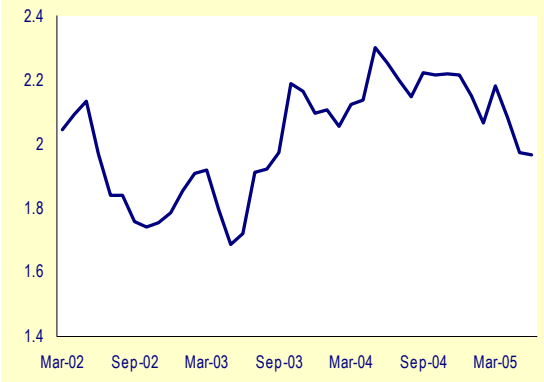
Graph 18: **price expectations in surveys, euro area** (Jan 2001 to May 2005)



(1) Price trends over next 12 months.
(2) Selling price expectations for the months ahead.
Source: Commission services.

Furthermore, developments in inflation-indexed bonds indicate that inflation expectations of financial market participants remain contained. The ten-year euro-area break-even inflation as derived from French inflation-indexed bonds fell below 2 percent in June, the first time since September 2003 (Graph 19).

Graph 19: **Inflationary expectations embedded in French index-linked bonds** (in % – Mar 2002 to June 2005)

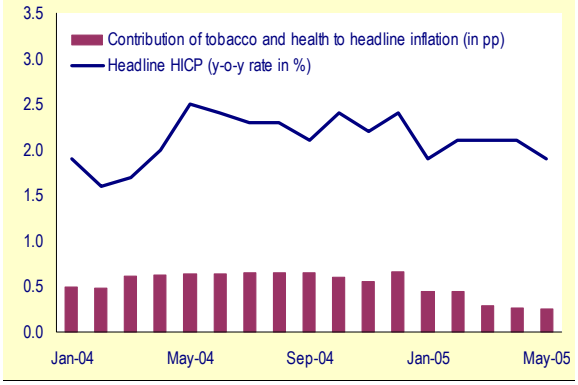


Source: Ecowin.

Increases in taxes and administered prices remain important

In the first five months of 2005, hikes in indirect taxes and administered prices, as measured by inflation in tobacco and health services, have added about 0.4 pp to headline inflation (Graph 20). While smaller than last year, this is still significantly above the level of 0.2 pp registered on average during the 1996-2002 period.

Graph 20: **Tobacco products and health services inflation in the euro area** (Jan 2004 to May 2005)



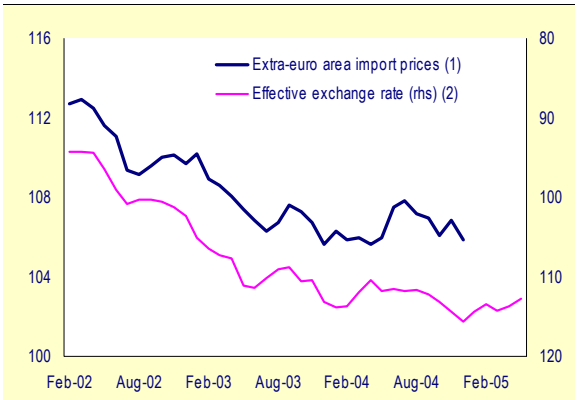
Source: Commission services.

Past appreciation of the euro

Over the past three years, the appreciation of the euro has been a significant factor contributing to disinflationary forces in the euro area. As can be seen from Graph 21, developments in the effective exchange rate and in extra-euro-area import prices are strongly related. An appreciation of the euro appears to have a strong negative effect on extra-area import prices. Looking at the end of the series, we can see that, over the past few months, the euro has begun to depreciate. While figures on import prices for the beginning of 2005 are not yet available, we can infer that this depreciation will have put upward pressure on import prices during this time.

While the effect on import prices is relatively rapid, the pass-through to consumer prices is much slower (1.5 to 2 years, according to Commission estimates). Thus, the disinflationary effects of the appreciation of the euro, experienced last year, can be expected to last well into the end of 2005 and the beginning of 2006.

Graph 21: **Imported disinflation, euro area** (base 1999=100 – Jan 2002 to May 2005)



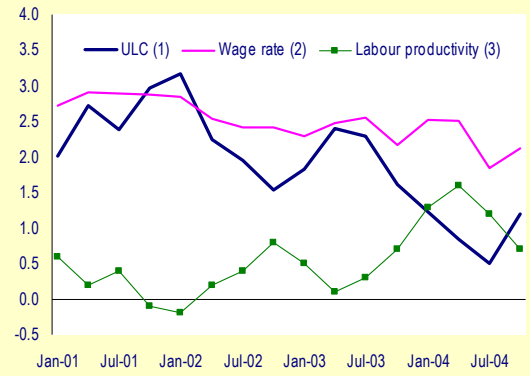
(1) Price index of imports of consumption goods. The latest import price data is from December 2004.
(2) Inverted scale.
Source: Commission services.

Modest growth in labour costs

Modest growth in labour costs continues to contribute to price stability in the euro area. The annual percentage change in unit labour costs has fallen over the last few years, from an average of 2.3% in 2001 to 0.9% in 2004. Looking at quarterly figures, we can see that growth in unit labour costs fell from 2.4% y-o-y in the second quarter of 2003 to 0.5% in the third quarter of 2004, its lowest rate for 4 years (Graph 22). In the last quarter of 2004, it rose again to 1.2%.

To a large extent, developments in labour costs reflect movements in labour productivity which, after a period of significant increases, began to slow at the end of 2004. Growth in labour productivity increased steadily from 0.1% in the second quarter of 2003 to 1.6% in the same quarter of 2004, subsequently falling to 1.2% and 0.7% in the third and fourth quarters, respectively. Moderation in unit labour costs is also – though to a lesser extent – due to weak growth in total compensation per employee. Data on negotiated wages compiled by the ECB (available with a smaller lag than wage data from national accounts) show that wage moderation continued in the first quarter of 2005.

Graph 22: **Unit labour costs, euro area**
(y-o-y changes in % - 2001Q1 to 2004Q4)

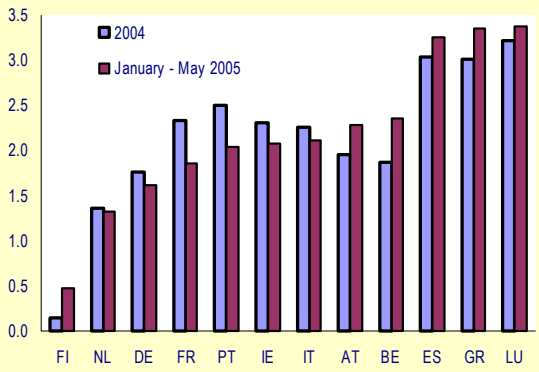


(1) Ratio of compensation per employee to real GDP per employee.
(2) Total compensation per employee.
(3) Ratio of real GDP to employment.
Source: Commission services and ECB.

Inflation differentials persist but have narrowed recently

In the first five months of 2005, the lowest annual rates of headline HICP inflation have been observed in Finland, Netherlands and Germany, and the highest rates have been observed in Luxembourg, Greece and Spain (Graph 23). In Finland, the average HICP inflation rate has so far in 2005 been about 0.5%, while it has reached about 3.4% in Luxembourg.

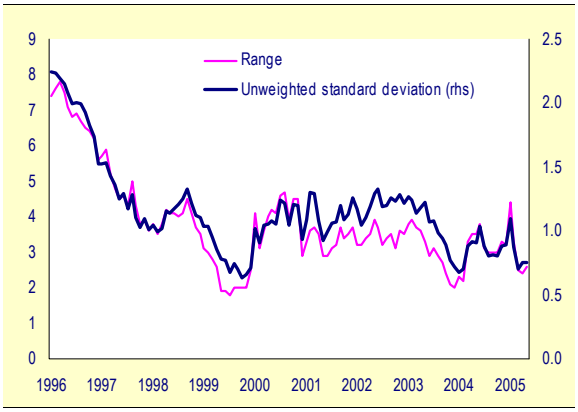
Graph 23: **HICP inflation, euro-area Member States**
(Average y-o-y % changes)



Source: Commission services.

Graph 24 displays two measures of inflation dispersion across the euro-area Member States, the unweighted standard deviation and the range.[7] Both measures indicate that the inflation dispersion reached a bottom at the end of 1999 and another in the turn of 2003-04. For instance, the average range was just above 2 pp during each of the two periods. In 2004, the inflation dispersion increased again. This had to some extent to do with changes in indirect taxation and administered prices. For instance, cuts in alcohol taxes in Finland entailed a substantial deceleration of inflation there. From March to May this year, however, inflation dispersion within the euro area narrowed somewhat. The average range in this period was 2.6 pp compared to 3.1 pp in 2004.

Graph 24: **HICP inflation dispersion across euro-area Member States** (in % and pp – Jan 1996 to May 2005)



Source: Commission services.

[7] The range is here defined as the difference (in percentage points) between the maximum and minimum values.

Focus

II. Growth differences in the euro area

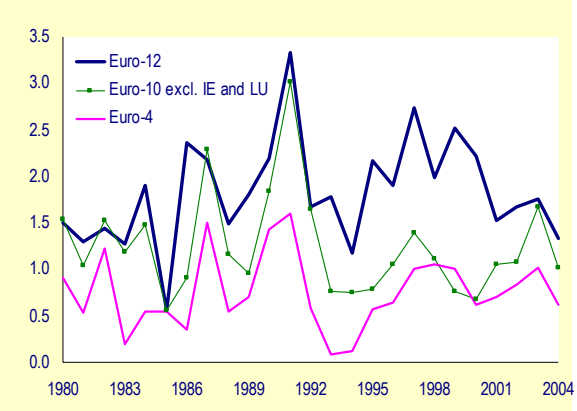
In spite of a recent rise in growth dispersion among Germany, France, Italy and Spain, growth differences in the euro area are not unusually high by historical standards or in comparison with other monetary unions. Growth differences reflect contrasting cyclical and structural developments. Sources of cyclical differences are economic disturbances with temporarily differentiated impacts, such as trade fluctuation and swings in exchange rates, equity and oil price developments. Business cycles in the euro-area Member States are, however, relatively closely aligned, even though important differences in the transmission of monetary and fiscal policy remain. Failure to adjust rapidly to economic shocks could trigger prolonged periods of overheating and overcooling, damaging also potential growth. Disappointingly, the adjustment mechanism works only very slowly. Differences in potential output growth have become entrenched and pose an increasing problem, particularly as growth differences cannot be explained by fast growth in catching-up economies. The most important determinant of differences in potential growth is the labour contribution, followed by differences in TFP growth.

Six years after the introduction of the euro, the dispersion in growth rates of Member States has prompted a broad debate about growth differences in the euro area. At the same time, the euro area has gone through a comparatively weak spell of growth. Some Member States, such as Germany and Italy, have been acutely affected, while others, like France, Spain and several smaller euro-area countries, have experienced more benign economic conditions. In the light of these developments, this note analyses the nature and extent of growth differences in the euro area. A first section compares the current growth differences in the euro area with historical developments and with regional differences in other currency areas. A second section separates cyclical from structural growth dispersion. It analyses differences in the transmission of common shocks, the functioning of adjustment mechanisms and the structural reasons behind widening long-term growth differences.

1. Growth dispersion in the euro area

Although it has attracted widespread coverage, the current dispersion of growth rates in the euro area is routine and normal. Since the mid-nineties, the average annual growth deviation in the euro area has fallen (Graph 25). This was influenced in particular by a moderation in Ireland's very high growth rate. Dispersion was not constant, however, and increased notably in 1996/97 when a recovery started. This was followed by a period of renewed convergence of growth rates which lasted until 2000. In 2003, dispersion peaked again, as the latest recovery started; growth rates in the various euro-area countries have again become more similar since 2004.

Graph 25: **Dispersion in annual growth in the euro area**(1) (standard deviation in % – 1980 to 2004)

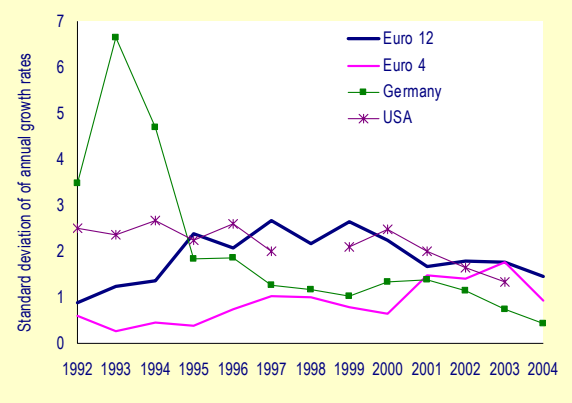


(1) Euro 12: all euro MS; Euro 10: MS excluding IE and LU; Euro 4: DE, FR, IT, ES.
Source:, Commission services.

Compared with other currency areas, euro-area growth dispersion is also not unusually large. Graph 26 shows that growth differences within the United States and Germany have historically been as high as the dispersion across the euro-area Member States. These comparisons should not, however, be over-interpreted: higher factor mobility, financial integration and fiscal transfers make it in principle easier to deal with dispersion within those countries than among euro-area

members.[8] It should also be noted that US states and Bundesländer are on average smaller and more specialised than euro-area Member States.

Graph 26: **Differences in growth dispersion** (1)
(euro area, Germany, USA) (in % – 1992 to 2004)

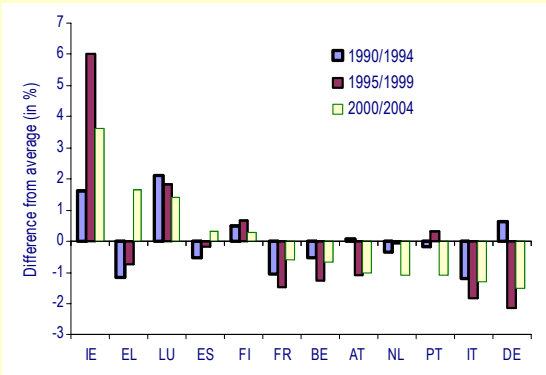


(1) Euro 12: all euro members 4; Euro 4: DE, FR, IT, ES; Germany: 16 Bundesländer, USA: 50 States, no index for 1998 due to break in series.
Source: Commission services.

Variation indices of growth are sensitive to the country groups that are chosen. In the past, substantially divergent behaviour could be observed between different country groupings, in particular between the large Member States and the group including all euro-area countries, but also when outliers (in this case Ireland and Luxembourg) are removed from the analysis (Graph 25). The interpretation of dispersion indices therefore hinges on the relative weight one attaches to economies of different sizes.

However, relatively low recent growth dispersion among the 12 Member States masks a significant and increasing long-term growth divergence. Countries that had above-average growth in the last five years usually had it already in the early or late nineties, pointing to a high importance of structural factors (Graph 27). There are only a few significant changes that affect the relative ranking of countries and, with it, growth dispersion. Notably, Germany's unification-boosted over-performance turned into a decade-long underperformance. By contrast, Greece's below-average growth in the nineties turned into the second-highest growth rate in the last five years. The next section analyses the drivers of short- and long-term growth differences across countries in monetary union.

Graph 27: **Growth in the euro area by country**
(difference from Euro-12, average in % p.a.)



(1) Growth rate of non-weighted average of euro members set to 0.
Source: Commission services.

2. *Determinants of growth dispersion*

Growth dispersion due to differences in the business cycle and long-term trends

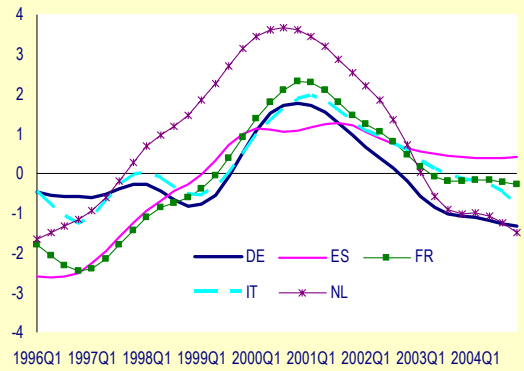
Growth dispersion is not constant; it is influenced by the cyclical position of the euro area and shocks with an asymmetric impact. Clearly, however, cyclical dispersion has become less important since the early nineties. European business cycles have become more synchronised over the last decade.[9] In particular, the business cycles and GDP turning points of the five largest euro-area Member States are very similar to those of the euro area as a whole, supporting the assertion that the economies of the countries concerned are highly interdependent (Graph 28). A fairly high degree of business cycle synchronisation can also be detected for smaller euro-area members (Graph 29). Greece is the exception with an unsynchronised cycle, which can be partly explained by the country's more

[8] On the other hand, institutions within a country might not be flexible enough to allow regions with growth rates that differ substantially from the country average to adjust. This might explain persistent growth differences within countries.

[9] The cyclical component of growth can be calculated with the same econometric techniques used for determining potential output, notably the Hodrick-Prescott (HP) filter.

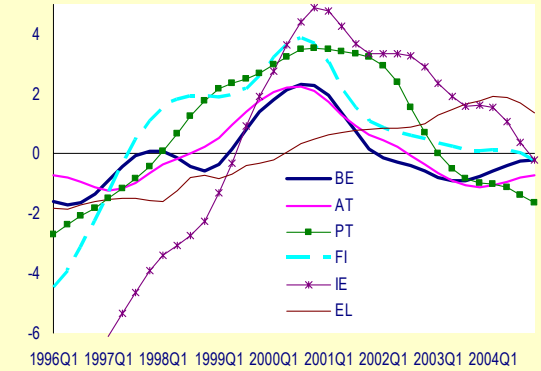
recent convergence and accession to the euro area, as well as the special influence of the Olympic Games on the cycle.[10]

Graph 28: **Output gaps in five largest euro-area countries** (in % of trend GDP – 1996Q1 to 2004Q4)



Source: Commission services.

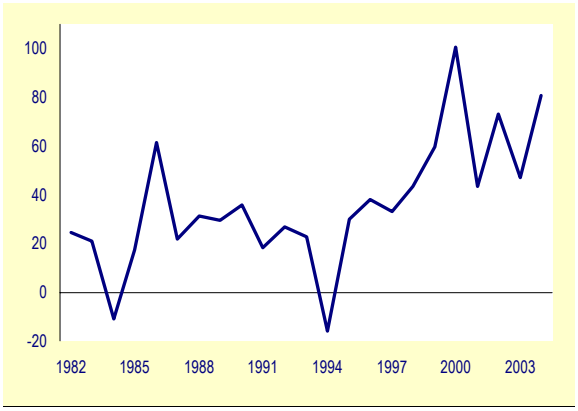
Graph 29: **Output gaps in six small euro-area countries** (in % of trend GDP – 1996Q1 to 2004Q4)



Source: Commission services.

Given the decreasing importance of cyclical factors, trend growth has more recently explained up to 80% of the overall dispersion (see Graph 30).

Graph 30: **Share of trend growth dispersion in total annual euro-area growth dispersion** (1)
(in % – 1982 to 2005)



(1) Excluding Luxembourg and Ireland.
(2) Shares are calculated covariance with total growth differences.
Source: Commission services.

Short-term factors determining cyclical growth dispersion

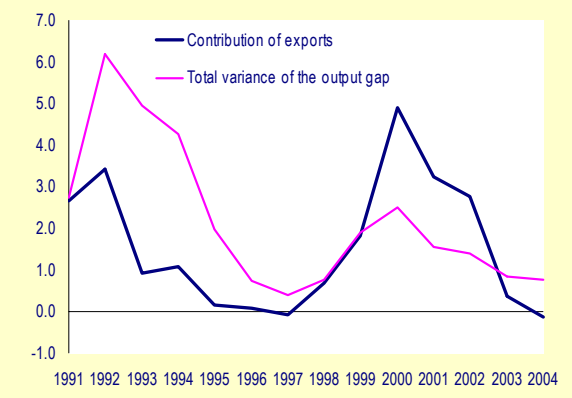
Although economic integration appears to have led to a more synchronised business cycle, a number of short-term factors have impacted on growth dispersion over the last few years. These include common shocks with an asymmetric impact, including most notably large fluctuations in the global economy, the launch of the euro, swings in exchange rates, equity prices and oil prices. It should be noted that, in the presence of such asymmetric shocks and due to structural differences among countries, some degree of cyclical differences is unavoidable in an economic and monetary union. Against this background, the level of output gap dispersion experienced in the past five years appears remarkably low. This is in part attributable to the positive effect of the European integration process on cyclical synchronisation.

The asymmetric transmission of fluctuations in world trade explains a significant part of the cyclical dispersion observed. As shown in Graph 31, the contribution of exports to cyclical dispersion increased markedly in the late nineties and decreased again after 2000.[11]

[10] Different methods, such as the dating of business cycles, also arrive at a close harmonisation of recent cycles.

[11] It is worth stressing that national accounts do not provide a breakdown of exports into an extra- and an intra-euro-

Graph 31: **Contribution of exports** (1) **to the total variance of output gaps in euro-area countries** (2) (in % – 1991 to 2004)



(1) The contribution of the export to the variance of the Member States' output gaps is the covariance across Member States of the cyclical components of exports and the output gaps (HP filter).
(2) Variance around euro-area mean (excluding LU).
Source: Commission services.

The impact of extra-area trade on cyclical dispersion is influenced by significant variations in the openness of Member States to extra-area trade, and hence their exposure to fluctuations in the global economy. The asymmetric effect of trade openness on growth can be reinforced when the exports of euro-area members grow at different rates, e.g. as a result of specialisation or price competitiveness.[12] Since the late nineties, there has been a fairly high degree of dispersion in the export performance of the individual Member States, which can partly be ascribed to price competitiveness developments and such factors as the geographical and sectoral specialisation of Member States' exports.[13]

In contrast to the surge in world trade in the late nineties, the recovery in world trade since mid-2003 has not been a major source of cyclical dispersion within the euro area, since the sectoral and geographical drivers of world trade seem to have been less asymmetric than during the previous phase of rapid world trade growth. In addition, the competitiveness adjustment mechanism has, to some extent, been at play.

There is now broad agreement that the inception of EMU itself has been a temporary cause of asymmetries across Member States. These have been either a consequence of the interest rate convergence process that preceded the launch of the common currency or of exchange rate parities required economic adjustment.[14]

The temporary phase of increased cyclical dispersion in the years around the introduction of the euro was accentuated by important differences in financial conditions. Member States with stronger cyclical growth received a further stimulus to domestic demand from lower real interest rates, because they tended to have higher inflation rates resulting from the strength of the upswing as well as other factors, such as the Balassa-Samuelson effect. However, inflation differences have narrowed in the past two years, leading to a convergence in real interest rates. It is noteworthy that the cross-country correlation between the cyclical strength of domestic demand and the changes in real interest rates has been quite small in recent years, suggesting that differences in real interest rate differentials no longer play a significant role in explaining growth dispersion.[15] Finally, it is worth stressing that asymmetries in demand pressures have probably been reinforced by large differences in trends in housing prices across Member States, which in

area component. Estimates of the contribution of exports to output gap dispersion therefore cover both intra- and extra-area trade, which consequently blurs the analysis.

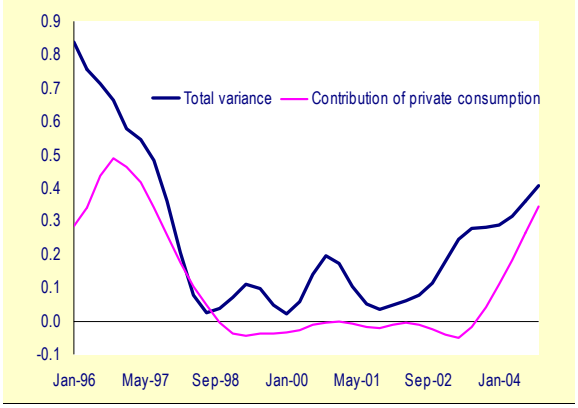
[12] See focus on "The export performance of the euro area" European Commission, Quarterly Report on the Euro Area Volume 4 No. 1 (2005). For an analysis of differences in Member States' technological specialisation and its relation to trade performance, see also European Central Bank (2005) "Competitiveness and the export performance of the euro area", ECB Occasional Paper No. 30.

[13] In the late nineties, Member States which were more open to trade also tended to benefit from faster export growth (e.g. Ireland, Austria and the Netherlands) a trend which strengthened the positive effect of fast growth in world trade on cyclical dispersion. The opposite situation was observed during the downturn in world trade in 2001-02, when a higher openness to trade was generally associated with a weaker export performance, a factor which reinforced the cyclical convergence effect of the trade downturn.

[14] For instance, the overvaluation of the German real effective exchange rate relative to other Member States may have been substantial (Hansen, J. and W. Roeger (2000), "Estimation of real equilibrium exchange rates", DG ECFIN Economic Papers No. 144).

turn were much affected by the strong reductions in nominal interest rates during the run-up to EMU (see focus on housing market). The sensitivity of private consumption to housing wealth varies significantly across Member States.

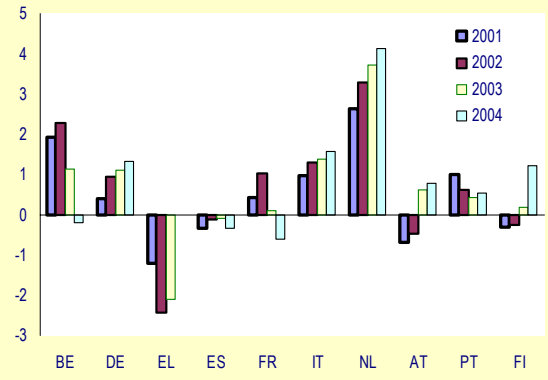
Graph 32: **Contribution pf private consumption to the total variance of the output gaps of Germany, France, Italy and Spain** (in %–1996Q1 to 2004Q4)



Source: Commission services.

The euro area has experienced a number of additional shocks that may have contributed to cyclical dispersion, albeit probably only modestly. In theory, surging oil prices could be a source of growth differences as oil intensities vary significantly across Member States. In practice, the significant differences in the contribution of energy to HICP inflation do not seem to have been a major source of dispersion in national consumption growth.[16] In a similar vein, the appreciation of the euro since 2000 may have been a source of cyclical dispersion as some countries are more exposed to extra-euro area trade than others. However, it is difficult to establish reliable empirical estimates of this effect due to the problem of disentangling the impact of the euro'sppreciation from the concurrent recovery in world trade.

Graph 33: **Household gross savings rate** (2001 to 2004; change in percentage points since 2000)



Source: Commission services.

Particularly in the four biggest euro-area economies, different developments in private consumption growth have been an important source of recent cyclical growth dispersion (Graph 32). These differences in household spending patterns are linked to divergent growth in disposable income amplified by divergent savings behaviour. Graph 33 shows remarkable differences in consumption smoothing reflected in the degree to which savings rates have changed across countries since the end of the ICT bubble in 2000. In case of the Netherlands at one extreme, the saving rate rose by 4 pp until 2004 while at the other extreme in Greece it fell by 2 pp. Rising housing prices may partly explain why savings rates in Spain and France have not risen in the past few years. In other countries, stagnating consumer confidence has led to lacklustre consumption growth during the current recovery. This was, in turn influenced by the prolonged downturn, sluggish developments in the labour market as well as the budgetary situation in some Member States, and the uncertainty associated with reforms affecting permanent income.

[15] Furthermore, it is important to stress that investment and consumption decisions are based on anticipated rather than observed real interest rates. For a discussion of the possible divergence between the two measures and its impact on the competitiveness adjustment channel, see Otmar Issing, "One size fits all! A single monetary policy for the euro area", speech at the International Research Forum, Frankfurt am Main, Germany, 20 May 2005.

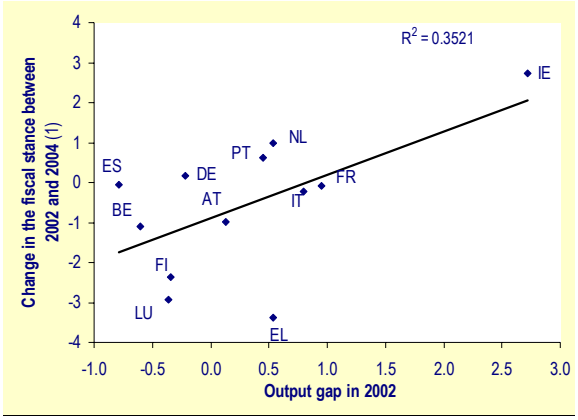
[16] In particular, there was no significant correlation between Member States' consumption growth and losses in household purchasing power attributable to higher oil prices in 2004.

Asymmetric impact of policy impulses

Differences in the transmission of monetary policy remain a possible cause of cyclical asymmetries in the euro area.[17] Changes in short-term interest rates may have a weaker effect on activity in Belgium, Germany, France, the Netherlands, and Finland and may be more potent in Italy, Ireland, Spain, Greece and Austria.[18] Although EMU may have fuelled some convergence, differences remain in the response of short-term bank lending rates to money market rates across countries.[19] Furthermore, monetary transmission through a "housing" channel may have increased in the current cycle. In particular, a study by the OECD concludes that monetary transmission may be stronger in euro countries with flexible mortgage markets than in economies where such financial products are less developed.[20]

There are few signs that discretionary budgetary policies have been an important source of cyclical disparities since the launch of EMU (Graph 34) though before they tended to be pro- rather than counter-cyclical, thereby exacerbating cyclical differences rather than reducing them. Automatic stabilisers work in the opposite direction and reduce the cyclical divergence in the euro area. The size of this dampening effect is relatively large in the euro area but can vary considerably across Member States. It depends on both the size of the government sector and the nature of the tax-benefit systems on the one hand, and the nature of the economic disturbance on the other.

Graph 34: **Differences in the output gap and the fiscal stance** (in %)



(1) Change in the cyclically adjusted primary balance as a share of GDP – a positive signs indicates a fiscal tightening.
Source: Commission services.

Structural factors determining growth dispersion

The dispersion in potential output growth among euro-area members is presently larger than any observed in the last two decades. There is also an increasing cross-country heterogeneity in the sources of GDP growth. The heterogeneity of the sources of demand in the euro-area economy that was already noted at the cyclical level has therefore become increasingly entrenched.[21]

The contribution of exports to the dispersion of trend growth has decreased steadily over the past few years (Graph 35). Since the late nineties, changes in external competitiveness have contributed to reducing growth disparities within the euro area, although this effect has been slow and is therefore captured in trend measures as much as in cyclical measures. In contrast to exports, trend developments in domestic demand

[17] Extensive research on this topic was undertaken by the Monetary Transmission Network, which was created in 1999 to study the transmission of monetary policy in the newly formed euro area. The output of the MTN consists of contributions by economists from the ECB and all national central banks of the Eurosystem.

[18] Van Els, P., A. Locarno, J. Morgan and J.-P. Villetelle (2001), "Monetary policy transmission in the euro area: what do aggregate and national structural models tell us?", ECB Working Paper No. 94, 2001.

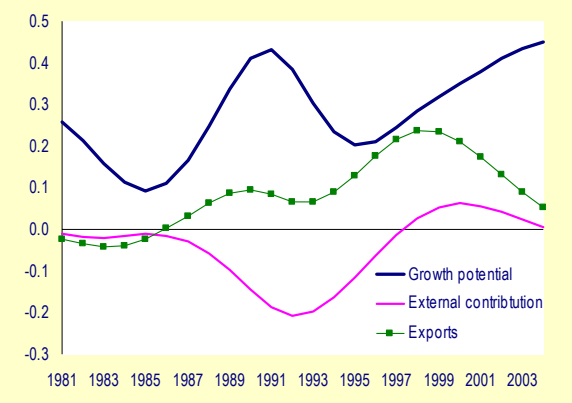
[19] See Kleimeier, S. and H. Sander (2002), "European financial market integration: evidence on the emergence of a single eurozone retail banking market", paper presented at the 29th Annual Meeting of the European Finance Association, Berlin, August 2002 and Angeloni, I. and M. Ehrmann (2003),"Monetary policy transmission in the euro area: any change after EMU?", ECB Working Paper No. 240.

[20] Hoeller, P., C. Giorno and C. de la Maisonneuve (2004), "One money, one cycle? Making monetary union a smoother ride", OECD Economics Department Working Paper No. 401, 2004.

[21] A similar conclusion was reached in a note by Espinoza, A. and J.M. Fournier (2005) ("Les particularités de la reprise de 2003 en zone euro", Diagnostics Prévisions et Analyses Economiques, Ministère de l'Economie des Finances et de l'Industrie).

were a source of increasing divergence, notably due to private consumption.

Graph 35: **Dispersion in growth potential** (1) **and share of external contribution** (2)(3)
(in % – 1981 to 2004)



(1) Variance around mean.
(2) Covariance between growth potential and trend growth of exports and external contribution.
(3) Euro area excluding IE and LU.
Source: Commission services.

Differences in potential growth rates may be associated with a welcome increase in the per capita income levels of catching-up countries. This, however, has not the case since the start of EMU. Neither potential growth nor even total factor productivity growth show any long-term correlation with relative income levels.

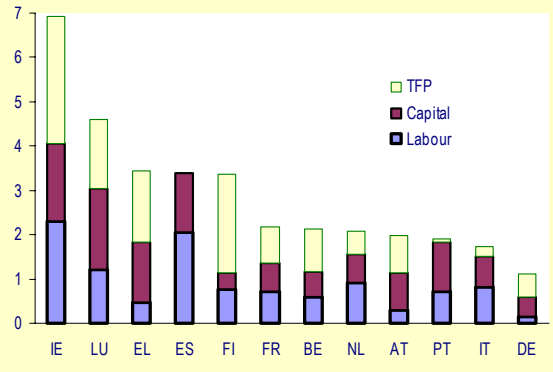
Table 3: **Factor contributions to potential output growth and variance** (in %)

	Potential output (1)				Variance of potential output			
	Labour	Capital	TFP	Total	Labour	Capital	TFP	Total
1990-94	0.4	0.9	1.1	2.4	0.4	0.1	-0.11	0.5
1994-99	0.6	0.8	0.9	2.3	0.1	0.0	0.05	0.2
2000-04	0.8	0.8	0.7	2.2	0.2	0.0	0.19	0.5

(1) Unweighted average of 12 euro-area members.
Source: Commission services.

A production function approach shows that the capital inputs, labour inputs and total factor productivity (TFP) contributed approximately equal shares to euro-area growth in the last five years.[22] There are, however, significant differences across countries both in terms of potential growth and in the relative importance of the various input factors (Graph 36).

Graph 36: **Growth contributions by input factor**
(average 2000-2004 – in %)



Source: Commission services.

Variations in labour inputs are the most important factor explaining differences in potential output (Table 3). In the last five years employment explained more than half of the total variance in potential output. In the early nineties this was as much four fifths, even though the contribution of labour to average growth at the time was substantially less. The long-term ability to increase labour's contribution to growth depends on demographic developments on the one hand and the regulatory environment on the other. Already now, the influence of demographic developments (including immigration) on growth is clearly visible. It is no coincidence that the fastest-growing economy (Ireland) registered a significant population increase, while Germany and Italy show little dynamics in their population growth.[23] Important regulatory factors determining employment growth are the

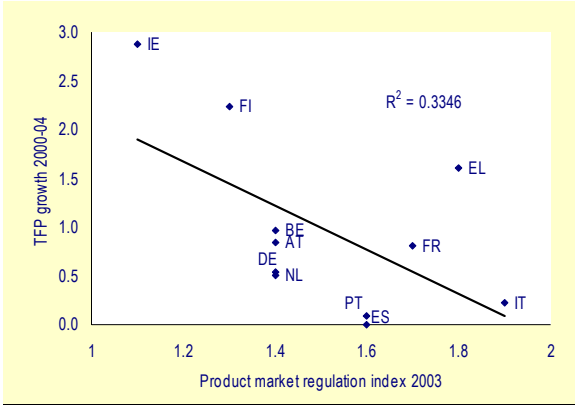
[22] However, caution should be exercised in interpreting the quantitative results of potential growth calculations. First, interdependencies among production inputs work in all directions. For instance, the functioning of the labour market influences the attractiveness of a country for investment, while the level of investment affects the demand for labour. Similarly, the skill level of workers impacts on TFP growth. Second, standard filtering and production function approaches cannot distinguish slow adjustment processes from lasting structural factors.

[23] Effects of ageing go beyond their simple contribution to the labour force. Those countries with an unfavourable demographic structure might therefore be stuck not just with lower absolute growth but also lower per-capita growth compared with countries with a younger population.

structure of the tax-benefit system, wage setting, working time flexibility, employment protection legislation, active labour market policies, early retirement and disability schemes, etc.

Total factor productivity has developed into the second important factor to explain dispersion in potential output. TFP trends are the mirror image of the trends for labour inputs. The contribution of TFP to average growth was higher in the early nineties, but was negatively associated with the dispersion of growth between Member States (Table 3). Productivity shocks have since then become positively correlated with the dispersion of potential output growth. The ICT sector is likely to have played a major role in this development.

Graph 37: **Product market regulation** (1) **and TFP growth** (2000-2004)



(1) Index calculated by OECD.
Source: Commission services.

Structural and regulatory differences contribute substantially to long-run growth differences. Countries with a lower degree of product market regulation generally registered a higher TFP growth than more regulated countries (Graph 37). TFP is also influenced by a number of other factors such as the educational system, foreign direct investments, and demographics, geography, or specialisation.

Differences in the growth of capital stock also increase the dispersion in potential output, albeit by a significantly lesser degree than labour inputs, or, recently TFP. In contrast to the important cyclical role of investment, the capital stock cannot be identified as a major factor for determining structural growth. This is probably related to difficulties in properly measuring the value of capital stock. First, it mixes different types of capital with different productive potential. Second, important investments such as education and research are not captured at all.

The competitiveness adjustment mechanism

In the absence of national monetary policy and changes in nominal exchange rates, a large part of the adjustment burden to growth imbalances falls on price and competitiveness developments: a Member State experiencing a stronger upswing than the rest of the euro area is likely to face comparatively faster inflation and a progressive appreciation of its real exchange rate, which should rebalance demand.

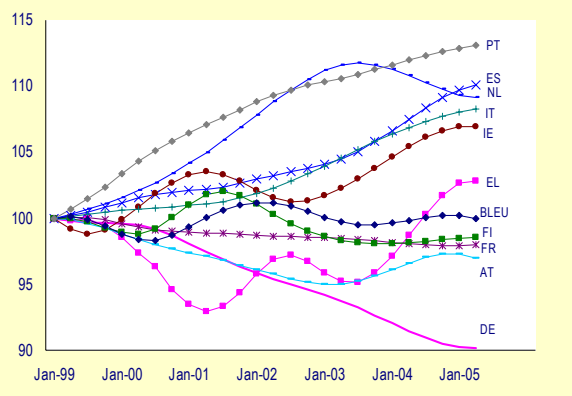
The competitiveness adjustment mechanism has clearly been at play in the euro area in the past few years. Among the five countries which posted large positive output gaps in 2000, four experienced a sharper slowdown in export growth than the euro-area average in the early 2000s (Ireland, Luxembourg, the Netherlands and Finland) with only Portugal performing better than the average. Conversely, Germany, which was in a weaker cyclical position in 2000, has enjoyed a comparatively stronger export performance in the past few years. These developments can be related to changes in the real effective exchange rate in all countries except Ireland and Finland.[24]

However, the competitiveness adjustment mechanism is working only very slowly. A striking feature of real exchange rate developments since the beginning of Stage 3 of EMU is the existence of large and persistent cross-country differences in underlying competitiveness trends. This is the case even for

[24] Ireland has faced a significant appreciation of the REER based on unit labour costs but not of the one based on export prices. Finland has experienced no appreciation in the former and a marked depreciation in the latter. However, there is some evidence that for Ireland the REER based on unit labour costs may underestimate the extent of the losses in competitiveness incurred in the past few years (Quarterly Report on the Euro Area Vol. 4 No.1 2005).

intra-area developments, which abstract from different exposure to external shocks (Graph 38).[25]

Graph 38: **Developments in intra-area competitiveness**
(REER based on unit labour costs (1) – index 1999=100)
(Jan-1999 to April 2005)

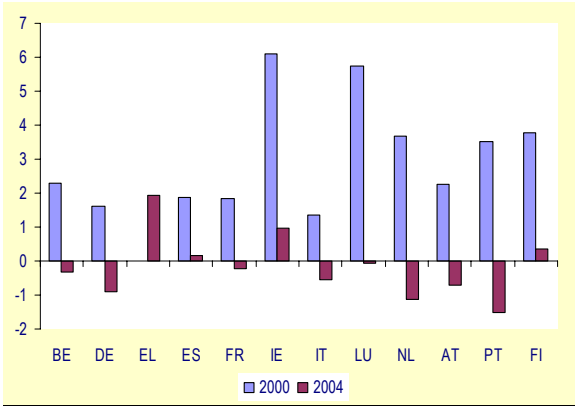


(1) REER against 11 other Member States.
Source: Commission services.

There is some evidence that the euro area is still paying the price for two sets of shocks incurred in the run-up to EMU (i.e. an inappropriate level of some of the locked-in exchange rate parities and demand shocks linked to interest rate convergence) and that the adjustment to these two shocks has been slow. The clearest case for this is that of Germany, which has been going through a competitiveness-improving process that does not seem to be over yet and still needs to spark a revival in domestic demand.

Inappropriate wage dynamics in some Member States are the most important reason for the lack of effectiveness of the competitiveness channel as a correction mechanism to cyclical imbalances. For instance, Italy has experienced a marked appreciation of its real exchange rate over the past few years, because unit labour costs have surged on the back of a substantial slowdown in productivity. In a similar vein, the significant deterioration of competitiveness registered in Spain since the launch of EMU cannot be fully ascribed to cyclical developments but also seems to be partly explained by a lack of competition in some sectors and the effect of wage indexation schemes. In this respect, it is worth noting that the correlation between the output gap and competitiveness developments was rather weak in 2004.

Graph 39: **Output gaps (1), euro area**
(in % of trend GDP– 2000 and 2004)



(1) HP filter.
Source: Commission services.

The cost of such rigidities can be high. Notably, rigid prices and wages may cause the competitiveness adjustment mechanism to temporarily amplify cyclical disparities. As nominal interest rates are determined at the euro-area level, higher inflation will entail lower real interest rates in the faster-growing country. If economic agents respond to lower real interest rates by investing and consuming more, the economy will initially face further demand and cyclical pressures. Only when the competitiveness mechanism gains traction will the cyclical asymmetry be progressively eroded. However, persistence in inflation differences due to price inertia may in turn lead to excessive losses in competitiveness and a period of overshooting in the real exchange rate. Overall, the competitiveness adjustment mechanism is likely to give rise to adjustment cycles.[26]

[25] It is nevertheless worth bearing in mind that differences in competitiveness performance are sometimes difficult to interpret due to the fact that different real exchange rate measures may paint quite different pictures. Such differences may be the consequence of exporters' margin behaviours or may signal important differences in the sectoral composition of the tradable and non-tradable sectors.

[26] For a detailed analysis of the interplay between real interest rates and real exchange rates and the dynamics of overheating and overcooling see Deroose, S., Langedijk, S. and W. Roeger (2004), "Reviewing adjustment

Adjustment to past overheating has led to overcooling in some Member States. Two of the Member States which experienced large positive output gaps in the late nineties (Portugal and the Netherlands) now post the largest negative output gaps in the euro area (Graph 39). In addition to the competitiveness channel, however, there are other factors at work such as the correction of domestic financial and fiscal imbalances in Portugal[27] and negative housing wealth effects in the Netherlands.[28]

An excessively slow competitiveness adjustment also carries the risk of negative spillovers on potential growth, when a cyclical weakness persists over too long a period. First, persistently high real interest rates could weigh on investment and the capital stock. Second, a further deterioration of cyclical conditions could weigh on labour demand and entail an increase in structural unemployment due to hysteresis effects.

The functioning of the competitiveness adjustment mechanism within EMU is subject to a number of asymmetries. First, the adjustment mechanism works more rapidly in countries which are more open to trade. For the euro area, this basically means that it is likely to be more effective in smaller Member States than in larger ones.[29] Second, as already noted, housing wealth effects may differ significantly between Member States, paving the way for possibly large differences in the risk of over-adjustment. Third, the functioning of the labour market and the degree of competition in the product market determine how fast deviations in output gaps affect prices. Finally, the link between changes in price competitiveness and export growth depends on the sensitivity of world demand to the prices of domestic products.

The working of the competitiveness adjustment mechanism may also be complicated by the existence of strong sectoral and geographical specialisation effects. Specialisation effects may have a significant impact on export growth which can either reinforce or counteract price competitiveness effects. For instance, Ireland and Finland have seen their specialisation becoming less growth-supportive in the early part of this decade, a factor which has helped the progressive cooling-off of their economies. Unfavourable specialisation effects have contributed to the overcooling of the Dutch economy in the past few years and have also aggravated Italy's competitiveness problems.

3. Policy implications

Getting to grips with growth differences in the euro area is a matter of priority for economic policies. If an individual Member State fails to absorb a shock rapidly, this may result in a protracted period of low growth, which could trigger a damaging spiral of falling potential growth due to weak investment, eroding skills and rising levels of economic inactivity amongst the working age population. An extended period of below potential growth will also weigh heavily on consumer and investor expectations and may in addition create severe budgetary difficulties.

On the macroeconomic side, fiscal policy has assumed a more important role under EMU given the absence of national monetary policy and exchange rates in the face of disturbances with differentiated impacts. Automatic budgetary stabilisers can play a central part in cushioning the initial impact of such disturbances, although their effectiveness will depend on the type of shock in question. Ensuring the implementing of the Stability and Growth Pact will better allow the full functioning of the automatic budgetary stabilisers. An issue for further discussion concerns whether, and under which circumstances, additional budgetary adjustment may be required under EMU, particularly in the context of overheating.

dynamics in EMU: from overheating to overcooling", Economic Papers No. 198. European Commission.

[27] See European Commission (2004), "The Portuguese economy after the boom", Directorate General for Economic and Financial Affairs, Occasional Papers No. 8.

[28] See Albers, R. and S. Langedijk (2004), "The Netherlands: from riches to rags", ECFIN Country Focus, Vol. 1 Issue 13.

[29] See Hoeller, P., Giorno, C., and C. de la Maisonneuve (2002), "Overheating in euro area economies: should fiscal policy react?", Economic Department Working Paper No. 323, OECD.

Ensuring a more even transmission of monetary policy could help to reduce an important source of growth differences in the euro area. Research suggests that an opening up of financial markets, for example in the retail banking sector, would increase the effectiveness of monetary policy by ensuring a more symmetric transmission of interest rate changes in the Member States. An issue for further research concerns the link between liberalisation in euro-area housing markets and the potential for asset price swings and increased volatility in household wealth. Further consideration could also be given to the challenge of ensuring the downward adjustment of prices in a low inflationary environment. In such circumstances, the adjustment may need to take longer in order to achieve the required magnitude.

On the microeconomic side, further economic integration should help to reduce growth differences. As the elimination of national exchange rates encourages closer trade ties within the euro area and the degree of economic openness becomes more similar amongst Member States, national business cycles are expected to become more closely aligned. A further effective integration of financial markets, for example, could help to reduce the volatility of consumption within the euro area by increasing opportunities for risk sharing and consumption smoothing in the face of changing economic conditions.

Structural reforms are also necessary to strengthen the operation of the competitiveness adjustment channel. The latter holds the key to adjusting to economic disturbances, to tackling persistent growth differences, and therewith to the smooth functioning of EMU. In this context, particular attention has to be paid to reforms that enhance the responsiveness of real wages to economic developments and foster a sufficient degree of competition in product markets.

In conclusion, EMU entails a fundamental shift in the economic policy framework, with the burden of adjustment to disturbances with differentiated impacts being clearly located at the national level. The persistence of growth differences in the euro area suggests that adjustment mechanisms are not responding to such disturbances in a timely manner and that some Member States are paying a high self-imposed price in terms of protracted periods of overheating and overcooling. To rectify this situation, it is critical that Member States move forward through an appropriate combination of macroeconomic policies, increased economic integration and structural reforms in labour, product and capital markets.

Focus

III. Housing markets and the business cycle in the euro area

Real house prices in the euro area have experienced a remarkable phase of growth since the late 1990s. However, unlike in the USA or the UK, there is little empirical evidence that house prices have been a major source of economic resilience in the latest downturn in the euro area as a whole. Developments in housing markets can affect the business cycle via several channels, including the transmission of monetary policy, wealth effects and the role of house prices as collateral for bank lending. Available empirical evidence suggests that these channels are weak in the euro area as a whole and in some of its largest Member States while being more potent in a number of smaller Member States. These asymmetries reflect structural differences in housing and mortgage markets that would warrant further research. Further integration and liberalisation of mortgage and housing markets within the euro area would increase the efficiency of these markets and help reduce asymmetries between Member States in the transmission of shocks, including monetary policy shocks. However, the role of housing markets as a source of resilience during cyclical downturns should be considered with caution. Although house prices have increased in the latest downturn, they have generally tended to move in tandem with the business cycle over the past three decades, thus possibly contributing to boom-bust cycles.

The link between housing and mortgage markets on the one hand, and economic growth on the other, has recently attracted much attention from researchers and policy makers. There are two major reasons for this interest. First, EMU has stimulated the analysis of potential asymmetries in the transmission of the single monetary policy between euro-area countries. This literature has identified housing and mortgage markets as a potential cause of differences in monetary transmission. Second, since the late 1990s there has been a concomitant sharp rise in real house prices and mortgage debt in a number of industrialised countries. In a subset of these countries, consumption appears to have been more resilient in the latest downturn (e.g. the USA and the UK), a fact that has been related by some to a stronger housing wealth effect on consumption. Against this background, this Focus section reviews the theoretical interrelations between housing and mortgage markets and the wider economy, the main stylised facts on the housing market and business cycles and the main results of the empirical literature. It then draws some policy implications and concludes.

1. Housing markets and domestic demand: the channels of transmission

A key part of the interconnection between housing markets and the business cycle relates to the housing transmission channel of monetary policy. It is important to stress, however, that the links between housing markets and the business cycle go beyond the transmission of monetary policy as house prices do not only respond to change in monetary policy but are also affected by other factors.

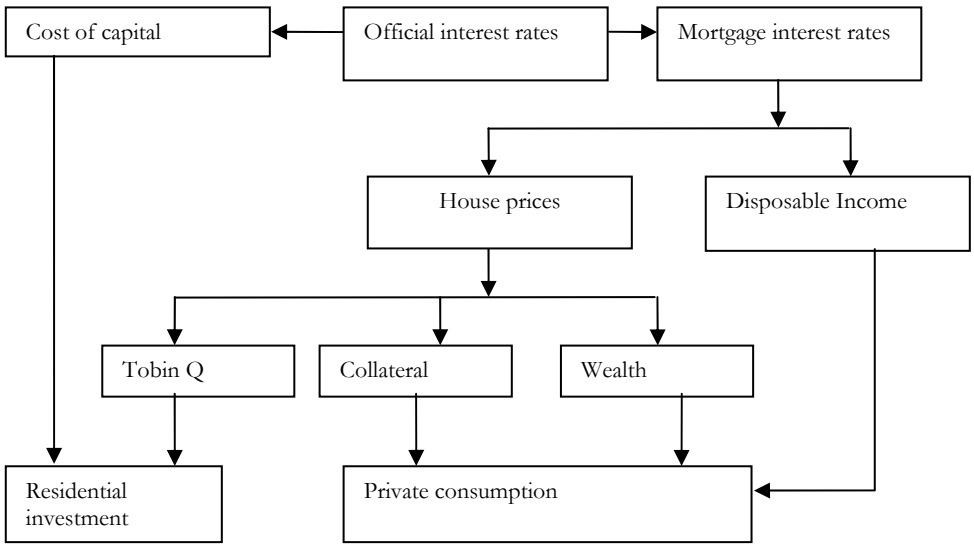
Monetary policy channel

Graph 40 summarises the main channels of transmission of monetary policy through the housing and mortgage markets.[30] Changes in interest rates affect domestic demand via three main private consumption channels (income, wealth and collateral effects), and via two residential construction channels (cost of capital and Tobin Q).

Income effects. Household consumption can increase as a result of the direct income effect of lower interest payments on household debt (of which the largest share is typically related to housing purchase). The income effect will be stronger when household debt is large relative to disposable income, when variable and adjustable interest rate contracts are prevalent (including the possibility of restructuring the debt) and when the pass-through from base interest rates to retail mortgage rates is quicker and fuller. However, in most countries (especially in the euro area) the household sector as a whole has positive net holdings of interest-bearing assets. Therefore, the

[30] Adapted from Giulodori, M. (2004), "Monetary policy shocks and the role of house prices across European countries", DNB Working Paper No. 15, De Nederlandsche Bank.

Graph 40: **The housing channel of monetary policy transmission**



income effect of a reduction in interest rates could even dampen private consumption.[31]

Wealth effects. Households may increase their level of consumption in response to an increase in their housing wealth. The housing wealth effect will essentially depend on house price sensitivity to interest rates and on households' propensity to consume out of housing wealth. House price volatility is generally higher in countries with a short average duration of mortgage debt and with lower transaction costs.

An increase in housing wealth is different from an increase in financial wealth in two important respects. First, due to the dual role of housing as both a real asset and a commodity yielding service, an increase in the value of housing assets causes a redistribution of wealth within the household sector (see Box 1). Secondly, an increase in housing wealth has mostly short-term effects on non-housing consumption. In the long run, there should be only limited impact on non-housing household expenditure from wealth effects, as a rise in real estate values cannot be related to a future increase in productive capacity (as, for instance, in the case of equities).

Property as collateral. Higher house prices raise the value of the collateral available to households. With financial market imperfections, the extra collateral loosens credit constraints on households and supports the expansion of debt-financed expenditures.

Residential construction. Residential construction will be stimulated directly by the fall in the cost of capital. To the extent that monetary policy affects house prices, it will also have an impact on construction via the Tobin-Q effect.[32]

Other possible channels

House prices are determined by a host of factors, including demographic developments, income, interest rates, level of financial development, government housing policies, etc. It is therefore clear that, independently of any monetary policy action, both cyclical developments (e.g. changes in market interest rates or household income) and structural changes (e.g. financial market liberalisation and innovation, public subsidies to house purchase) could give rise to a credit and housing price cycle. Expected returns on alternative assets also influence the demand for houses.[33]

The characteristics and structure of mortgage markets play an important role in shaping the link between housing markets and growth, and in particular the wealth effect. First, easy access to

[31] Such a negative effect has, for instance, already been registered in Italy.

[32] When the ratio of house prices to construction costs increases, it becomes more profitable to build new houses.

[33] For instance the fall in stock prices in 2000-2003 is thought to have increased the attractiveness of housing assets.

Box 1: **Distributional impact of changes in house prices**

Like other assets, house prices can be thought of as being the discounted value of the future benefits of home ownership. As a first approximation, the discounted value is equivalent to the expected rental value (the imputed rent for owner-occupiers) over the expected life of the house. In contrast to other assets, however, houses also provide services to households. In consequence, a rise in real house prices not only impacts on the wealth of the owners but also has potentially important distributional effects within an economy. These effects are partly determined by the source of the rise in prices (e.g. whether it is caused by lower interest rates or higher expected rents).

Schematically, the first-round impact of higher house prices on the three main categories of households (owner-occupiers, tenants and landlords) would be as follows:

- If higher house prices are caused by higher expected rents, owner-occupiers experience a positive wealth effect but also an increase in the current and future price of housing services (a negative income effect). Generally, the former is assumed to dominate. If house prices rise in response to a fall in interest rates (and hence in the discount factor), there will be a wealth gain for owner-occupiers but no negative income effect.
- Tenants experience a welfare loss when higher house prices are caused by higher current and/or expected rents. In the same vein, prospective would-be buyers will need to save more to be able to buy a house. When house prices respond to lower interest rates there should be no impact on the welfare of tenants. For prospective new buyers the higher purchase cost will be partly offset by the lower costs of servicing the debt (and they will have to provide a higher initial down-payment if mortgage loans are limited to below 100% of the purchase value).
- Whatever the cause of higher house prices, landlords (and other type of investors owning rented houses) experience a wealth gain.

Therefore, a rise in house prices causes a transfer of wealth from current tenants and future home owners to existing home owners. For a 'pure' wealth effect to appear, the propensity to consume of home owners must exceed that of other household groups. These distributional aspects suggest a stronger impact of house price changes on aggregate consumption when home ownership is higher and when the changes in house prices are caused by interest rate movements rather than by a change in expected rents.

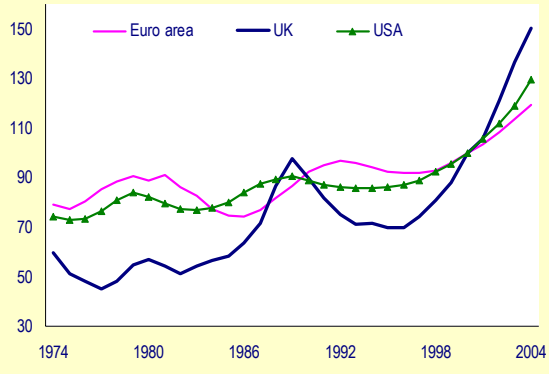
mortgage financing strengthens the sensitivity of house prices to changes in the underlying fundamentals. Second, housing wealth is more "liquid" when mortgage markets are more complete (i.e. when they offer a wider range of contracts and, in particular, the possibility of withdrawing housing equity) and transaction costs (including taxes) are lower. This greater liquidity would normally result in a higher marginal propensity to consume out of housing wealth. Third, the option of refinancing mortgages when interest rates fall may support disposable income in downturns (refinancing is most common in the USA).

2. Some stylised fact of the euro-area housing market and business cycles

Some features of the aggregate euro-area housing market cycle

International synchronisation of house prices. As housing assets are tradable mostly on a local basis, local supply and demand conditions play a prominent role in shaping prices. Notwithstanding this strong geographical segmentation, house price cycles have shown some international synchronisation over the past three decades (Graph 41). For instance, the correlation of de-trended house prices between the euro area and the USA has exceeded 50% for the past 30 years. However, the degree of international synchronisation tends to vary over time. The euro-area cycle lagged its US or UK counterparts in the late 1980s and early 1990s but prices have moved in tandem in the three countries/regions since the mid-1990s.

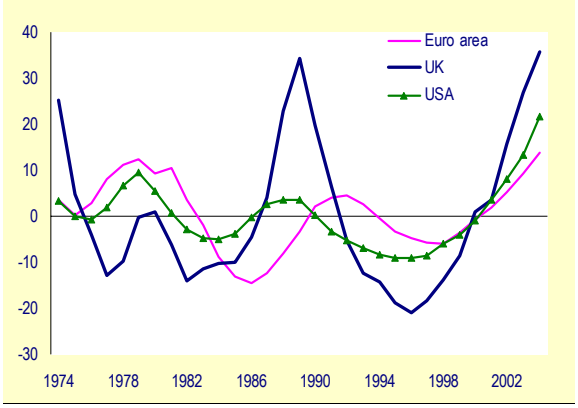
Graph 41: **Real house price indices**
(base 2000= 100 – 1974 to 2004)



Source: European Commission calculations based on data from the ECB, the OECD and national sources.

The partial (and unstable) international synchronisation of house price cycles may be explained by the fact that house prices are partly driven by macroeconomic variables such as interest rates and disposable income that can move in tandem across countries during some periods (for instance, when countries are subject to common shocks). Nevertheless, national housing markets retain their own individual dynamics. According to some estimates, only two fifths of the fluctuations in house prices can, on average, be accounted for by macroeconomic determinants.[34]

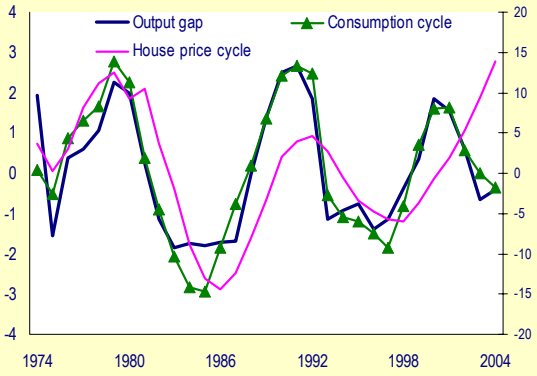
Graph 42: **Real house price cycles**
(deviation from a log-linear trend in % – 1974 to 2004)



Source: European Commission calculations based on data from the ECB, the OECD and national sources.

The euro area, the USA and the UK have all experienced a rapid increase in real house prices since the late 1990s. The rise in prices started somewhat earlier in the USA and the UK (in 1997) than in the euro area (in 1999), where it has also been less sharp. Since 1996, real residential prices have increased by 30% in the euro area, 50% in the USA and 115% in the UK. De-trended house prices have now reached historical highs in the 3 countries/regions (Graph 42). The common surge in residential prices can be ascribed to several factors, including low inflation and interest rates. However, it cannot be excluded that housing markets have recently displayed some bubble-like features in several advanced economies with a rising share of buyers basing their investment decisions on the expectation of rapid capital gains.[35]

Graph 43: **Real house prices and the business cycle, euro area** (1) (deviations from trend in % – 1974 to 2004)



(1) Log-linear trend for house prices and HP filter trend for consumption and the output gap.
Source: European Commission calculations based on data from Eurostat, the ECB, the OECD and national sources.

House prices and the business cycle. There is a clear link between house prices and the business cycle. The correlation between the house price cycle and the output gap has exceeded 50% over the past three decades in the euro area (Graph 43). It is even higher (above 60%) if the deviation of private consumption relative to its trend is used instead of the output gap. The link between house prices and the business cycle appears, however, to be unstable. The correlation was very strong from the 1970s to the 1990s but a clear decoupling has been observed since 2000 when house prices continued to surge while activity and consumption entered a phase of cyclical weakness.

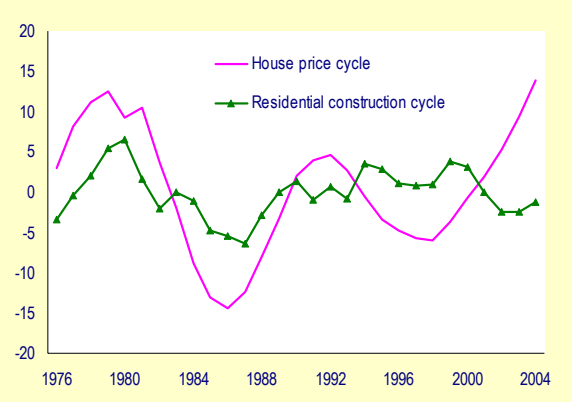
House prices and residential construction. There is also a link between house prices and the residential construction cycle (Graph 44). The correlation is broadly similar to that observed for the output gap for the 1970s and 1980s although there is no noticeable lag between the two cycles. Since the 1990s, however, construction supply has responded in a much more muted way and with significant lags to changes in house prices. In the

[34] Based on VAR models for 18 advanced economies. See Zhu, H. (2005), "The importance of property markets for monetary policy and financial stability", in BIS Papers No. 21, 'Real estate indicators and financial stability'.

[35] According to IMF estimations, determinants of house prices cannot explain fully the rise in house prices observed in some countries in recent years. See IMF "World Economic Outlook" September 2004.

early 1990s the change in behaviour may have been explained, at least partly, by German unification but it is worth noting that it has persisted through the latest run-up in prices.

Graph 44: **Real house prices and the residential construction cycle** (1)
(deviations from trend in % – 1976 to 2004)



(1) Log-linear trend for house prices and HP filter trend for residential construction.
Source: European Commission calculations based on data from Eurostat, the ECB, the OECD and national sources.

Overall, the ongoing expansion phase of the house price cycle appears remarkable on several counts in the euro area as well as in the USA and the UK. It is longer and stronger than its predecessors of the 1970s and the 1980s. It has shown some counter-cyclical features rather than the usual pro-cyclical pattern observed in the past. Finally, it is worth noting that, in the euro area, the rise in house prices seems to have had a more limited impact on construction activity than in the past.

The picture within the euro area

The average euro-area picture conceals large differences at Member State level. Given the existence of large structural differences in housing and mortgage markets (see Box 2), these differences are not very surprising.

Synchronisation across Member States. The synchronisation of house prices across Member States remains generally relatively limited. French and, to a lesser extent, Italian and Spanish housing prices show strong co-movements with the euro-area aggregate but synchronisation is much lower in the case of countries such as Germany, Austria, Belgium, Finland and Ireland (Table 4). Furthermore, synchronisation with the euro-area average tends to be unstable and decreased in the 1990s in nearly all Member States except France and Spain. The volatility of the house price cycles also tends to vary substantially depending on the countries considered. Overall, these results indicate that national markets remain fairly segmented within the euro area.[36] It is therefore difficult to talk about a specific euro-area housing market.

Table 4: **Member States' house price cycles**
(in %)

	Correlation with the euro-area house price cycle		**Volatility** (1)
	1976-03	1991-03	1976-03
BE	82	19	16
DE	40	-31	5
ES	58	92	18
FR	90	99	9
IE	54	32	24
IT	69	63	14
NL	65	25	27
AT	n.a.	9	n.a.
PT	n.a.	59	n.a.
FI	-29	42	19
Euro area	100	100	7

(1) As measured by the standard deviation of real house prices.
Source: Commission services.

Graph 45: **Real house prices** (1)
(annual average changes in % – 1999 to 2004)

(1) 1999-2003.
(2) 1999-2002.
Source: ECB, OECD and national sources.

[36] However, geographical proximity may play a role in explaining price synchronisation between Member States as price correlation is high for some countries sharing a common border (e.g. Germany and Austria, Belgium and the Netherlands, Spain and France). Cross-country contagion effects can therefore not be totally ruled out.

Box 2: **Main characteristics of euro-area mortgage markets**

Most euro-area mortgage markets have been expanding rapidly in recent years (see table below) and in many Member States outstanding mortgage debt is currently at historically high levels (relative to GDP or household disposable income). The growth of mortgage lending has been fostered by both macroeconomic factors (such as the fall in interest rates and the strong growth of house prices in some countries) and structural developments (such as the increasing liberalisation and integration of financial markets). In spite of sharing some common trends, however, EU mortgage markets remain very diverse:

- The size of the household sector's residential mortgage debt varies considerably across countries, with ratios of mortgage debt to GDP above 60 per cent in Denmark, the Netherlands and the United Kingdom and below 25 per cent in France, Italy and Greece.

Key features of EU mortgage markets

	Outstanding mortgage debt (% of GDP)		Fixed or variable interest rate	Loan term (years)	Loan to value (%)	Home ownership (%)	
	1995	2003				1990	2002
BE	21	28	F	20	83	67	71
DE	45	54	F	25-30	67	39	42
EL	4	14	V	15	75	76	83
ES	17	32	V	15	70	78	85
FR	20	23	F	15	67	54	55
IE	24	37	V	20	66	79	77
IT	8	11	Mixed	15	55	68	80
LU	25	18	n/a	20-25	n/a	n/a	n/a
NL	48	79	F	30	90	45	53
AT	5	4	F	20-30	60	55	56
PT	18	49	V	15	83	67	64
FI	32	32	V	15-18	75	67	58

Source: European mortgage federation, ECB (2003), Debelle (2004).

- Owner-occupancy rates are around or above 80 per cent in Ireland, Spain, Greece and Italy and around 50 per cent or lower in Germany, Denmark and the Netherlands. Somewhat surprisingly, home-ownership levels appear to be *negatively* correlated with levels of household mortgage debt. This suggests that mechanisms other than borrowing – such as inter-generational transfers - provide access to home-ownership in low-debt countries.
- The average typical loan-to-value (LTV) ratio (i.e. the typical amount of the mortgage loan relative to the value of the house) in the EU is around 70 per cent. LTV ratios are lowest in Austria and Italy (below 60 per cent) and highest in Belgium, Denmark, the Netherlands and Portugal (80 per cent or more).
- Typical loan terms tend to be shorter in Southern Europe. In France, Spain, Greece, Italy and Portugal, the typical loan term is 15 years, whereas a 25-30 year loan term is the norm in Austria, Germany, Denmark, the Netherlands, the United Kingdom and Sweden. Both LTV ratios and mortgage terms are positively correlated with the amount of outstanding mortgage debt.
- The typical duration of mortgage contracts is also different across countries. Detailed data are difficult to come by, but it is possible to roughly split the sample into a group of countries where variable rates are predominant and another where fixed rates are more common. These differences are often related to the prevailing funding sources for lenders (i.e. whether short-term deposits or long-term securities).

These differences reflect Members States' economic history and cultural factors, but also differences in policy approaches with respect to incentives for home-ownership, regulation of rental market, prudential regulation on mortgage credit, legal protection of collateral, etc.

After a period of convergence in the 1990s, house price cycles within the euro area have diverged again since 1997. Differences between Member States' average changes in real house prices have been rather large over the past few years (Graph 45). Whereas prices have surged in countries such as Ireland, Spain and France, they have contracted or remained stable in Austria, Germany and Portugal. Hence developments in house prices have tended to be counter-cyclical only in a subset of countries.

House prices and the business cycle. National differences are also substantial when looking at the link between the house price cycle and the business cycle. The correlation between house prices and the business or consumption cycles has traditionally been much stronger in some countries (e.g. Spain, the Netherlands and Finland) than in others (Belgium, Germany and Italy) (see Table 5). Most Member States have experienced a drop in this correlation since the 1990s although the loosening of the link seems to have been more pronounced in Belgium and Germany. However, the link appears to have strengthened in Ireland and, to a lesser extent, in France.

Table 5: **Correlation between the house price cycle and the business cycle** (1) (in %)

	Corr. with the private consumption cycle		Corr. with the residential construction cycle	
	1976-03	**1991-03**	**1976-03**	**1991-03**
BE	54	-40	60	-54
DE	25	6	66	65
ES	87	74	70	45
FR	67	71	24	-23
IE	66	87	57	67
IT	31	23	62	96
NL	83	76	46	31
AT (2)	n.a.	47	n.a.	19
PT	n.a.	80	n.a.	n.a.
FI	92	88	83	84
Euro-12	69	56	51	-69

(1) Log-linear trend for house prices and HP filter trend for consumption and residential construction.
(2) 1991-02.
Source: Commission services.

House prices and residential construction. National differences also exist in the link between house prices and the residential construction cycle, but these seem to be narrower than for the consumption cycle. There is no apparent relation between the strength of the link between house prices and construction and the strength of the link between house prices and consumption. Some countries post a strong correlation for both consumption and residential construction (e.g. Spain and Finland), others only for one of the two variables (e.g. construction in Germany and Italy). As is the case for the consumption cycle, the link between house prices and residential construction appears to have weakened since the 1990s, although more so in some countries than others.

4. Main findings of the empirical literature

Evidence from the monetary policy transmission literature

Although empirical studies of the monetary transmission usually do not single out a 'housing channel', some indirect evidence can be derived from the estimated impact of monetary policy shocks on demand components and from the examination of specific links in the transmission mechanism.

Table 6: **Response of consumption to a monetary policy shock** (1)

	VAR models			Large-scale structural models		
Year	1	2	3	1	2	3
Euro-12	30	37	42	57	43	34
USA	51	52	55	81	74	66

(1) Share of consumption in the total response of private sector domestic demand to a monetary policy shock (in %).
Source: Angeloni I., Kashyap, A.K., Mojon, B. and D. Terlizzese (2003), The Output Composition Puzzle: A Difference in the Monetary Transmission Mechanism in the Euro Area and the US", ECB Working Paper No. 268.

A stylised fact about the euro area is that the contribution of investment to the overall impact of a monetary policy shock on GDP is large relative to that of consumption, in spite of the much larger share of the latter in total domestic demand. In structural econometric models for the euro area, investment accounts for half to three quarters of the overall response of private sector domestic demand to the monetary policy shock, in spite of investment being only about a fifth of euro-area GDP (Table 6). This is in contrast to evidence for the US, where the consumption response plays a much greater role. Differences in the wealth effect are a possible explanation of this divergence, but by no means the only one. Larger welfare benefits in Europe may also be responsible for a more muted response of disposable income, and thus consumption, to monetary policy. Finally, more possibilities to refinance mortgage debt in the USA when interest rates fall, as well as a smaller share of interest-bearing assets in US household portfolios, could also be a factor.

Other pieces of evidence can be related to analyses of the various links and channels in the monetary transmission mechanism.

First, analyses of the pass-through from monetary policy interest rates to mortgage interest rates conclude that the pass-through has become more potent and more similar across euro-area countries since 1999.[37]

Second, there are some studies of the impact of monetary policy shocks on house prices. VAR models suggest a statistically significant but economically limited impact of monetary policy on real house prices.[38] A second standard result from this class of models is that most of the variation in house prices is explained by the own dynamics of national housing markets. Explanatory variables such as income, real interest rates and other asset prices (equity) explain the rest. Alternative approaches, such as panel data models of real house prices, point to qualitatively similar results but to a more powerful reaction to interest rates.[39] Moreover, studies usually find a significant role for the growth of credit aggregates although the direction of causality between credit and prices is not totally clear. For instance, Tsatsaronis and Zhu (2004) find evidence that the effect of house prices on credit supply is stronger in countries where rates are variable and where banks use more market-based property valuation methods for loan accounting.[40]

Third, there is some evidence concerning the income channel. Earlier studies suggest a *negative* income effect following a cut in official interest rates. The direction of the effect depends on the response of long-term interest rates and the net asset position of the household sector. Assuming that long-term interest rates fall following monetary policy loosening, the negative impact would typically be stronger in countries with high public debt, such as Italy or Belgium.[41] More recent simulations for the euro area confirm the possibility of a negative and powerful income effect. [42]

Residential investment is rarely separated out from other investment components in empirical analyses. The available evidence suggests that the reaction of residential investment to a monetary policy shock in euro-area countries is weaker than that of non-residential investment. The opposite holds for the US. [43]

Evidence on the housing wealth effect

Although the issue of the size of the housing wealth effect has attracted significant attention in some countries such as the USA and the UK, empirical research on the euro area is still relatively sparse and cross-country comparisons remain relatively difficult. Nevertheless, several recent studies have endeavoured to quantify housing wealth effects in a multi-country setting. Methodologically, this recent research can be grouped around two types of approach.

Some studies rely on cross-sectional panel regressions to provide an average picture of the housing wealth effect in advanced economies. For instance, Case et al. (2001) estimate a simple consumption function on a panel of 14 OECD countries and find elasticities of consumption relative to housing wealth in the range of 0.11-0.17. [44] Ludwig and Slok (2004) estimate a more sophisticated consumption function (with an error correction term) on a sample of 15 OECD countries and find a substantially smaller impact

[37] Angeloni, I. and M. Ehrmann (2003), "Monetary policy transmission in the euro area: any changes after EMU?", ECB Working Paper No. 240.

[38] See, for instance Giuliodori (2004) and Zhu (2005).

[39] See for instance the IMF, "World Economic Outlook", September 2004.

[40] Tsatsaronis, K. and H. Zhu (2004), "What drives house price dynamics: cross-country evidence", BIS Quarterly Review, March.

[41] Households own a large share of the stock of public debt in these countries.

[42] McAdam, P. and J. Morgan (2001), "The monetary transmission mechanism at the euro area level: issues and results using structural macroeconomic models" ECB Working Paper No 93.

[43] Smets, Frank (1995), "Central bank macroeconometric models and the monetary policy transmission mechanism", in BIS (1995), "Financial Structures and the Monetary Policy Transmission Mechanism", Basle.

[44] Case, K., Shiller, R. and J. Quigley (2001), "Comparing wealth effects: the stock market versus the housing market", NBER Working Paper No. 8086.

Box 3: **Housing equity withdrawal (HEW)**

HEW occurs when the net flows of borrowing secured against housing exceeds investment in housing. In fact, two definitions are found in the empirical literature: the narrow one excludes spending on home improvement (which adds to residential investment in national accounts) while the broad one includes it.

Homeowners can withdraw equity by: (i) selling a property and moving to a cheaper one but reducing the mortgage by less than the difference in the value of the two properties; or, (ii) borrowing against their housing wealth. The equity withdrawn can be used for consumption, for investment in non-housing assets, debt restructuring and for housing improvement (in the case of the broad HEW definition). The amount of HEW is a function of a number of factors, including the degree of home ownership, housing market turnover and access to mortgage equity withdrawal products. Greater access to secured debt implies a fall in the inter-temporal discount rate (i.e. a fall in the relative price of current versus future consumption). In particular, equity withdrawal may be used to finance durable goods consumption, which would otherwise be financed by borrowing at higher interest rates.

According to some estimates, HEW has contributed substantially to private consumption growth in some countries (e.g. Australia, Ireland, the Netherlands, the UK and the United States) in the last cycle (Catte et al. (2004)). However, this view is not undisputed. For instance, surveys carried out in the USA, the UK and the Netherlands indicate that only a small proportion of the cash extracted from housing equity (in the broad sense) is directly spent on consumption while most of it is used for either housing improvement (i.e. investment) or households balance sheets, i.e. to replace higher-cost unsecured debt. Hence in the USA, housing equity cashed out may have accounted for only 10-25% of the total increase in consumption in 2001.(*)

This does not mean however that the overall potential impact of HEW is small but rather that there is no full agreement as to the most important channels by which it affects the economy. Research by the Netherlands Central Bank combining survey evidence and model simulations indicates that HEW contributed around 1 percentage point to economic growth in the Netherlands in 1999 and 2000, while a halving of the level of equity withdrawal in 2001 contributed to a negative contribution to growth of around 0.5 pp in both 2001 and 2002.(**)

(*) Deep A. and D. Domanski (2002), "Housing markets and economic growth: lessons from the US refinancing booms", BIS Quarterly Review, September.
(**) Netherlands Central Bank (2003), 'Financial behaviour of Dutch households', Quarterly Bulletin, September 2003

of housing prices with a range of long-term elasticities of 0.01-0.04.

A number of studies have tried to assess the importance of housing wealth effects by estimating similar consumption functions across several countries, thereby allowing more meaningful cross-country comparisons.[45]

Three preliminary conclusions can be derived from these studies:

Firstly, whereas housing wealth effects are generally identified in Anglo-Saxon countries, evidence for euro-area Member States is mixed. Positive housing wealth effects can be found in some smaller Member States such as the Netherlands, Finland, Ireland and possibly Spain. In contrast, it is likely that housing wealth has, at best, only a limited impact on consumption in the larger Member States, with France possibly being an exception. As a consequence, housing wealth effects are generally difficult to identify at the euro-area aggregate level. [46]

Secondly, there is still substantial uncertainty as to the size of the housing wealth effect, as reflected by large ranges of elasticities in most countries. Cross-country comparisons should therefore be made with caution.

Third, little research has so far been carried out on the factors that may explain large country differences in the strength of the housing wealth effect. A major exception is Catte et al. (2004) who underline the importance of housing equity withdrawal (HEW) and of households' ability to extract cash from increases in house prices. Nevertheless, the conclusion of a strong link between HEW and private consumption is not

[45] See, for instance, Catte, P., Girouard, N., Price, R. and C. André (2004), "Housing markets, wealth and the business cycle", OECD Economic Department Working Paper No. 394, June.

[46] The conclusion is corroborated by two recent studies on, respectively, Germany and Italy which conclude on the absence of housing wealth effects in these two countries. See Hamburg, B., Hoffmann, M. and J. Keeler (2005), "Consumption, wealth and business cycles: why is Germany different?", Deutsche Bundesbank, Discussion Paper No. 16/2005 and Grant, C. and T.A. Peltonen (2005), "Housing and equity wealth effects of Italian households", DNB Working Paper No. 43, De Nederlandsche Bank.

undisputed (see Box 3). Furthermore, several other parameters may also be pivotal in explaining the strength of the link between house prices and consumption, including the completeness of mortgage markets, housing transaction costs, housing taxes and subsidies and the share of homes that are owner-occupied. In particular, there is some empirical evidence that the latter may be important.[47]

5. Conclusion and policy implications

Since the late 1990s, euro-area house prices have experienced a rising trend that has been remarkable both for its duration and strength and because it has persisted during a phase of sustained cyclical downturn. However, contrary to countries like the USA or the UK, there is little empirical evidence that house prices have been a major source of economic resilience in the euro area as a whole. Empirical studies suggest that changes in house prices may have a significant incidence on domestic demand in a number of small euro-area Member States, but probably a limited impact in larger Member States such as Germany and Italy.

There is a large consensus that one of the main determinants of the rise in house prices in many countries in the past few years has been the fall in interest rates in the latest downturn. This highlights the important role that the link between the housing market and the business cycle plays in determining the power of monetary policy.

Differences in the link between the housing and the business cycle can be ascribed to differences in the structure of the housing and the mortgage markets. In general, the link is probably stronger where mortgage markets are more complete, home ownership is high and HEW is more widespread. However, further empirical research is clearly needed on the respective roles of these factors.

In addition to bringing greater efficiency in the financial and housing sectors, further integration and liberalisation of mortgage markets within the euro area would help reduce differences in the transmission of the monetary impulses and thereby facilitate the common monetary policy. Nevertheless, liberalisation also carries risks which need to be properly monitored and better understood. There is some evidence that house prices may affect credit supply. In that case, the possibility of mutually reinforcing effects between house prices and credit may lead to the formation of bubbles and imbalances in banks and household balance sheets. Historical experience suggests that boom and bust episodes are not uncommon in the housing market and that house-price busts tend to be followed by significant contractions in GDP.[48]

Regarding the role of housing markets in boosting economic resilience to shocks, it is important to bear in mind two facets of the housing cycle. Firstly, developments in house prices have only tended to be counter-cyclical in the latest downturn. It can therefore not be excluded that they will again be more pro-cyclical in the future, thereby amplifying the business cycle rather than smoothing it. Secondly, the consumption-smoothing role of house prices in the latest downturn has been associated with a rise in mortgage debt that has increased households exposure to changes in interest rates and will, at some stage, act as break on growth as household balance sheets need to be consolidated.

Finally, it is worth stressing that the impact of housing and mortgage market integration and liberalisation on growth differences between Member States is unclear. Reductions in differences in the transmission of monetary policy would clearly lead to a more synchronised response to changes in monetary policy. However, although partly synchronised across Member States, housing markets will remain largely local. As a result, more powerful links between the housing and the business cycles could, in some circumstances, lead to increased growth differences if house price developments turn out to be pro-cyclical.

[47] See Chirinko, R.S., de Haan, L. and E. Sterken (2004), "Asset price shocks, real expenditures and financial structure: a multi-country analysis", DNB Working Paper No. 14, De Nederlandsche Bank.

[48] See Bordo, M. D. and J. Olivier (2002), "Boom-busts in asset prices, economic instability and monetary policy", Discussion Paper No. 3398, May.

IV. Recent DG ECFIN publications

1. Policy documents

EUROPEAN ECONOMY. No. 6. 2004
The EU Economy: 2004 Review
http://europa.eu.int/comm/economy_finance/publications/the_eu_economy_review_en.htm

EUROPEAN ECONOMY. No. 1. 2005
The second report on the implementation of the 2003 - 2005 Broad Economic Policy Guidelines
http://europa.eu.int/comm/economy_finance/publications/european_economy/implement2004_en.htm

EUROPEAN ECONOMY. No. 2. 2005
The Economy for the euro area, the European Union, and Candidate countries in 2004 – 2006. Economic Forecasts, Spring 2005
http://europa.eu.int/comm/economy_finance/publications/european_economy/forecast_en.htm

EUROPEAN ECONOMY. No. 3. 2005
Public finances in EMU – 2005
http://europa.eu.int/comm/economy_finance/publications/publicfinance_en.htm

EUROPEAN ECONOMY. OCCASIONAL PAPERS. No.16. March 2005
The economic costs of non-Lisbon. A survey of the literature on the economic impact of Lisbon-type reforms
http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers16_en.htm

EUROPEAN ECONOMY. OCCASIONAL PAPERS. No.17. April 2005
10 Years of Barcelona process: taking stock of economic progress in EU Mediterranean partners
http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers17_en.htm

EUROPEAN ECONOMY. OCCASIONAL PAPERS. No.18. April 2005
European Neighbourhood Policy: Economic Review of ENP Countries
http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers18_en.htm

Communication by the Commission on "Strengthening economic governance and clarifying the implementation of the Stability and Growth Pact" (COM(2004)581)
http://europa.eu.int/comm/economy_finance/publications/sgp/com2004581_en.htm

Communication by the Commission on "The situation of Germany and France in relation to their obligations under the excessive deficit procedure following the judgement of the Court of Justice" (COM(2004)813)
http://europa.eu.int/comm/economy_finance/about/activities/sgp/edp/com_com_2004_en.pdf

2. Analytical documents

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 220.
Marco Ratto, Werner Röger, Jan in't Veld and Riccardo Girardi (Directorate General for Economic and Financial Affairs)
An estimated new Keynesian dynamic stochastic general equilibrium model of the Euro area
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers220_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 221.
C. Denis, K. Mc Morrow, W. Röger and R. Veugelers (Directorate General for Economic and Financial Affairs)
The Lisbon Strategy and the EU's structural productivity problem
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers221_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 222.
Michele Cincera (DULBEA-CERT, ULB and CEPR) and Olivia Galgau (DULBEA, ULB)
Impact of market entry and exit on EU productivity and growth performance
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers222_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 223.
Elena Flores, Gabriele Giudice and Alessandro Turrini (Directorate General for Economic and Financial Affairs)

The framework for fiscal policy in EMU: What future after five years of experience?
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers223_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 224.
Lars Jonung (Directorate-General for Economic and Financial Affairs) and Thomas Hagberg (Ekonomistyrningsverket, Stockholm)
How costly was the crisis of the 1990s? A comparative analysis of the deepest crises in Finland and Sweden over the last 130 years.
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers224_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 225.
Fernando C. Ballabriga (ESADE Business School) and Carlos Martinez-Mongay (Directorate-General for Economic and Financial Affairs)
Sustainability of EU public finances
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers225_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 226.
Christoph Walkner and Jean-Pierre Raes (Directorate-General for Economic and Financial Affairs)
Integration and consolidation in EU banking - an unfinished business
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers226_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 227.
Lars Jonung (Directorate-General for Economic and Financial Affairs)
Proceedings of the 2004 first annual DG ECFIN research conference on "Business Cycles and Growth in Europe"
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers227_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 230.
Heikki Oksanen (Directorate-General for Economic and Financial Affairs)
Actuarial neutrality across generations applied to public pensions under population ageing: effects on government finances and national saving
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers230_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 231.
David R Collie (Cardiff Business School, Cardiff University)
State aid to investment and R&D
http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers231_en.htm

3. Regular publications

Euro area GDP indicator (Indicator-based forecast of quarterly GDP growth in the euro area)
http://europa.eu.int/comm/economy_finance/indicators/euroareagdp_en.htm

Business and Consumer Surveys (harmonised surveys for different sectors of the economies in the European Union (EU) and the applicant countries)
http://europa.eu.int/comm/economy_finance/indicators/businessandconsumersurveys_en.htm

Business Climate Indicator for the euro area (monthly indicator designed to deliver a clear and early assessment of the cyclical situation)
http://europa.eu.int/comm/economy_finance/indicators/businessclimate_en.htm

Key indicators for the euro area (presents the most relevant economic statistics concerning the euro area)
http://europa.eu.int/comm/economy_finance/indicators/key_euro_area/keyeuroarea_en.htm

Monthly and quarterly notes on the euro-denominated bond markets (looks at the volumes of debt issued, the maturity structures, and the conditions in the market)
http://europa.eu.int/comm/economy_finance/publications/bondmarkets_en.htm

Price and Cost Competitiveness
http://europa.eu.int/comm/economy_finance/publications/priceandcostcompetiteveness_en.htm

V. Key indicators for the euro area

1 Output		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
Industrial confidence [1.1]	Balance	-10	-12	-11	-5	-6	-8	-9	-11	-10
Industrial production [1.2]	mom % ch	0.2	-0.9	0.2	0.5	-0.7	-0.1	0.6		
		2001	2002	2003*	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2
Gross domestic product [1.3]	Qtr. % ch				0.7	0.4	0.3	0.2	0.5	
2 Private consumption		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
Consumer confidence [2.1]	Balance	-6	-11	-18	-13	-13	-14	-13	-15	-15
Retail sales [2.2]	mom % ch	1.2	1.1	0.1	0.9	-0.4	0.1	-1.1	1.1	
		2001	2002	2003*	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2
Private consumption [2.3]	Qtr. % ch	1.9	0.6	1.1	0.5	0.1	0.3	0.6	0.3	
3 Investment		2001	2002	2003*	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2
Capacity utilization [3.1]	%	83.5	81.2	80.7	81.1	81.1	82.0	82.1	81.9	80.9
Gross fixed capital formation [3.2]	Qtr. % ch	-0.3	-2.7	-0.4	-0.5	0.4	0.5	0.8	-0.7	
Change in stocks [3.3]	% of GDP	-0.2	-0.1	0.0	-0.3	-0.2	0.1	0.0	0.0	
4 Labour market		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
Unemployment [4.1]	%	8.0	8.2	8.4	8.8	8.9	8.9	8.9	8.8	
		2001	2002	2003*	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2
Employment [4.2]	Ann. % ch	1.4	0.5	0.1	0.3	0.6	0.7	0.8		
Shortage of labour [4.3]	%	7.8	3.8	2.5	2.4	2.6	2.4	2.2	2.3	2.4
Wages [4.4]	Ann. % ch	2.8	2.9	2.5	2.4	2.3	2.0	1.8		
5 International transactions		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
Export order books [5.1]	Balance	-14	-22	-24	-10	-12	-15	-18	-19	-20
World trade [5.2]	Bn. EUR	121	125	132	151	150	150	153		
Exports of goods [5.3]	Bn. EUR	767.4	776.9	1038.6	97.8	96.8	97.6	98.5		
Imports of goods [5.4]	Bn. EUR	802.2	781.6	970.4	94.3	91.8	93.6	94.8		
Trade balance [5.5]	Bn. EUR	-34.8	-4.7	68.2	3.5	5.1	4.0	3.7		
		2001	2002	2003*	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2
Exports of goods and services [5.6]	Qtr. % ch	3.4	1.7	0.2	1.5	2.7	1.0	0.3	0.2	
Imports of goods and services [5.7]	Qtr. % ch	2.1	-1.6	2.1	0.3	2.7	2.4	0.9	-1.1	
		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
Current account balance [5.8]	Bn. EUR	2.0	44.9	18.1	-1.8	6.0	2.7	-0.8		
Direct investment (net) [5.9]	Bn. EUR	-104.6	-11.0	-18.4	-13.1	-4.9	-9.0	-6.4		
Portfolio investment (net) [5.10]	Bn. EUR	36.5	64.4	-9.4	-18.2	21.7	-4.5	-2.8		
6 Prices		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
HICP [6.1]	Ann. % ch	2.3	2.3	2.1	1.9	2.1	2.1	2.1	1.9	2.1
Core HICP [6.2]	Ann. % ch	1.9	2.5	2.0	1.7	1.6	1.6	1.4	1.6	
Producer prices [6.3]	Ann. % ch	2.2	1.7	1.6	3.9	4.2	4.2	4.3	3.5	
7 Monetary and financial indicators		2001	2002	2003*	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
Interest rate (3 months) [7.1]	% p.a.	4.3	3.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1
Bond yield (10 years) [7.2]	% p.a.	5.0	4.8	4.1	3.6	3.6	3.7	3.5	3.3	3.2
ECB repo rate [7.3]	% p.a.	3.25	2.75	2.25	2.00	2.00	2.00	2.00	2.00	2.00
Stock markets [7.4]	Index	4047	3053	2420	2957	3050	3066	3014	3021	3152
M3 [7.5]	Ann. % ch	5.3	5.6	7.8	6.5	6.7	6.6	6.9		
Credit to private sector (loans) [7.6]	Ann. % ch	7.9	7.7	5.0	7.3	7.3	7.6	7.4	7.6	
Exchange rate USD/EUR [7.7]	Value	0.90	0.95	1.13	1.31	1.30	1.32	1.29	1.27	1.22
Nominal effective exchange rate [7.8]	Index	91.5	95.1	106.4	112.5	111.6	112.5	111.6	110.5	107.6

Number	Indicator	Note	Source
1	**Output**		
1.1	Industrial confidence indicator	Industry survey, average of balances to replies on production expectations, order books, and stocks (the latter with inverted sign)	ECFIN
1.2	Industrial production	Volume, excluding construction, wda	Eurostat
1.3	Gross domestic product	Volume (1995), seasonally adjusted	Eurostat
2	**Private consumption**		
2.1	Consumer confidence indicator	Consumer survey, average of balances to replies on four questions (financial and economic situation, unemployment, savings over next 12 months)	ECFIN
2.2	Retail sales	Volume, excluding motor vehicles, wda	Eurostat
2.3	Private consumption	Volume (1995 prices), seasonally adjusted	Eurostat
3	**Investment**		
3.1	Capacity utilisation	In percent of full capacity, manufacturing, seasonally adjusted, survey data (collected in each January, April, July and October).	ECFIN
3.2	Gross fixed capital formation	Volume (1995 prices), seasonally adjusted	Eurostat
3.3	Change in stocks	In percent of GDP, volume (1995 prices), seasonally adjusted	Eurostat
4	**Labour market**		
4.1	Unemployment	In percent of total workforce, ILO definition, seasonally adjusted	Eurostat
4.2	Employment	Number of employees, partially estimated, seasonally adjusted	ECB/ Eurostat
4.3	Shortage of labour	Percent of firms in the manufacturing sector reporting a shortage of labour (unfilled job openings) as a constraint to production, seasonally adjusted	ECFIN
4.4	Wages	Not fully harmonised concept, but representative for each Member State (mostly hourly earnings)	ECFIN
5	**International transactions**		
5.1	Export order books	Industry survey; balance of positive and negative replies, seasonally adjusted	ECFIN
5.2	Exports of goods	Bn. EUR, excluding intra euro-area trade, fob	Eurostat
5.3	Imports of goods	Bn. EUR, excluding intra euro-area trade, cif	Eurostat
5.4	Trade balance	Bn. EUR, excluding intra euro-area trade, fob-cif	Eurostat
5.5	Exports of goods and services	Volume (1995 prices), including intra euro-area trade, seasonally adjusted	Eurostat
5.6	Imports of goods and services	Volume (1995 prices), including intra euro-area trade, seasonally adjusted	Eurostat
5.7	Current account balance	Bn. EUR, excluding intra euro-area transactions; before 1997 partly estimated	ECB
5.8	Direct investment	(net) Bn. EUR, excluding intra euro-area transactions	ECB
5.9	Portfolio investment	(net) Bn. EUR, excluding intra euro-area transactions	ECB
6	**Prices**		
6.1	HICP	Harmonised index of consumer prices	Eurostat
6.2	Core HICP	Harmonised index of consumer prices, excluding energy and unprocessed food	Eurostat
6.3	Producer prices	Without construction	Eurostat
7	**Monetary and financial indicators**		
7.1	Interest rate	Percent p.a., 3-month interbank money market rate, period averages	Datastream
7.2	ECB repo rate	Percent p.a., minimum bid rate of the ECB, end of period	Datastream
7.3	Bond yield	Percent p.a., 10-year government bond yields, lowest level prevailing in the euro area, period averages	Datastream
7.4	Stock markets	DJ Euro STOXX50 index, period averages	Datastream
7.5	M3	Seasonally adjusted moving average moving average (3 last months)	ECB

7.6	Credit to private sector (loans)	MFI loans to euro-area residents excluding MFIs and general government, monthly values: month end values, annual values: annual averages	ECB
7.7	Exchange rate USD/EUR	Period averages	ECB
7.8	Nominal effective exchange rate	Against 13 other industrialised countries, double export weighted, 1995 = 100, increase (decrease): appreciation (depreciation)	ECFIN

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