



QUARTERLY REPORT ON THE EURO AREA

Volume 5 N° 1 (2006)

Highlights in this issue:

- **Recent economic developments and short-term prospects**
- **The respective roles of employment and wages in supporting household consumption**
- **The weak response of housing supply to surging prices**
- **Focus: Accumulated household debt – a counterpart to rising house prices in the euro area**

**EUROPEAN
COMMISSION**

**DIRECTORATE-GENERAL FOR
ECONOMIC AND FINANCIAL AFFAIRS**

Table of contents

EDITORIAL	3
I. ECONOMIC SITUATION IN THE EURO AREA	5
RECENT ECONOMIC DEVELOPMENTS AND SHORT-TERM PROSPECTS	5
THE RESPECTIVE ROLES OF EMPLOYMENT AND WAGES IN SUPPORTING HOUSEHOLD CONSUMPTION	15
THE WEAK RESPONSE OF HOUSING SUPPLY TO SURGING PRICES	20
II. FOCUS: ACCUMULATED HOUSEHOLD DEBT – A COUNTERPART TO RISING HOUSE PRICES IN THE EURO AREA	26
III. RECENT DG ECFIN PUBLICATIONS	37
IV. KEY INDICATORS FOR THE EURO AREA	39



EDITORIAL

The euro-area recovery remains on track. The interim forecast recently published by the European Commission expects GDP growth to accelerate to 1.9% in 2006. This forecast is based on both a positive outlook for exports and – more significantly – on a progressive firming of domestic demand.

The outlook for exports is positive partly because of improved cost competitiveness of the euro area, but also, and more importantly, because world trade is expected to continue to expand rapidly. This reflects high expected growth rates in major countries and regions such as China, Japan, the United States, Latin America and oil-exporting countries.

Regarding the prospects for domestic demand, the majority of recent indicators justify optimism. Most encouraging is the outlook for private investment which has been on a clear recovery since spring last year and should continue to expand in the months to come. In the case of private consumption, actual growth rates were lower than expected at the end of 2005. However, a revival of private consumption is expected in the course of this year as consumer confidence has been strengthening since the summer of 2005 and the outlook for employment is improving progressively.

It is true that the GDP growth recorded in the fourth quarter of last year was relatively weak. However, this seems to be largely due to technical factors. As GDP grew above its potential rate in the third quarter, some reversal in the fourth quarter was quite likely. Moreover, GDP figures for some euro-area countries may have been distorted by incomplete working-day adjustments. It can therefore be expected that forthcoming hard data will trail the upward trend of the soft data, leading to a significant

reacceleration of economic activity in the months to come.

While current economic developments give grounds for optimism, it is important to bear in mind that economic policies play a vital role in determining the euro-area's actual and potential growth performance. Sensible choices must be made in many different areas. In the context of this Quarterly Report, two areas are given explicit attention.

First, some commentators have recently argued that the revival in consumer spending, which is crucial for the rebound of economic activity, hinges on a pick-up of wages. However, economic analysis shows that it has been employment growth rather than wage growth that has increasingly driven private consumption over the past decade. Therefore, if policy-makers want to stimulate private consumption in their countries, they should take measures to raise employment as part of the re-launched Lisbon strategy. In contrast, a policy of artificial wage rises may actually lower private consumption due to its negative effects on employment.

Second, several euro-area Member States have lately experienced rapid increases in house prices and in household indebtedness. While there is no cause for concern at the level of the euro area as a whole, the situation in some Member States calls for a careful monitoring. Rapidly rising house prices can leave an economy vulnerable to a subsequent price correction with ensuing negative wealth effects. Irrespective of whether such a correction occurs or not, high levels of debt leave households vulnerable to adverse shocks to disposable income and interest rates. While the probability of these risks materialising remains low, if they do, they could hamper

growth. Moreover, the significant cross-country differences in housing market developments observed in recent years have contributed to the persistence of growth differences between Member States and thereby can present important challenges to the smooth functioning of EMU.

The question is, therefore, how policies should respond, bearing in mind that monetary policy can no longer be used at national level to control the growth of credit. Some general policy recommendations can be given here.

An early policy response to an emerging housing market boom is the best approach as it averts a build-up of risk. If the housing market is already heated, then any policy response must be measured, so as to avoid the risk of actually triggering an abrupt price correction.

Public statements should be used to remind private-sector agents of the existence of risks in the housing markets. Potential house buyers should be warned of the risks of possible overvaluation of the market and of overstressing themselves in terms of mortgage financing. Similarly, mortgage providers should be encouraged to exercise more caution in providing mortgage financing to clients and to take appropriate steps in prudential risk management when necessary.

Fiscal policy should, as far as possible, be neutral towards the housing market. All policy-induced incentives to purchase housing – for example, tax breaks and mortgage subsidies – should be progressively withdrawn. Tighter fiscal policy is in any case also desirable for other reasons: it would improve the sustainability of public finances and could contribute towards a better policy mix.

Finally, regulation needs to be reviewed to favour a better match between demand and supply of houses, and a better functioning and integration of mortgage markets. For instance, there is evidence that the current regulatory framework has caused construction activity in the euro area as a whole to react sluggishly to the house price increases in the last decade, although there are substantial differences between Member States. Regulatory changes which improve the capacity of housing supply to respond to price increases could thus reduce the volatility of house prices and the risk of bubbles forming.



Klaus REGLING
DIRECTOR GENERAL



I. Economic situation in the euro area

The latest reading of the national accounts for the euro area, which showed an unexpected slowdown of GDP growth between the third and the fourth quarter, should be interpreted with caution. Growth was above its potential rate in the third quarter and some reversal in the fourth quarter was likely. Moreover, GDP figures for some euro-area countries may have been distorted by incomplete working-day adjustments. Overall, the euro-area recovery remains on track. Strong gains in business surveys, with manufacturing confidence at its highest level in five years, point to a solid rebound of growth during the first quarter of this year. Recent indicators related to domestic demand are encouraging, particularly for corporate investment which has been on a clear path of recovery since the second quarter of last year. Notwithstanding persistently high oil prices, healthy growth in world trade and a progressive firming of domestic demand will support activity in the euro area during the next few quarters.

Wage growth in the euro area has been particularly subdued in the past two years and is expected to remain so in 2006. In combination with persistent sluggishness in private consumption, these developments have led some commentators to conclude that a revival in consumer spending hinges on a pick-up of wages. However, an analysis of the respective contributions of wages and employment to consumer spending does not bear this conclusion out. Since the mid-1990s, growth in disposable income – the single most important determinant of consumption – has been dominated by employment growth with wage growth playing only a modest role. Furthermore, econometric analysis indicates that gains in disposable income underpinned by robust employment growth have a significantly bigger impact on consumer spending than those resulting from wage increases.

The fast rise in house prices in the euro area since the late 1990s reflects strong demand pressures but also a sluggish supply response. Econometric evidence shows that the response of housing supply to changes in prices varies substantially from one Member State to another but tends to be weak for the euro area as a whole. Since the 1990s, this weakness of supply, which is probably caused by structural features of the housing market such as building and land-use regulations, has been aggravated by the oversupply which has depressed the German construction sector since the end of the unification boom.

1. Recent economic developments and short-term prospects¹

Subdued economic activity in the fourth quarter ...

The euro-area economy is currently benefiting from a very supportive environment. Growth in world output and trade is strong, due particularly to strong momentum in much of Asia. The euro/US dollar exchange rate has come down from its record high at the end of 2004 to a level which puts companies in the euro area in a more favourable competitive position. Oil prices, which surged at the turn of the year, have recently fallen and, while remaining high, are now at a level comparable to that of last autumn. The stance of the macroeconomic policy mix is broadly supportive to private sector demand.

Given these conditions and the strong outcome in the third quarter, GDP growth in the euro area surprised on the downside in the last quarter of 2005. According to the first estimate of the Quarterly National Accounts, the pace of economic expansion weakened from 0.7% in the third quarter to 0.3% in the fourth quarter, somewhat below market expectations and 0.1 pp lower than predicted in the European Commission's autumn 2005 economic forecasts. At the same time, growth in the previous quarters of 2005 was revised upwards, resulting in an average GDP growth of 1.3% for the year as a whole, as projected in the autumn forecast.

The breakdown of expenditure shows that the slowdown of economic activity in the fourth quarter reflected both the negative impact of a fall in net foreign demand and the weakening of domestic demand, which was dragged down by a slight drop in consumption expenditure. However, investment continued to expand, albeit at a slightly slower pace.

¹ The cut-off date for the statistics included in this issue was 21 March 2006.

Table 1: Euro-area growth components

	2005 Q1	2005 Q2	2005 Q3	2005 Q4	Carryover to 2006	Forecast (1)	
						2006 (2)	2007 (2)
% change on previous period, volumes							
GDP	0.3	0.4	0.7	0.3	0.6	1.9 (3)	2.1
Private consumption	0.1	0.3	0.5	-0.2	0.2	1.4	1.9
Government consumption	0.0	0.8	0.9	0.0	0.6	2.0	1.5
Gross fixed capital formation	0.2	1.0	1.1	0.8	1.4	3.1	3.2
Changes in inventories (% of GDP)	0.3	0.3	0.1	0.5	0.2	0.5	0.5
Exports of goods and services	-0.9	2.0	3.4	0.5	2.5	5.0	5.0
Imports of goods and services	-1.5	2.3	3.1	0.9	2.8	5.0	5.1
% contribution to change in GDP							
Private consumption	0.1	0.2	0.3	-0.1	0.1	0.8	1.1
Government consumption	0.0	0.2	0.2	0.0	0.1	0.4	0.3
Gross fixed capital formation	0.1	0.2	0.2	0.2	0.3	0.6	0.7
Changes in inventories	0.0	0.0	-0.2	0.4	0.2	0.0	0.0
Net exports	0.2	-0.1	0.2	-0.2	-0.1	0.1	0.0

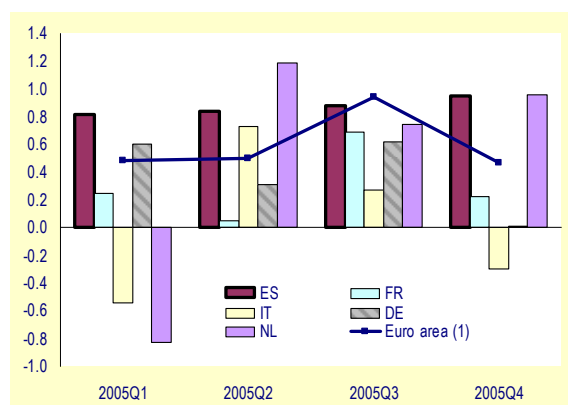
(1) Annual change in %. (2) European Commission Autumn 2005 Forecasts. GDP growth. (3) February 2006 Interim Forecasts.
Source: Commission services.

...partly explained by technical factors

The slowdown of economic activity in the euro area between the third and the fourth quarter of 2005 should not be overstated. GDP growth accelerated markedly in the third quarter to an annualised pace of 2.7% – thus well above potential growth – so that some counter-movement in the following quarter is not overly surprising. In addition, GDP figures for the second half of 2005 may have been distorted by incomplete adjustment of working-day effects due to substantial variations of working days in some euro-area countries. All in all, a large part of the deceleration in economic activity in the fourth quarter was of a technical nature and, as such, not particularly worrying. Furthermore, as first estimates of national accounts are prone to subsequent revisions, a cautious assessment of the low growth momentum seen in fourth-quarter GDP numbers is warranted.

In fact, the pattern displayed by the less volatile annual growth profiles indicates that underlying growth momentum at the end of last year was stronger than suggested by the quarter-on-quarter GDP figure. On a year-on-year basis, GDP growth in the euro area continued to improve during 2005, accelerating from 1.2% in the first half of the year to 1.6% in the third quarter and edging up to 1.7% in the fourth quarter. Against the background of a major increase in oil prices, which rose by 45% in euro terms in 2005, this still is an improving, and rather atypical, performance for the region.

Graph 1: GDP growth in selected euro-area countries (Quarter-on-quarter % changes in 2005)



(1) Excl. DE, ES, FR, NL and IT.
Source: Commission services.

The analysis of economic activity in the last months of 2005 is further complicated by the fact that GDP growth differed widely across euro-area countries during the last quarter, with weak activity in the largest economies dampening the outcome for the region as whole. On a quarter-on-quarter basis, economic activity contracted in Greece (-0.2%) and was flat in Germany (0.0%) and weak in France (0.2%), while strong activity was recorded in Austria (0.7%), Spain, Finland (0.9%) and the Netherlands (1%).²

² No data are yet available for the fourth quarter for Italy.



Table 2: Selected euro-area and national leading indicators, 2005-2006

	SENT. IND ⁽¹⁾	BCI ⁽²⁾	OECD ⁽³⁾	PMI Man. ⁽⁴⁾	PMI Ser ⁽⁵⁾	IFO ⁽⁶⁾	NBB ⁽⁷⁾	ZEW ⁽⁸⁾
Long-term average	100.0	0.00	2.83	52.3	54.5	95.6	-9.5	32.7
Trough in latest downturn	88.1	-1.25	-0.77	42.9	46.7	87.3	-26.5	-10.4
March 2005	97.1	-0.12	0.2	50.4	53.0	95.3	-9.4	36.3
April 2005	96.1	-0.31	-0.4	49.2	52.8	93.9	-15.9	20.1
May 2005	96.0	-0.39	-0.6	48.7	53.5	92.8	-16.1	13.9
June 2005	96.1	-0.30	-0.3	49.9	53.1	93.5	-14.4	19.5
July 2005	97.2	-0.08	0.4	50.8	53.5	96.0	-13.8	37.0
August 2005	97.4	-0.09	1.3	50.4	53.4	96.0	-14.1	50.0
September 2005	98.5	0.06	2.1	51.7	54.7	96.6	-7.0	38.6
October 2005	100.2	0.17	2.9	52.7	54.9	99.4	-6.0	39.4
November 2005	99.7	0.13	3.6	52.8	55.2	98.4	-5.6	38.7
December 2005	100.5	0.37	3.8	53.6	56.8	100.4	-0.8	61.6
January 2006	101.5	0.34		53.5	57.0	103.8	-4.4	71.0
February 2006	102.7	0.61		54.5	58.2	104.8	1.6	69.8
March 2006								63.4

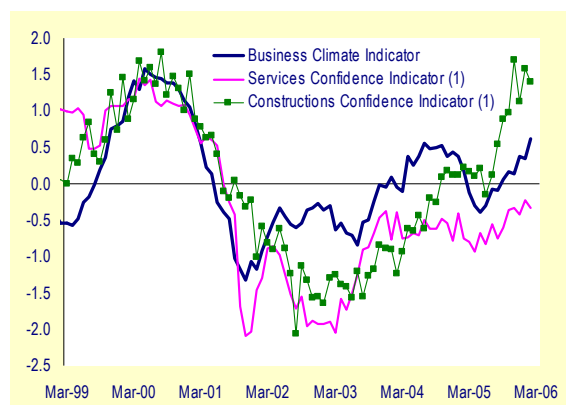
(1) Economic sentiment indicator, DG ECFIN. (2) Business climate indicator, DG ECFIN. (3) Composite leading indicator, six monthly change. (4) Reuters Purchasing Managers Index, manufacturing. (5) Reuters Purchasing Manager Index, services. (6) Business expectations, West Germany. (7) National Bank of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

The mixed hard data for Q4 contrast with upbeat surveys

Another argument for interpreting the slowdown in quarter-on-quarter growth at the end of last year as a statistical blip is a continued and marked improvement in business survey data. According to the European Commission's Survey, industrial confidence has risen almost uninterrupted since mid-2005, marking no significant pause in the fourth quarter. In particular, production expectations and the assessment of order books have improved substantially. The Business Climate Indicator (BCI) has been above its long-term average since September last year, reaching a five-year high in February 2006. Reuters PMI index of manufacturing activity in the euro area strengthened steadily in the last quarter of 2005 and at the beginning of 2006. The index, currently standing at 54, indicates healthy expansion in the manufacturing sector. As to national business survey indicators, the German IFO business index increased in February to reach its highest level in 13 years. Since summer 2005, both the future expectations and the current conditions of the index have posted strong increases. Finally, the manufacturing indicator of the National Bank of Belgium has been improving almost without interruption since April last year and the indicator is now back in positive territory, for the first time since mid-2004.

Survey data also point to improving economic conditions in the service sector, even though the recovery has so far been more muted in this sector than in manufacturing. Although it is still below its long-term average, the European Commission's service sector confidence index has shown a broad upward trend since March 2005. Gains in the Reuters index for services have been more substantial in recent months. The indicator is well above the neutral level of 50 and in February reached its highest level since October 2000. Since the third quarter of 2005, the improvement has been widespread across all components, including employment.

Graph 2: Business confidence indicators, euro area
(Balances in % – Mar 1999 to Feb 2006)



(1) The series is normalised (i.e. adjusted so as to have a means of 0 and a standard deviation of 1).

Source: Commission services.

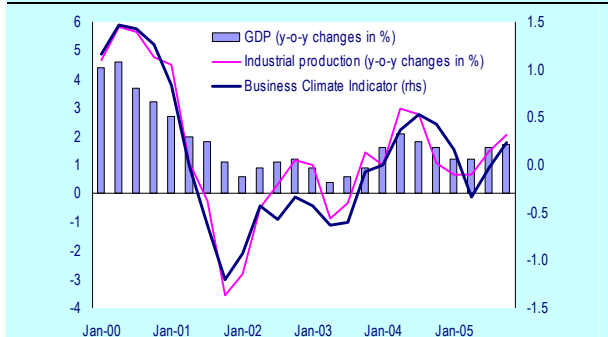
Box 1: Interpreting recent discrepancies between survey and hard data in the euro area

Most business survey indicators for the euro area have been on an upward path since summer last year, a development which contrasts with downside surprises on some recent hard data. Since the trough of the downturn in 2001, the euro area has experienced two short-lived mini recoveries of around 4-5 quarters (starting, respectively, early 2002 and during the first half of 2003) which have been followed by significant relapses in activity and confidence. Against such a background, the recent gap between surveys and hard data has raised some concerns about the solidity of the ongoing recovery. The present box argues that the gap can be explained by a number of technical (and temporary) factors and that surveys have recently sent more robust signals than during the mini recoveries of 2002 and 2003.

ECFIN's business climate indicator (BCI) has increased substantially (by one standard deviation) since last spring and is now at its highest level in five years. Such a significant improvement seems a priori at odds with the slowdown in quarter-on-quarter growth registered in the last quarter of 2005 both for industrial production and GDP. There are, however, three reasons to downplay the importance of the recent discrepancy between hard and soft data.

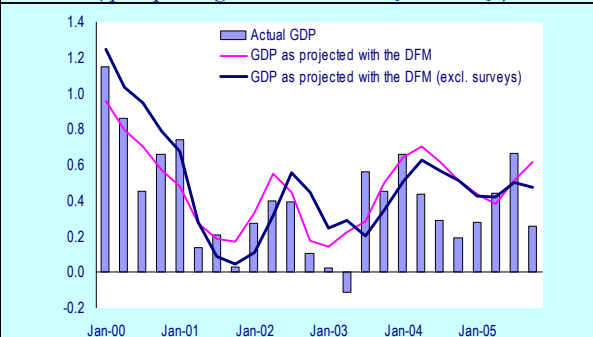
First, temporary differences in developments in hard and soft data are not unusual when looking at highly volatile quarter-on-quarter growth developments. Economic activity and survey indicators show a closer relation when growth is measured on a year-on-year basis. As shown in the left panel of the graph below, there was no significant gap between the two series in the last quarter of 2005 when changes in industrial production are measured year-on-year. A more formal econometric equation linking y-o-y changes in industrial production to the BCI points to only a modest downside surprise in that quarter (with an actual reading of industrial growth of 2.1% against projected growth of 2.3% on the basis of the BCI data). Much larger temporary discrepancies between industrial production and manufacturing surveys were occasionally registered in the past.

GDP, industrial production and the business climate indicator, euro area (2000Q1-2005Q4)



Source: Commission services.

GDP, actual and as projected with ECFIN's dynamic factor model (q-o-q changes in % – 2000Q1-2005Q4)



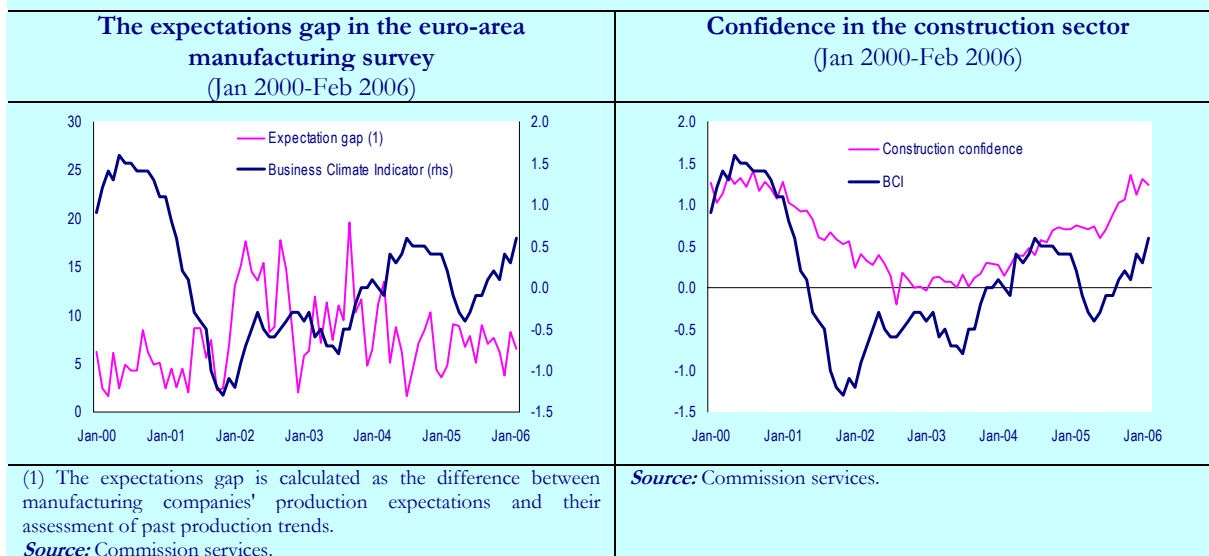
Source: Commission services.

Second, DG ECFIN's dynamic factor model (DFM) points to an underestimation of GDP growth in the last quarter of 2005. The model allows to extract underlying common developments in economic activity in the euro area from about 2000 activity indicators and can be used to make short-term GDP projections. The projections made before the latest release of the national account data pointed to strong growth in the fourth quarter of 2005, at about 0.6% q-o-q against an estimate of 0.3% by Eurostat. In the past, such overestimations have proved to be a good leading indicator of subsequent upward revisions of GDP growth by Eurostat (see Grenouilleau 2006). It is also noteworthy that the DFM points to robust GDP growth in the fourth quarter whether survey data are included in the underlying data set or not (see right panel of graph above). In other words, Eurostat's relatively weak GDP data for the last quarter of 2005 contrasts with the more upbeat picture provided by surveys but also by most other activity indicators.

Finally, calendar effects seem to have contributed to the underestimation of GDP and industrial production data in some Member States in the last quarter of 2005. The calculation of seasonally adjusted data was complicated by the fact that Christmas fell on a Sunday, inducing some households to take additional holidays (a phenomenon that is difficult to estimate statistically). As a result, the deceleration of activity in the fourth quarter is likely to be followed



by stronger-than-expected growth in the first quarter of 2006. Such a pattern was indeed observed in 2004 when Christmas also fell on a weekend (see Goldman Sachs 2006).



It is also worth stressing that some recent developments in confidence indicators suggest that the ongoing recovery might be on a somewhat firmer footing than the two mini-recoveries of 2002 and 2003. First, companies' expectations and assessment of the current situation have moved in tandem in the past months whereas improvements in confidence in 2002 and 2003 were, in their initial stages, mostly driven by expectations (see left panel of graph above). Second, the current recovery is characterised by a synchronised and fairly sustained upturn in all major sectors for which confidence is measured (manufacturing, services, households, retail and construction). This was not the case in 2002 and 2003 when, for instance, confidence in the construction sector remained weak (see right panel of graph above) or the recovery in the retail sector was limited.

References

- (1) Goldman Sachs European Weekly Analysts No. 06/10, March 9 2006.
(2) Grenouilleau, D. (2006), 'The stacked leading indicators dynamic factor model: a sensitivity analysis of forecast accuracy using the bootstrap', forthcoming Economic Paper, Directorate-General for Economic and Financial Affairs.

Signals from domestic demand remain broadly encouraging...

A comforting development in the latest national account data was the continuation of the investment recovery. Gross fixed capital formation grew by 0.8% in the last three months of the year, down from 1.1% in the third quarter. Despite the slight slowdown in the fourth quarter, the underlying momentum of capital spending remained healthy, as shown by the acceleration of annual growth from 1.2% in the first quarter of 2005 to 3.2% in the last quarter.

Besides a marked strengthening of business confidence, several factors should support the ongoing recovery of corporate investment in the months to come. Disregarding erratic month-to-month fluctuations, data on industrial activity

point to a pick-up in momentum. The year-on-year growth rate of industrial production increased throughout 2005, rising from 0.6% in the first quarter to 1.8% in the fourth quarter. On the financing side, the annual growth rate of loans to non-financial corporations rose from 7% in the third quarter to 7.5% in the fourth, thus continuing the upward trend observed since early 2004. Finally, industrial new orders picked up noticeably at the end of last year, suggesting demand pressures are increasing in the investment sector.

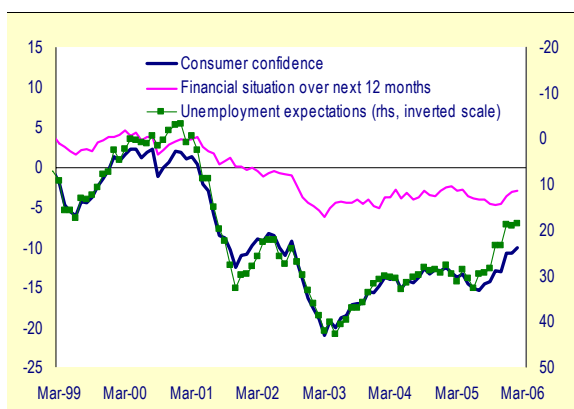
The positive outlook for investment is not limited to the equipment sector. After an unexpected fall in December 2005, confidence in the construction sector resumed the upward trend followed since summer 2005. The current

level of the index is well above its long-term average.

Inventory accumulation added 0.4 pp to GDP growth in the fourth quarter. The reasons for the strong inventory accumulation in the fourth quarter are difficult to assess. On the one hand, it may reflect the accumulation by firms of unsold goods as a consequence of the unanticipated slowdown in demand. On the other hand, inventories are a volatile component of demand and this figure is likely to be typically revised to more “normal” levels in successive estimates of Quarterly National Accounts. An argument supporting the second interpretation is that business surveys have not signalled any deterioration in the assessment of companies' stock levels.

In contrast to investment, fourth quarter data on consumption were disappointing. Private consumption expenditure contracted by 0.2%, down from an upwardly revised 0.5% in the third quarter. Hence, the contribution of private consumption to GDP growth turned negative in the last quarter of 2005, interrupting the moderate but steady improvements in the first three quarters of the year. Similarly, on the back of a significant contraction in public spending in Germany and a substantial deceleration in France, public consumption was unchanged in the fourth quarter, compared to a 0.9% increase in the third quarter.

Graph 3: Consumer confidence, euro area
(Balances in % – Mar 1999 to Feb 2006)



Source: Commission services.

The drop in private consumption in the fourth quarter is at odds with developments in

consumer surveys. After the temporary dip during the first half of 2005, consumer confidence has shown signs of improvement since summer 2005. The indicator of consumer sentiment moved above its long-term average in December of last year and is now back to a level last reached in 2002. The strengthening of confidence among consumers largely reflects improved expectations about economic growth and reduced concerns about unemployment. Confidence in the retail sector, on the other hand, remained broadly stable in the fourth quarter and the beginning of 2006, after having improved sharply in the third quarter of 2005. On a more positive note, the volume of retail trade as measured by Eurostat increased again in January after having stagnated in November and December. German retail data, which in recent months have been volatile, explain most of this rebound.

Developments in wages and, more critically, the labour market are important for the recovery of household spending and the solidity of the rebound of economic activity in the euro area.

Wage indicators suggest that wages have not accelerated and are still expanding at the moderate pace observed in the last two years. In addition, following the delayed impact of rising oil prices, consumer spending was affected by the acceleration of headline inflation from 2% to 2.3% between the first and the second half of 2005, which reduced households' purchasing power.

When assessing the outlook for consumption, it is important to bear in mind that employment is a more significant determinant of consumer spending than wages (Section 2 below provides econometric evidence supporting this conclusion). In this respect it is encouraging to note that there was some, albeit limited, improvement in labour market conditions during 2005. The level of employment remained broadly flat during the first half of the year but employment growth then accelerated to 0.2% in the third quarter. Meanwhile, the unemployment rate fell steadily from 8.8% in April 2005 to 8.3% in October – though this downward movement is partly explained by statistical effects linked to reforms implemented in Germany and France. Since October, the unemployment rate has



remained broadly stable. However, recent survey data have shown a mildly positive outlook for the labour market. For instance, the employment component of the composite PMI indicator moved above the 50-mark separating expansion from contraction in the fourth quarter of 2005, and strengthened further at the beginning of 2006.

... while the outlook for exports continues to be upbeat

Growth in euro-area exports decelerated to 0.5% in the fourth quarter, down from 3.4% in the previous quarter. Given the volatility of trade data, a statistical adjustment following the strong performance of exports in the previous quarter is probably the main explanation of this development. In addition, as exports include intra-euro-area trade, the slowdown in the fourth quarter may partly reflect weak output growth. The parallel, albeit less pronounced, deceleration of import growth from 3.1% in the third quarter to 0.9% in the fourth supports this observation.

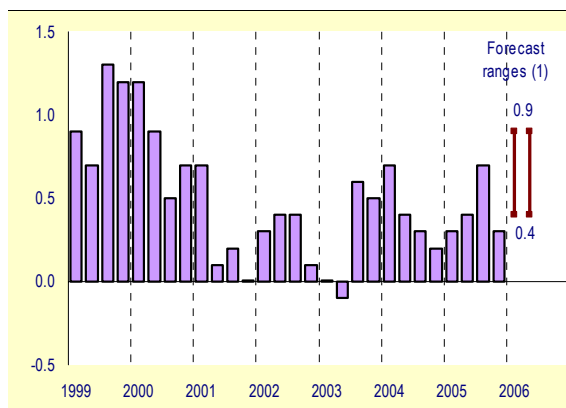
Indeed, most indicators that are typically well correlated with extra-euro-area trade are consistent with continuous strong foreign demand in the euro area. World trade was up by a healthy 2.8% in the fourth quarter, according to the latest CPB release. The indicators for export expectations of the quarterly "World Economic Survey" was stronger in the fourth quarter than in any previous quarter of 2005. The cost-competitiveness of the euro area, as measured by the real effective exchange rate (based on unit labour costs) has been improving since early 2005 and recorded a gain of about 1% in the last quarter of 2005.

Recent indicators point to a strong rebound of economic activity in the first quarter

Notwithstanding the slowdown in the fourth quarter of 2005, economic activity in the euro area is expected to bounce back in the first quarter of 2006 and to gather momentum in the course of the year, owing to brisk global growth combined with a broadly supportive policy mix. According to the European Commission's

February 2006 interim forecast, GDP growth is projected to reach 1.9% in 2006.³

Graph 4: **The short-term outlook for euro-area GDP growth** (Q-o-q changes in % – 1999Q1 to 2006Q2)



(1) Dynamic Factor Model.

Source: Commission services.

The main contribution to growth should come from domestic demand combined with a small but positive contribution from net foreign demand. Private investment, in particular, should be boosted by optimistic demand expectations, improved balance sheets and continued favourable financing conditions. The recovery of consumer spending should be more gradual, in line with expected improvements in the labour market and rising confidence.

Since the publication of the interim forecast, survey data have continued to be upbeat, suggesting that GDP growth in the euro area may surprise on the upside in the short term. This is at least the message sent by the updated quarterly GDP growth projections for the euro area derived from DG ECFIN's Dynamic Factor

³ Starting this year, the Commission will present interim forecasts twice a year. The interim forecasts update the comprehensive bi-annual forecasts presented in the spring and the autumn, the purpose being to improve economic surveillance in the EU and the euro area and to verify to what extent the recent fully-fledged forecasts are still on track. The interim forecasts, however, are much more partial in nature and coverage. They update the GDP growth and inflation outlook for the five largest EU Member States, i.e. Germany, Spain, France, Italy and the UK, as well as the euro area and the EU, for the current year. The complete document of the February 2006 interim forecast can be found at http://europa.eu.int/comm/economy_finance/about/activities/activities_keyindicatorsforecasts_en.htm.

Model (DFM).⁴ According to the model, quarter-on-quarter GDP growth for the euro area is projected to be in a range of 0.4% to 0.9% in the first two quarters of 2006.

Risks to the growth outlook

Despite the projection of a gradual return to potential growth during 2006, the outlook is subject to some risks and uncertainties linked to the international environment and domestic demand.

Regarding the international environment, the rise in oil prices during 2005 and early 2006 resulted not only from rising demand in the USA, China and India, but also from supply problems in the Middle East, Nigeria, Russia, and the Gulf of Mexico. As a consequence of this tight balance between demand and supply, oil prices have become more volatile and any significant further rise in oil prices would dampen euro-area growth.

Large current-account imbalances remain in the world economy, creating increasing strains on the global financial system. A disorderly unwinding of these imbalances and a significant fall in the dollar exchange rate against the euro would undermine economic activity in the euro area.

Global growth could also be derailed by fresh geopolitical shocks. Increasing tensions in the Middle East and elsewhere could, for example, result in rising commodity prices. There is also a specific concern related to a possible global pandemic if the 'avian flu' spreads more widely within the human population.

While the downside risks are clearly significant, there is also the possibility that global growth would re-accelerate if oil prices were to fall significantly or geopolitical turbulences to abate substantially.

On the domestic side, a fall in inflation helped by lower oil prices may boost private consumption, so far the missing link of the recovery in the euro area. A significant increase in consumer confidence as political uncertainties about the

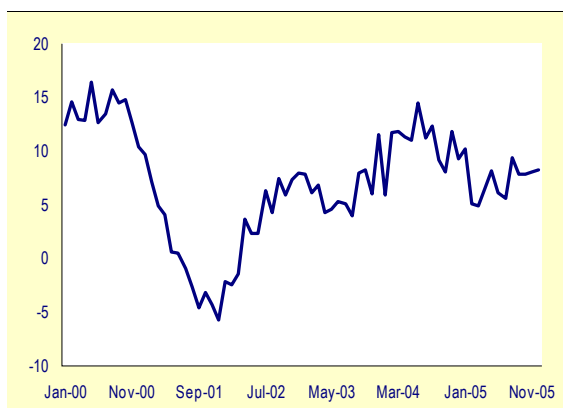
implementation of structural reforms ease would also provide additional support to domestic demand and overall growth in the euro area.

A stronger recovery than envisaged in the autumn and interim forecast over the next two years cannot be ruled out if the euro area can build on the significant improvement in business confidence, boosting employment and supporting a stronger-than-expected revival in domestic demand.

World growth remains strong

The global economy gained some momentum in the second half of 2005, which is also reflected in the continuing gradual strengthening of *world trade*. The year-on-year rate of increase of the world trade indicator compiled by the CPB has risen from a low of 4.7% in April to above 8% in December 2005, the latest month for which data is available (Graph 5). The global economy has so far managed to grow rapidly, despite *oil prices* remaining above US\$60 per barrel for a prolonged period.

Graph 5: **World trade**
(Y-o-y % changes in volume – Jan 2000 to Dec 2005)



Source: CPB Netherlands Bureau of Economic Policy Analysis.

The *US economy* registered annual GDP growth of 3.5% in 2005. Relatively low growth in the fourth quarter (1.6% annualised according to the preliminary estimate) was not the result of a fundamental weakening of the expansion, but due to volatility in car sales and defence spending and hurricane-related output disruptions. Recent data point to solid growth in the first quarter of

⁴ The DFM model distils most recent updated information from hard and survey data of about two thousand time series. See Quarterly Report on the Euro Area Vol. 4, No. 4, 2005, Box 1, p 10, for an explanation of the DFM.



2006, again mainly fuelled by consumer spending, but also by the inventory cycle and hurricane-rebuilding. Later this year, the economy is expected to slow down in response to rising interest rates and a downturn in the housing market. A moderation in house price inflation may already be under way. Employment continues to increase around a 1.5% annual growth trend and the unemployment rate fell to 4.8% in February. Headline inflation has shown some volatility in response to energy price developments, but core inflation has remained stable around 2%. The trade balance has worsened again since September, which has resulted in an overall trade deficit of 5.8% of GDP in 2005 while the current account deficit has increased to 6.4% of GDP. Last year's general government fiscal deficit can be estimated at 3.9% of GDP. The Federal Reserve raised the federal funds target rate to 4.5% at the end of January and announced that some further firming of monetary policy may be needed. Longer-term interest rates have also continued to drift upwards and the yield curve remains almost flat.

The economic expansion in *Japan* is broadening beyond the export-related sector. In the last quarter of 2005, GDP growth reached 5.5% (quarter-on-quarter at an annualised rate). The main engine of growth was private domestic demand, notably household consumption and investment, but net exports also contributed. For the year as a whole, GDP growth reached 2.8%. The Japanese economy is expected to continue expanding at a similar pace in 2006, based on a continued favourable external environment and domestic demand maintaining its current momentum. On the price front, in January 2006, both headline and core inflation reached 0.5% year-on-year and core inflation should remain positive for the year as a whole. However, there are still some uncertainties about whether the deflation as come to a definitive end. In this context, the Bank of Japan is likely to be cautious when taking any steps towards a tighter monetary stance.

China's GDP was revised upwards in December 2005, mainly due to an upward revision of the size of the service sector. GDP growth in 2005 is now officially estimated at 9.9%. The very robust

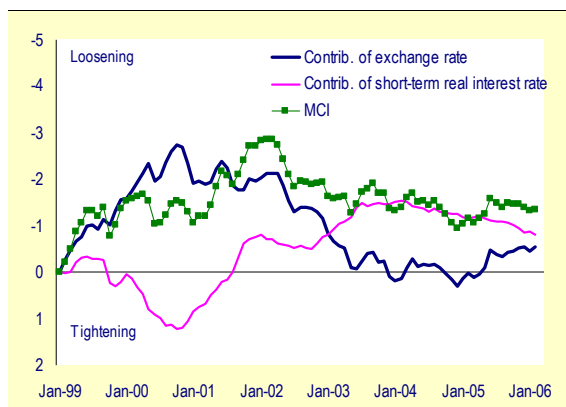
2005 GDP growth rate was underpinned by still high investment spending and surging net exports. GDP growth is expected to moderate modestly to slightly over 9% in 2006, mainly due to a reduction of net export growth. The growth momentum in the rest of Asia picked up in the second half of 2005 on the back of strong external demand. It is expected to moderate somewhat in 2006 in tandem with the expected gradual growth deceleration in China and the USA, but to remain robust thanks to buoyant domestic demand.

Growth in Latin America remained solid in 2005, although moderating somewhat as monetary tightening took its toll on domestic demand. With continued favourable external conditions and monetary policy having started to ease again in some countries, growth should remain around 4% in 2006. The high price of oil should sustain growth in oil-exporting countries, such as those in the Commonwealth of Independent States and the Middle East, where growth is expected to reach about 6% and 5% respectively this year.

Monetary and financial conditions

Monetary conditions in the euro area, as measured by the Monetary Conditions Index (MCI), have remained accommodative over the last months. The impact of the exchange rate depreciation and the increase in short-term interest rates have cancelled each other out.

Graph 6: The euro-area MCI and its contributors
(Inverted scale – Jan 1999 to Feb 2006)

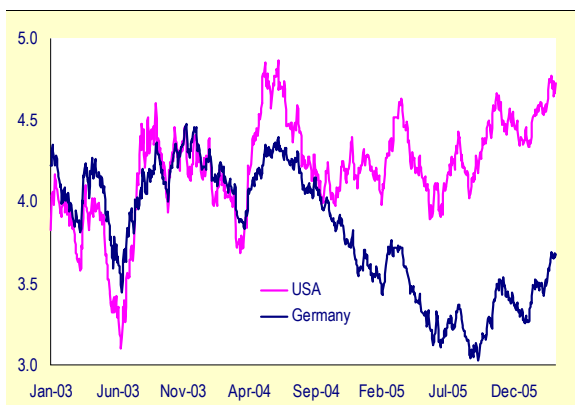


Source: Commission services.

On 2 March, the ECB increased its policy rates again by 25 basis points, bringing its main policy rate to 2.5%. The main reasons for the interest rate hikes were the upside risks to price stability indicated by both the economic and monetary analysis. The rate hike should help anchor medium- to long-term inflation expectations. Despite the two rate hikes since December 2005, nominal and real short-term interest rates remain exceptionally low by historical standards.

Financial market expectations as derived from futures contracts are pricing in a next rate hike by 25 basis points in the second quarter and another hike by 25 basis points before the end of the year. High probability is also given to another hike in the first half of 2007. This would bring the ECB's policy rate to 3.25%.

Graph 7: 10-year government bond yields
(Daily data, in % – 1 Jan 2003 to 21 March 2006)



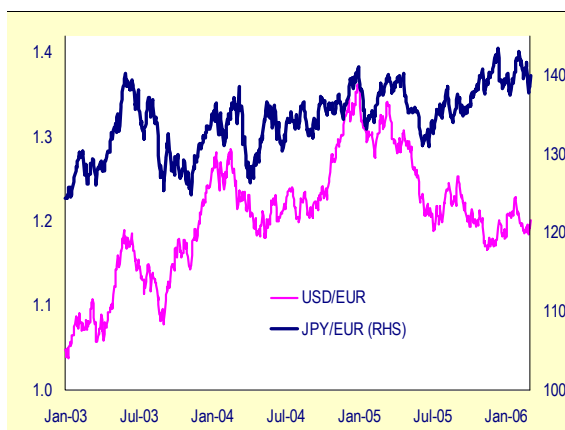
Source: Ecwin.

In the period leading to the ECB rate hike decision, bond markets experienced a strong downward price correction, bringing bond yields up to around 3.7%, from a historical low of 3% in September. The driving forces behind the upturn of government bond yields in the euro area were positive data releases, the two interest rate hikes, and hawkish comments from several Governing Council members, fuelling further rate hike speculations. In the USA, the pick-up in bond yields was mainly driven by strong US economic figures for January and some further monetary policy tightening.

Since early October, the euro-dollar exchange rate has fluctuated within a relatively narrow range around 1.20 USD/EUR. Market

expectations about the course of monetary policy in the USA and the euro area continued to be the main determinant of movements within this range. In December and January, expectations that an end of the Fed tightening cycle would come to an end on the one hand and speculations about ECB interest rate hikes on the other hand led to an appreciation of the euro exchange rate by some 5%, from 1.17 USD/EUR to slightly below 1.23 USD/EUR. Following Fed Chairman Ben Bernanke's first Congressional testimony on 15 February and some strong US data, market expectations about further Fed increases were fuelled and brought the euro-dollar exchange rate back to a level slightly below 1.20 USD/EUR. Since then, the dollar-euro exchange rate has remained broadly stable.

Graph 8: Euro exchange rates
(Daily data – 1 Jan 2003 to 21 March 2006)



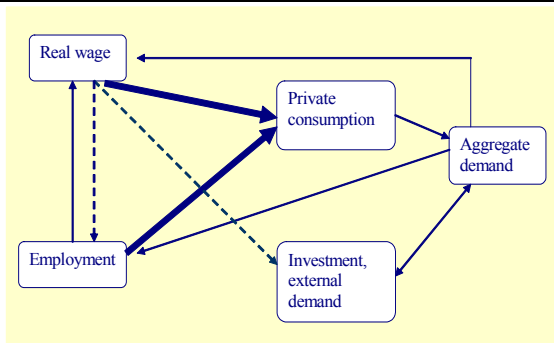
Source: Commission services and Ecwin.



2. The respective roles of employment and wages in supporting household consumption

The weakness of domestic demand in the euro area over the past few years has spurred a discussion about whether low wage growth has held back private consumption. Indeed, real compensation per employee grew on average by only 0.2% per annum in 2002-05. Over the same period, private consumption expanded by a disappointing annual average of 1.6% in constant prices. Real compensation growth is estimated to have been negative in 2005, with private consumption growth reaching just 1.5%. For 2006, the Commission autumn 2005 forecast points to a further year of negative real wage growth.

Graph 9: A stylised view of the link between wages, employment and aggregate demand components



Source: Commission services.

There are some analysts who argue that any rebound in private consumption will necessitate stronger increases in wages than witnessed in the recent past. This notion is contentious because even if higher wage growth has the potential to stimulate private consumption, it would simultaneously increase labour costs and possibly depress employment, with adverse consequences for household consumption. Graph 9 shows the main interactions between wages, employment and aggregate demand. Solid arrows denote positive and dotted arrows negative relations. Higher wages lead to an increase in private consumption, which in turn causes firms to invest and hire more via its effect on aggregate demand. However, for wage increases to stimulate overall economic activity, this positive demand effect would need to be stronger than

the negative effect of rising labour costs on employment, investment and external competitiveness. Thus employment and investment would need to be weakly responsive to wages. Moreover, the economy would need to be relatively closed to external trade so that the negative impact of higher labour costs on external competitiveness and external demand does not play too strong an offsetting role.

The central interest of this note is in the bold arrows of Graph 9, i.e. the relative strength of real wages and employment as determinants of private consumption. Thus, the link between real wages and investment, external demand and employment is not addressed in the analysis below, which focuses rather on the questions of whether low real wage growth automatically translates into low growth in private consumption or whether employment has an offsetting role in the event of low wage growth.

The link between the wage bill, disposable income and consumption in the euro area

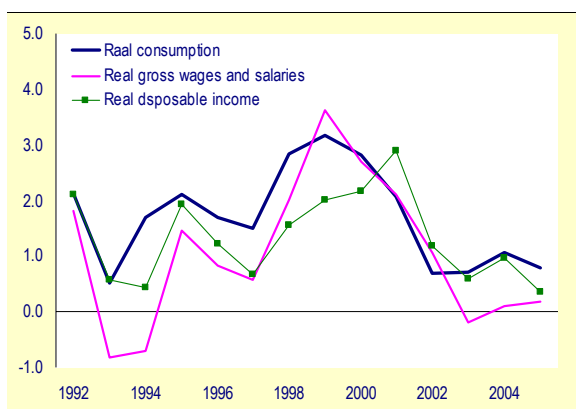
In modern economic theory, the relationship between the wage bill – i.e. the product of employment and wage per person employed – and consumption is somewhat ambiguous. In general, economic theory posits that private consumption is determined by permanent rather than temporary changes in disposable income. Current employment and labour income have relatively little influence on actual consumption. Changes in disposable income have an impact on consumption only under special circumstances, for instance, if they are perceived as indicating a change in permanent income or if households are subject to liquidity constraints.

Nevertheless, despite these theoretical caveats, empirical research usually finds that disposable income is the single most important determinant of private consumption and labour income constitutes the most important part of disposable income.

Growth in gross disposable income, the total wage bill and private consumption has moved close together over the cycle in the euro area (see Graph 10). The strong linkage between disposable income and private consumption is

also evidenced by the estimates of the consumption function presented in the Quarterly Report on the Euro Area I-2003. They yielded a long-term elasticity of 1.05, meaning that changes in disposable income translate almost 1:1 into corresponding changes in private consumption.⁵ These consumption equation also showed that disposable income mattered more for the decline in consumption in 2000-03 than other fundamental determinants such as wealth.

Graph 10: Households' real income and real consumption (Annual changes in % – 1992-2004) (1)



(1) EUR-6, consisting of BE, DE, FR, IT, NL, FI.
 Source: Commission services.

Graph 11 presents the decomposition of household's disposable income into labour income, non-labour income and re-distribution in 2005. It shows that the labour income of both employees and the self-employed amounts to more than two third of households' gross disposable income.⁶ Non-labour income, which is the sum of net property income (interest, distributed income of corporations and rents) and gross operating surplus makes up 27% of gross disposable income.⁷ The residual term

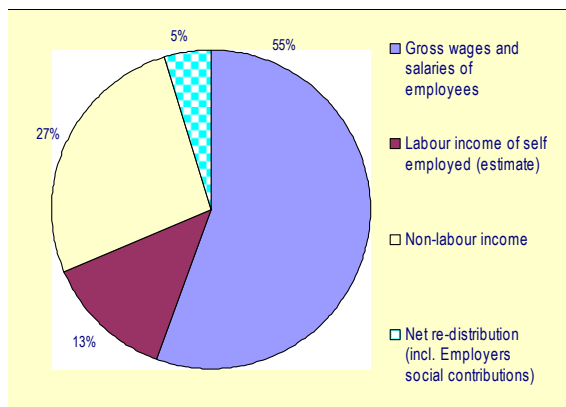
⁵ For estimates of consumption functions for Germany and France, see Orellana, M., Paternoster, D. and S., Sørensen (2005), 'Consumption, investment and saving in the euro area: an assessment', European Economy Occasional Paper No 20.
http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers20_en.htm.

⁶ The average labour income of each self-employed person is estimated to be equal to the average compensation per employee and deducted from the gross operating surplus and mixed income' aggregate.

⁷ The gross operating surplus is a measure of the profits derived from the activity of self-employed persons.

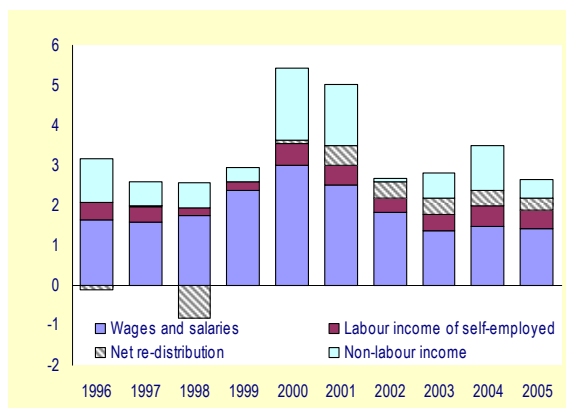
captures the net redistribution between the government and households, i.e. current taxes on income and wealth etc., social contributions and benefits, and current transfers.

Graph 11: Composition of households' gross disposable income 2005 (1)



(1) Euro area excluding IE, LU and PT.
 Source: Commission services.

Graph 12: Contribution to changes in the gross disposable income of households at current prices (Annual changes in % – 1996-2005) (1)



(1) Euro area excluding IE, LU and PT.
 Source: Commission services.

Can households expect any deterioration in labour income in a cyclical slowdown to be at least partially offset by rising non-labour income? Graph 12 reveals that the contribution of total labour income to households' disposable income growth has followed a pro-cyclical pattern, being strong in 1999/2000 and weaker since then. A reduction in the wage bill implies an increase in corporate profits, which could be re-distributed to households in the form of capital income. However, there appears to be little evidence of



such an offsetting effect. Both components of non-labour income, i.e. net property income and households' gross operating surplus, seem to move with rather than counter to the business cycle. As a result, they do not offer a cushion if labour income should fall during cyclical slowdowns. It is rather social security payments that have played this role, as evidenced by a counter-cyclical contribution of net re-distribution to disposable income.

The breakdown of labour income into real wages and employment

Though the wage bill is regarded as a key determinant of households' disposable income and thus of private consumption, the respective contributions of the wage rate and employment components has hardly been analysed. Empirical analysis tends to focus on the propensity to consume out of disposable income and out of wealth, typically finding that the elasticity with respect to wealth is the much smaller of the two.⁸ In theory, the marginal propensity to consume out of a change in wages or a change in employment can be expected to be dissimilar if people perceive one component to be more permanent than the other. Furthermore, people entering into employment may increase their consumption by more than those that are granted a pay increase, which may lead to changes in the aggregate level of consumption irrespective of changes in the total wage bill.⁹

Two findings emerge from the decomposition of the contribution of employment and real wage growth to the growth of the real wage bill in the euro area for the 1996-2005 period (Graph13).

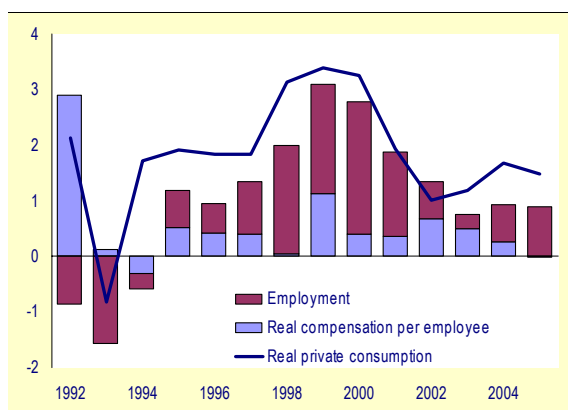
- First, growth in the total wage bill was mainly driven by job creation during that period.

⁸ See Barrell, R. and E.E. Davis (2004), 'Consumption, financial and real wealth in the G-5', NIESR Discussion Paper No 232; Dreger, C. and H.E. Reimers (2003), 'Consumption and income in the euro area: Empirical evidence based on panel cointegration methods', Institut für Wirtschaftsforschung Halle Working Paper No 139.

⁹ Differences may also arise from the fact the changes in employment and wages may not have the same impact on household liquidity constraints. Entering employment may entail a more substantial easing of liquidity constraints than getting a wage increase.

- Second, years with high employment growth were also years with high growth in private consumption. The same cannot be said for the relationship between real wage growth and private consumption, which display a much weaker correlation for the 1996-2005 period and even a slightly negative correlation for the 2001-05 period.

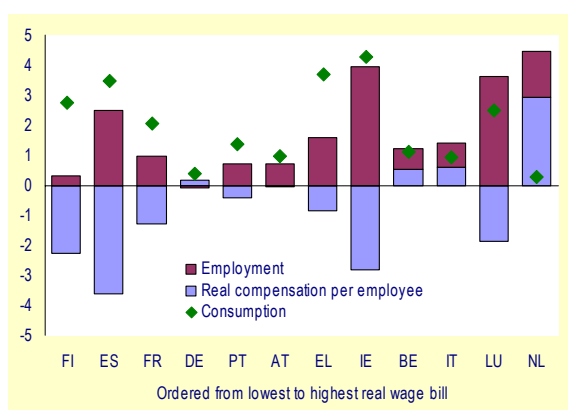
Graph 13: Contribution of employment and real wages to the real wage bill, euro area
(Annual changes in % – 1992-2005) (1)



(1) Compensation includes wages, salaries and employers' contribution to social security.

Source: Commission services.

Graph 14: Contribution of employment and real wages to consumption, euro-area Member States,
(Average annual growth in % – 2001-05) (1)



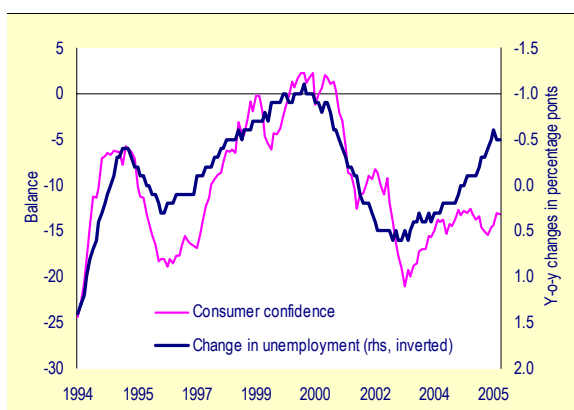
(1) Compensation includes wages, salaries and employers' contribution to social security.

Source: Commission services.

A higher correlation of consumption with employment than with wages is also visible at the level of the individual euro-area Member States.

Graph 14 suggests that a high increase in a country's real wage bill did not mechanically translate into high private consumption growth in 2001-05. Remarkably, some countries recorded relatively vibrant private consumption despite negative real wage growth. In these countries, high private consumption growth went along with relatively strong employment growth. This seems to indicate that differences in labour market conditions matter more than differences in real pay in explaining differences in consumption growth. The fact that a strong correlation exists between consumer confidence and unemployment also lends credence to this assessment (Graph 15).

Graph 15: Consumer confidence and annual change in the rate of unemployment, euro area (Monthly data – Jan 1994 - Nov 2005)



Source: Commission services.

An empirical consumption function, in which both employment and real wages are entered as separate independent variables and real private consumption growth as a dependent variable, provides further support for the argument that employment plays a more important role than wages in determining private consumption spending. The estimates presented in Table 3 are obtained from a panel of annual data of the 12 euro-area Member States covering the 1970-2005 period. The high coefficient of the employment variable suggests that employment is significantly more important for consumption growth than wages. Several models were estimated. In the simplest model (row Ia), the elasticity of consumption with respect to employment is 0.8 and the elasticity of consumption with respect to wages is only 0.2. The comparison of the estimates from the 1990s

onwards with those covering the period 1970-2005 also suggest that the elasticity of consumption with respect to employment may have increased somewhat over time.

The coefficients are robust to different variations of the model. For instance, the introduction of an error-correction term or estimation without fixed effects hardly changes the coefficients. The basic result of a higher elasticity for employment than for wages is also robust to the inclusion of further variables (non-labour income, financial and housing wealth, interest rates). It also holds if countries are estimated individually with annual data.¹⁰

A more serious methodological concern is that wages and employment are not exogenous variables. Endogeneity may cause the estimates to be biased, i.e. the estimated coefficients do not reflect their true value. However, the use of more sophisticated estimation methods taking the potential endogeneity problem into account (instrumental variable methods) confirms the conclusion that consumption is more responsive to employment than to wages.

Finally, it should also be noted that the estimates should not suffer from multi-collinearity because there is limited coincident correlation between real wage growth and employment growth. The coefficient of correlation is -0.03 for the entire sample. It increases if employment growth is lagged with respect to real wage growth.

Consumption in times of negative real wage growth

It is interesting to examine how private consumption has developed in periods of negative real wage growth. Negative real wage growth has not been exceptional in the euro-area Member States over the few last years. Every single year since the early 1990s at least one Member State has recorded negative real wage growth. For instance, Belgium, Spain, Austria and Finland registered negative real wage growth in 2000, notwithstanding the rapid GDP growth registered that year. And periods of negative real wage growth were not restricted to just a few

¹⁰ Except for Germany and Greece in the long sample and Finland in the short sample.



Table 3: Estimation of a consumption function, 12 euro-area Member States
(Endogenous variable: growth in real private consumption) (1)

		Constant	Real wage growth	Employment growth	Error correction term (lag 1)	Adj. R ²	Durbin-Watson
(Ia)	OLS 1990-2005	0.012 (9.90)	0.212 (4.48)	0.787 (18.11)		0.75	1.88
(Ib)	OLS 1970-2005	0.016 (14.88)	0.321 (9.30)	0.687 (15.75)		0.59	1.95
(IIa)	E-C 1990-2005	0.011 (9.42)	0.248 (5.14)	0.805 (18.67)	-0.109 (-2.74)	0.76	1.78
(IIb)	E-C 1970-2005	0.016 (14.49)	0.347 (10.07)	0.697 (16.27)	-0.100 (-4.03)	0.61	1.86
(IIIa)	IV 1990-2005	0.010 (5.16)	0.297 (2.74)	0.897 (15.38)		0.73	1.97
(IIIb)	IV 1970-2005	0.012 (5.79)	0.449 (4.34)	0.834 (13.43)		0.56	2.02

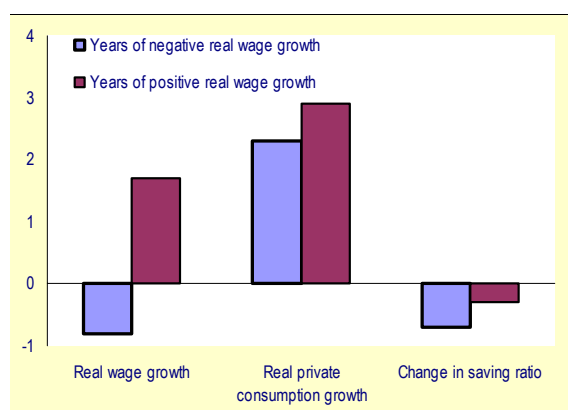
(1) t-values in brackets. The estimates include time and country-fixed effects. LN: natural logarithm. OLS = ordinary least squares, E-C = error correction with the long-term relationship $\text{LN}(\text{Consumption}) = -2.7 + 0.643 * \text{LN}(\text{Real wage} * \text{Employment}) + 0.1 \text{ Dummy [1 for Germany after 1991, 0 else]}$ (including time and country-fixed effects), IV 2-stage least squares with lagged real wage growth, lagged employment growth, lagged TFP growth, export growth, and working-age population growth used as instruments.

Source: Commission services.

countries. France is in fact the only country in the euro area where real wage growth was positive every year between 1990 and 2005. Out of the 192 data points of annual wage growth available for the 1990-2005 period (16 years × 12 Member States), there are 48 observations of annual negative real wage growth (i.e. 25% of the total sample). During these years of negative real wage growth, real consumption grew on average by 1.7% (see Graph 16). In years of positive real wage growth it was 2.6%.

The households' saving ratio, meanwhile, declined on average by 0.6 pp in years of negative real wage growth as opposed to by 0.3 pp in 'normal' years. Thus, when real wage growth was negative households' consumption was supported by a considerable reduction in households' savings ratio.

Graph 16: Consumption during periods of negative and positive wage growth, euro-area Member States
(Average annual changes in % – 1990-2005) (1)



(1) Averages calculated by decomposing the sample of 192 observations (12 countries × 16 years) into two sub-samples (years of negative wage growth and years of positive wage growth). IE and PT are excluded in the case of the savings ratio.

Source: Commission services.

Conclusions

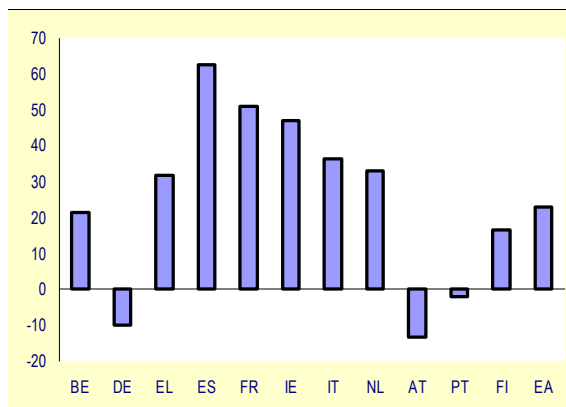
Labour income is a key determinant of private consumption in the euro area. When labour income is decomposed into its main determinants, we see that private consumption has increasingly been driven by employment growth rather than by wage growth over the past decade. This finding reflects both strong employment creation in a context of continued wage moderation and a stronger incidence of employment than wages on private consumption. In order to strengthen private consumption, it will therefore be paramount to create conditions for higher employment.

3. The weak response of housing supply to surging prices

Stylised facts

Euro-area real house prices have risen at a strong pace since the late 1990s, although the pattern has differed significantly across countries (Graph 17). In the wake of this price increase, a broad literature has developed on the interaction between the housing market and the business cycle.¹¹ Much of the discussion has focused on the interaction between house prices, monetary policy and private consumption, which takes place via income effects, wealth effects and the use of real estate as credit collateral. By contrast, the impact of higher house prices on construction activity has attracted relatively little attention. Yet one remarkable aspect of the present boom in housing demand in the euro area is, however, that it does not appear to have been accompanied by a very strong increase in construction activity.

Graph 17: Real house price developments, euro-area Member States (change in % – 1999-2004) (1)



(1) CPI- deflated.

Source: Commission services, ECB, NIESR.

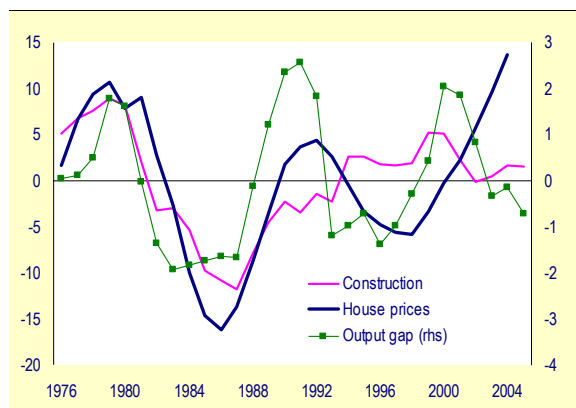
Historically, a very high degree of co-movement can be observed between the business cycle, the cyclical component of house prices and housing construction in the euro area (Graph 18). Until the end of the 1990s this relationship was fairly stable. In a stylized way, house price cycles followed the output gap by about 1 year. In the

¹¹ QREA Vol. 4 N°2 (2005) Focus: Housing markets and the business cycle in the euro area.



same vein, the residential construction cycle followed the housing price cycle by about 1 year and the output gap by 1-2 years.

Graph 18: House price cycle, residential construction cycle and output gap, Euro area
(Deviation from trend in % – 1976-2004) (1)



(1) House prices and residential construction are detrended with a linear filter.

Source: Commission services.

However, this relationship appears to have broken down since roughly 2000. In recent years, house prices have continued to rise at a pace above trend levels, while both construction and economic activity have remained below trend levels. Essentially, the house price and construction cycle appear to have decoupled. And the construction cycle, in turn, appears to be leading the output gap rather than follow it.

Consumption versus investment cycles

This decoupling of the house price cycle and the construction cycle is clearly important in understanding present cyclical developments. In addition, the magnitude of the residential housing supply response has important implications for the development of the euro-area business cycle and the transmission of monetary policy. Let's illustrate this by imagining two extreme supply responses to higher demand for housing.

Pure price response: In this case, the price elasticity of housing is perfectly inelastic with no real economy response whatsoever in terms of increased investment activity or increased

housing services. The economic impact of higher prices would be limited to the private consumption side, where higher house prices serve as collateral for loans and trigger wealth effects. As a consequence, consumption either increases when house prices rise or suffers when house prices collapse.¹² With supply playing no role in dampening price increases, this zero-elasticity scenario can easily lead to a speculative bubble.

Pure quantity response: In this case, the price elasticity of housing is perfectly elastic and an increase in demand is immediately met by an increase in the housing stock and, hence, housing services being provided. As a consequence, nominal and real wealth increase in parallel. In this case, higher demand mostly triggers an investment cycle, (as opposed to the consumption cycle of the pure price response). Due to the longevity of housing, the main risk associated with such a cycle is the possible build-up of overcapacity.

The price elasticity of housing supply is therefore important in determining the level and volatility of house prices. It also systematically influences the functioning of the monetary transmission mechanisms. In this respect, the euro area could find itself in the worst of worlds. While house prices and construction activity show a relatively high long-term correlation due to common trends, in the short to medium-term, rising prices may lead to a very low increase in the housing stock as a result of low supply elasticity, as suggested in Graph 18. Simultaneously, empirical evidence points to a low housing wealth effect in the euro area, which means that rising prices do not trigger much additional consumption either.¹³

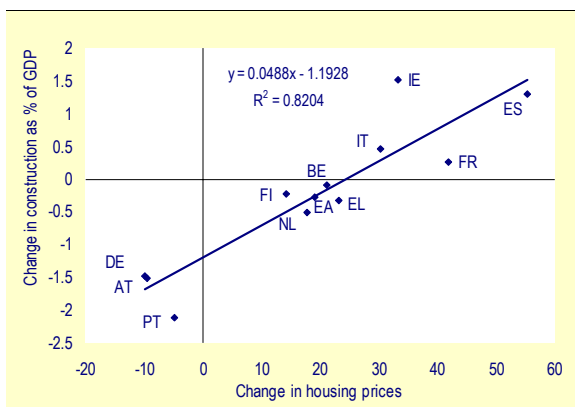
¹² This leaves aside possible complications due to distributional effects between house owners and house buyers and renters (at least as long as a link is maintained between rental payments and house prices).

¹³ Catte, P., Girouard, N., Price, R. and C., André (2004), 'Housing markets, wealth and the business cycle', OECD Economics Department Working Paper No. 394, 7 December.

Large differences within the euro area

The long-run correlation between construction volume and house prices in the euro-area countries appears to be very strong. Graph 19 plots the change in real house prices between 1999 and 2004 in different euro-area countries against the change in the share of the construction sector over the same time period, suggesting a strong relation between the two variables.¹⁴

Graph 19: Changes in house prices and construction shares (In % – 1999-2004)



Source: Commission services.

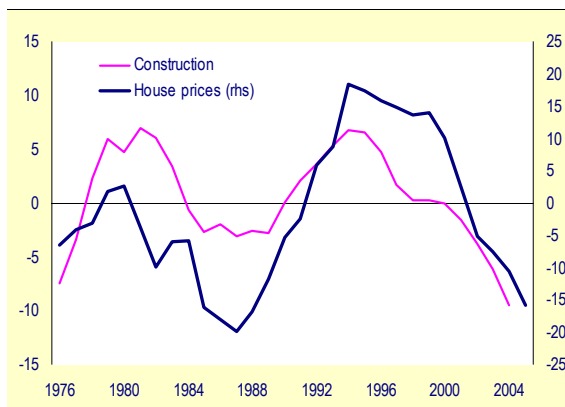
However, a strong correlation among two parameters does not necessarily imply causality. For instance, in countries where there is strong population growth, e.g. in Ireland, the housing sector share will increase, while due to land or other constraints, prices for houses will go up at the same time. This simply means that both indicators are influenced by the same exogenous developments. In addition, the causality does not only flow from higher house prices towards higher construction. There also exists a negative feedback from higher construction to lower house prices. The difficulty is therefore to filter out the supply elasticity from other interactions.

Before doing so, it is important to emphasise that the housing market of the euro area is far from homogeneous, as is evident from Graphs 17

¹⁴ The R² of the regression shown in the graph is 0.82, which is extremely high for a cross-sectional analysis. When the time span of the analysis is shortened to 3 years, house prices still explain 56% of the variation in relative change in construction volumes.

and 19. In particular, the German situation, which is heavily influenced by the post-unification boom-bust cycle in the construction sector, constitutes an important outlier. In contrast with developments in the rest of the euro area, German house prices and residential construction volumes have moved down over the last ten years (Graph 20).

Graph 20: Construction cycle and house price cycle, Germany (Deviation from trend in % – 1976-2004)(1)



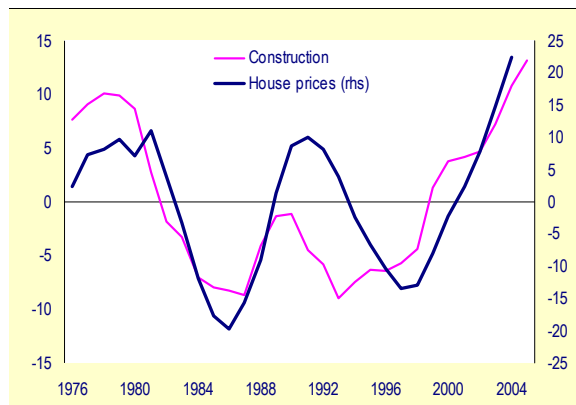
(1) House prices and residential construction are detrended with a linear filter.

Source: Commission services.

Germany’s size and divergent housing trend also entail a substantial aggregation problem for the euro area as a whole. Graph 18 shows clearly that the euro-area residential construction cycle is no longer moving in harmony with the house price cycle. However, a completely different picture emerges when Germany is excluded from the euro-area aggregate. Graph 21 shows that the link between house prices and construction apparently still holds in that case, without any apparent structural break. Since the same link (with reverse signs) also holds for Germany alone, the observed structural break in Graph 18 appears to be a statistical artefact caused by aggregation. The situation in individual countries therefore needs to be closely examined to gain any insight into the housing market, even if anecdotal evidence suggests a growing link among European real estate markets.



Graph 21: Construction cycle and house price cycle, euro area excluding Germany (Deviation from trend in % – 1976-2004) (1)



(1) House prices and residential construction are detrended with a linear filter.

Source: Commission services.

Empirical analysis suggests a relatively low supply response

Table 4 presents a time-series analysis of residential construction in eight euro-area countries, the UK and the United States. Supply is estimated as a function of real house prices. Population growth and interest rates are added as proxies for supply shifter.¹⁵ Changes in real house prices in the regression are lagged by one year.¹⁶ This formulation principally excludes the problem of endogeneity, which occurs as house prices themselves are negatively influenced by the volume of construction activity.¹⁷

The estimated price elasticities vary substantially across the euro area, even though the significance sometimes differs. Elasticities range between zero and 1.4. They are relatively high in Belgium

¹⁵ Population developments are used to capture major structural shifts in housing growth. Supply is assumed to respond to these changes via shifts in activity rather than changes in prices. Real interest rates are a proxy for capital costs. Suppressing these two additional regressors would not change substantially the main conclusions presented here.

¹⁶ The exception is the USA, where an equation without a time lag yielded the best results. This might be due to faster planning procedures and fewer land-use constraints than in Europe.

¹⁷ This may not be completely true, because house prices may also fall as a result of anticipated construction activity.

and Germany. France, Finland and Ireland have a mid-level elasticities. By contrast, the analysis shows very low price elasticities for Spain, Italy, the Netherlands, and Portugal. The supply elasticity is zero for the UK,¹⁸ but high for the USA.

A regression of the euro-area aggregate (including Germany) yields an elasticity of 0.4. This is also the only regression yielding a statistically significant structural break in the price elasticity in the mid-1990s, confirming the existence of an aggregation problem at the euro-area level.

In qualitative terms, these results broadly confirm the findings of other international comparisons. For instance, based on quarterly figures for housing starts, Swank et al. (2002)¹⁹ estimate price elasticities of new housing supply ranging from a high value of 2.1 for Germany over a middling value of 1.1 for France to 0.3 in the Netherlands. They also show that the UK housing supply is only half as responsive as the French housing market, a third as responsive as the US housing market, and only a quarter as responsive as the German housing market. Malpenzzi et al. (2001) arrive at similar findings for the UK and the USA.²⁰

The regressions suggest that house prices play a relatively small role in driving construction activity in the euro area as a whole. The great variations across Member States in house price elasticity reflect substantial structural and regulatory differences. An important aspect is that the elasticity measures only changes in the rate at which new housing is provided, which is not the same as changes in the overall housing supply. Indeed, there are large differences in the size of the construction sectors relative to the existing housing stock, which could explain differences in the observed supply elasticities of

¹⁸ In the case of the UK, the regression resulted in a small negative but statistically insignificant value.

¹⁹ Swank, J., J. Kakes and A.F. Tiemann (2002), "The housing ladder, taxation and borrowing constraints", De Nederlandsche Bank Staff Reports, N° 9.

²⁰ Malpenzzi, S. and Maclennan D. (2001), "The price elasticity of supply of new residential construction in the US and UK", *Journal of Housing Economics*, Vol. 10, 278-306.

Table 4: **Estimated elasticities of new housing supply**
(Endogenous variable: % changes in real investment in residential construction) (1)

Country	House price	Population growth	Real interest rate	R ² adjusted
Belgium	1.41 (3.55)	2.36 (0.85)	-0.02 (-1.69)	0.26
Germany	0.80 (2.43)	0.99 (2.10)	-0.01 (-1.81)	0.30
France (3)	0.48 (3.78)	0.31 (0.64)	---- (2)	0.31
Spain	0.03 (0.72)	4.72 (4.59)	---- (2)	0.46
Italy	0.11 (1.50)	1.38 (1.64)	-0.003 (-0.94)	0.19
Ireland	0.46 (2.00)	---- (2)	-0.004 (-0.92)	0.09
Netherlands	0.21 (2.23)	---- (2)	---- (2)	0.12
Portugal (3)	0.26 (1.24)	---- (2)	---- (2)	0.03
Finland	0.49 (3.39)	---- (2)	-0.005 (-0.97)	0.30
Euro Area	0.37 (2.85)	0.19 (0.80)	-0.009 (-1.92)	0.24
UK	-0.006 (-0.03)	---- (2)	-0.002 (-0.36)	-0.07
USA	1.47 (4) (1.5)	---- (2)	---- (2)	0.11

(1) t-values in brackets. Based on annual data from 1974 to 2004. New housing supply = real residential investment; House prices=annual % change in nominal house priced deflated by CPI and lagged by 1 year; (except USA) Population = annual % change in population between 30 and 44 lagged by 1 year; interest rate= average of real short and long term rates (lagged by one year).

(2) Suppressed because of wrong sign.

(3) Total construction;

(4) Not lagged.

Source: Commission services; ECB; US Bureau of Economic Analysis

new housing. This suggests the need for a cautious interpretation of the estimated elasticities, which would need to be adjusted for the different stock-to-flow ratios. After adjustment, the estimated response of housing stock to house prices in France is identical to that in Germany, to give just one example. Furthermore, considering that the growth in housing stock in Spain is seven times that of, say, Germany, and dominated by fundamentals, it is not surprising that it is difficult to find a statistically significant interaction.

Other structural factors that influence the supply response are land-use restrictions and permit procedures. In addition, the supply elasticity is influenced by the relative importance of government-provided social housing and the

real-estate development industry. Local land-use regulations and slow permit procedures have been identified among the reasons for the rigidity of housing supply and an important factor underlying both the trend rise of house prices and the high variability in the UK. Similar factors affect house price dynamics in the Netherlands and in Spain.²¹

Table 5 lists some indicative structural features of the housing market, which underline the diversity of the housing markets in the euro area. However, the interactions among the various indicators are too complex to single out a single one as a determinant of house-price elasticities.

²¹ Catte et al. (2004), *ibid.*



Nor is it clear whether all factors only affect the supply side.

Table 5 : Mortgage and housing market indicators

	Share of owner occupied housing (2002)	Typical loan term (years)	Typical loan-to-value ratios	Housing stock (Avg. annual gr. 2000-04)
Belgium	71	20	83	0.8%
Germany	42	25-30	67	0.6%
Greece	83	15	75	na
Spain	85	15	70	4.0%
France	55	15	67	1.0%
Italy	80	15	55	0.2%
Ireland	77	20	66	8.1%
Netherlands	53	30	90	0.8%
Portugal	64	15	83	0.0%
Finland	58	15-18	75	1.2%

Source: Catte et al. (2004) ; European Mortgage Federation.

Conclusions

The rise in house prices over the last ten years in the euro area reflects a combination of strong demand and a muted supply response. Econometric analysis shows that housing supply is responding only modestly to changes in prices in the euro area as a whole. This low responsiveness appears to be linked to structural parameters, notably building and land-use regulations. There is also evidence that the price responsiveness of supply for the euro area has decreased since the 1990s and that construction activity has remained surprisingly sluggish in recent years.

However, the euro-area housing market is still far from homogenous and the price elasticity of housing supply varies significantly across Member States, being relatively high in countries such as Germany and France and much lower in Italy, Spain or the Netherlands. The reduction in price elasticity of housing in the last ten years for the euro-area aggregate appears to be largely attributable to Germany, where house prices and construction have been strongly depressed by the oversupply the followed on the heels of unification.

Clearly, countries can influence the supply elasticities through regulatory changes to allow a more flexible supply response. This would reduce the volatility of house prices but might lead to the risks of possible bubble formation shifting from private consumption to construction investment.

Focus

II. Accumulated household debt – a counterpart to rising house prices in the euro area

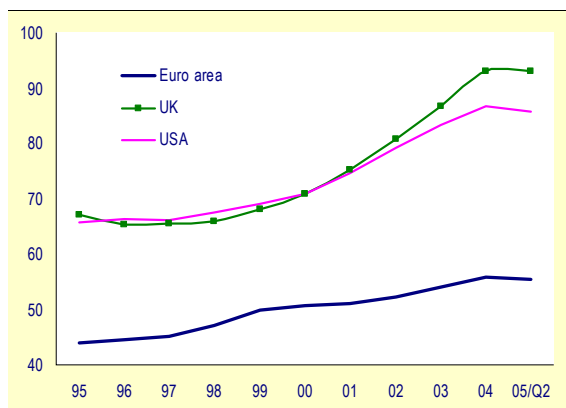
A counterpart to the sustained rise in house prices within the euro area in recent years has been the accumulation of household debt, much of which has been secured against house purchases. These related phenomena have been facilitated by favourable financing conditions, reflecting historically low interest rates and supply-side changes in mortgage markets which have expanded access to credit. A rise in the level of debt increases households’ exposure to changes in house prices as well as to economic shocks affecting income growth and interest rates. It may also lead to overstretched balance sheets that require a period of consolidation and spending restraints. For the euro area as a whole, risks to growth related to household indebtedness appear quite low at this juncture. However, developments in household debt have been characterised by considerable heterogeneity at Member State level and the situation may be less benign in some Member States where rapid debt accumulation has been associated with fast growth in household spending, deteriorating balance sheets and soaring house prices. These Member States appear to be more vulnerable to economic shocks such as a rise in interest rates, a correction in house prices or a downward revision of domestic growth prospects.

The steady rise in household indebtedness within the euro area in recent years – which contrasts with the process of debt consolidation observed in the corporate sector – is increasingly a focus of attention among analysts and policymakers. This focus section reviews the factors which have led to the rapid accumulation of debt by households since the beginning of the decade and assesses the associated risks to economic growth in the euro area. Section 1 examines recent developments in household debt and their likely causes. Section 2 reviews the various channels through which high indebtedness may affect economic growth. Section 3 then proposes an assessment of the current debt situation in the euro area and in the euro-area Member States. Based on this examination and the channels identified earlier, Section 4 discusses a number of potential risk factors – of global and euro-specific origin – to households in the euro area. Section 5 concludes.

1. Recent developments in household debt

Household indebtedness has increased steadily in most Western countries since the mid-1990s. In the euro area, the ratio of household debt to GDP climbed from 44% in 1995 to 56% in 2004 (Graph 22). The accumulation of debt was even more rapid in countries such as the UK and the USA, where the debt to GDP ratio increased by about 20-25 pp over the same period.

Graph 22: Household debt, euro area, UK and USA
(Ratio to GDP in % – 1995 2004) (1)



(1) Euro-area data do not include EL, IE and LU.
Source: Commission services, US Federal Reserve System.

Rapid debt accumulation in Western economies may be attributed to a combination of macroeconomic, demographic and structural factors.

At the **macroeconomic level**, historically low interest rates have been a key driver of credit demand. In addition, demand for housing and mortgages – which accounts for most of the increase in total household lending – has been boosted by a stable and low-inflation environment.²² In some countries, there is also evidence that rapid rises in house prices have

²² High inflation raises the financial burden of a loan in the early years of repayment.



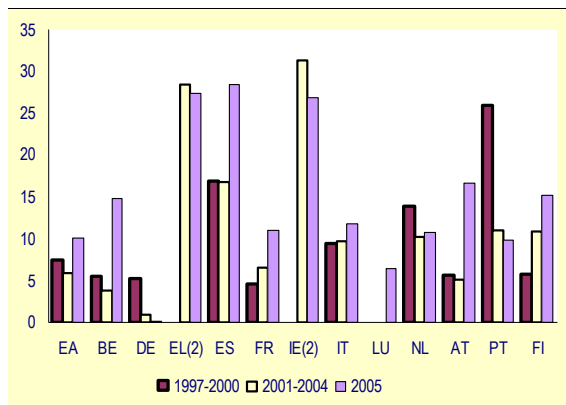
encouraged borrowing by raising the value of collateral and easing credit restrictions.²³

In addition to favourable macroeconomic conditions, **demographic developments** have also tended to be supportive of the housing market in many countries. Population growth and the demographic developments that affect the number of households have implications for the demand for housing and for mortgages. Large immigration flows, falls in the average size of households, rises in the share of population of household formation age and increasing female participation in the labour market all have potentially important implications for household credit demand.

Finally, increased household borrowing also reflects **structural changes** both on the supply side and the funding side of the mortgage markets, which have presented households with expanded access to credit for house purchase and eased liquidity constraints. Among those changes affecting the supply of mortgage financing has been the increased availability of: (i) extended maturity of contracts, providing borrowers with more time to repay a given amount borrowed; (ii) higher loan-to-value ratios, opening up enlarged borrowing opportunities for borrowers with limited capital of their own; (iii) an increasing share of variable interest rate loans, typically offering lower-cost borrowing when compared with longer-term fixed rates; and (iv) interest-only loans as well as – in some cases – equity withdrawal possibilities, permitting households with limited resources to acquire a house and enabling house owners to borrow against equity acquired in their house. There have also been changes on the funding side of the mortgage market, including the growing availability of both mortgage bonds and debt securitisation, which have allowed mortgage financing institutions to source their funding beyond their retail deposit base.

²³ While there is a clear causal relation between credit conditions and house prices (better credit conditions fuel demand for housing and mortgages and thereby house prices), there is also empirical evidence of a reverse effect of property prices on credit growth in some countries. The potency of this reverse effect is related to structural features of the mortgage market. See Tsatsaronis, K. and H., Zhu (2004), 'What drives housing price dynamics: cross-country evidence', BIS Quarterly Review, March.

Graph 23: Household debt growth in euro-area Member States (average annual growth in %) (1)



(1) Data for 2005 refer to MFI debt growth.

(2) Growth in 2004 instead of 2001-04.

Source: ECB, Commission services.

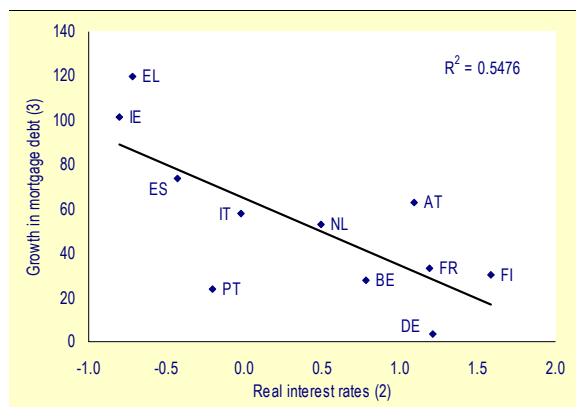
The overall euro-area picture of relatively sustained household debt accumulation conceals large differences, ranging from a near stagnation of household debt in Germany since 2000 to rapid credit growth in most other Member States (Graph 23). In recent years, household debt accumulation has been particularly sustained in Spain, Greece, the Netherlands, Ireland and Portugal. The cross-country heterogeneity of developments in household indebtedness within the euro area reflects several factors.

First, the adoption of the euro was associated with a very substantial downward convergence in interest rates and increased access to external bank lending in several Member States (notably in Greece, Spain, Italy and Portugal). Over and above favourable global liquidity conditions, these factors have contributed to a surge in household credit in most of the countries concerned.

Second, in some Member States, comparatively higher inflation (due to either the so-called Balassa-Samuelson effect or different cyclical positions) has further depressed real interest rates, providing an additional boost to credit demand (Graph 24). The pro-cyclical effect of real interest rates may have been reinforced by the mutual interaction between real interest rates and house prices (low real interest rates fuel demand for housing, leading to a rise in house prices which pushes up growth and inflation via

wealth effects and further depresses real interest rates).

Graph 24: Household mortgage debt and real interest rates, euro-area Member States (2002-04 – in %) (1)



(1) No data for LU.
 (2) Average real short-term interest rates (consumption deflator) 2002-04.
 (3) Growth in mortgage debt between 2001 and 2004.
Source: European Mortgage Federation, Commission services.

Third, demographic developments have been more supportive of demand for housing and mortgages in some Member States than others due, for instance, to significant immigration flows (e.g. Ireland and Spain) or faster growth of the population of household formation age (e.g. Ireland, Spain, Netherlands and France).

Finally, structural differences in mortgage markets and in the fiscal treatment of housing have also contributed to the observed dispersion of developments in household indebtedness. For instance, Member States where mortgages are predominantly at variable rates have tended to experience faster credit growth in recent years (Greece, Spain, Ireland and Italy). There have also been cross-country differences in the pace of mortgage product innovation and of structural change in the mortgage markets.²⁴ In particular, some Member States with relatively underdeveloped mortgage markets seem to have entered a catching-up process and recorded comparatively faster credit growth.

²⁴ For a review of recent mortgage product innovation in selected countries see OECD (2005), "Recent house price developments: the role of fundamentals", OECD Economic Outlook, No. 78, Chapter 3, December.

2. The implications of household debt for economic growth – reviewing the channels

An increase in household debt is not per se a source of concern for economic performance, but excessive accumulation of debt can create vulnerabilities to adverse shocks. While even the accumulation of high levels of debt may simply be a sign that households are responding optimally to positive changes in their economic environment, three main considerations need to be taken into account.

A rapid increase in borrowing may lead **households to accumulate a higher-than-desired level of indebtedness**, inducing a subsequent cut in household spending so as to improve their balance sheets. Typically, this situation will arise when households overestimate their long-term income prospects or their capacity to service their accumulated debt.

- Overestimation of income prospects and debt-servicing capacity may be more frequent during phases of sustained economic upswings or in periods of marked structural change. Developments in some EU Member States in the 1980s also reveal that phases of rapid financial market liberalisation and deregulation may raise the risk of a temporary build-up of excessively optimistic expectations, as economic agents (including policymakers) need time to fully understand the implications of their changing environment.²⁵
- With respect to underestimation of a future debt burden, there are indications that households borrowing at variable interest rates may tend to form excessively optimistic expectations of future interest rate

²⁵ Increasing competition in the banking sector leads to a relaxation of credit constraints that fuels domestic demand, particularly if macroeconomic policy is slow to respond to implications for growth in the short term. The associated pick-up in growth may generate excessive income expectations and may also be reinforced by rapid growth in house prices. These factors seem to have been at play in the UK and Nordic countries in the 1980s. See Debelle, G. (2004), 'Macroeconomic implications of rising household debt', BIS Working Paper No. 153, June.



developments when monetary policy is accommodative.²⁶

In any event, a period of excessively optimistic expectations is typically followed by a period of spending retrenchment during which households restore overstretched balance sheets by restraining their expenditure.

A higher level of debt makes **households more vulnerable to economic shocks** affecting disposable income and interest rates. A rise in the overall debt levels may be associated with an increase in the share of households for which the debt-servicing costs represent a substantial portion of disposable income. In that case, an unexpected loss in income – especially if it takes the form of an increase in unemployment²⁷ – can lead to a rapid rise in the number of households forced to raise their level of precautionary savings because they face a high probability of default. A related argument is that a high level of indebtedness restricts the possibility of using further credit for consumption smoothing and therefore raises the sensitivity of consumption to fluctuations in disposable income. A higher debt level also means greater exposure to unexpected changes in interest rates. The size of this impact and the speed of its transmission will vary substantially across countries, depending on the sensitivity of debt-servicing costs to changes in interest rates. In countries where mortgages are predominantly at variable rates, households will be directly exposed to an increase in interest rates. In countries where rates are mostly fixed, banks will bear more of the exposure to the interest-rate risk, depending on their financing structure.

A higher level of debt may be associated with **higher exposure to changes in house prices**. A recent study has identified a strong cross-country correlation between the strength of

housing-wealth effects on consumption and the size of the mortgage market.²⁸ Such a correlation may partly reflect a causal link. A fall in house prices will entail an increase in the probability of default for heavily-indebted households and an increase in precautionary savings. To the extent that an increase in the aggregate level of indebtedness is associated with a rise in the share of heavily-indebted households, it will also mean higher sensitivity to house price fluctuations. More generally, mortgage markets tend to be larger in those countries where they are more liberalised and the correlation is also likely to be an indication that the size of housing-wealth effects depends on the degree of sophistication of mortgage markets.

3. Assessing household borrowing trends in the euro area

The euro area as a whole

Debt and balance-sheet data would tend to ease any immediate concern about the level of household indebtedness in the euro area as a whole. Although the euro-area household debt ratio has climbed significantly in recent years, it remains well below the corresponding ratios in the United States and the United Kingdom. Moreover, the debt-to-financial-asset ratio has risen only moderately (Graph 25) and debt-servicing costs have actually been declining as a proportion of disposable income (Graph 26).²⁹ Finally, survey evidence suggests that the bulk of the debt is held by high-income households who also tend to enjoy a relatively sound financial position.³⁰

²⁶ For evidence on the UK mortgage market see Miles, D. (2004), ‘The UK mortgage market: taking a longer term view – Final Report and recommendations’, HM Treasury, March.

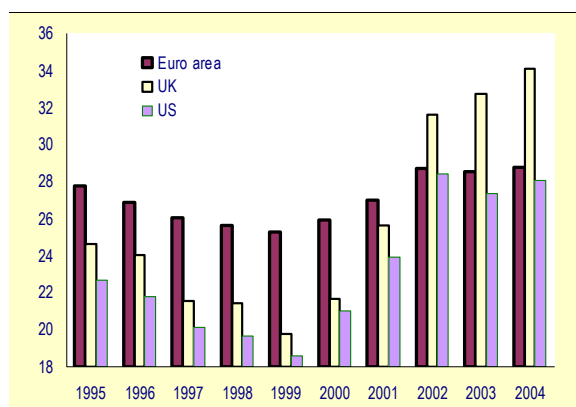
²⁷ A rise in unemployment usually means a large drop in income for a limited number of households. Other possible sources of a change in income (e.g. increased taxation, fluctuations in wages rates) tend to be less concentrated on a small part of the population.

²⁸ Catte, P., Girouard, N., Price, R. and C., André (2004), ‘Housing markets, wealth and the business cycle’, OECD Economics Department Working Paper No. 394, 7 December.

²⁹ Ideally, the assessment of household balance sheets should not be restricted to financial assets and should include developments in tangible assets such as the housing stock. Unfortunately, data on tangible assets are not available for the euro area as a whole.

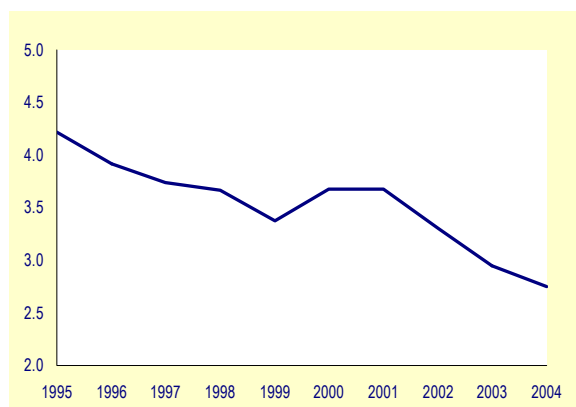
³⁰ European Central Bank (2005), ‘Financial stability review’, December.

Graph 25: Household debt to financial assets, euro area, UK, USA (In % – 1995-2004) (1)



(1) Euro-area data do not include EL, IE and LU.
Source: Commission services, US Federal Reserve System.

Graph 26: Interest paid by households as a share of disposable income, euro area (In % – 1995-2004) (1)



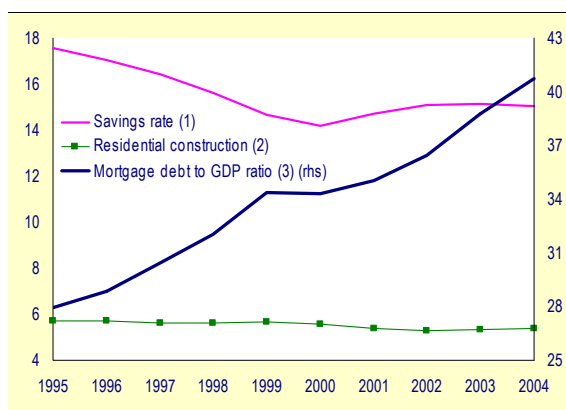
(1) Excluding IE and LU.
Source: Commission services.

Analysis of the real counterparts of debt accumulation is an important part of the assessment of an economy's exposure to debt. If credit growth has fostered a spending boom and an expansion in real activity, a mere stabilisation of indebtedness could have a significant negative bearing on economic growth.

However, the exposure of economic growth to a change in the pace of debt accumulation appears fairly limited in the euro area as a whole. There is no evidence that households have borrowed substantially to consume or that the build-up of household debt has spurred a boom in residential construction. A moderate decline in the savings ratio accompanied the increase in mortgage

indebtedness in the late 1990s, but household consumption has remained fairly sluggish since 2000, despite a continued rise in indebtedness (Graph 27). Similarly, the build-up of mortgage debt since the mid-1990s has been associated with only moderate growth in euro-area residential construction. For a variety of structural reasons, the euro-area residential construction sector is characterised by the slow and relatively weak response of supply to changes in demand (see also the section on 'The weak response of housing supply to surging prices' in this issue).

Graph 27: Mortgage debt and household savings, euro area (In % – 1995-2004) (1)



(1) As a share of disposable income – EU12 excluding IE and LU.
 (2) As a share of GDP – EU12 excluding PT.
 (3) EU12 excluding AT and PT.
Source: Commission services, European Mortgage Federation.

On this basis, it would seem that the euro-area household balance sheet is relatively robust and that, in any case, an adverse shock to disposable income or debt servicing costs would have only a limited impact on GDP growth.

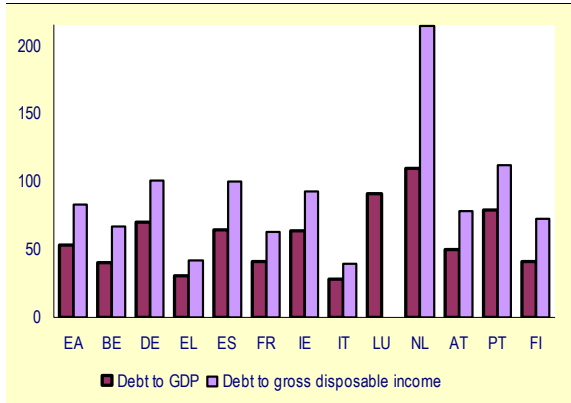
The euro-area Member States

The assessment of developments in household indebtedness is less sanguine in some of the euro-area Member States. The euro-area average hides a large dispersion in household indebtedness across the Member States with debt to disposable income figures roughly at 100% or above in Germany, Spain, Ireland, the Netherlands and Portugal (Graph 28). In 2005, debt of monetary and financial institutions (MFI) grew by more than 25% in Greece, Spain and Ireland. Other countries recorded sharp credit



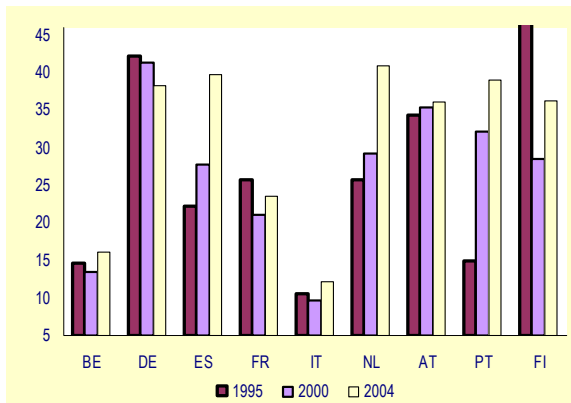
growth in earlier periods, e.g. the Netherlands and Portugal during the second half of the 1990s.

Graph 28: Household debt-to-GDP and to disposable income ratios, euro-area Member States (In % – 2004) (1)



(1) MFI debt for EL, IE and LU – 2003 debt to gross disposable income data for IE and PT
Source: Commission services, ECB and Irish Central Bank.

Graph 29: Household total-debt-to-financial-asset ratio, euro-area Member States (In % – 1995-2004) (1)

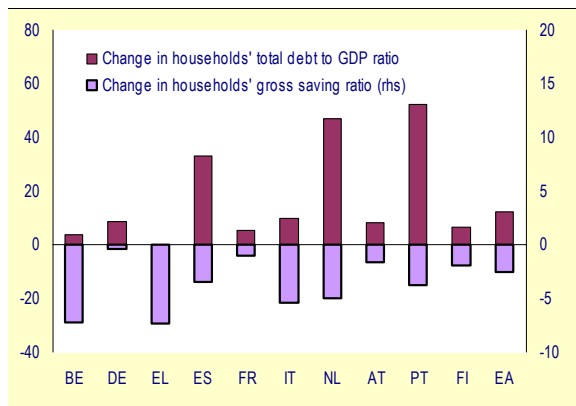


(1) No data for EL, IE and LU.
Source: Commission services.

Historically low interest rates have allowed households to contain their debt servicing costs. National account data indicate that the ratio of interest paid by households to their disposable income has decreased in the past few years in all Member States, except for Greece. Nevertheless, in some of the Member States for which data are available, the increase in indebtedness has led to a deterioration in household balance sheets. For example, a sharp rise in the debt-to-asset ratio has been witnessed in Spain, the Netherlands and

Portugal (Graph 29). In this context, it should be noted that there are no data available on debt-to-asset ratios for households in Ireland, Greece and Luxembourg so it is difficult to assess the full implications of debt accumulation for balance sheets in these three countries.

Graph 30: Changes in household total-debt-to-GDP ratio and savings ratio, euro-area Member States (In % – 1995-2004) (1)



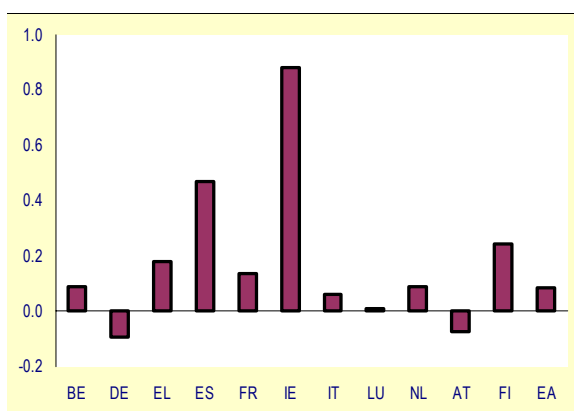
(1) Debt data are not available for EL, IE and I.U. Savings data are not available for IE and LU.
Source: Commission services.

In some Member States, the rise in household debt would appear to have been partly used to finance private consumption (Graph 30). Greece, the Netherlands and Portugal all recorded a substantial decline in their savings ratio during the second half of the 1990s (no data are available for Ireland). In the Netherlands and Portugal, the consumption boom was followed by a period of consolidation in the early 2000s during which the savings ratio experienced a partial rebound. In 2004 or 2005, however, the ratio edged down again in both countries. In Greece, the savings ratio pursued its downward course in the early 2000s and has stabilised since.³¹ This would indirectly suggest that private consumption growth in these Member States could be at risk in the event of a reversal of recent trends in credit growth.

³¹ In contrast, the household savings ratio in Spain has moved more in line with the euro-area average during most of the past 10 years as the consumption boom in that country was mainly financed by strong income growth on the back of rapid improvements in the labour market. However, the Spanish savings ratio dropped by 3 percentage points in the past two years, when the overall euro-area savings ratio remained nearly stable.

In general, there is little evidence to suggest that residential construction in euro-area Member States has benefited significantly from the increase in household debt and so there would be little prospect of a sharp decline in activity in the event of a slowdown in mortgage credit growth. However, Spain and Ireland, where the housing sector has made a significant contribution to economic growth in recent years, may be exceptions in this respect (Graph 31).

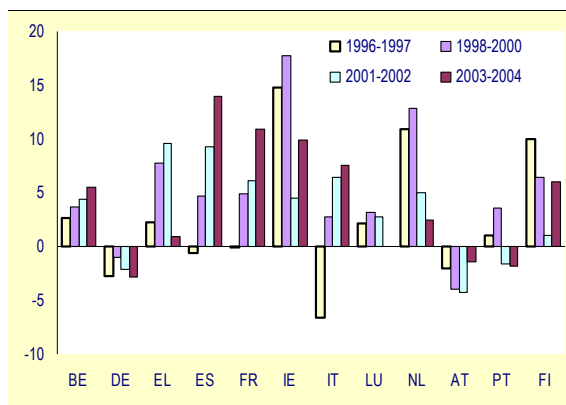
Graph 31: Residential construction, euro-area Member States (Average annual contribution to GDP growth in % – 1995-2004) (1)



(1) No data for PT.
Source: Commission services.

While residential construction may not have benefited generally from growth in mortgage credit, a major counterpart has been rapidly-rising house prices in several Member States. Fast-growing mortgage lending in a context of inelastic construction supply has resulted in double-digit rates of increase in house prices in several Member States, peaking at an annual rate of about 18% in Ireland (1998/2000), 14% in Spain (2003/4), 14% in the Netherlands (1998/2000), 9% in Greece (2001/2002), and 11% in France (2003/4). The inflation in house prices in several Member States is unprecedented in terms of size and duration and there is a risk that housing markets may be overvalued relative to historical norms. A notable exception is Portugal, where house prices have risen at a moderate pace despite a period of rapid expansion in household credit in the late 1990s. House prices in Germany and Austria have clearly under-performed the euro-area average and this trend mirrors a relatively subdued pace of credit growth in the two countries.

Graph 32: Real house prices, euro-area Member States (Annual average changes in % – 1995-2004)



(1) 1997 only in the case of FR.
Source: ECB, European Mortgage Federation for LU, Commission services.

In sum, while the aggregate indebtedness of households in the euro area is not a cause for concern, evidence suggests a need for vigilance in some euro-area Member States where households have accumulated debt at an exceptionally rapid pace. In these Member States, the combination of rapid debt accumulation, weakened balance sheets, decreasing savings ratios and soaring house prices would tend to heighten the vulnerability of households to adverse shocks. Possible sources of such shocks are examined in the next section.

4. Risk factors associated with high household indebtedness in some euro-area Member States

In identifying possible adverse shocks to highly indebted households in some euro-area Member States, the main focus is on likely developments in interest rates, economic growth (as a determinant of disposable income) and the housing market.

Revised expectations of interest rates and economic growth

While the outlook for the euro-area economy is the brightest for several years, the extent of current financial imbalances in the global economy presents a continuing risk to a sustainable recovery. The low level of short-term



interest rates and the global decline in benchmark long-term interest rates to historically low levels has been accompanied by an even greater decline in risk premiums, raising concern that an investor search for yield in an environment of ample global liquidity may have resulted in widespread mispricing of risk. If risk has been mispriced by the markets, the current constellation of global and euro-area interest rates would be vulnerable to an abrupt change in investor sentiment, particularly if global liquidity conditions were to tighten further.

While the near-term prospect of an abrupt rise in interest rates is low, the possibility cannot be ruled out entirely. Financial markets remain concerned about the US external deficit and the associated risk of disorderly adjustment in the US dollar exchange rate. If interest rates were to move sharply higher as imbalances unwind, the prospects for growth in the global economy – including the euro-area economy – would be undermined and euro-area households could be hit by the twin effects of higher-than-expected debt servicing costs and lower-than-expected growth in their disposable income.

Irrespective of developments in the global economy, assessment of risks to interest rates and economic growth must also take account of special circumstances within the euro area. In several Member States, euro adoption was associated with a downward convergence in interest rates and better access to external bank lending. These factors have contributed to a surge in household credit often reinforced by pro-cyclical movement in real interest rates. While this phenomenon reflects rational inter-temporal smoothing on the part of economic agents, the consequent rise in household debt has been unusually sharp and could be an indication of overly optimistic growth expectations that would leave the Member States vulnerable to a domestically-generated slowdown in growth. Rapid cyclical growth – typically associated with rapid financial balance sheet deterioration and household spending booms – which is mistaken as a change in permanent income tends to be associated with credit misallocation on a large scale.

Correction in house prices

In a central scenario of sustained recovery in the euro-area economy, a gradual cooling in housing markets seems the most likely outcome in the medium term, but important risk factors remain linked to the specific nature of the current phase of increasing house prices.

First, house prices in several euro-area Member States are experiencing their longest phase of increase since the 1970s and have reached historical highs. These features suggest that the associated expansion in mortgage credit may extend to a larger-than-usual share of the population, possibly altering the overall risk profile of household debtors. As house price inflation has far exceeded the growth rate in disposable income, it is likely that the leverage of individual household debtors has risen significantly. In such circumstances, there is a risk that, although survey evidence suggests that the bulk of mortgage debt in the euro area is held by households with a sound financial position, the “marginal” mortgage taker could be in a more vulnerable financial situation.

Second, typical indicators of house price developments could understate the extent of overvaluation in localised “hot spots”. These indicators are normally constructed on a national basis and therefore might not reflect the huge price rises recorded in agglomeration centres. In such circumstances, house prices in some urban areas might be more out of line with historical norms than suggested by official figures and consequently more prone to correction.

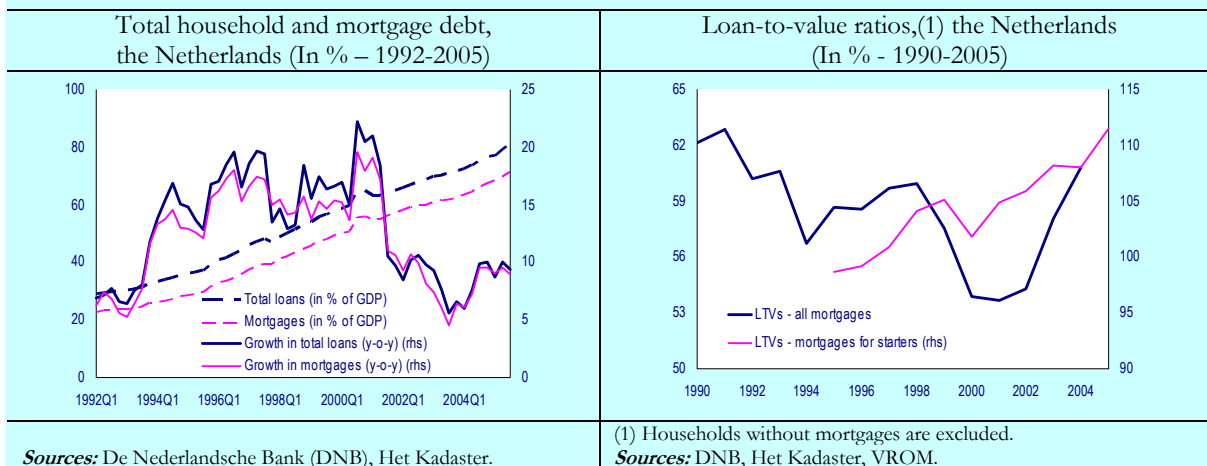
Third, while many valid arguments can be brought forward in defence of recent house price and credit developments – including population growth, catch-up factors, financial liberalisation, etc. – one cannot exclude the possibility of excessive optimism among households, implying an overestimation of long-term income prospects and an underestimation of future debt burdens. A recent review of available estimates of fundamental price levels for a limited number of countries by the OECD suggests possible house

Box 2: Debt accumulation and growth – the recent Dutch experience

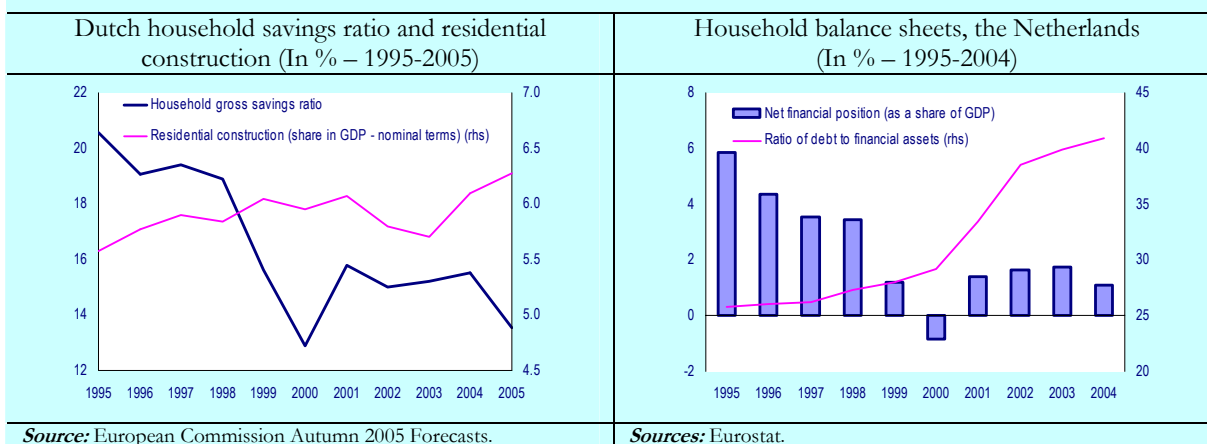
The Dutch economy posts the highest level of household indebtedness in the euro area and has experienced one of the fastest debt accumulations in Europe since the mid-1990s. The present box reviews these developments and, in particular, households' response to the period of weak growth since 2001.

1. Developments in household debt since the mid-1990s

Since the early nineties the indebtedness of Dutch households has grown substantially from below 30% of GDP in 1991 to over 80% of GDP in 2005 (see left panel of next chart). Almost 90% of this debt is mortgage debt. Several factors explain the substantial increase in indebtedness.



Decreasing real interest rates as well as the interplay between surging house prices (which have tripled since the early nineties) and mortgage growth are important but do not tell the full story. A major role has been played by the Dutch fiscal regime that permits full tax deductibility of (most) mortgage interest payments at the marginal tax rate. The appearance of new mortgage products that take advantage of tax deductibility⁽¹⁾ stimulated the withdrawal of mortgage equity. Finally, the loosening of lending criteria, which has been attributed to stronger competition between mortgage providers, boosted the growth of mortgage debt in the late nineties. All these factors have led to an increase in the Loan-To-Value (LTV) ratio of first-time buyers on the housing market (see right panel of chart above). In recent years the Dutch government has taken some steps to reduce the generosity of the fiscal regime for mortgages.



Turning to the counterparts of household debt, rapid credit growth fuelled a surge in household spending in the late 1990s as shown by a marked decline of the savings ratio and sustained demand for residential construction (see left panel of chart above). However, given supply rigidities, the latter has tended to be reflected more in rising prices than in real activity. The period of buoyant spending was then followed by a period of consolidation. The savings ratio rebounded strongly in 2001, partly in response to falling stock prices, and the share of residential construction in GDP experienced a temporary decline in 2002-03.



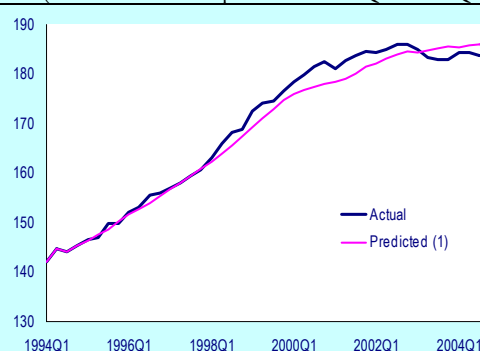
Regarding balance sheets, robust consumption and residential spending led to a marked deterioration of households' balance sheets in the late 1990s. Households' net financial surplus (i.e. the acquisition of financial assets minus the incurrence of financial liabilities) decreased steadily over the period, turning briefly negative in 2000. It recovered in the early 2000s although to a relatively low level (see right panel of previous chart). After a sharp increase in 2001-02, the ratio of households' debt to financial assets continued to increase in 2003-04 although at a slower pace.

2. Households' response to the recent period of slow growth

In recent years, the Netherlands have been an interesting case study of households' behaviour in the presence of a combination of high debt and weak economic growth. Since 2001, Dutch households have responded to deteriorating income and wealth conditions by reining in consumption and engaging in a relatively modest restructuring of their balance sheets while borrowing further but at a slower pace.

Spending cuts. The persistent weakness of consumption since the beginning of the decade is not necessarily evidence that spending has been constrained by excessive debt accumulation. It could indeed reflect a normal response by households to deteriorating economic growth conditions. In order to test this possibility, a standard consumption function (where debt plays no role) was estimated. Results suggest that Dutch consumption was stronger than expected on the basis of developments in wealth and income in the late 1990s, with a gap of more than 2% at the end of 2000. In contrast, it has been weaker than expected since 2001 with a maximum gap of above 1% at the end of 2003. Although these results must be interpreted with caution, they could be evidence that Dutch consumers have gone through a period of 'excessive optimism' in the late 1990s and a period of consolidation since then.

Private consumption in the Netherlands
(Bn euro in 1995 prices – 1995Q1-2004Q4)



(1) As predicted by a consumption function relating consumption to disposable income, financial wealth, and housing wealth.

Source: NIESR, European Commission.

Balance-sheet restructuring. Dutch households have adjusted to weak growth conditions by raising their financial surplus and engaging in some balance sheet restructuring. These efforts, however, have remained relatively modest. On the one hand, households' net financial assets (i.e. financial assets minus borrowing) have increased again since 2003 and there are also indications that households have modified the composition of their financial wealth by accumulating more liquid assets. On the other hand, the financial vulnerability of some groups of households seems to have increased noticeably. For instance, estimates of the Dutch Central Bank suggest that a large share of homeowners in the lower income ranges would be left with mortgage in excess of their home value if house prices were to drop by 20%.⁽²⁾ In addition, households seem to have been slow to lock in low interest rates. Debt is predominantly of a fixed rate nature in the Netherlands but households have first reacted to the decline in interest rates by opting for variable rates or rates fixed for a short term. Although the trend has been reversed since 2005, Dutch households seem relatively more exposed to fluctuations in interest rates than a few years ago.

Overall, the weak cyclical conditions prevailing since 2001 have not been sufficient to trigger a major debt consolidation in the Netherlands. However, high debt seems to have exerted some pressure on consumption in the past few years as households have corrected some spending overshooting of the late 1990s. Furthermore, the latest downturn was somewhat atypical as it was associated with historically-low real interest rates (which have eased the burden of the debt considerably) and steady growth in house prices (which has allowed to households to borrow against rising equity). The exposure of the economy to changes in interest rates and house prices has increased in recent years and high household debt could prove to be a more substantial drag on household spending in case of simultaneous negative shocks on interest rates and house prices.

⁽¹⁾ Debt is often not paid back until maturity but endowments are made on savings and investments accounts to pay back the debt. This is a major reason why Dutch debt ratios are higher than elsewhere.

⁽²⁾ De Nederlandsche Bank (2005), 'Confidence, happiness and financial situation of households', Quarterly Bulletin, September, pp. 55-64.

price overvaluations in a few euro-area Member States.³²

Finally, even a mere stabilisation of house prices at their prevailing high level could, in some countries, entail a significant downshift in economic growth as past gains in housing wealth wane. The experience of the Netherlands is revealing in this context (see Box 2).

5. Conclusion

A counterpart of the sustained rise in house prices within the euro area in recent years has been the accumulation of household debt, much of which has been secured against house purchases.

While the relevant indicators suggest that household indebtedness is not currently a major concern at the level of the euro area, the situation may be more worrying in some euro-area Member States where debt levels can be considered to be high and where rapid debt accumulation has been associated with weakened balance sheets, fast growth in household spending and soaring house prices. Moreover, the number of Member States in this situation could well expand if current trends were to persist. Highly-indebted households in these Member States are

vulnerable to a rise in interest rates which may imply a heavier-than-expected debt servicing burden, slower economic growth which may imply a lower-than-expected increase in disposable income, and a correction in house prices which may impact severely on their net financial wealth.

On the basis of the current outlook for economic growth and interest rates, none of these risks can be said to have a high probability in the short term. Nevertheless, the possibility of a less benign scenario is not negligible in light of persistent global financial imbalances and the extent to which house prices in some Member States have departed from historical norms. Furthermore, potential economic costs associated with these risks are likely to be high.

Such considerations are particularly relevant in the context of countries participating in a monetary union, where the possibility of overshooting the optimal debt level is increased by the pro-cyclical real interest rate channel which can itself be reinforced by developments in house prices. Furthermore, euro-area monetary policy will not be able to respond to the effects of expenditure retrenchment at the Member State level, unless such a retrenchment shows effects for the euro area as a whole.

³² OECD (2005), *ibid.*



IV. Recent DG ECFIN publications

1. Policy documents

European Commission – Directorate General for Economic and Financial Affairs

February 2006 Interim Forecast

http://europa.eu.int/comm/economy_finance/publications/european_economy/2006/interim_forecast_0206_en.pdf

EUROPEAN ECONOMY. No. 3. 2005

Public finances in EMU –2005

http://europa.eu.int/comm/economy_finance/publications/publicfinance_en.htm

EUROPEAN ECONOMY. No. 5. 2005

Economic Forecasts, Autumn 2005 - 2007: growth picks up

http://europa.eu.int/comm/economy_finance/publications/european_economy/forecasts_en.htm

EUROPEAN ECONOMY. No. 6. 2005

The EU Economy 2005 Review

http://europa.eu.int/comm/economy_finance/publications/european_economy/the_eu_economy_review_en.htm

EUROPEAN ECONOMY. OCCASIONAL PAPERS. No.21. November 2005

Responding to the challenges of globalisation

http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers21_en.htm

EUROPEAN ECONOMY. OCCASIONAL PAPERS. No.22. January 2006

Report on the Lisbon National Reform Programmes 2005

http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers22_en.htm

EUROPEAN ECONOMY. ENLARGEMENT PAPERS. No.25. August 2005

2005 Fiscal notifications of acceding and candidate countries: overview and assessment

http://europa.eu.int/comm/economy_finance/publications/enlargement_papers/elp25_en.htm

EUROPEAN ECONOMY. ENLARGEMENT PAPERS. No.26. November 2005

Progress towards meeting the economic criteria for accession: 2005 Country assessment

http://europa.eu.int/comm/economy_finance/publications/enlargement_papers/elp26_en.htm

EUROPEAN ECONOMY. SPECIAL REPORT. No. 4. 2005

The 2005 EPC projections of age-related expenditure (2004-2050) for the EU-25 Member States: underlying assumptions and projection methodologies

http://europa.eu.int/comm/economy_finance/publications/european_economy/2005/eespecialreport0405_en.htm

EUROPEAN ECONOMY. SPECIAL REPORT. No. 1. 2006

The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education and unemployment transfers (2004-2050)

http://europa.eu.int/comm/economy_finance/publications/european_economy/2006/eespecialreport0106_en.htm

2. Analytical documents

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 236

Giuseppe Carone, Declan Costello, Nuria Diez Guardia, Gilles Mourre, Bartosz Przywara, Aino Salomaki (Directorate-General for Economic and Financial Affairs)

The economic impact of ageing populations in the EU25 Member States

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers236_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 239.

Alfonso Arpaia, Declan Costello, Gilles Mourre and Fabiana Pierini (Directorate-General for Economic and Financial Affairs)

Tracking labour market reforms in the EU Member States: an overview of reforms in 2004 based on the LABREF database

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers239_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 240.

Christian Gayer (Directorate-General for Economic and Financial Affairs) and Julien Genet (Hendyplan, Brussels)

Using factor models to construct composite indicators from BCS data - a comparison with European Commission confidence indicators

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers240_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 241.

Marco Buti (Directorate-General for Economic and Financial Affairs)

Will the new stability and growth pact succeed? An economic and political perspective

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers241_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 242.

Alexander Hijzen (GEP, University of Nottingham), Holger Görg (GEP, University of Nottingham and DIW Berlin) and Miriam Manchin (Tinbergen Institute, Rotterdam University)

Cross-border mergers and acquisitions and the role of trade costs

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers242_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 243.

Rachel Griffith, Rupert Harrison and Helen Simpson Institute for Fiscal Studies (IFS)

The link between product market reform, innovation and EU macroeconomic performance

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers243_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 244.

Rainer Nitsche (CRA International) Paul Heidhues (University of Bonn and CEPR)

Study on methods to analyse the impact of state aid on competition

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers244_en.htm

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 245.

Catarina Dantas Machado Rosa and Kristiina Raade (Directorate-General for Economic and Financial Affairs)

Profitability of venture capital investment in Europe and the United States

http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers245_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

Monetary condition index MCI

http://europa.eu.int/comm/economy_finance/indicators/monetaryconditions_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

		2002	2003	2004	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06
1 Output										
Industrial confidence ^{1.1}	Balance	-12	-11	-5	-7	-6	-7	-5	-4	-2
Industrial production ^{1.2}	mom % ch	-0.7	0.5	2.0	-0.2	-0.7	1.4	0.2	0.0	
		2002	2003	2004	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1
Gross domestic product ^{1.3}	Qtr. % ch				0.2	0.3	0.4	0.7	0.3	
2 Private consumption										
Consumer confidence ^{2.1}	Balance	-11	-18	-14	-15	-13	-13	-11	-11	-10
Retail sales ^{2.2}	mom % ch	1.1	0.1	0.2	-0.7	0.3	0.0	-0.1	0.8	
		2002	2003	2004	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1
Private consumption ^{2.3}	Qtr. % ch	0.6	1.1	1.6	0.8	0.1	0.3	0.5	-0.2	
3 Investment										
Capacity utilization ^{3.1}	%	81.2	80.7	81.6	82.1	81.9	81.1	80.9	81.1	81.7
Gross fixed capital formation ^{3.2}	Qtr. % ch	-2.0	0.9	2.3	0.6	0.2	1.0	1.1	0.8	
Change in stocks ^{3.3}	% of GDP	-0.1	0.0	-0.1	0.4	0.3	0.3	0.1	0.5	
4 Labour market										
Unemployment ^{4.1}	%	8.2	8.4	8.9	8.3	8.3	8.3	8.3	8.3	
		2002	2003	2004	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1
Employment ^{4.2}	Ann. % ch	0.7	0.3	0.7	0.8	0.6	0.6	0.6		
Shortage of labour ^{4.3}	%	3.8	2.5	2.4	2.1	2.2	2.0	2.1	2.8	2.4
Wages ^{4.4}	Ann. % ch	2.9	2.5	2.2	1.9	2.6	2.2	2.1		
5 International transactions										
Export order books ^{5.1}	Balance	-22	-24	-13	-17	-15	-14	-11	-11	-9
World trade ^{5.2}	Bn. EUR	125	132							
Exports of goods ^{5.3}	Bn. EUR	776.9	1038.6	1142.1	107.3	104.4	108.2	108.7		
Imports of goods ^{5.4}	Bn. EUR	781.6	970.4	1069.1	105.1	105.4	107.3	111.1		
Trade balance ^{5.5}	Bn. EUR	-4.7	68.2	73.0	2.2	-1.0	0.8	-2.4		
		2002	2003	2004	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1
Exports of goods and services ^{5.6}	Qtr. % ch	2.1	0.6	5.9	0.4	-0.9	2.0	3.4	0.5	
Imports of goods and services ^{5.7}	Qtr. % ch	0.5	2.6	6.1	1.4	-1.5	2.3	3.1	0.9	
		2002	2003	2004	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06
Current account balance ^{5.8}	Bn. EUR	44.9	18.1	42.4	-2.2	-7.4	-9.5	-4.4	-3.3	
Direct investment (net) ^{5.9}	Bn. EUR	-11.0	-18.4	-39.7	-1.7	-6.4	-12.9	-5.3	5.1	
Portfolio investment (net) ^{5.10}	Bn. EUR	64.4	-9.4	39.0	30.3	-6.6	-34.7	-13.8	-38.2	
6 Prices										
HICP ^{6.1}	Ann. % ch	2.3	2.1	2.2	2.6	2.5	2.4	2.2	2.4	2.3
Core HICP ^{6.2}	Ann. % ch	2.5	2.0	2.1	1.5	1.5	1.5	1.4	1.3	1.3
Producer prices ^{6.3}	Ann. % ch	1.7	1.6	2.3	4.4	4.2	4.2	4.7	5.3	
Import prices ^{6.4}	Ann. % ch	97.9	102.5	97.2	109.1	108.9	109.5			
7 Monetary and financial indicators										
Interest rate (3 months) ^{7.1}	% p.a.	3.3	2.3	2.1	2.1	2.2	2.4	2.5	2.5	2.6
Bond yield (10 years) ^{7.2}	% p.a.	4.8	4.1	4.1	3.1	3.3	3.5	3.4	3.3	3.5
ECB repo rate ^{7.3}	% p.a.	3.25	2.75	2.25	2.00	2.00	2.25	2.25	2.25	2.50
Stock markets ^{7.4}	Index	3053	2420	2805	3352	3344	3405	3548	3627	3744
M3 ^{7.5}	Ann. % ch	5.6	7.8	5.9	8.2	8.0	7.6	7.5		
Credit to private sector (loans) ^{7.6}	Ann. % ch	7.7	5.0	6.0	8.7	8.9	9.0	9.2	9.7	
Exchange rate USD/EUR ^{7.7}	Value	0.95	1.13	1.24	1.23	1.20	1.18	1.19	1.21	1.19
Nominal effective exchange rate ^{7.8}	Index	95.1	106.4	109.8	108.5	108.2	107.6	107.8	108.7	108.2

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	World trade	Volume, 1998=100, seasonally adjusted	CPB
5.3	Exports of goods	Bn. EUR, excl. intra euro-area trade, fob, seasonally and working day adj.	Eurostat
5.4	Imports of goods	Bn. EUR, excl. intra euro-area trade, cif, seasonally and working day adj.	Eurostat
5.5	Trade balance	Bn. EUR, excl. intra euro-area trade, fob-cif, seasonally and working day adj.	Eurostat
5.6	Exports of goods and services	Volume (1995 prices), including intra euro-area trade, seasonally adjusted	Eurostat
5.7	Imports of goods and services	Volume (1995 prices), including intra euro-area trade, seasonally adjusted	Eurostat
5.8	Current account balance	Bn. EUR, excluding intra euro-area transactions;	ECB
5.9	Direct investment	(net) Bn. EUR, excluding intra euro-area transactions	ECB
5.10	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
6.4	Import prices	Import unit value index for goods	Eurostat
7	Monetary and financial indicators		
7.1	Interest rate	Percent p.a., 3-month interbank money market rate, period averages	Ecwin
7.2	Bond yield	Percent p.a., 10-year government bond yields, lowest level prevailing in the euro area, period averages	Ecwin
7.3	ECB repo rate	Percent p.a., minimum bid rate of the ECB, end of period	Ecwin
7.4	Stock markets	DJ Euro STOXX50 index, period averages	Ecwin



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

Contributors to this issue are:

Recent economic developments and short-term prospects

*C. Brzeski, O. Grevesmühl and
D. Paternoster*

The respective roles of employment and wages in supporting household consumption

M. Thiel

The weak response of housing supply to surging prices

*L. González Cabanillas and
H. Jansen*

Focus: Accumulated household debt – A counterpart to rising house prices in the euro area

*J. Berrigan, J. Capel, E. Ruscher
and C. Walkner*

Overall co-ordination and editing

J. Kuhlmann and E. Ruscher

Data assistance was provided by Danila Conte

Comments on the report would be gratefully received and should be sent to the Editor-in-Chief:

Servaas Deroose
Director – Macroeconomy of the euro area and the EU
Economic and Financial Affairs Directorate-General
European Commission
Rue de la loi 200 BU1 0/209
B-1049 Brussels

or by e-mail to servaas.deroose@cec.eu.int, eric.ruscher@cec.eu.int or joost.kuhlmann@cec.eu.int

§