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## QUARTERLY REPORT ON THE EURO AREA

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## Editorial

Following three years of low growth in the euro area, the first green shoots of recovery are appearing. Indeed, recent data have begun to send out encouraging signals suggesting that the trough of the cycle has been passed. The conditions for recovery during the second half of the year are falling into place, both on the domestic and the external side. Confidence is strengthening, monetary and financial conditions are accommodative, stock prices have rebounded significantly and inflation is expected to come down further. In the external environment, the global economy is gathering pace, with the US economy leading the recovery. Overall, upside and downside risks to the short-term growth outlook of the euro area are now much more balanced than a few months ago and activity should pick up gradually during the second half of the year.

Excessive debt in the corporate sector has been a major source of economic weakness in the downturn and the strength of the forthcoming recovery will hinge on the financial situation of the private sector. In this respect it is important to note that the analysis presented in this report is encouraging. The so-called balance-sheet constraints are unlikely to be a substantial drag on the recovery.

The downturn has prompted enterprises to cut costs and reduce debt. With data on corporate balance sheets only available up to 2002, it is difficult to gauge the extent of the progress made in restoring enterprises' balance sheets. However, recent indirect evidence - including tentative signs of a recovery in debt and equity financing as well as lower spreads on corporate bonds - suggests that balance sheet constraints have eased. Hence, companies should now be in a better position to take advantage of

historically low interest rates to finance new investments.

While household debt has continued to increase in the downturn, it is unlikely to act as a brake on consumption in the euro area as a whole. Households incurred new debt mostly to finance house purchases. For most Member States, house price increases would appear to be sustainable. Although the possibility of a housing-market bubble in some smaller or medium-sized Member States cannot be ruled out, their weight for the euro area is relatively small.

Finally, recent indicators suggest that market concern about the health of the euro-area banking system has eased in recent months. Euro-area banks are generally profitable, well capitalised and maintain high solvency ratios. Bank equity prices have recovered while indicators of risk in the banking sector have also improved. Hence, the resilience of euro-area banks should also help them to support a recovery in economic activity. Indeed, bank credit to the private sector has increased recently at a rate of 5%, which is more than the nominal GDP growth rate.

The length of the current downturn has led some commentators to question the benefits of EMU for economic growth. Here, it is important to stress that, if anything, the euro is part of the solution, and certainly not the cause of the problem of sluggish growth in the euro area. This is clearly shown in the Focus Section of the present report which discusses the impact of EMU on trade and foreign direct investment. Enhanced market integration, via increased trade and foreign direct investment, features prominently among the expected benefits of an economic and monetary union. When it was launched, the euro was expected to boost trade flows

within the euro area through lower transaction costs and enhanced price transparency. It was also expected to make the euro area a more attractive place to invest in. The evidence presented in the report shows that these expectations are being largely fulfilled: EMU has already contributed significantly to enhanced cross-border integration in the euro area.

Looking more in detail into the available evidence, all existing empirical studies find a positive impact of EMU on trade. Although there is some uncertainty as to the size of the impact of the euro on intra-euro-area trade flows, there is no doubt that the effect is positive and already substantial. In addition, the full impact of the euro has probably not yet been felt.

An analysis of recent FDI flows indicates that the attractiveness of the euro area as a destination for foreign investment has increased significantly since the launch of the euro. In particular, EMU countries have attracted a rising share of total FDI inflows

into the EU in recent years. The euro has stimulated primarily cross-border investment within the euro area but it is likely that it has also contributed to the strength of investment from non-EMU countries into the euro area.

Increased cross-border integration is not just an objective in itself. It also has substantial positive implications for macroeconomic policies and long-term growth prospects. Trade is a source of cyclical synchronisation between Member States and thereby facilitates macroeconomic policy management in EMU. In addition, and in a more long-term perspective, increased trade and FDI lead to enhanced cross-border competition, faster productivity gains and, ultimately, faster growth and higher standards of living.

Pedro SOLBES

MEMBER OF THE EUROPEAN  
COMMISSION



## I. Economic situation in the euro area

*Economic activity was weaker than anticipated in the second quarter of 2003 but recent confidence surveys, leading indicators and hard data have begun to send out encouraging signals suggesting that the trough of the cycle has been passed. Business confidence in services has strengthened steadily since the spring. Early signs of an upturn in the manufacturing sector have also become visible. Finally, consumer confidence is improving slowly but steadily. Overall, recent developments are a cause for cautious optimism as the factors for a pick-up of activity during the second half of the year are falling into place. The international environment is clearly improving and conditions are also becoming more conducive to domestic demand. Monetary and financial conditions are supportive and there are indirect signs that balance sheet constraints have begun to ease. Decelerating inflation will also foster private consumption. Although risks to the short-term outlook remain significant, they are now more balanced than a few months ago.*

### 1. Economic situation<sup>1</sup>

#### **GDP fell marginally in Q2 but surveys and some hard data suggest that the trough of the cycle has been passed**

Available data confirm the weakness of activity in the euro area during the first half of the year. Eurostat's latest estimate shows a mild quarter-on-quarter contraction of GDP of 0.1% in the second quarter, coming on top of a slight downward revision of growth in the first quarter from 0.1% to 0%. The second-quarter

contraction in activity was spearheaded by a significant slowdown in domestic demand. Private spending came in weaker than anticipated, investment pursued its downward course and the contribution to growth from the re-building of inventories was more modest than during the first months of the year. These negative developments were only partly offset by a less negative contribution of net trade to growth than in the previous quarter.

Notwithstanding weaker than expected data for the first half of the year, confidence surveys

<b>Table 1: Euro-area growth components</b>					
	2002 Q3	2002 Q4	2003Q1	2003Q2	Overhang 2003 H1
<b>% change on previous quarter, volumes<sup>(1)</sup></b>					
GDP	0.2	0.1	0.0	-0.1	0.2
Private consumption	0.3	0.3	0.5	0.1	1.0
Government consumption	0.5	0.2	0.3	0.7	1.4
Gross fixed capital formation	0.1	0.2	-1.2	-0.4	-1.6
Changes in inventories (% of GDP)	-0.4	-0.4	0.1	0.1	---
Exports of goods and services	1.5	-0.4	-1.2	-0.5	-0.5
Imports of goods and services	1.5	0.2	0.1	0.0	1.6
<b>% contribution to change in GDP</b>					
Private consumption	0.2	0.2	0.3	0.0	0.6
Government consumption	0.1	0.0	0.1	0.1	0.3
Gross fixed capital formation	0.0	0.1	-0.2	-0.1	-0.3
Changes in inventories	-0.1	0.0	0.4	0.0	0.5
Net exports	0.0	-0.2	-0.5	-0.2	-0.8

(1) Annual change in % for overhang.

Source : Commission services.

<sup>1</sup> The cut-off date for statistics included in this issue was 29 September 2003.

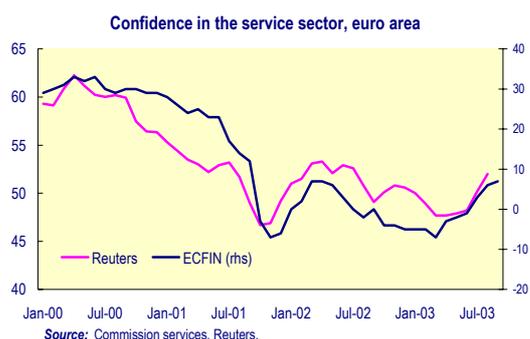
Table 2: Selected euro area and national leading indicators, 2002-2003

	SENT. IND <sup>1)</sup>	BCI <sup>2)</sup>	OECD <sup>3)</sup>	PMI <sup>4)</sup>	Reuters Ser <sup>7)</sup>	IFO <sup>5)</sup>	NBB <sup>6)</sup>	ZEW
Long-term average	96.2	0.00	2.9	52.2	54.2	101.5	-7.6	43.8
Trough in latest downturn	94.7	-1.24	-3.3	42.9	46.7	89.7	-21.1	-10.4
November 2002	95.3	-0.27	2.3	49.4	50.8	95.9	-9.0	4.2
December 2002	95.1	-0.23	1.6	48.4	50.6	97.9	-12.9	0.6
January 2003	94.9	-0.33	1.2	49.3	50.0	98.1	-15.5	14.0
February 2003	95.1	-0.27	0.5	50.1	48.9	98.4	-10.5	15.0
March 2003	94.6	-0.63	0.2	48.4	47.7	97.2	-17.4	17.7
April 2003	94.7	-0.53	0.1	47.8	47.7	95.0	-20.5	18.4
May 2003	94.8	-0.63	0.8	46.8	47.9	97.3	-18.3	18.7
June 2003	94.8	-0.65	1.7	46.4	48.2	98.7	-26.5	21.3
July 2003	94.6	-0.87	2.1	48.0	50.2	100.2	-19.3	41.9
August 2003	95.0	-0.48		49.1	52.0	102.2	-14.3	52.5
September 2003	95.4	-0.42				105.2	-14.5	60.9

1) Economic sentiment indicator, DG ECFIN. 2) Business climate indicator, DG ECFIN. 3) Composite leading indicator, six monthly change.

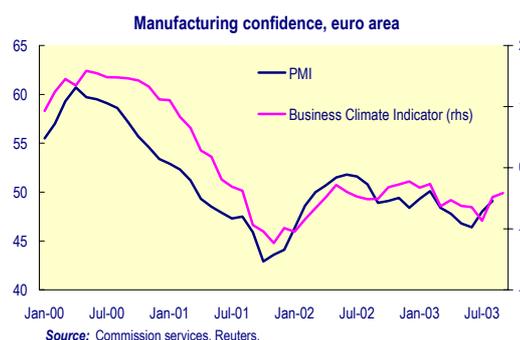
4) Reuters Purchasing managers index, manufacturing. 5) Business expectations, West Germany. 6) National Bank of Belgium indicator for manufacturing. 7) Reuters Services purchasing manager index.

have begun to send encouraging signals during the last few months. Household sentiment has improved slowly but almost steadily since May on the back of a more positive assessment of the general economic outlook and weakening concerns on unemployment. As to business sentiment, an upturn is clearly visible in the service sector. Confidence has strengthened significantly since the spring in DG ECFIN's surveys of services and, to a lesser degree, retail trade. Reuters' services index has increased steadily since June and now stands above the 50 level which separates expansion from contraction.



The manufacturing sector has also begun to send out early signals of an improvement over the summer. DG ECFIN's business climate indicator rebounded significantly in August and September. Although remaining below 50, the

PMI index increased significantly in July and August (see next Graph).



Other leading indicators have also begun to point upwards. The OECD's composite leading indicator for the euro area was up for the third consecutive month in July. Furthermore, a few national surveys which are generally considered as having some predictive power for activity in the euro area as a whole have also improved in recent months. IFO's business climate index has increased continuously since May. The NBB manufacturing indicator has strengthened over the summer.

Finally, it is encouraging to note that, the strengthening of business confidence does not rest exclusively on enhanced expectations but is also, to some extent, backed by a better



assessment of enterprises' past and current situation. This is quite clear in DG ECFIN's survey of the service sector where the assessment of past demand trends has increased more rapidly than the assessment of future demand trends. Such a development stands in stark contrast with the short-lived recovery of confidence in 2002, during which sentiment was essentially driven by expectations. The situation is more mixed in the manufacturing sector where, according to DG ECFIN's survey, the assessment of recent production trends increased noticeably in August before falling somewhat in September.

Some hard data have also begun to send positive signals. According to Eurostat's latest estimate, euro-area industrial production increased by 0.7% from June to July. Year-on-year growth in retail sales was also up from 0.4% in May to 0.7% in June.

### Conditions are in place for a pick-up of activity in the second half of the year

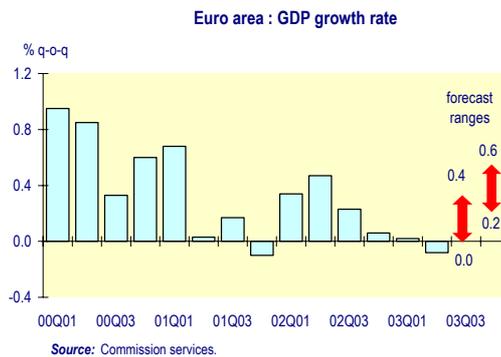
The factors are in place for a better second half of the year. The international environment is clearly improving and conditions are also becoming more conducive to domestic demand.

In the external environment, there are signs of improved growth trends emerging in many parts of the world. In particular, growth is accelerating in the USA (see Box 1 on next page) and the Japanese economy is performing above expectations. As a result, the euro area is expected to benefit from a strengthening of external demand in the coming months.

As regards domestic demand, the strong euro helps in bringing inflation down and supporting purchasing power while low interest rates alleviate the burden of debt for both households and enterprises. Recent indirect evidence suggests that balance sheet constraints in the corporate sector have eased in recent months (see Section 2). In addition, concerns about the health of the banking sector have

receded. As a result, capital cost considerations should progressively regain a more significant role in companies' investment decisions. Low interest rates and rising stock prices therefore pave the way for stronger capital formation. In this respect, it is encouraging to note a tentative pick-up in the growth of debt financing in the euro area.

Based on the above factors, a gradual pick-up in economic activity is foreseen in the second half of 2003. The indicator-based quarterly GDP forecast for the euro area, developed by DG ECFIN, points to quarter-on-quarter growth for the third quarter of 2003 in the range of 0% to 0.4%. The model suggests an acceleration in the fourth quarter to a range of 0.2% to 0.6%. Based on the mid-range values, the average growth rate should be at around 0.5% for 2003 as a whole.



Substantial uncertainty still surrounds the short-term outlook but risks are now more balanced than a few months ago.

Downside risks exist both on the external and the domestic side. On the external side, the global upturn will hinge on the sustainability of the recovery in the USA and, to a lesser degree, in Japan. For the euro area, the strength of the export recovery will also depend on the external value of the euro. On the domestic side, the deceleration of private consumption in the second quarter contrasts with the relative resilience of household spending in the previous four quarters. Although it is likely to

**Box 1: The economic situation in the USA**

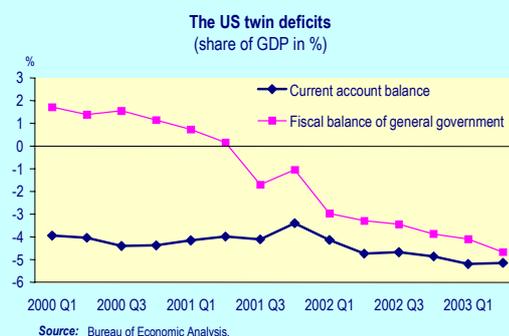
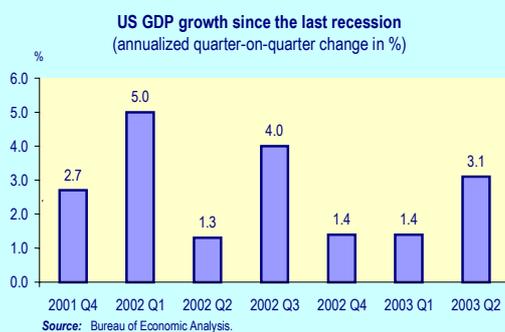
The recovery in the United States has been gaining momentum lately with consumer spending advancing strongly and business investment picking up. The preliminary GDP estimate for the second quarter shows an annualised real growth rate of 3.1%. Recent economic data indicate that third-quarter growth will be even stronger. An abatement of geopolitical uncertainties, fiscal expansion and an accommodative monetary policy have all contributed to this rebound.

According to the IMF, the fiscal deficit of general government may surge to 6% of GDP in 2003 following the latest tax cuts and the higher defence spending in connection with the Iraq War. The Federal Reserve lowered its target for the federal funds rate by 25 basis points to only 1% in June. Subsequently, the Fed has stated that it believes that the accommodative stance of monetary policy can be maintained for a considerable period.

In spite of the economy picking up speed, the labour market has so far failed to improve. Between November 2001 - when the last recession ended - and August 2003, the number of nonfarm payrolls has fallen by 0.9%. The unemployment rate is up by half a percentage point to 6.1% over the same period. The downward trend in employment during a recovery phase reflects extraordinarily strong productivity growth over the past two years. The labour market weakness poses the risk that the recovery will not have become self-sustaining when the macro-economic stimulus eventually diminishes.

Inflation has been held to a low level by slack in resource utilisation and the sizeable advances in labour productivity. CPI core inflation fell to 1.3% in August on a year-over-year basis, compared to 2.2% for the overall index. However, the risk of deflation seems to have become very remote considering the momentum which the economy has gained over the summer months.

The international competitiveness of US goods and services remains weak. The dollar's real effective exchange rate fell by 7% between February 2002 and August 2003, but it remains 9% higher than its average since 1990, according to the Federal Reserve's broad dollar index. The balance-of-payments situation has continued to deteriorate in the current year. In the first six months, the trade deficit increased to 4.6% of GDP from 4.0% in 2002 while the current account deficit climbed to 5.2% of GDP from 4.6% in 2002. The long-standing concern about the external imbalance has been aggravated by the fact that the current account deficit now fully reflects a domestic fiscal deficit, a so-called 'twin-deficit' situation. If the current account deficit were to be corrected in a disorderly way, it would have a clear dampening effect on world growth.





be just a temporary blip, it may also herald more cautious spending on the back of rising unemployment. Some uncertainty is also attached to the factors that have been hindering corporate spending in the downturn. Recent evidence on the easing of balance sheet constraints is only indirect. Furthermore, the inventory build-up observed since the beginning of the year is difficult to interpret and could be a technical correction rather than the signal of an upturn in the inventory cycle (see Section 3).

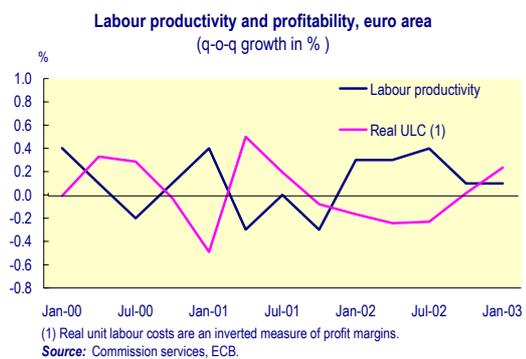
Upside risks are mainly related to domestic demand. Macroeconomic policies are supportive and inflation is expected to decline. In addition, political uncertainties related to the global context and to the continuation of structural reforms in the euro area may fade away. This combination of positive factors could trigger a release of pent-up demand both from households and enterprises. In particular, as private saving rates are above their long-term average, there is scope for a rapid increase of consumption.

### The short-term outlook for employment remains sluggish

Employment growth has come to a standstill since the second half of 2002. Year-on-year growth, which peaked at over 2.0% in 2000, fell to 0.1% in the first quarter of 2003. Short-term prospects for employment remain sluggish as further progress in productivity is necessary to maintain profitability and competitiveness and as labour market developments always lag behind economic trends.

After a significant pick-up in the first three quarters of 2002, labour productivity has remained nearly flat on a quarter-to-quarter basis in the past two quarters, leading to a slight erosion of profit margins after a year of steady improvement. In the absence of timely data, more recent developments in profitability are difficult to assess but it is likely that a strong euro is exerting pressures on profitability in the export sector. Further

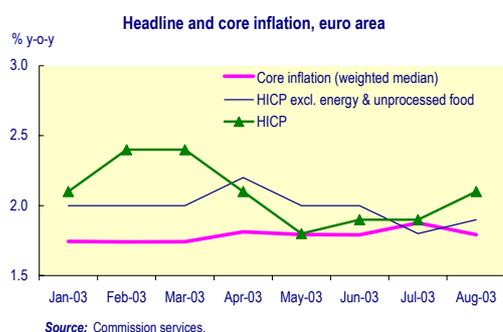
cost-cutting will probably take place in the corporate sector when the economy begins to gather momentum. The sluggish short-term prospects for employment are supported by developments in recent business surveys. Some surveys have shown a slight improvement in the assessment of employment over the summer – Reuters PMI and Reuters services - but the levels of these indicators remain low.



After remaining virtually stable during most of 2001, the unemployment rate has drifted steadily upwards since the end of 2001, increasing by close to 1 percentage point to reach 8.9% in July. Concerns related to unemployment have contributed to undermine private spending over the last two years and are likely to continue to be a drag on private consumption over the coming months. However, it is encouraging to note that households' worries on unemployment have receded slightly over the summer.

### Inflation is receding slowly

After peaking at 2.4% in February and March, headline inflation decelerated somewhat in the spring before edging up again in the summer to reach 2.1% in August. The recent pick-up essentially reflects higher energy and food prices. Core inflation, as measured by the HICP excluding energy and unprocessed food, eased modestly between April and July before accelerating very slightly again in August to reach 1.9%.



Overall, the slow speed of deceleration of inflation since the spring reflects essentially two factors.

Firstly, oil prices, which had declined sharply after the beginning of the war in Iraq, have rebounded appreciably. Brent oil prices bottomed out at \$23 per barrel at the end of April 2003, but rose to just below \$30 per barrel at the end of August before easing again somewhat in September. The price rise since spring reflects a number of supply-side factors, including the difficulty in restoring the rate of Iraq's oil production, political uncertainty in Venezuela and Nigeria, and relatively low stock levels, particularly in the USA.

Secondly, core inflation is easing only gradually owing to sluggish productivity growth and a slow pass-through of the appreciation of the euro into domestic prices. With growth in labour compensation slightly up to 2.7% year-on-year and slow productivity gains, the first quarter of 2003 has seen an uptick of growth in unit labour costs to y-o-y 1.8%, against 1.4% in the last quarter of 2002. As to the appreciation of the euro, import prices in the second quarter of 2003 were only 1.6% lower than a year before based on quarterly national account data. Over the same period, the euro effective exchange rate appreciated by 15% based on quarterly averages. As national accounts for the euro area do not separate extra-euro-area from intra-euro area trade, import prices also capture developments in domestic prices.

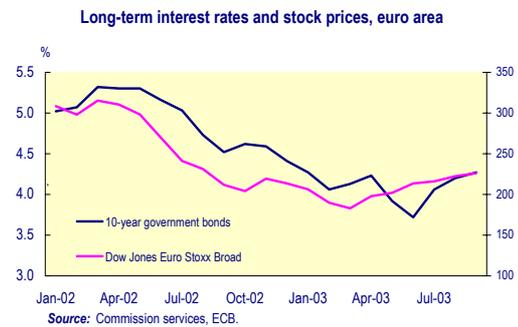
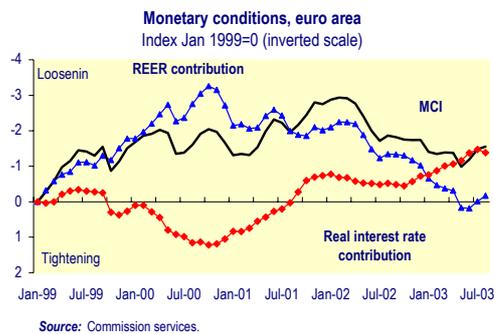
Furthermore, recent developments in import prices have been affected by fluctuations in oil prices. However, the relatively slow pass-through is confirmed by the analysis of monthly import prices for manufactured goods. In May 2002, manufactured import prices were only 6% lower than a year before. Over the same period, the euro effective exchange rate had appreciated by 16%. These data suggest that the impact of the appreciation of the euro on import prices has not been fully felt at this juncture.

Core inflation is expected to continue to decline, albeit at a slow pace, over the next months as a result of a sizeable output gap, low imported inflation and the pass-through effect of declining inflation in industrial producer prices. In addition, survey data on producers' and consumers' inflation expectations point to declining price trends. Headline inflation, on the other hand, may be more volatile due to weather-related price spikes for food and energy price movements.

### Monetary and financial conditions remain supportive

In July and August 2003, the Monetary Conditions Index (MCI)<sup>2</sup> was at a level similar to that seen in spring 2003. In May, the MCI had moved in the direction of tighter conditions as a consequence of the higher level of the euro real effective exchange rate. The appreciation was partly reversed between mid-June and August. This development, together with a decrease in the real short-term interest rate, brought an easing of monetary conditions over the summer. Although the MCI is not yet available for September, the renewed appreciation of the euro since the beginning of September is likely to have entailed somewhat tighter monetary conditions that month.

<sup>2</sup> The MCI tries to capture the combined impact on economic activity of changes in the real effective exchange rate and the real short-term interest rate.



After a period of sharp decline, government bond yields have rebounded significantly since mid-June. End of September, long-term yields in the euro area were about 60 basis points above their low in June. The rise was even higher in the case of US bonds at about 90 basis points. Nevertheless, long-term interest rates in the euro area remain lower than at the beginning of the year.

The reversal in global long-term interest rates largely reflects cyclical developments. Since 2000, a number of cyclical factors have resulted in lower bond yields, including a sharp fall in corporate investment, expectations of sustained accommodative monetary policies on the back of sluggish growth and some worries about deflation risks. Since mid-June, these factors have been operating in reverse as market expectations of a global recovery have strengthened and concern about deflation has proven unfounded.

In addition, portfolio reallocation effects have also played a role. A portfolio shift out of equities and into fixed-income investments during the equity-market correction was another source of downward pressures on long-term yields in the economic downturn. While bond yields and equity prices have largely moved in tandem since 2000, the recovery in equity prices since mid-March 2003 was initially accompanied by a further fall in bond yields (see next graph). The recent correction in bond prices therefore reconciles the views of the bond and equity markets on the outlook for the global economy.

Finally, the deterioration in government budget balances has also put upward pressure on global bond yields in recent months. Due to a sharper deterioration of fiscal balances this effect has so far probably been more pronounced in the USA than in the euro area. However, there is a risk that the impact of worsening public finance could be magnified in the euro area by a perceived weakening of long-term fiscal discipline if the existing fiscal framework were to lose its credibility.

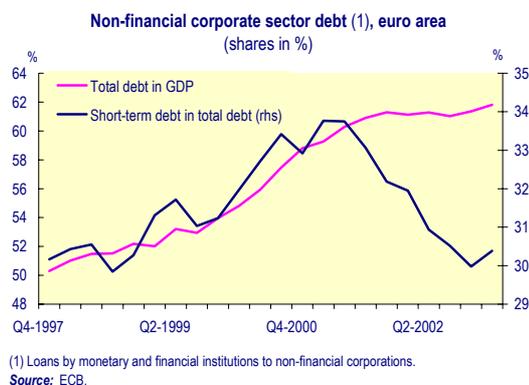
Corporate bond issuance has rebounded from its low level in 2002 with a narrowing in corporate spreads and declining premiums in credit default swaps. In addition, July data show that long-term interest rates on bank loans to households and the corporate sector are still on a downward path. Together with a sharp recovery in stocks prices, which end of September were about 30% above their low in March in the euro area, these developments mean that long-term financing conditions remain supportive for the corporate sector. In contrast, the implications of the recent rise in government bond yields could be more worrying for households in those countries where mortgage-related household debt is high and where housing prices have been rising rapidly.

## 2. Balance sheets constraints in the private sector

The outlook for economic growth will crucially be shaped by the condition of private-sector balance sheets. Typically, companies and households tend to borrow against their expected earnings in an economic upswing and tend to consolidate their debts in the downswing. Amid a pronounced cyclical upswing, leverage ratios in both corporate and household sectors rose substantially in the course of the 1990s. The subsequent economic downturn has been long but shallow by normal standards and has been characterised by some de-leveraging of the corporate sector, a steady increase in household debt and concerns about the financial health of the banking sector. In this context, a key question is whether balance sheet constraints will act as a brake on the forthcoming recovery in the euro area.

### Non-financial corporate sector

Corporate debt levels have acted as a drag on investment during the current economic downturn. With data on corporate balance sheets only available to 2002, it is difficult to assess the extent of the progress already made in restoring balance sheets. However, recent indirect evidence suggests that balance sheet constraints have eased in recent months. This includes tentative signs of a recovery of debt and equity financing, higher equity prices, lower spreads on corporate bonds and, to a lesser degree, some improvements in profitability.



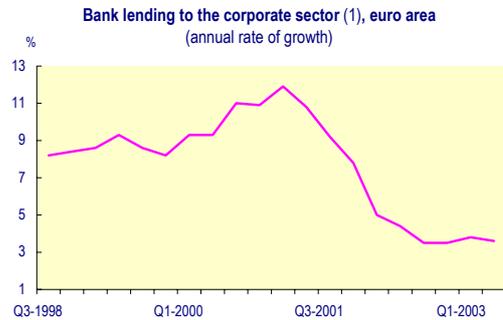
Companies in the euro-area economy have responded to financial pressures by reducing investment, inventories and debt. The total stock of debt of the euro-area non-financial corporate sector has broadly stabilised, in terms of GDP, since the beginning of 2002. Companies have also modified the term structure of their debt, reducing significantly the share of short-term borrowing after mid 2001 (see previous graph).

There are now signs of a tentative pick-up in the growth of debt financing in the euro area. Issuance of corporate debt securities accelerated to an annual rate of 12.7% in the second quarter of 2003 (from 4.1% at the end of 2002). There is also some recovery in secondary issuance of equity, although IPO activity has remained weak. Bank loans to euro-area non-financial enterprises expanded by 3.6% during the second quarter of 2003, confirming the broad stabilisation of growth recorded since the end of last year.

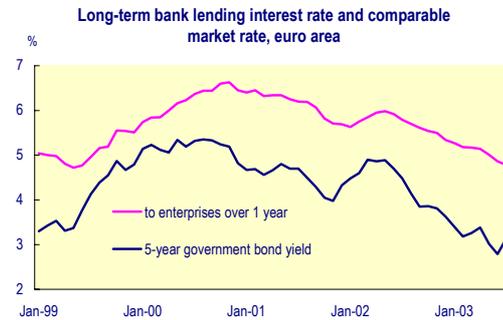
**Table 3: Balance sheets of the non-financial corporate sector, euro area**

	1998	1999	2000	2001	2002
Debt /GDP	52.2	54.0	58.8	61.3	61.4
Debt / equity	110.6	80.8	94.7	120.0	182.9
Short-term debt/total debt	30.3	31.2	32.9	32.2	30.0
Net incurrence of liabilities/GDP	7.9	11.5	16.3	10.7	6.1
Debt financing	4.7	7.6	9.6	6.0	3.3
Equity financing	3.1	3.6	6.6	4.5	2.6

Source : ECB.

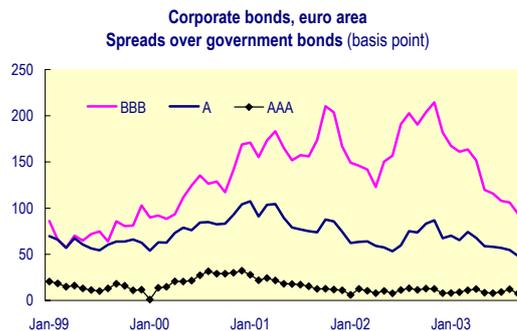


(1) Loans by monetary and financial institutions to non-financial corporations.  
Source: ECB.



Source: ECB.

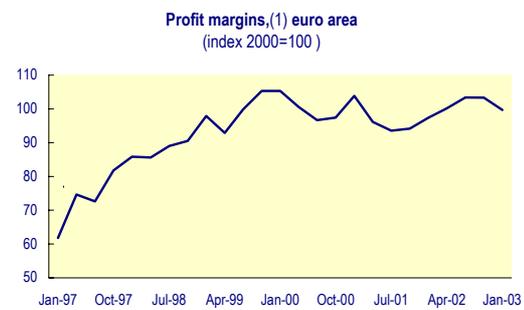
In the period 2001-2002, much of the decline in risk-free interest rates was not transmitted to the corporate sector, as spreads on both corporate bonds and on bank loans widened. However, as shown in the graph below, there has been a sharp narrowing in spreads on corporate bonds in 2003.



Source: Thomson Financial Datastream.

Recent developments are somewhat less positive for bank loans. Typically, bond spreads anticipate movements in bank-loan spreads. However, there is so far no clear evidence that the widening of margins between lending rates and comparable market interest rates has come to an end. This is consistent with the reportedly cautious attitude of euro-area banks in extending loans to enterprises.<sup>3</sup>

Labour productivity and profitability picked up significantly in the euro area in 2002, an improvement which should support the forthcoming recovery. However, since the beginning of 2003, developments in profit margins have been slightly less favourable due to a near stagnation of productivity. Furthermore, euro-area companies, which had made substantial investments in the United States in the phase of dollar appreciation, have also suffered from the negative impact of the subsequent dollar depreciation on the book value of such investments and on the revenues from the activity of their US subsidiaries.



(1) Gross operating surplus as a share of GDP.  
Source: Commission services, ECB.

<sup>3</sup> See the July 2003 ECB bank lending survey for the euro area, summarised in the ECB Monthly Bulletin of August 2003. The survey indicates that banks were still, on balance, tightening credit standards, although

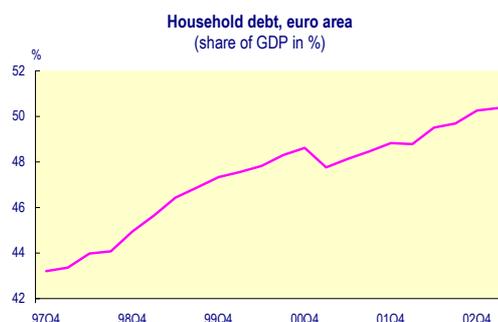
the percentage of those doing so dropped significantly from April to July.

### Household sector

Households have continued to accumulate debt in the course of the economic downturn, mostly to finance house purchases. In the euro area, mortgage lending growth remained above a robust 7% annual rate in the first two quarters of 2003. Mortgage lending growth has generally been strongest in those Member States where house prices have increased most – such as Greece, Spain, Ireland, and the Netherlands (see Table 4).

Rising debt levels have increased the vulnerability of household spending to adverse developments in other sectors of the economy. While household borrowing has reached abnormally high levels in some countries, the interest burden has been contained by the sharp decline in nominal and real interest rates. However, the high level of indebtedness exposes borrowers (and lenders) to a fall in households' income or a rise in interest rates – especially where mortgage contracts include variable or short-term adjustable interest rates.

while substantial but less marked increases were recorded in Belgium, France and Italy. However, prices began to decelerate in the Netherlands and Ireland in the course of the year.



Source: Commission services.

A significant increase in interest rates or a further deterioration of the labour market, could trigger a reversal in house-price inflation and bring about a sizeable correction in the housing markets of some Member States. However, for the euro area as a whole, the risk that balance sheet constraints might act as a brake on consumption appears low at the present juncture.

**Table 4: Nominal property prices, euro area**  
(annual change in %)

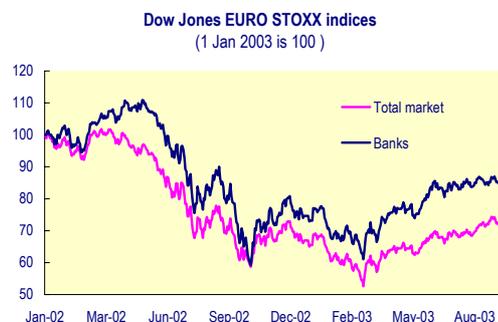
	Residential property		Household debt	
	1995-02	2002	1995-02	2002
BE	5.2	6.5	5.1	1.5
DE	0.0	1.0	4.4	2.5
ES	9.8	17.4	13.2	6.2
FR	4.8	6.7	6.2	6.2
IR	14.5	14.2		
IT	3.7	10.0	8.1	6.3
NL	11.2	4.5	12.7	7.0
FI	8.2	8.7	4.3	4.7

Source: BIS

While the possibility of a housing-market bubble exists in several Member States, the risks have declined in some cases. Ireland, Greece and Spain still experienced a double-digit increase in nominal house prices in 2002,

### The banking sector

Risk indicators suggest that market concern about the health of the euro-area banking system has eased. Bank equity prices have recovered in line with broader market indices (see next Graph), while other indicators of risk - such as credit default swap prices - have also improved on average.



Source: Thomson Financial Datastream.



**Table 5: Key indicators for euro-area banks**

	1998	1999	2000	2001	2002
<b>Credit quality</b>					
Loan Loss Res / Gross Loans	2.82	2.77	2.59	2.58	2.68
Loan Loss Res / Impaired Loans	72.43	74.16	77.41	88.82	74.63
Impaired Loans / Gross Loans	3.90	3.73	3.35	2.91	3.60
<b>Solvency</b>					
Equity / Tot Assets	4.03	4.06	4.28	4.17	4.32
<b>Profitability</b>					
Return On Avg Assets (ROAA)	0.44	0.52	0.73	0.43	0.27
Return On Avg Equity (ROAE)	11.17	12.96	17.42	10.29	6.38

Source: Bankscope – Based on the 140 largest banks.

The assessment by credit rating agencies of the national banking sectors within the euro area is generally good, in line with official statements by supervisors. However, risk indicators continue to exhibit a wide dispersion around the upper band – particularly when compared to the situation in the USA and the United Kingdom – pointing to the existence of certain problem cases.

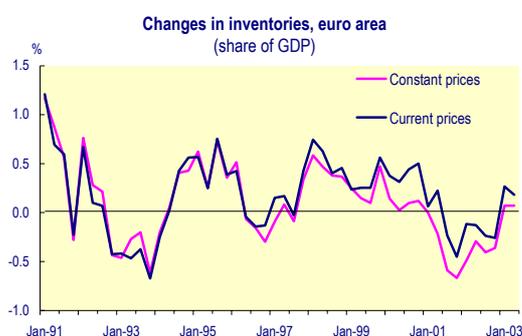
Euro-area banks are generally profitable, despite a sharp deceleration in corporate lending, and remain well capitalised with sound solvency ratios. With falling commission income and rising loan-loss provisions, bank profitability has been supported mainly by retail activity, and more specifically by the buoyancy of household lending. Profitability has also benefited from significant cost-cutting and business restructuring, e.g. via the closure or selling of investment banking activities, insurance subsidiaries, specialised credit providers, etc.

In addition, the percentage of non-performing loans over total loans in banks' balance sheets has stayed relatively low (3.6% in 2002) compared to previous downturns. All in all, the deterioration in asset quality and reduced profits have not impaired the average solvency of euro-area banks. Capital ratios have been maintained at high levels, and even increased slightly in 2002, indicating that most banks still have the capability to absorb further potential losses.

In general, concerns about the health of the euro-area banking sector have eased. Nevertheless, the resilience of the euro-area banking sector has not completely dispelled more specific concerns. First, the counterpart of buoyant mortgage markets in some Member States has been a sharp rise in their banks' exposure to the real estate sector. Second, the delay in economic recovery means that the buffers available to banks are somewhat reduced, and parts of the banking system could be vulnerable to further sustained weakness in the real sector and/or renewed weakness in equity markets. At this stage, however, the health of the banking sector is not a source of concern for the recovery of the economy.

### ***3. Assessing recent developments in inventories***

Changes in inventories are the most volatile of the expenditure components of GDP and can be a major source of cyclical fluctuations in activity. Changes in inventories have played an important role in the euro area in the present downturn. In real terms, stocks were scaled down steadily between the first quarter of 2001 and the last quarter of 2002 before increasing again in the first half of this year (see next graph).



Source: Commission services.

The adjustment has been more moderate in nominal terms. As shown on the graph above, there are noticeable, and unusual, differences in the changes in real and nominal inventories between late 1999 and late 2002. Whether these differences are a statistical artefact or reflect genuine changes in the relative price of stocks is difficult to assess. In general, prudence is required when analysing both real and nominal developments in stocks. For a number of reasons, changes in inventories as provided in national account data may be difficult to interpret. In particular, it is worth stressing that:

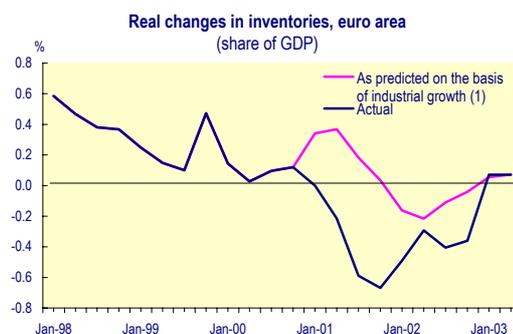
- In several Member State, changes in inventories are measured as a residual in the identity linking GDP and its expenditure components. In these cases, changes in inventories also cover errors and statistical discrepancies.
- Inventory data may be subject to significant revisions.
- The inventory component of national accounts covers both actual changes in inventories and acquisition less disposal of valuables.

### A strong inventory cycle

Putting recent developments in perspective, the inventory contraction registered in 2001-02 started earlier in the cycle and was more protracted than during the 1992-93 recession - 8 successive quarters of contraction against 6.

The depletion of stocks shaved off close to 2% of real GDP growth in 2001-02 against slightly more than 2% of GDP in 1992-93.

The 2001-02 inventory contraction looks particularly sharp when measured against the overall strength of the cycle. As stock building takes place predominantly in the industrial sector, changes in inventories tend to be relatively strongly correlated with growth in industrial production.<sup>4</sup> However, in 2001-2002 more inventory adjustment took place than would have been warranted given the strength of the industrial cycle and past historical patterns.



(1) as predicted by an equation linking changes in inventories to growth in industrial production. See text for explanations.  
Source: Commission services.

This can be verified formally with a simple estimated equation relating real changes in inventories to year-on-year changes in industrial production. The equation performs relatively well over the 1990s but predicts a systematically higher level of inventories than actually observed in 2000-02.<sup>5</sup> The difference is shown in the graph above which plots actual real changes in inventories and changes in real inventories as predicted by the

<sup>4</sup> The correlation between year-on-year growth in industrial production and changes in inventories exceeds 60% over the past decade.

<sup>5</sup> The equation relates real changes in inventories to growth in industrial output and lagged changes in inventories. It was estimated on quarterly data for the 1991-1999 and has the usual good statistical properties. It explains about 50% of the variance of changes in inventories.



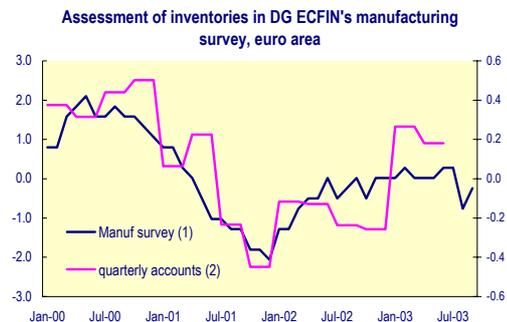
equation. Since the beginning of 2003, developments in stocks seem to have come back to more normal levels.

### Assessing inventory recovery

The adjustment of inventories seems to be over since the beginning of 2003. During the first two quarters of the year, changes in stocks made a cumulative contribution to GDP growth of about 0.4 percentage points in the euro area. This turnaround has fuelled hopes that the downward phase of the inventory cycle could be over and that stock building could make a positive contribution to growth in the second half of the year. However, recent developments must be considered with prudence as national accounts and surveys have recently sent conflicting signals.

Business surveys are frequently used to assess recent developments in inventories. The correlation between survey indicators and changes in inventories as measured in national accounts is generally reasonably high. In the case of DG ECFIN's manufacturing survey, the correlation ranges between 65 and 80% depending on the concept considered. Interestingly, the correlation is significantly higher when using inventory data from national account data in nominal terms rather than real terms. This may reflect the fact that enterprises are assessing their stocks on the basis of their costs rather than their volumes.

The next graph plots the stock component of the manufacturing survey of DG ECFIN. After a long period of relative stability, the indicator deteriorated appreciably in the summer, suggesting that producers currently assess the level of their inventories as somewhat too high. In any event, the indicator's recent developments do not foreshadow a sustainable upturn of the inventory cycle.



(1) Inverted normalised and lagged by one month.  
(2) Changes in inventories as a share of GDP in nominal terms.  
Source: Commission services.

Overall, the increase of inventories, as measured in the national accounts, appears fragile. It may mark a return to more “normal” behaviour relative to historical patterns after an exceptionally sharp downswing in investment. In this context, the strength of the inventory adjustment in 2001-02 may have been a reflection of strong balance-sheet constraints and the fact that inventories have played an important role in the cost-cutting process in the corporate sector. The build-up of inventories observed since the beginning of the year could then be interpreted as another sign of the improvement of the financial situation in the corporate sector (see Section 2).

However, the possibility of a shift in the relation between the inventory cycle and the manufacturing cycle since the late 1990s cannot be excluded. Such a shift could, for instance, be a consequence of improved inventory management due to the use of information technologies and of the widespread development of lean production techniques. In that case, the recent built-up of stocks would appear fragile and the contribution of inventories to the forthcoming recovery more modest than generally expected. Such an interpretation would be in line with recent developments in the assessment of stocks in manufacturing surveys.

## Focus

### II. The impact of EMU on trade and FDI

*Enhanced market integration, via increased trade and foreign direct investment, features prominently among the expected benefits of an economic and monetary union. This focus reviews the available evidence on the impact of EMU on trade and FDI since the introduction of the euro on 1 January 1999. Its main conclusion is that EMU has already contributed significantly to enhance cross-border integration in the euro area. Existing empirical evidence points to a sizeable positive effect of EMU on intra-euro-area trade, with an impact ranging between 5 and 50% depending on the studies considered. The effect does not seem to have reached its maximum yet and the upper end of the range is a more plausible estimate of the potential long-run impact than its lower end. An analysis of recent FDI flows also indicates that the attractiveness of the euro area as a destination for foreign investment has increased significantly since the launch of the euro. In particular, EMU countries have attracted a rising share of total FDI inflows into the EU in recent years. However, FDI is determined by a large number of factors and further work is required to determine the exact contribution of the euro introduction.*

#### 1. The impact of EMU on trade and FDI: possible channels

##### Monetary integration and trade

Economic theory clearly predicts a positive impact of the euro on trade flows between EMU Member States. There are basically three channels through which monetary integration can affect trade.

*Lower transaction costs.* A single currency allows exporters or customers to save on the transaction costs associated with the management of multiple currencies. Transaction costs include conversion charges on the spot exchange rate market, the cost of hedging against currency fluctuations, in-house costs associated with the management of multiple currencies and banking charges on cross-border payments. In 1990, these transaction costs were estimated at about 0.3-0.4% of GDP in the EU as an average.<sup>6</sup>

*Exchange rate stability.* Exchange rate volatility can hamper trade despite the existence of well-developed markets for currency hedging. In practice, exporters cannot insure themselves adequately against all forms of

exchange rate risks. In particular, hedging can be more costly for currencies which are not traded intensively on world financial markets. In addition, available hedging instruments are essentially of a short-term nature. There are reasons to believe that trade is also affected by medium to long-term fluctuations in real exchange rates.<sup>7</sup> Hedging against such medium to long-term risks is in most cases difficult or even impossible.

*Price transparency.* A single currency facilitates cross-border comparisons of prices, thereby enhancing cross-border competition and increasing trade flows. In this context, EMU may be considered as a crucial complement to the EU's Single Market programme.

Overall, through these three channels, the euro should foster intra-euro-area trade flows and thereby contribute to a better allocation of resources within EMU.

<sup>6</sup> See European Commission (1990).

<sup>7</sup> In particular, trade is frequently associated with sunk costs including the build-up of specialised knowledge or the establishment of local distribution networks. In these cases, the risk of persistent deviations of exchange rates from their equilibrium value may act as a deterrent to trade.



## Monetary integration and FDI

Contrary to trade, economic theory is less clear-cut as to the impact of a single currency on FDI flows. Reflecting the multiplicity of factors affecting investment decisions, a large number of theoretical models have been proposed that conclude either in a positive or a negative effect of monetary integration on foreign investment.<sup>8</sup>

To illustrate some of the possible arguments, it is useful to distinguish between trade-substituting and trade-creating FDI. Foreign direct investment can be a substitute for trade if it aims at bypassing trade restrictions and at servicing the local market. It can also be a source of trade if it aims at boosting exports to the local market<sup>9</sup> or at producing for re-exports by taking advantage of some form of comparative advantage in local production.<sup>10</sup>

In this setting, factors that affect trade - such as transaction costs or exchange rate uncertainty - will have different implications for foreign investment depending on its trade-substituting or trade-creating nature. To the extent that monetary integration boosts trade flows, it will also tend to fuel trade-creating FDI while hampering trade-substituting FDI.

A similar argument can be made when looking at the specific role of exchange rate risks. Exchange rate fluctuations affect the stream of income from a foreign investment operation. Recent developments in investment theory have generally highlighted the negative impact of uncertainty on investment in the presence of sunk costs. In this context, the reduction of exchange rate risks<sup>11</sup> associated with a single currency tends

to be supportive of FDI. However, other arguments have also been put forward to defend a positive relation between exchange-rate uncertainty and foreign investment. For instance, replacing exports with local production will make it possible to reduce the volatility of the stream of profits from a specific export market. In that case, monetary integration may lead to a reduction of FDI.

Finally, to the extent that the euro exacerbates the positive effects of the creation of a truly internal market (leading to economies of scale and a larger home market) FDI will also be stimulated.

## 2. Existing empirical research

### Trade and EMU

Until the late 1990s, the potential impact of monetary integration on trade was widely believed to be positive but relatively small. This conclusion was underpinned by the fact that estimates of transaction costs were rather modest and that empirical studies had generally failed to find a strong negative relation between exchange rate uncertainty and trade.

Research was given a new impulse after the publication of a seminal paper by A.K. Rose in 2000. Estimating a gravity model<sup>12</sup> of trade flows for a large number of countries, Rose identified a large negative effect of exchange rate volatility on trade flows. He also found that trade flows between countries sharing a common currency were three times larger than flows between otherwise similar

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<sup>8</sup> For a review of the relevant literature see, for instance, Pain (2002).

<sup>9</sup> For instance, by establishing a distribution network.

<sup>10</sup> For instance, the existence of specific skills in the local labour force.

<sup>11</sup> It may be argued that, in the case of FDI, exchange rate uncertainty is essentially of a medium to long-run nature. Monetary integration suppresses short-term

volatility but will only reduce long-term real exchange rate risks.

<sup>12</sup> The gravity model postulates that bilateral trade between two countries is proportional to the size of their GDPs and inversely proportional to the distance between them. The latter may be defined in such a way as to take into account all factors that create "distance", including cultural and language differences, border effects, etc.

Table 6: Selected empirical studies on the impact of currency unions on trade

Authors	Methodology	Estimated impact of EMU/currency union on trade
<b>General studies on impact of currency unions</b>		
Rose (2000)	Gravity model	Tripling of trade
Rose (2002)	Review of existing studies	Doubling of trade
<b>Specific studies of impact of EMU</b>		
Rose and van Wincoop (2001)	Pre-EMU data	Potential increase in trade of 50%
Bun and Klaassen (2002)	Dynamic export model Annual data 1965-2001 for EU and non-European G7	4% increase in trade after one year, 10% after 3 years and potential long-run effect of 40%
Barr, Breedon and Miles (2003)	Gravity model Quarterly data 1978-2002 for EU + EFTA countries	EMU has already added 28% to trade among members
Micco, Stein and Ordóñez (2003)	Gravity model Annual data 1992-2002 for 22 industrial countries or EU	EMU has translated into a 5-20% increase of bilateral trade

countries. This common currency effect came on top of the exchange rate volatility effect.

Given its magnitude, Rose's estimate of the common currency effect was initially greeted with substantial scepticism. Rose's methodology was criticised on several grounds.<sup>13</sup> Estimation techniques and models were subsequently refined and the estimated magnitude of the impact reduced. However, the overall conclusion of a very large effect of a common currency on trade was not altered significantly.

Rose's initial empirical evidence on the common currency effect rested essentially on small or poor countries. It was unclear, though, to what extent his results applied to EMU. However, in recent years, a number of studies have endeavoured to address the specific issue of the link between the euro and

trade (see Table 6). Using pre-EMU data, *Rose and van Wincoop (2001)* estimate the potential impact of EMU on trade to be 50%. More significantly, with EMU now in its fifth year of existence, series on intra-euro-area trade begin to be sufficiently long to allow a direct measure of the role of EMU. At least three studies have so far attempted to do so:

- Based on gravity model estimates for EU and EFTA countries, *Barr et al. (2003)* find that EMU has led to a 30% increase in intra-euro-area trade.
- In *Micco et al. (2003)*, the estimated impact of EMU is somewhat lower at 5-20%. Using also a gravity model, the authors obtain a range of estimates depending on the number of countries included in the analysis and the model specification used.
- Finally, based on data for EU and non-European G7 countries, *Bun and Klaassen (2002)* estimate a dynamic model of exports and reckon that the euro has increased trade by 4% in its first year with a long-term potential impact of 40%.

<sup>13</sup> For instance, the direction of the causality between trade and a single currency was unclear. Countries sharing a common currency may tend to trade more but countries may also adopt a common currency more easily when their trade links are strong.



### Box 3: UK views on the impact of EMU on trade and FDI

In June 2003, the UK government published its second assessment of the five economic tests relating to EMU entry (HM Treasury, 2003a). Several studies were prepared on specific relevant topics to act as a basis for this assessment. The link between EMU and trade was addressed in a specific study (HM Treasury, 2003b). The EMU effects on FDI were analysed in a study on EMU and business sectors (HM Treasury 2003c).

#### *Effect of EMU on trade*

On the basis of existing empirical research, the study concludes that there is reasonably robust evidence that EMU has boosted intra-euro trade since 1999. The main finding of the study is that UK membership of the euro area could lead to a potential increase in UK trade with the euro area of 5 and 50 per cent, without any trade diversion from non-euro-area countries. It acknowledges that the upper estimate is closer to the more likely long-term outcome. Apart from increased trade within EMU, the study concludes that increased trade integration with the euro area would be beneficial for long-term UK growth: each 1 percentage point increase in the trade to GDP ratio increases real GDP per head at least 1/3 per cent (but possibly 2/3 per cent) in the long run. This suggests EMU membership could potentially raise output per head in the UK in the long term by between 4½ and 9¼ per cent or between 0.15 and 0.30 percentage points a year over a 30-year period. However, as the study points out, these estimates are surrounded by substantial uncertainty and depend on sustained convergence of the UK economy with the euro area.

#### *Effect of EMU on FDI*

The study concludes that EMU is likely to boost FDI in the euro area over time. In this context, UK membership of EMU on the right basis would lead to an increase of bilateral FDI flows between the UK and the euro area. The study acknowledges that the UK's share of EU FDI has dropped since the launch of the euro. However, it also emphasises that FDI flows have been affected by many factors in recent years and that it is therefore difficult to say with confidence that EMU has already boosted FDI within the euro area.

The main conclusion that emerges from recent empirical studies is that EMU has already had a sizeable impact on intra-euro-area trade flows and that the effect could increase further in the coming years.<sup>14</sup> Some uncertainty remains as to the exact size of the EMU effect. Depending on the methodology used, the estimated impact on intra-euro-area trade flows varies between 5 and 50%. Although this is below Rose's early estimates of the impact of currency unions on trade, the studies on EMU generally capture only the effect already embedded in the data. The EMU effect has probably not reached its maximum yet and its long-run impact will probably be closer to the upper than the lower end of the above range.

<sup>14</sup> Such an EMU effect has also been identified in trade flows to and from individual Member States. For instance see Stephan (2002) for an estimation of German exports.

### Foreign direct investment and EMU

Although the impact of the Single Market on European FDI flows has given rise to significant empirical research,<sup>15</sup> the empirical literature on the effect of EMU is so far more sparse. A notable exception is Barr et al. (2003) who analyse the fall of FDI into the UK in the recent years and conclude that it cannot solely be explained by exchange rate effects and that it may also be a consequence of not adopting the euro.

In contrast, the link between foreign direct investment and exchange rate uncertainty has generated a relatively large empirical literature. However, reflecting the complexity of the relation between uncertainty and investment,

<sup>15</sup> For instance, Barrell and Pain (1999) conclude that the Single Market has increased the attractiveness of Europe as an investment destination for both EU and non-EU firms.

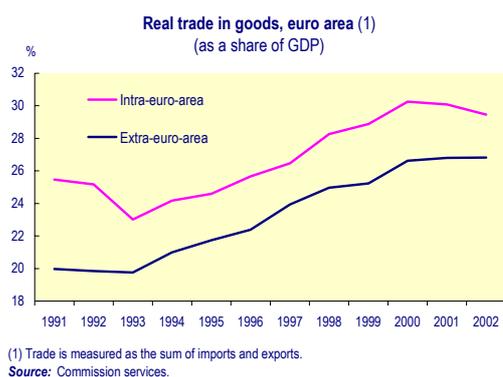
studies have tended to produce contradictory conclusions. To give a few examples:

- *Goldberg and Kolstad (1995)* explore the effect of short-run exchange rate volatility on US trade flows with Canada, Japan and the UK and find a positive relation between volatility and FDI.
- Working with a sample of OECD countries, *De Ménil (1999)* also reports a significant positive effect of exchange rate volatility on FDI.
- In contrast, *Barrell et al. (2003)* find that US firms investing in Europe tend to be risk-averse and to lower their investments as exchange rate volatility rises.

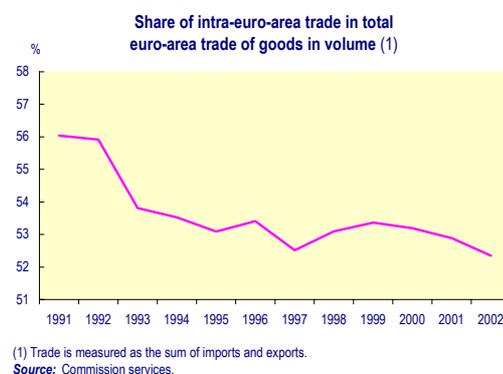
### 3. Recent trends in trade and FDI

#### Intra and extra-euro-area trade

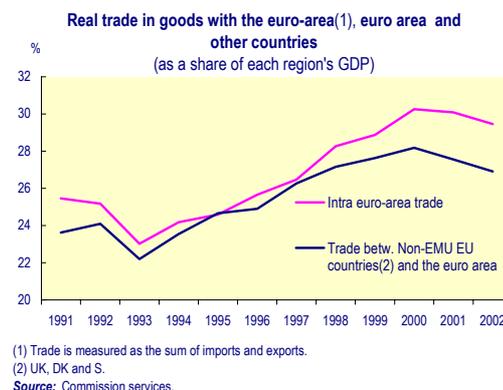
Trade flows to and from the euro area increased quite rapidly in the 1990s. As shown in the graph below, both intra and extra-euro-area trade of goods rose continuously as a share of GDP, between 1994 and 2000. Reflecting the traditional strong response of trade to fluctuations in activity, the current cyclical downswing has brought this expansion to a halt since 2001.<sup>16</sup>



Developments in euro-area trade in the 1990s have been dominated by globalisation and surging world trade. This explains the continuous slide of the share of intra-euro-area trade in total euro-area trade volumes during most of the 1990s (see next graph). The slide came to halt in 1998-99 on the back of the Asian crisis. Since the late 1990s, the launch of EMU has probably helped to mitigate the overall downward trend of the share of intra-euro-area trade.



A positive EMU effect on trade is clearly visible when restricting the analysis to EU countries. The next graph shows trade with the euro area for EMU countries on the one hand (i.e. intra-euro-area trade) and for the three EU countries not belonging to EMU, on the other. Trade is expressed as a share of the GDP of the regions considered.



<sup>16</sup> In the absence of adequate trade data on services, the graphs presented here are based on trade in goods.



Since the late 1990s, trade within the euro area has clearly expanded more rapidly than trade between EMU Member States and the other three EU countries. It is interesting to note that the two curves already start to diverge in 1998, suggesting that exporters may have anticipated the launch of EMU.

The EMU effect on trade identified in the graph can be confirmed statistically with the help of a simple trade model relating Member States' trade with the euro area to a time trend and a dummy variable capturing a possible EMU effect (see Box 4). The main conclusion from the estimation of such a model is that trade flows with the euro area have increased significantly for EMU members since the start of EMU in 1999. The estimated effect of EMU on import flows ranges between 7 and 18% depending on the estimation strategy adopted. The range can be considered as conservative to the extent that it only captures the impact that is already visible in the data up to 2002 and that the full effect may not yet have been reached. No shift in trade is observed for the EU countries which have not adopted the euro.

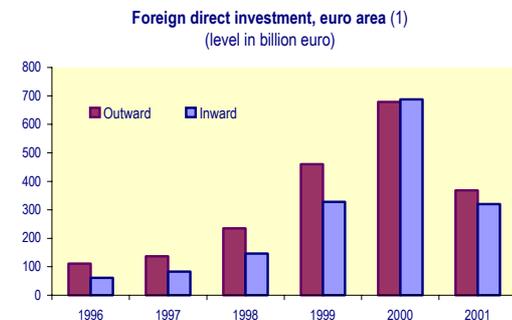
#### Foreign direct investment into and from the euro area

The late 1990s have seen a massive increase of FDI flows to and from the euro area. According to Eurostat, annual outward FDI flows from EMU countries rose from 110 billion euro in 1996 to close to 680 billion euro in 2000.<sup>17</sup> The surge was even more remarkable in the case of inward FDI flows which multiplied 11-fold over the same period, climbing from about 60 to 690 billion euro.

The current slowdown has taken its toll on direct investment, with outwards and inwards flows falling respectively to 370 and 320 billion euro in 2001. Nevertheless, these figures remain high by historical standards,

<sup>17</sup> Eurostat data cover both intra-euro-area and extra-euro-area FDI.

suggesting that the increase in direct investment in the late 1990s was not purely a cyclical phenomenon.<sup>18</sup>



(1) FDI data include both intra and extra-euro-area flows.  
Source: Commission services.

The surge in foreign direct investment in the late 1990s is part of a broad globalisation trend that has affected most industrialised countries. Most OECD countries experienced a significant increase in FDI flows over the period. Potential explanations for this trend include the growing importance of multinational enterprises, deregulation, investment-friendly policies in a number of countries<sup>19</sup> and cross-border consolidation in ICT-related sectors.<sup>20</sup>

In addition, developments in direct investment in the late 1990s can also be put down to the equity price bubble that built-up during that period. It is noteworthy that FDI flows in recent years have been largely dominated by mergers and acquisitions of existing businesses as opposed to greenfield investment. As a result, the factors which contributed to fuel equity prices, including

<sup>18</sup> No Eurostat data is available for 2002 yet. ECB data show a further fall in extra-euro area FDI in 2002 but both outwards and inwards direct investment remain largely above their 1996 level.

<sup>19</sup> Among which the privatisation of state-owned utilities was of major importance.

<sup>20</sup> For a general discussion of recent FDI trends see OECD (2003).

**Box 4: Identifying an EMU effect in a simple trade model**

The present box assesses the effect of EMU on trade by means of a simple econometric model, relating trade with the euro area to a constant, a dummy and possibly a time trend. The following two equations were estimated on a panel of time-series trade data for EU countries:

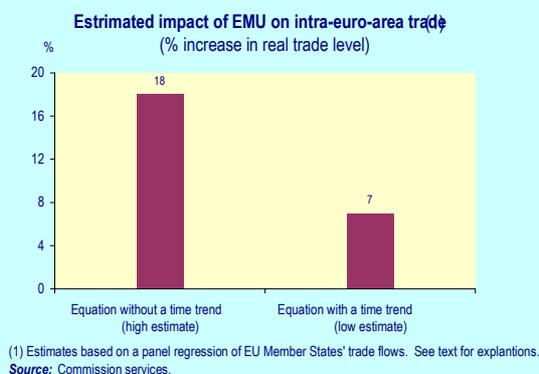
$$S(i,t) = \text{CONST}(i) + a(i)*\text{DUM}(t) + e(i,t)$$

$$S(i,t) = \text{CONST}(i) + a(i)*\text{DUM}(t) + b*\text{TIME} + e(i,t)$$

where S is the Log of the trade share (the ratio of the sum of exports and imports to and from the euro area to GDP, with all variables in current prices),  
 DUM is a dummy variable equal to one after 1998,  
 TIME is a time trend,  
 e is a random error term,  
 t and i are subscripts for time and for EMU membership (1 for members, 2 for non-members).

The estimated panel consisted of two country aggregates made respectively of euro-area member countries, on the one hand, and of the UK and Denmark, on the other. Due to data limitations, Austria, Finland Portugal and Sweden had to be excluded from the analysis. Trade shares were constructed from quarterly national account and custom data. Trade data including both goods and services were taken from national accounts. Custom data were used to split total trade into its intra-euro-area and extra-euro-area components. The two equations were estimated over the 1991Q1 to 2002Q4 period.

A pooled estimation makes it possible to control for common effects across the two aggregates such as a common trade trend, for example. The tests of the estimated coefficients for “a(1)” and “a(2)” makes it possible to check whether changes in intra-euro-area trade after the launch of EMU are statistically significant for the “EMU group” and “the non-EMU group” respectively.



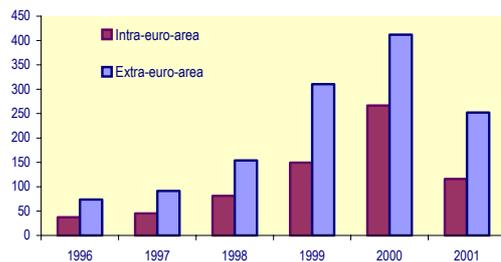
Overall, as shown in the graph above, the estimated equations confirm the existence of a substantial positive effect of EMU on intra-euro-area trade. The size of the effect depends on the specification used.

In the case of *the first equation*, the estimated coefficient of the dummy variable indicates that intra-euro-area trade has increased by about 18% since the start of EMU in 1999. In the meantime, there has been no significant increase in trade between the euro area, on the one hand, and the UK and Denmark, on the other (the estimate of “a(2)” is not statistically different from zero). These estimates neglect possible other trade integration effects unrelated to EMU, such as lower transportation costs, for example. *The second equation* allows for a time trend in the regression in order to capture autonomous trade integration effects. This produces a more cautious estimate of the effect of EMU with an increase in intra-euro-area trade of about 7%. It is worth stressing that both estimates of the impact of EMU may be considered as conservative insofar as they are based on data running to 2002. The impact of EMU on trade may not have been fully felt at this point in time and may be larger than is captured in the above estimations.



easy access to equity capital and excessive profit expectations, probably also boosted foreign direct investment activity. Furthermore, inflated stock prices also had a direct impact on the statistical valuation of those FDI operations consisting of acquisitions of large shares in quoted companies.

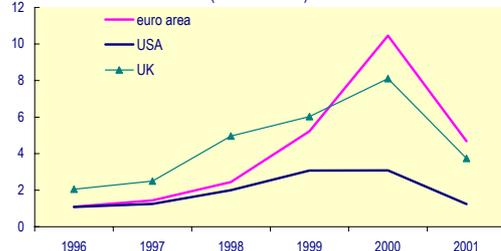
Outward foreign direct investment, euro area,  
(level in billion euro)



Source: Commission services.

At the euro-area level, this broad globalisation trend is clearly visible when decomposing euro-area FDI into intra and extra-euro area flows. As shown in the previous graph, the increase of total euro-area FDI outflows in the late 1990s is the result of a simultaneous surge of intra-euro-area investment and of outflows from the euro area to the rest of the world. The latter can clearly not be attributed to an EMU effect and reflects the broad globalisation that has affected most OECD countries.

Inward foreign direct investment,  
euro area, USA and UK (1)  
(share of GDP)

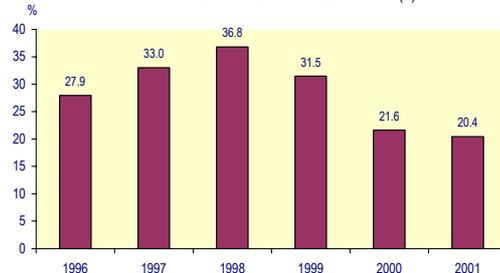


(1) Euro-area data includes both intra-euro-area and extra-euro-area flows.  
Source: Commission services.

Nevertheless, globalisation alone cannot explain all recent developments in euro-area FDI. The analysis of inward FDI flows indicates that the euro area became a comparatively more

attractive location for foreign investment in the late 1990s. During that period, the share of inward FDI in GDP increased more markedly in the euro area than in the USA and, to a lesser degree, in the UK.<sup>21</sup> Despite significant cutbacks in foreign investment in the current downturn, the share of inward FDI in GDP remained sizeably higher in the euro area in 2001, at 4.7% compared with 3.7% in the UK and 1.2% in the USA.

Inward foreign direct investment,  
share of non-EMU countries in EU15 total (1)



(1) EU data include both intra-EU and extra-EU data.  
Source: Commission services.

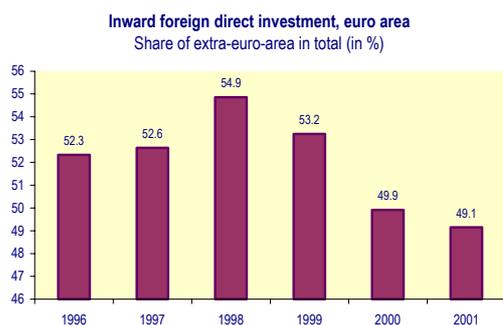
Recent FDI inflows into the euro area have probably been partly fostered by EU-wide factors, including the Internal Market and the associated cross-border consolidation of the EU industry, the privatisation of state-owned companies and the deregulation of public utilities. Nevertheless, a comparison of recent developments in EU countries not belonging to EMU with developments in the euro area points to a significant impact of the single currency on foreign investment. As shown in the above graph, the share of non-EMU countries in total inward investment into the EU15 has decreased sharply since the launch of the euro, falling from 37% to 20% between 1998 and 2001. Tentative and partial data available for 2002, suggest that the fall continued last year and that the share of non-

<sup>21</sup> FDI data may be distorted by very large M&A operations. In 2000, FDI into the euro area was boosted by the acquisition of Mannesmann (Germany) by Vodafone (UK). However, the surge in inward FDI into the euro area in the late 1990s remains remarkable even when excluding this very large acquisition.

EMU countries may have been cut further by about a half. This indicates that the increased attractiveness of the euro area as a destination for foreign investment is, at least partly, attributable to EMU.

It is important to stress that the EMU effect on FDI identified in the above graph actually covers two factors. First, the single currency may have increased the attractiveness of the euro area as a basis for foreign investment due to a number of factors including the suppression of intra-euro-area exchange rate risks. Second, the weakness of the euro exchange rate made euro-area assets quite attractive during the first years of EMU. Given that FDI data are only available to 2001, these two factors are difficult to disentangle.

Turning to the origin of FDI inflows into the euro area, the launch of EMU has gone hand in hand with a large increase in intra-euro-area FDI and a significant drop in of the share of extra-euro-area direct investment in total direct investment. From a peak of 55% in 1998 the share dropped to 49% in 2001, suggesting a more significant impact of EMU on intra-euro-area FDI flows than on investment by non-EMU countries into the euro area (see next graph).



Source: Commission services.

It is however worth stressing that investment by non-EMU countries into the euro area also surged in the late 1990s, increasing in particular more rapidly than inward FDI into the UK or the USA. Hence, it is quite possible that EMU

has stimulated both cross-border investment between EMU countries and investment from non-EMU countries into the euro area.

Overall, recent developments in FDI data are compatible with a positive “EMU” effect on foreign investment into the euro area. As FDI has been affected by a number of other factors since the late 1990s, the magnitude of this EMU effect is difficult to assess. In particular, the impact of the relative weakness of the euro exchange rate in the early years of EMU is difficult to disentangle from a broader EMU effect without resorting to a proper econometric model.

#### 4. Conclusion

Available empirical evidence points to a sizeable effect of EMU on trade and, possibly, foreign direct investment in the euro area.

Several empirical studies are now available which, based on estimated trade models, all conclude that the euro has already had a large impact on intra-euro-area trade. Depending on the studies considered, the effect of EMU on intra-euro-area import flows is estimated to range between 5 and 50%. There is also some evidence that the EMU effect on trade has not reached its maximum yet. As existing estimates generally only capture the effect already embedded in existing data, the long-run impact of EMU is probably closer to the upper end of this range.

In contrast, empirical evidence is more limited in the case of foreign investment. An analysis of recent FDI flows indicates that the attractiveness of the euro area as a destination for foreign investment has increased significantly since the launch of the euro. However, FDI is determined by a large number of factors, among which the magnitude of a positive effect of EMU is difficult to assess.



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### III. References to further work

#### 1. Policy documents

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**Economic Forecasts, Spring**

[http://europa.eu.int/comm/economy\\_finance/publications/european\\_economy/forecasts\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/european_economy/forecasts_en.htm)

EUROPEAN ECONOMY. No. 3. 2003

**Public finances in EMU - 2003**

Communication from the Commission to the Council and the European Parliament COM(2003) 283 final

[http://europa.eu.int/comm/economy\\_finance/publications/european\\_economy/public\\_finances2003\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/european_economy/public_finances2003_en.htm)

EUROPEAN ECONOMY. No. 4. 2003.

**The Broad Economic Policy Guidelines BEPGs for the 2003-05 period. COM(2003)170 final**

[http://europa.eu.int/comm/economy\\_finance/publications/european\\_economy/broadeconomyguidelines2003\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/european_economy/broadeconomyguidelines2003_en.htm)

EUROPEAN ECONOMY. ENLARGEMENT PAPERS. No. 16. September 2003.

**Projected trends in candidate countries' debt ratios in the light of the 2003 fiscal notifications**

[http://europa.eu.int/comm/economy\\_finance/publications/enlargement\\_papers/elp16\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/enlargement_papers/elp16_en.htm)

EUROPEAN ECONOMY. ENLARGEMENT PAPERS. No. 17. September 2003

**Main results of the April 2003 fiscal notifications presented by the candidate countries**

[http://europa.eu.int/comm/economy\\_finance/publications/enlargement\\_papers/elp17\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/enlargement_papers/elp17_en.htm)

OCCASIONAL PAPERS. No.4.

**Economic Policy Committee EPC : Key structural challenges in the acceding countries: The integration of the acceding countries into the Community's economic policy co-ordination processes**

[http://europa.eu.int/comm/economy\\_finance/publications/occasional\\_papers/occasionalpapers4\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/occasional_papers/occasionalpapers4_en.htm)

**Activities:** Pre-accession economic programme (PEP)

[http://europa.eu.int/comm/economy\\_finance/about/activities/activities\\_thirdcountrieseconomic\\_pep\\_en.htm](http://europa.eu.int/comm/economy_finance/about/activities/activities_thirdcountrieseconomic_pep_en.htm)

**Activities.** Stability and Growth Pact (SGP) and fiscal surveillance

[http://europa.eu.int/comm/economy\\_finance/about/activities/sgp/main\\_en.htm](http://europa.eu.int/comm/economy_finance/about/activities/sgp/main_en.htm)

#### 2. Analytical documents

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 185.

Harry Huizinga (Tilburg University and CEPR) and Gaëtan Nicodème (DG Economic and Financial Affairs)

**Foreign ownership and corporate income taxation : an empirical evaluation**

Economic integration in Europe has not led to a 'race to the bottom' regarding corporate income taxes. This paper documents trends in the foreign ownership of companies in Europe and it examines whether foreign ownership has exerted a positive influence on corporate income tax levels. Using company-level data, we document that the foreign ownership share in Europe stood at around 21.5 percent in the year 2000. The estimation suggests that a one percentage point increase in foreign ownership increases the average corporate income tax rate between a half and one percent.

[http://europa.eu.int/comm/economy\\_finance/publications/economic\\_papers/economicpapers185\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers185_en.htm)



EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 186.

David Young (DG Economic and Financial Affairs)

**Employment protection legislation: its economic impact and the case for reform**

Despite the large volume of economic literature on employment protection legislation (EPL), there remain remarkable disagreements among economists and policy-makers on the subject. This paper reviews some of the recent theory and empirical evidence.

[http://europa.eu.int/comm/economy\\_finance/publications/economic\\_papers/economicpapers186\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers186_en.htm)

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 187.

Marco Buti (European Commission) and Paul Van den Noord (OECD)

**What is the impact of tax and welfare reforms on fiscal stabilisers? A simple model and an application to EMU**

Reforms aiming at lowering the tax burden and cutting social benefits may boost efficiency and output, and improve market adjustment to shocks, but, by reducing the size of automatic stabilisers, may also imply less cyclical smoothing. This paper argues that the alleged trade-off between efficiency/flexibility and stabilisation depends on the typology of shocks affecting the economy.

[http://europa.eu.int/comm/economy\\_finance/publications/economic\\_papers/economicpapers187\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers187_en.htm)

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 188.

Torben M. Andersen, CEPR, IZA and EPRU

**Wage formation and European integration**

European integration is likely to affect labour market performance through various routes. One important channel is the effects product market integration has on labour markets. This paper reviews how product market integration may strengthen labour market interdependencies between integrating economies and therefore affect both the level of employment and the flexibility by which wages adjust to shocks.

[http://europa.eu.int/comm/economy\\_finance/publications/economic\\_papers/economicpapers188\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers188_en.htm)

EUROPEAN ECONOMY. ECONOMIC PAPERS. No. 189.

Filip Keereman (DG Economic and Financial Affairs)

**External assumptions, the international environment and the track record of the Commission Forecast**

While in the Commission Forecasts interest rates, exchange rates or oil prices are treated more like assumptions, it is interesting to test their realism. It appears that these variables are formulated in a reasonably accurate way and that in general alternative assumptions would not improve the picture.

[http://europa.eu.int/comm/economy\\_finance/publications/economic\\_papers/economicpapers189\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/economic_papers/economicpapers189_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/euroareagdpend.htm](http://europa.eu.int/comm/economy_finance/indicators/euroareagdpend.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](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](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](http://europa.eu.int/comm/economy_finance/indicators/key_euro_area/keyeuroarea_en.htm)

**Monthly and quarterly notes on the euro-denominated bond markets** (looks at the volumes of debt issued, the maturity structures, and the conditions in the market)

[http://europa.eu.int/comm/economy\\_finance/publications/bondmarkets\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/bondmarkets_en.htm)

**Price and Cost Competitiveness**

[http://europa.eu.int/comm/economy\\_finance/publications/priceandcostcompetitiveness\\_en.htm](http://europa.eu.int/comm/economy_finance/publications/priceandcostcompetitiveness_en.htm)

## IV. Key indicators for the euro area

1 Output		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Industrial confidence <sup>1.1</sup>	Balance	-9.833	-11.58		-12	-12	-12	-14	-11	-9
Industrial production <sup>1.2</sup>	mom % ch	0.225	-0.858		0.4	-1	0.1	0.6		
		2001	2002	2003*	02 Q1	02Q2	02Q3	02Q4	03Q1	03Q2
Gross domestic product <sup>1.3</sup>	Ann. % ch	1.5	0.8	1.8	0.3	0.6	0.9	1.2	0.8	0.2
Gross domestic product <sup>1.3</sup>	Qtr. % ch				0.4	0.4	0.3	0.1	0.0	-0.1
2 Private consumption		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Consumer confidence <sup>2.1</sup>	Balance	-6.083	-10.58		-19	-20	-19	-18	-17	-17
Retail sales <sup>2.2</sup>	mom % ch	1.325	1.3167		1.6	-0.7	0			
		2001	2002	2003*	02 Q1	02Q2	02Q3	02Q4	03Q1	03Q2
Private consumption <sup>2.3</sup>	qoq %ch.	1.8	0.6	1.7	-0.1	0.3	0.3	0.3	0.5	0.1
3 Investment		2001	2002	2003*	02 Q1	02Q2	02Q3	02Q4	03Q1	03Q2
Capacity utilization <sup>3.1</sup>	%	83.525	81.2		81.1	81.2	81	81.5	81.1	80.8
Gross fixed capital formation <sup>3.2</sup>	Qtr. % ch	-0.3	-1.9	2	-0.7	-1.3	0.1	0.2	-1.22	-0.4
Change in stocks <sup>3.3</sup>	% of GDP	-0.2	-0.1	0.1	-0.2	-0.2	-0.4	-0.4	0.1	0.1
4 Labour market		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Unemployment <sup>4.1</sup>	%	8	8.2	8.3	8.8	8.8	8.9	8.9		
		2001	2002	2003*	02 Q1	02Q2	02Q3	02Q4	03Q1	03Q2
Employment <sup>4.2</sup>	Ann. % ch	1.4	0.4	0.4	0.7	0.5	0	0	0	
Shortage of labour <sup>4.3</sup>	%	7.8	3.8		5	4	3	3	3	
Wages <sup>4.4</sup>	Ann. % ch	2.8	2.9	2.8	3.1	3.1	2.9	2.9	2.8	
5 International transactions		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Export order books <sup>5.1</sup>	Balance	-14.25	-22		-25	-26	-29	-28		
World trade <sup>5.2</sup>	Bn. EUR	6454	6309		504	487	479	487		
Exports of goods <sup>5.3</sup>	Bn. EUR	767.4	776.9	823.4	85.4	85.1	85.9	91.5		
Imports of goods <sup>5.4</sup>	Bn. EUR	802.2	781.6	828.1	82.4	80.6	79.2	79.3		
Trade balance <sup>5.5</sup>	Bn. EUR	-34.8	-4.7	-4.7	3	4.5	6.7	12.2		
		2001	2002	2003*	02 Q1	02Q2	02Q3	02Q4	03Q1	03Q2
Exports of goods and services <sup>5.6</sup>	Qtr. % ch	4.3	0.7	6.1	-0.2	2.1	1.5	-0.4	-1.2	-0.5
Imports of goods and services <sup>5.7</sup>	Qtr. % ch	2.1	-1.6	6.2	-1.3	1.5	1.5	0.2	0.1	0
		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Current account balance <sup>5.8</sup>	Bn. EUR	-12.3	9.6	11	-1	2	2.5	0		
Direct investment (net) <sup>5.9</sup>	Bn. EUR	-104.6	-90.4		-19.8	-0.3	23.7	-3.6		
Portfolio investment (net) <sup>5.10</sup>	Bn. EUR	36.5	38		5.4	7	12.9	-35.3		
6 Prices		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
HICP <sup>6.1</sup>	Ann. % ch	2.5	2.2	2	2.1	1.9	2	1.9	2.1	
Core HICP <sup>6.2</sup>	Ann. % ch	2	2		2.2	2	2	1.9		
Producer prices <sup>6.3</sup>	Ann. % ch	2.2083	1.7333		1.7	1.3				
Import prices <sup>6.4</sup>	Ann. % ch	0.4	-1.4	0.3						
7 Monetary and financial indicators		2001	2002	2003*	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03
Interest rate (3 months) <sup>7.1</sup>	% p.a.	4.265	3.3		2.54	2.46	2.15	2.13	2.4	2.15
Bond yield (10 years) <sup>7.2</sup>	% p.a.	5	4.8		4.16	3.9	3.64	3.95	4.15	4.23
ECB repo rate <sup>7.3</sup>	% p.a.	3.25	2.75		2.5	2.5	2	2	2	2
Stock markets <sup>7.4</sup>	Index	4046.8	3053		2278.3	2301	2443.3	2459.8	2524.1	2585.1
M3 <sup>7.5</sup>	Ann. % ch	5.2667	5.6		8.2	8.3	8.5			
Credit to private sector (loans) <sup>7.6</sup>	Ann. % ch	7.9	7.65		4.6	4.6	4.5	4.9		
Exchange rate USD/EUR <sup>7.7</sup>	Value	0.9	0.94	0.98	1.0854	1.15	1.166	1.14	1.11	1.11
Nominal effective exchange rate <sup>7.8</sup>	Index	80.1	82.2	83.7	104.89	108.54	108.71	107.30	106.16	105.72

\* ECFIN Spring 2003 forecasts (*European Economy*, No 2/2003 -April 2003)



Number	Indicator	Note	Source
<b>1</b>	<b>Output</b>		
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
<b>2</b>	<b>Private consumption</b>		
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
<b>3</b>	<b>Investment</b>		
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
<b>4</b>	<b>Labour market</b>		
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
<b>5</b>	<b>International transactions</b>		
5.1	Export order books	Industry survey; balance of positive and negative replies, seasonally adjusted	ECFIN
5.2	World trade	Bn; EUR, current prices, seasonally adjusted	ECFIN
5.3	Exports of goods	Bn. EUR, excluding intra euro area trade, fob	Eurostat
5.4	Imports of goods	Bn. EUR, excluding intra euro area trade, cif	Eurostat
5.5	Trade balance	Bn. EUR, excluding intra euro area trade, fob-cif	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; before 1997 partly estimated	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
<b>6</b>	<b>Prices</b>		
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 values for goods	Eurostat

<b>7 Monetary and financial indicators</b>			
7.1	Interest rate	Percent p.a., 3-month interbank money market rate, period averages	Datastream
7.2	ECB repo rate	Percent p.a., minimum bid rate of the ECB, end of period	Datastream
7.3	Bond yield	Percent p.a., 10-year government bond yields, lowest level prevailing in the euro area, period averages	Datastream
7.4	Stock markets	DJ Euro STOXX50 index, period averages	Datastream
7.5	M3	Annual percentage growth rate of seasonally adjusted flows, moving average (3 last months): from 1997 onwards corrected for holdings by non-residents	ECB
7.6	Credit to private sector (loans)	Annual percentage change, 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, until December 1998: USD/ECU rates	ECB
7.8	Nominal effective exchange rate	Against 13 other industrialised countries, double export weighted, 1995 = 100, increase (decrease): appreciation (depreciation)	ECFIN

Comments on the report would be gratefully received and should be sent to:

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