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Euroland: Upswing postponed

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Euroland: Upswing Postponed

by Kai Carstensen, Klaus-Jürgen Gern, Christophe Kamps and Joachim Scheide

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- The recovery in Euroland has started at the beginning of this year but it has remained rather moderate. Real GDP increased at an annual rate of less than 1½ percent during the first half of 2002. Capacity utilization has declined further and unemployment continued to go up. While exports have gained some strength, domestic demand has just about stabilized. Against the background of weak economic activity the increase in consumer prices has calmed down considerably.
- Several factors can be made responsible for the sluggish economic performance. Consumer sentiment was affected by the price increases at the beginning of this year and obviously also by the introduction of the new currency. Profit expectations of firms have not improved sufficiently as it is also reflected in the collapse of stock prices. In addition, export expectations have deteriorated recently because of the uncertainty about the US economy and the appreciation of the euro.
- In the light of the recent turbulences on stock markets and the increased uncertainty about the economic outlook in the euro area, the ECB will probably not raise interest rates this year as was expected a few months ago. In fact, there is a discussion whether the ECB would—or even should—lower interest rates. According to both pillars of its monetary policy strategy, an easing of monetary policy cannot be justified. Money growth still exceeds the reference value by a wide margin. Although our analysis indicates that money demand has become unstable recently, there is a risk that there is some excess liquidity in the euro area and that the high money growth cannot be explained by special factors alone. The perspectives for price level stability have also not improved considerably.
- The budget deficit in Portugal and also in Germany will probably exceed 3 percent of GDP this year; in Italy and France it is approaching this level. The European Commission has started the excessive deficit procedure for Portugal and may do the same for Germany soon. However, it is not certain there will be the necessary majority in the ECOFIN Council for the decision whether an excessive deficit exists. One cannot exclude that Italy and France have an interest to block such a decision because they also have problems of meeting the obligations of the Stability and Growth Pact. So it is possible that the finance ministers of these four countries which together have 35 votes in the Council will prevent the decision about the excessive deficit procedure. The coming months will show whether the Pact really has teeth. We are strongly in favor of a strict application of the Stability and Growth Pact.
- The recent deterioration of consumer and business sentiment does not, in our view, imply that a renewed downturn is imminent. After a relatively sluggish growth in the rest of this year, economic activity will pick up considerably in the course of 2003 and real GDP will rise faster than potential output. For the year as a whole, real GDP will increase by 2.3 percent, after 0.8 percent in 2002. The labor market situation will improve slowly in the course of next year. Inflation will remain moderate also because the ECB will tighten monetary policy gradually; in addition we expect that wages will rise only moderately. The consumer price index will increase by 1.6 in 2003, after 2.1 this year.

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Euroland: Upswing Postponed

The recovery in Euroland has started but it has remained rather moderate in the course of 2002. Real GDP increased at an annual rate of less than 1½ percent during the first two quarters. Capacity utilization has declined further and unemployment continued to go up. While exports have gained some strength as we had predicted, domestic demand has just about stabilized. The leading indicators do not suggest that a strong pickup of the economic expansion can be expected for the third quarter.

Several factors may explain why the economic performance has been weaker than expected. Consumer sentiment was affected by the strong price increases at the beginning of this year and obviously also by the introduction of the new currency; as a consequence, spending of private households has remained rather weak. The impulses from monetary policy have not led to a change in the dispositions of firms concerning inventories, and also the low interest rates have not yet pushed fixed investment. Obviously, profit expectations of firms have not sufficiently improved as it is also reflected in the collapse of stock prices. In addition, export expectations have deteriorated recently. One reason was the decline of stock prices in the United States and the ensuing uncertainty about the short-term outlook for the US economy; another reason was the strong appreciation of the euro since spring. Finally, oil prices have risen recently posing another risk for the recovery.

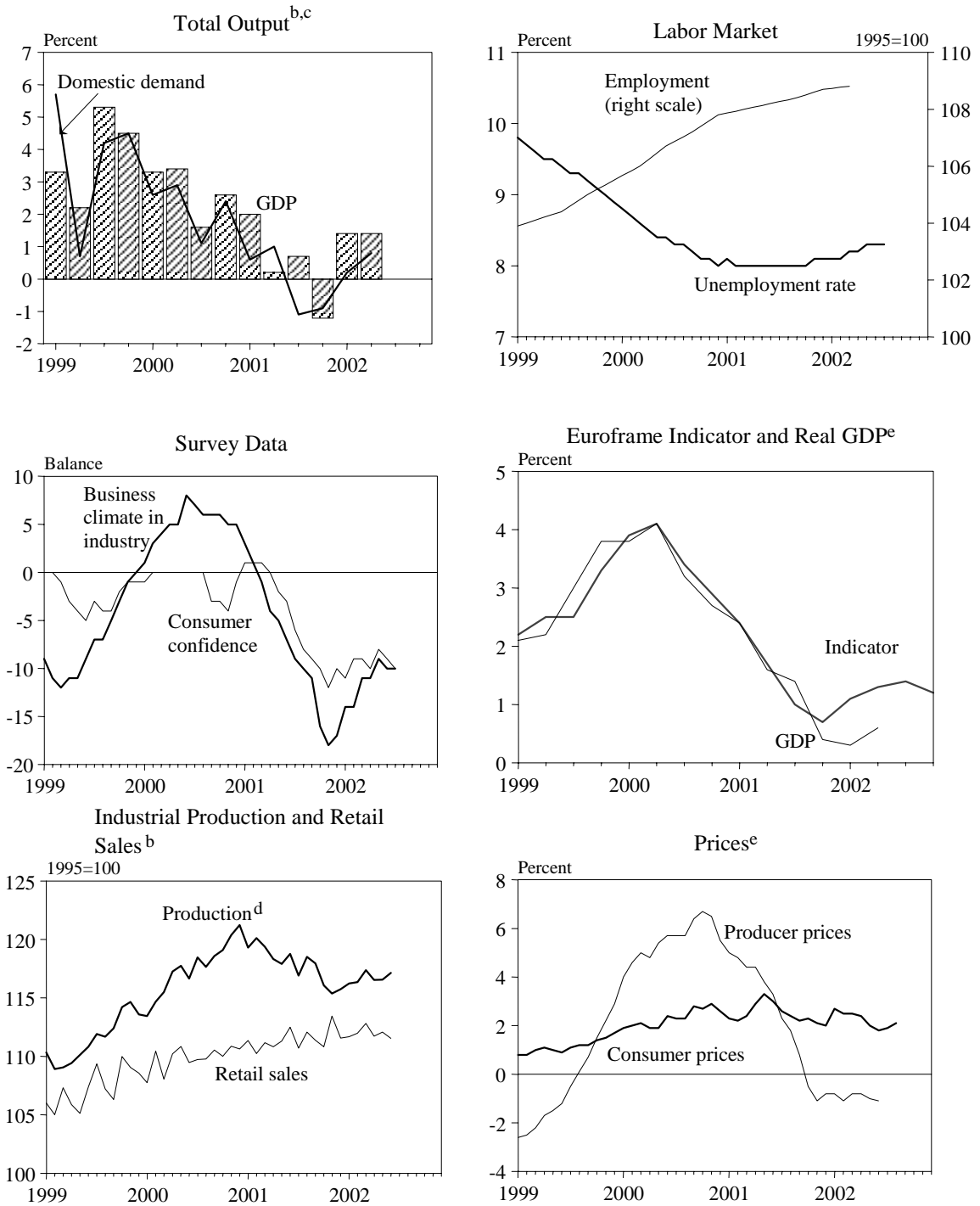
In spite of all these negative factors, we still expect that the upswing in Euroland is under way although it will be weaker than expected several months ago. The impulses from monetary policy are still substantial and should stimulate domestic demand. In addition, we do not expect that there will be a setback for the recovery in the United States; in spite of the adjustment processes following the burst of the stock market bubble, the economy will most likely continue to expand albeit at a moderate pace in the near term. Also, the recovery in the rest of the world is slowly gaining momentum (Benner et al. 2002). All this should lead to a stronger export performance which will, however, be dampened by the real appreciation of the euro.

The turbulences on the stock markets in Euroland have made it clear that the recovery cannot be viewed as robust right now; in fact, the risks have actually increased. Also because of these changes, the European Central Bank (ECB) will not raise interest rates this year as it was expected a few months ago. Since the risk for a renewed setback or a double dip is minor, we recommend that the ECB should not lower interest rates now. The two pillars of its monetary policy strategy also do not suggest that interest rates need to be cut. As far as fiscal policy is concerned, several countries have not yet met the obligations of the Stability and Growth Pact and have not balanced their budgets; among them is also Germany, the largest economy in the euro area. To the extent that citizens cannot expect lower taxes in the future, the medium-term growth prospects deteriorate; possibly, this expectation already dampens economic activity in the short run. Furthermore, the development of wages in Euroland do not brighten up the prospects for higher growth as wage moderation has not continued this year in most countries.

1 Sluggish Recovery

Economic activity in the euro area has only slightly recovered in the course of this year. Real GDP increased at an annualized rate of around 1.5 percent in the first and second quarter of 2002 (Figure 1). Thus, economy-wide production continued to grow at a lower rate than potential output whose growth rate we estimate to be around 2.5 percent. Since its cyclical peak in the year 2000 the output gap has

Figure 1: Business Cycle Indicators^a for Euroland



^aSeasonally adjusted. – ^bAt constant prices. – ^cPercentage change over previous quarter (annual rate). – ^dIndustrial without construction. – ^ePercentage change over previous year.

Source: Eurostat (2002), EUROFRAME (2002), ECB (2002c).

fallen by 2 percentage points.¹ The recovery has been sluggish so far especially because investment continued to decline in spite of expansionary monetary policy. Against the background of weak economic activity the situation on the labor market has only slightly deteriorated. While the unemployment rate has risen since last fall its increase has been comparatively mild (0.3 percentage points). Moreover, employment continued to expand, though at a significantly slower pace than in 2001.

The recovery of economic activity in the first half of 2002 has been considerably weaker than expected. While – as we had predicted – a recession in the euro area could be avoided, the dynamic upswing that we had foreseen did not materialize. Our spring forecast relied among other things on a number of leading indicators that pointed at a fast expansion of economy-wide production in the second and third quarter. For instance, the purchasing managers' index has perceptibly recovered since the end of last year; it has increased by more than 50 points since March and thus signals an upswing. Moreover, industrial and consumer confidence had considerably improved by spring; only lately have these two indicators deteriorated slightly. Also, the cyclical indicator calculated by EUROFRAME suggested a significant acceleration of economic expansion in the course of the first semester. Against this background the low dynamics in spring came as a surprise.

The sluggish recovery was characterized by weak domestic demand which increased by only 0.5 percent (annualized rate) in the course of the first half of 2002. Investment even declined. Apparently, the continued decline in capacity utilization, the fall in stock market prices and the renewed increase in oil prices were more important than the strong impulses from monetary policy and the improving external demand. At the same time, private households hardly expanded their consumption expenditures. While wages rose strongly at the beginning of the year in some countries, their increase in real terms was significantly lower due to the parallel price hike. Moreover, the rise in unemployment seems to have led to a decline in consumer confidence; the index recently compiled by the European Commission was only slightly higher than at its trough last November.

Exports increased by 4.2 percent (annualized rate) in the course of the first half of 2002, after having fallen by more than 3 percent in the course of last year. Yet, it has to be kept in mind that the trade data published by Eurostat in the national accounts include trade flows between member countries of the euro area. Other trade data published by Eurostat that are only partly comparable with those from the national accounts suggest that the increase in exports is due to higher trade flows inside the euro area. The deliveries to countries outside the euro area stagnated in the first half of this year. While exports to the United States increased again, those to the United Kingdom and Japan continued to decline. Meanwhile, the contribution of external trade to real GDP strongly rose as imports almost stagnated in the course of the first half of 2002 in view of weak domestic demand.

The increase in consumer prices has calmed down after an acceleration in January. The slower rise in prices was due to the decline in energy and especially in food prices. Yet, in August the Harmonized Index of Consumer Prices (HICP) was 2.1 percent higher than one year earlier according to preliminary estimates.² Between May and July of this year the inflation rate fluctuated inside the target corridor of 0 to 2 percent that the European Central Bank views to be consistent with price level stability. The core inflation rate (HICP excluding energy, food, alcohol and tobacco), however, still exceeds 2 percent, especially because service prices – which had been raised considerably at the beginning of the year when euro banknotes and coins were introduced – have continued to increase at a fast pace in recent months. This fall, the increase in prices will probably be moderate, since the scope

¹Our calculations on the basis of a Hodrick-Prescott filter suggest that the output gap amounted to around minus 1 percent in the second quarter of this year. The OECD (2002a: 217) estimates that the output gap was minus 1.6 percent this year on average. According to both estimates economy-wide capacity utilization has fallen by around 2 percentage points in the 2000–2002 period.

²The increase in the inflation rate above 2 percent in August is due to the fact that consumer prices had declined in August 2001.

for raising prices will remain limited due to continued economic weakness. However, the inflation rate will not fall far below 2 percent by the end of this year.

2 No Change of Monetary Policy for Now

The European Central Bank has left key interest rates unchanged since November 2001. The minimum bid rate on the main refinancing operations of the Eurosystem remained at 3.25 percent. Money market rates have declined somewhat during the summer as the expectation of an imminent rise of key rates diminished; at the beginning of September, the 3-month rate (EURIBOR) stood at 3.35 percent. The real short-term interest rate, approximated by subtracting the core rate of inflation, amounted to a little less than 1 percent which is considerably lower than the long-term average. Therefore, monetary policy continued to provide a stimulus for economic activity in the euro area.

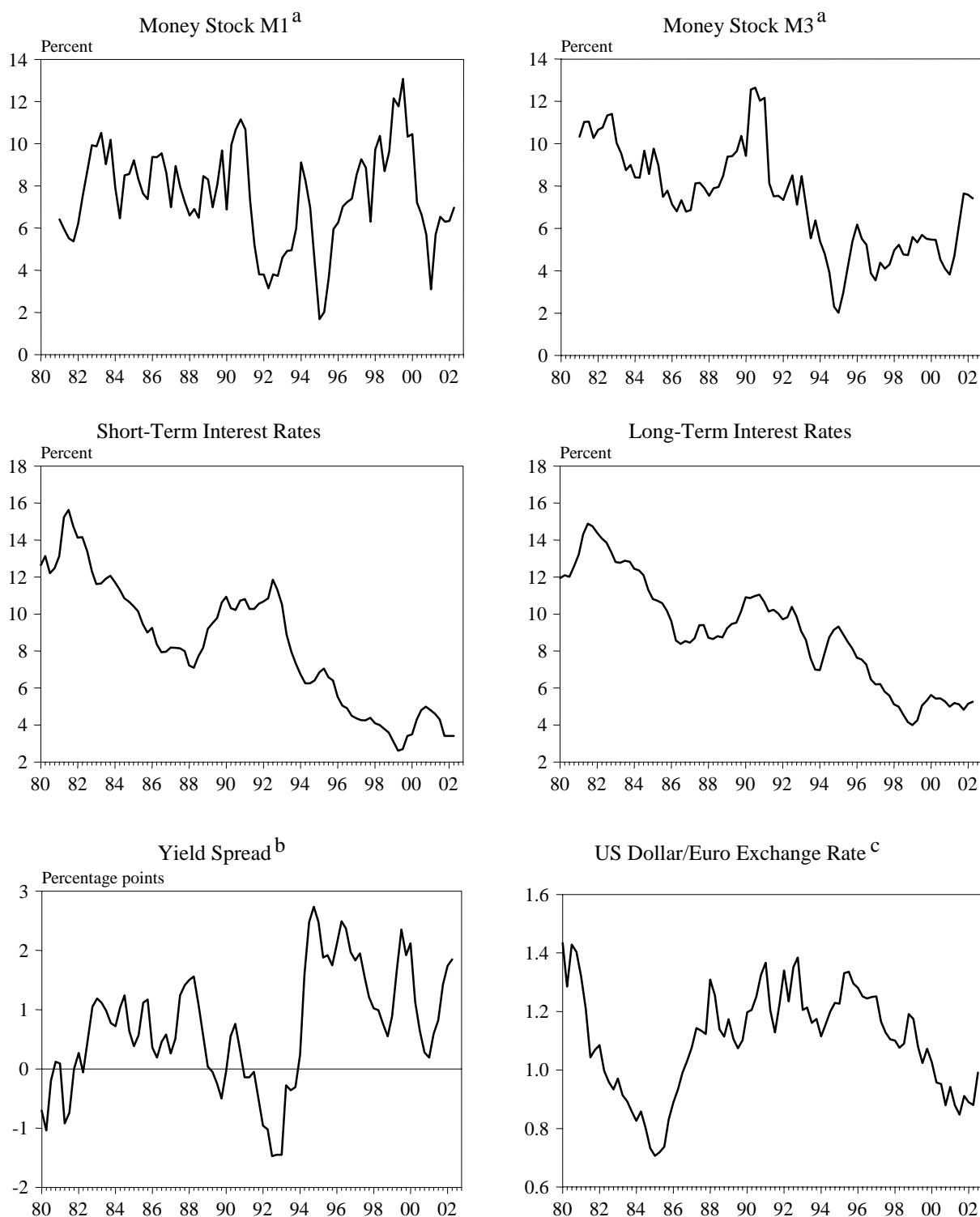
Long-term interest rates have declined as well; one reason was that the demand for government bonds increased following the surge of volatility and the collapse of prices on the stock market. Since spring, the yield for 10-year bonds dropped by about 80 basis points to 4.5 percent. In real terms, the long-term rate is also below its historical average. The amount of liquidity continues to be ample. For about one year, the growth rate of the money stock M3 has by far exceeded the reference value of 4.5 percent; in July, the year-over-year increase was 7.1 percent. However, there has been a slowdown in the course of this year: While the annual rate of the seasonally adjusted figure had amounted to more than 10 percent in the fall of 2001, it dropped to about 7 ½ percent in July.³ For the first time since the beginning of the monetary union, the euro has appreciated strongly against the US dollar (Figure 2); the advance was a lot smaller against other major currencies. In real effective terms, the exchange rate rose by almost 7 percent by August. All in all, the monetary conditions in the euro area have remained favorable although they have deteriorated somewhat since the spring of 2002.

A few months ago, it was expected that the ECB would raise interest rates soon. This was not only the view on financial markets; we, too, predicted in our spring forecast that the ECB would start in the fall of this year to tighten monetary policy somewhat. The main reason for this forecast was that given the expected upswing of the economy it would be appropriate to correct the expansionary course of monetary policy. However, contrary to our expectation, the upswing has not gained momentum. Against this background, but also in the light of the turbulences on the stock markets, our assumption is that the ECB will not raise its key interest rates this year. In fact, several observers forecast now that there will be a cut of rates or even urge the ECB to act in order to counter the sluggish performance of the euro area economy.

Whether a reduction of interest rates is indeed appropriate must be judged on the basis of the available gauges of the monetary policy stance. The ECB itself uses two pillars in the framework for the monetary policy strategy. The information revealed by the first pillar has not really changed in recent months. As M3 growth continues to be much higher than implied by the reference value, a reduction of interest rates is not indicated. To be sure, the ECB still refers to special factors which may overstate the rate of monetary expansion; for example, the implied stock market volatility in the euro area has increased markedly during the summer. But at the same time, the ECB states that the economic recovery may also have contributed to the high rate. In fact, the high excess liquidity “continues to be a cause for concern” (ECB 2002b: 8).

³Three-month annualized growth rate.

Figure 2: Indicators of Monetary Policy in Euroland, 1980–2002



^aPercentage change over previous year. – ^bLong-term interest rate minus short-term interest rate. – ^cBefore 1999: exchange rate US dollar/ecu.

Source: ECB (2002c).

Under certain conditions, the rapid money growth can indeed pose a risk for price level stability. This crucially depends on the stability of money demand. If this function is stable even in the short run, the risk would be especially relevant as it would imply that the velocity of money, which is currently well below its equilibrium level, would rise rapidly. In this case, nominal GDP would increase strongly, and as this would lead to a strong upswing, inflation would accelerate as well. However, our empirical analysis shows that the demand for money function has recently become unstable (Box 1). This may have to do with special factors although it is not possible to detect the true source of the instability empirically. If these special factors only have a temporary impact,⁴ the rate of monetary expansion should soon decline endogenously; with these factors losing their importance, the velocity of money would return to its normal level. In this case, the current liquidity overhang would not have any consequences for inflation (Gern et al. 2002: 12). However, since money growth has been very high for a long period of time already, it is difficult to argue that it is solely due to special factors. Although there is some uncertainty about the implications of high money growth, we conclude that there may indeed be some excess liquidity, which may have some consequences for inflation. All in all, therefore, the information of the first pillar does not suggest that interest rates have to be cut.

As far as the second pillar, the perspectives for inflation, is concerned, the situation has not changed very much in recent months. While inflation has declined after the surge at the beginning of this year, the HICP is still about 2 percent higher than a year ago. The core rate of inflation has remained stubbornly high at 2½ percent. Also the inflationary expectations do not imply that rates will safely fall below the 2-percent threshold so that price level stability will be achieved. This follows from the indicator that can be calculated on the basis of the French indexed-linked bond and also from the “Survey of Professional Forecasters” (ECB 2002c: 20 ff.). The inflation outlook appears to be a little more favorable because of the euro appreciation which has contributed to a considerable decline of import prices. However, the recent advance of oil prices is a factor which works in the opposite direction. According to our forecast, the increase of the HICP will fall below 2 percent next year. Nevertheless, we feel that it is appropriate to leave interest rates unchanged for now also because inflation has often surprised forecasters on the negative side in the recent past.

Another reason not to cut rates is that the current level of short-term interest rates is already low given the rate of capacity utilization and the rate of inflation prevailing in the euro area. This conclusion is confirmed by calculations of the Taylor rule (Figure 3). It is based on the observation that inflation continues to be higher than the ECB’s target.⁵ For this reason, the real rate of interest has to be higher than the equilibrium real rate,⁶ which we assume to be in the range of 2 to 3 percent.⁷ On the other hand, the real rate should be lower because capacity utilization in the euro area is below its normal level. According to our estimate, the output gap in the second quarter of 2002 is approximately –1 percent. On the basis of these inputs, the Taylor interest rate lies between 4¾ and 5¾ percent. Compared to these estimates, the short-term interest rate in the euro area is low enough to stimulate economic activity. A cut of key interest rates would only be appropriate if the economic outlook worsened markedly.

⁴There would be far-reaching consequences for the monetary policy strategy of the ECB if the money demand function had become permanently unstable. In that case, the “prominent role” of M3 could not be justified anymore. However, it is too early to draw such conclusions on the basis of our analysis.

⁵For calculating the Taylor interest rate it is useful to refer to the core rate of inflation (Gern et al. 2002: 8 ff.).

⁶This is the so-called Taylor principle, which implies that inflation can only be brought back to its target if monetary policy is tighter than normal.

⁷The equilibrium real interest rate cannot be observed. The vast majority of estimates is in this range.

Box 1: On the Stability of Money Demand in Euroland

Since the middle of 2001, the growth rate of M3 has exceeded the reference value of 4.5 percent leading to considerable excess liquidity^a and potentially indicating an instability of the money demand function in Euroland. For the sample 1980 I–1998 IV, Coenen and Vega (2001) find a stable money demand function. In the following, we extend their analysis to include observations up to 2002 I in order to assess whether this finding is still valid.

We explain real money demand ($M3r$) by real GDP (Y), a short-term interest rate (STR) and a long-term interest rate (LTR) as proxies for the nominal rate of return on financial assets included in and excluded from M3. The spread $LTR-STR$ can be interpreted as the opportunity cost of holding money instead of long-term bonds. Additionally, the inflation rate π is used as another opportunity cost measure.^b

The estimation procedure closely follows the approach of Coenen and Vega: In a first step, we estimate an unrestricted autoregressive lag model of order 2 from which the long-run parameters are derived. In a second step, we use a parsimoniously parameterized error-correction model (ECM) to estimate the transitory dynamics given the long-run parameters of the first step. To account for adverse developments in Germany in the year 1986 the dummy variable $D86$ proposed by Coenen and Vega is included in the dynamic model. We report estimation results for the sample 1980 I–1998 IV for which stability has been reported, and for the extended sample 1980 I–2002 I. For the first sample, we obtain the following results (lower-case variables denote logarithms, t -values in brackets):

$$\begin{aligned} \Delta m3r = & -0.84 - 0.10 \left[m3r - 1.14 y + 0.94 LTR - 0.67 STR + 3.89 \pi \right]_{t-1} + 0.19 \Delta m3r_{t-1} \\ & (-6.36) \quad (-6.38) \quad (-16.49) \quad (1.82) \quad (-1.52) \quad (1.76) \quad (2.17) \\ & + 0.13 \Delta^2 y_t - 0.24 \Delta LTR_{t-1} + 0.14 \Delta STR_t - 0.78 \Delta \pi_t - 0.50 \Delta \pi_{t-1} - 0.009 D86_t \\ & (2.63) \quad (-3.00) \quad (2.26) \quad (-6.23) \quad (-3.97) \quad (-3.80) \end{aligned}$$

$$R^2=0.75; JB=0.68 [0.71]; AR1=1.19 [0.27]; AR4=3.29 [0.51]; ARCH1=1.24 [0.27];$$

$$ARCH4=3.57 [0.47]; RESET1=0.35 [0.55]; HET1=11.08 [0.80]; HET2=34.72 [0.67].^c$$

All parameter estimates have the correct sign and plausible magnitudes. Moreover, all common misspecification tests support the specification, instability tests based on recursive estimation of the dynamic model do not find any sign of structural breaks. The ECM test for cointegration proposed by Banerjee et al. (1998) indicates that the long-run money demand function in fact represents a cointegration relationship.^d

This result changes if we take the full sample 1980 I–2002 I into account. For comparability we use exactly the same specification as before and obtain

$$\begin{aligned} \Delta m3r = & -0.95 - 0.11 \left[m3r - 1.21 y + 0.84 LTR - 0.18 STR + 0.86 \pi \right]_{t-1} + 0.32 \Delta m3r_{t-1} \\ & (-6.24) \quad (-6.25) \quad (-22.94) \quad (1.68) \quad (-0.51) \quad (0.64) \quad (4.02) \\ & + 0.10 \Delta^2 y_t - 0.14 \Delta LTR_{t-1} + 0.05 \Delta STR_t - 0.78 \Delta \pi_t - 0.53 \Delta \pi_{t-1} - 0.009 D86_t \\ & (2.04) \quad (-1.62) \quad (0.72) \quad (-6.52) \quad (-4.43) \quad (-3.39) \end{aligned}$$

$$R^2=0.69; JB=1.94 [0.38]; AR1=5.92 [0.02]; AR4=9.03 [0.06]; ARCH1=0.04 [0.83];$$

$$ARCH4=2.91 [0.57]; RESET1=0.37 [0.55]; HET1=14.16 [0.59]; HET2=30.69 [0.83].$$

Except for the test of first-order autocorrelation, all misspecification tests support the estimated model. Moreover, the ECM test for cointegration again indicates the presence of a cointegration relationship. It strikes out, however, that particularly the estimated long-run coefficients of STR and π change considerably and are even insignificant now. By means of appropriate tests we check whether these signs of instability turn out to be statistically significant.

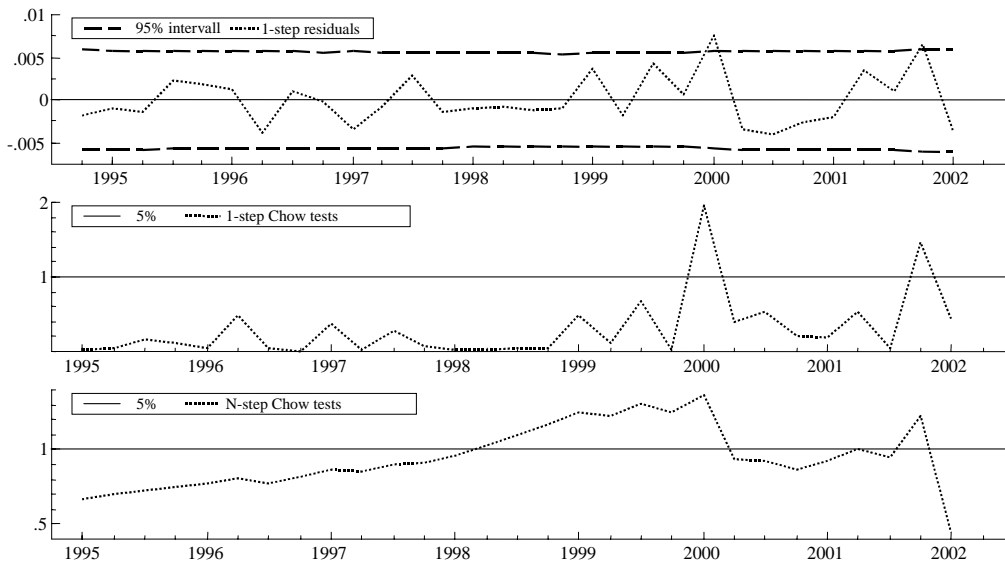
An easy approach to identify structural breaks is to use the first model which is estimated for the sample 1980 I–1998 IV, to make forecasts for the remaining period 1999 I–2002 I. Dynamic forecasts of the growth rate of $M3r$ are displayed in the following figure. We find that the actual growth rate lies above the 95 percent prediction intervals in 5 out of 13 cases. The departure is particularly high in the first quarter of 2000 and in 2001 II–2001 IV. Obviously, the model is not able to predict the observed high growth rates.

Additional evidence can be obtained from a recursive analysis of the econometric model. To identify a possible instability of the long-run relationship, we first recursively estimate the unrestricted lag model. We find that the estimated long-run parameters change gradually. Because of estimation uncertainty, we refrain from overly interpreting this gradual change and fix the long-run parameters at the full-sample estimates. To assess the stability of the dynamic adjustment process, we recursively estimate the parsimonious ECM. The recursive parameter estimates indicate that instability shows up around 2000 I or perhaps somewhat later.



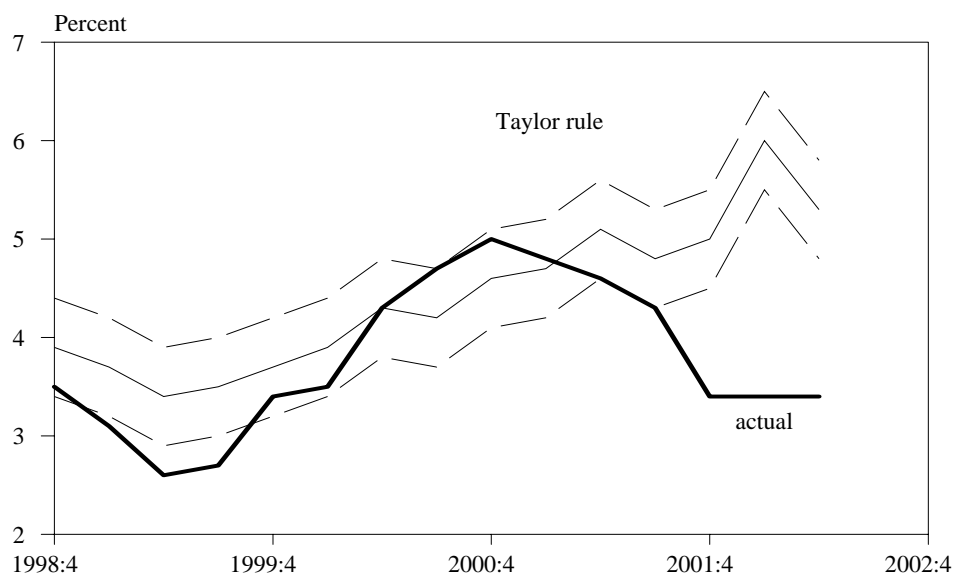
This finding is confirmed by the next figure where one-step residuals and recursive Chow tests are shown. In 2000 I and 2001 IV, the one-step residuals lie outside a 95 percent interval and the one-step Chow tests^c exceed the 95 percent critical value. So we find significant structural breaks. Also the N-step Chow tests^f reject the hypothesis of structural stability. However, we have to keep in mind that the distribution of any of the test statistics is only valid if we test the hypothesis of stability for a fixed breakpoint. Since we do not know the breakpoint in advance, the test results should rather be taken as a first indication for an instability of the money demand function in Euroland.

It is often argued that the uncertainty at stock markets can explain the deviation of M3 growth from the reference value. We therefore included the average quarterly volatility of the German stock index (DAX) calculated from daily observations as an explanatory variable into the money demand model. However, the estimated parameters of this variable and its lags turned out to be both individually and jointly insignificant. It is, therefore, questionable whether the apparent instability of the money demand function can be explained by stock market uncertainty.



^aThe ECB measures excess liquidity by means of the nominal and real money gap. Both measures indicate a considerable degree of excess liquidity for the aforementioned period (ECB 2002b:8). – ^bAs far as available, the time series are taken from the ECB. For the first years of our sample, they are concatenated with the data provided by Coenen and Vega (2001). For M3 we used an index which does not show up the break due to the enlargement of the euro area. – ^cWe applied the Jarque-Bera test for normality (JB), Breusch-Godfrey tests for autocorrelation of 1st and 1st to 4th order (AR1, AR4), LM tests for ARCH effects of 1st and 1st to 4th order (ARCH1, ARCH4), a test for nonlinearity of 1st order (RESET1) and two White tests for heteroscedasticity which use squares (HET1) and squares plus cross products (HET2), respectively. – ^dThe *t*-value corresponding to the loading coefficient of the cointegration relationship is –6.38, which is much smaller than the critical value of –4.03 tabulated by Banerjee et al. (1998). Therefore, the null hypothesis of no cointegration is rejected in favor of cointegration. – ^eOne-step Chow tests use sample values up to time *t* and *t*–1, respectively, to estimate the model and test the null of structural invariance. Therefore, they are based on one-step predictions. – ^fN-step Chow tests use sample values up to time *t* and *T* (the full sample), respectively, to estimate the model and test the null of structural invariance. Therefore, they are based on decreasing N-step predictions.

Figure 3: Short-term Interest Rates in Euroland: Actual Values and Values According to the Taylor Rule



^aThe Taylor rule is calculated for the core HICP (HICP excluding energy, food, alcohol and tobacco) under three different assumptions about the equilibrium real rate of interest (2 percent, 2.5 percent and 3 percent).

Source: Eurostat (2002), ECB (2002c), own calculations and estimates.

According to our forecast, the recovery in the euro area will gain momentum next year and the output gap will increase. We assume, therefore, that the ECB will start to raise interest rates in the spring of 2003. At the end of next year, the money market rate should be at 4 percent which is close to the neutral rate of interest according to the Taylor rule. So the impulses will slowly fade but monetary policy will not become restrictive. Furthermore, the monetary conditions will deteriorate somewhat because we predict that the euro will appreciate slightly.

3 Fiscal Policy: The Stability and Growth Pact Must Be Maintained

The cyclical downturn has shown up in the public budgets of the euro area. As last year, budget deficits will be markedly higher in most countries than envisaged in the respective Stability Programs. In 2002, the combined budget deficit in the euro area will reach 2.2 percent of GDP (Table 1), after having amounted to 1.3 percent last year. The increase of the budget deficit is due to the weakening of the economy. In view of the forecasted decline in economy-wide capacity utilization by 1¾ percent in 2002 and assuming an elasticity of the budget balance with respect to the output gap of 0.5 (OECD 1999: 147), the cyclical component of the change in the budget deficit amounts to 0.9 percent in relation to GDP. The worsened budgetary situation is thus entirely due to the free operation of automatic stabilizers. This means that fiscal policy in the euro area is neither expansionary nor restrictive this year.

Next year, fiscal policy will be restrictive in the euro area as a whole. Yet, a restrictive course will only be followed in those countries whose budgets exhibit a high deficit this year. Budget deficits in Portugal and probably also in Germany will even exceed the 3-percent threshold laid down in the Stability and Growth Pact. In France and in Italy, the deficit further approaches this level. These four

Table 1: Indicators of Fiscal Positions in Euroland, 2000–2003

| | Gross public sector debt ^a | | | | General government balance ^a | | | |
|-------------|---------------------------------------|-------|-------------------|-------------------|---|------|-------------------|-------------------|
| | 2000 | 2001 | 2002 ^b | 2003 ^b | 2000 | 2001 | 2002 ^b | 2003 ^b |
| Germany | 60.2 | 59.5 | 61.2 | 62.0 | 1.1 | -2.8 | -3.1 | -2.3 |
| France | 57.4 | 57.2 | 58.0 | 57.5 | -1.3 | -1.4 | -2.3 | -2.0 |
| Italy | 110.6 | 109.8 | 110.0 | 109.0 | -0.5 | -2.2 | -2.9 | -2.5 |
| Spain | 60.4 | 57.2 | 55.5 | 53.5 | -0.3 | 0.0 | -0.5 | -0.2 |
| Netherlands | 56.0 | 52.9 | 52.0 | 51.0 | 2.2 | 0.2 | -0.8 | -0.5 |
| Belgium | 109.3 | 107.5 | 105.5 | 103.0 | 0.1 | 0.2 | -0.7 | -0.4 |
| Austria | 63.6 | 62.9 | 62.0 | 60.5 | -1.5 | 0.1 | -0.9 | -0.5 |
| Finland | 44.0 | 43.6 | 43.5 | 43.0 | 7.0 | 4.9 | 3.0 | 2.5 |
| Greece | 103.9 | 102.6 | 101.0 | 99.0 | -0.8 | 0.1 | -0.4 | 0.0 |
| Portugal | 53.4 | 55.4 | 58.5 | 59.0 | -1.5 | -4.1 | -4.8 | -3.0 |
| Ireland | 39.0 | 36.3 | 35.0 | 34.0 | 4.5 | 1.7 | 0.0 | -0.5 |
| Luxembourg | 5.6 | 5.5 | 5.5 | 5.5 | 5.8 | 5.0 | 4.5 | 4.0 |
| Euroland | 69.5 | 69.1 | 69.5 | 68.5 | 0.2 | -1.3 | -2.2 | -1.7 |

^aIn percent of nominal GDP. – ^bForecast.

Source: ECB (2002c), own calculations and forecasts.

countries will have difficulties to reach a balanced budget in 2004, a goal that they uniformly announced in their Stability Programs published last fall. Reaching the goal would necessitate strong tax increases or expenditure cuts. However, the governments of these countries do not seem to be ready to take such measures. The French government has recently announced that it can reach the goal of a balanced budget only in 2007 unless real GDP increases by 3 percent per year in the next three years. Just as in the case of Italy, which had assumed a medium-run growth rate of around 3 percent in its last Stability Program, this assumption is unrealistic since potential output growth in these two countries is considerably lower.⁸ Unless these countries undertake consolidation measures they will thus only be able to meet the obligations laid down in their Stability Programs if cyclical conditions are extraordinarily favorable.

The situation is even more difficult in Germany⁹ and Portugal. The Portuguese government had to admit in July that the budget deficit for the year 2001 did not amount to 2.2 percent in relation to GDP as previously reported but instead to 4.1 percent.¹⁰ Thus the budget deficit in Portugal exceeded the upper limit of the Stability and Growth Pact already last year. Immediately after the publication of the revised deficit figures the European Commission (2002a) started the so-called excessive deficit procedure according to Article 104 of the Treaty of Amsterdam.¹¹ This procedure requires that the European Commission writes a report on the budgetary situation in the member country with a deficit ratio exceeding 3 percent. In the case of Portugal, the Commission will present the report to the ECOFIN Council in September. The ECOFIN Council has to decide by December 1, 2002 whether there is an excessive deficit in Portugal. The decision is taken with a qualified majority – 62 of altogether 87 votes. If the ECOFIN Council decides that an excessive deficit exists, the Portuguese government has four months to introduce corrective measures. If it does not take effective measures in this period, the ECOFIN Council can – again with qualified majority, but Portugal has no right to vote

⁸According to estimates of the OECD (2002a) the growth rate of potential output in Italy and France actually amounts to less than 2.5 percent.

⁹See Boss and Scheide (2002) for a detailed analysis.

¹⁰The Italian government also corrected the deficit ratio for 2001 this summer, from 1.4 percent to 2.2 percent. These two cases show that the member countries of the euro area possess considerable room for creative accounting. This room for maneuver was used to a considerable extent in the run-up to EMU by some countries (Kitterer and Wiese 1998: 29 ff.).

¹¹See Scheide and Solveen (1997) and ECB (1999) for a detailed description of the excessive deficit procedure.

anymore – make its recommendations public and urge the Portuguese government to take appropriate measures. If this does not happen within two months, the ECOFIN Council has the possibility to impose sanctions against Portugal with a qualified majority. These sanctions consist in a non-interest-bearing deposit that will not exceed 0.5 percent in relation to GDP. If the excessive deficit is not removed within two years, the deposit is transformed into a fine. Moreover, the funds that Portugal currently receives from the Cohesion Fund could be suppressed.

The European Commission will also soon start the excessive deficit procedure in the case of Germany if – as we forecast – the deficit in relation to GDP amounts to more than 3 percent this year. It is, however, questionable whether there will be a qualified majority in the ECOFIN Council in both the Portuguese and the German case for the conclusion that an excessive deficit exists in these countries. While fiscal policy in France and Italy is currently not characterized by an excessive deficit, both countries have so far not acted in accordance with the medium-term provisions of the Stability and Growth Pact either and, moreover, the deficit ratio approaches the 3-percent threshold. Consequently, it cannot be excluded that the German, French, Italian and Portuguese finance ministers will form a coalition in order to prevent the decision that an excessive deficit exists in Germany and Portugal. Taken together these four countries have 35 votes in the ECOFIN Council and thus have a blocking minority.

The coming months will show whether the Stability and Growth Pact really has teeth. It is regrettable that the governments of the large countries have not made consolidation efforts in the boom years 1999 and 2000. A softening of the rules or an abolition of the Pact – as demanded by some observers – would be a serious blow for sound fiscal policies in Europe and the credibility of governments. As a consequence, interest rates might be permanently higher and euro area countries would be even less prepared for the consequences of demographic aging than they are now. Also, a policy of permanently high budget deficits would make the ECB's task of maintaining price stability more difficult. All in all, we are strongly in favor of a strict application of the rules laid down in the Stability and Growth Pact.

4 Temporary Acceleration of Wage Inflation

In the current year, wage increases in Euroland have picked up considerably after having slightly accelerated already in 2001. In the first quarter 2002, compensation of employees per head was up 3 percent from one year before (full year 2001: 2.7 percent). The wage settlements that are currently available¹² point to a rise of compensation per employee of 3.2 percent in the full year 2002. The acceleration of wages was particularly pronounced in Germany, where the course of wage moderation, which had prevailed in the previous two years, was left in spite of the fact that the cyclical weakness was already clearly visible on the labor market. This was due to the effort of trade unions to achieve significant gains in real wages following two years of losses in purchasing power due to unexpectedly high inflation. Such a behavior of seeking compensation for unexpected inflation was, however, largely confined to Germany and – to a lesser extent – Italy, because real wages¹³ in 2001 actually declined only in these countries. In most other countries, the cyclical deterioration was reflected in a slowing of wage inflation (Table 2).

¹²An important source for current information on wage negotiations is the European Industrial Relations Observatory (<http://www.eiro.eurofound.ie>).

¹³Measured as compensation per employee deflated by the private consumption deflator.

Table 2: Wage Increases in Euroland^a, 2000–2003 (percent)

| | 2000 | 2001 | 2002 ^b | 2003 ^b |
|-------------|------|------|-------------------|-------------------|
| Germany | 1.2 | 1.6 | 2.9 | 2.4 |
| France | 1.9 | 2.0 | 2.5 | 2.5 |
| Italy | 3.0 | 2.8 | 2.7 | 2.4 |
| Spain | 3.4 | 4.3 | 3.6 | 3.0 |
| Netherlands | 4.6 | 4.6 | 5.0 | 4.2 |
| Belgium | 3.2 | 3.2 | 3.2 | 3.0 |
| Austria | 2.1 | 2.8 | 2.4 | 2.3 |
| Finland | 3.9 | 4.5 | 3.6 | 3.5 |
| Greece | 6.1 | 6.2 | 6.5 | 5.9 |
| Portugal | 6.3 | 5.8 | 4.5 | 3.8 |
| Ireland | 8.8 | 9.2 | 7.5 | 7.0 |
| Luxembourg | 4.3 | 5.3 | 3.8 | 4.0 |

^aCompensation of employees per worker. – ^bForecast.

Source: European Commission (2002b), own calculations and forecasts.

For next year, we expect wage increases in Euroland to slow down again driven by the softening of the labor market with employment growth sluggish through much of the forecasting period and unemployment stubbornly high. In addition, consumer price inflation is set to decline further leaving real wage growth little changed despite lower nominal wage increases. Finally, wage settlements in a number of important sectors of the German economy already agreed upon suggest that some slowing of wage growth is under way.

Despite the recent acceleration, wage growth is still no imminent threat to price stability. While in 2002 nominal unit labor costs – i.e. nominal wage increases minus productivity growth – exceed the 2 percent threshold that, according to the ECB, is consistent with price stability for the second successive year (Table 3), this is mainly due to the cyclically depressed productivity growth. It would be inadequate to assess the inflationary impact of wage settlements on the basis of the cyclical movements of labor productivity. A better yardstick is the development of trend productivity which we calculate here as the average growth rate over the cycle.¹⁴ Based on a trend productivity growth of 1.2 percent, unit labor costs are expected to rise by 2.1 percent (Table 4), which is still roughly consistent with the ECB target.

Table 3: Compensation of Employees and Productivity in Euroland, 1999–2003 (change over previous year in percent)

| | 1999 | 2000 | 2001 | 2002 ^a | 2003 ^a |
|--------------------------------------|------|------|------|-------------------|-------------------|
| Compensation of employees per worker | 2.3 | 2.6 | 2.7 | 3.0 | 2.6 |
| Productivity ^b | 0.9 | 1.5 | 0.1 | 0.5 | 1.2 |
| Unit labor costs | 1.4 | 1.1 | 2.6 | 2.5 | 1.4 |

^aForecast. – ^bReal GDP per worker.

Source: ECB (2002c), own calculations and forecasts.

¹⁴Measured from trough to trough, and incorporating our forecast, the most recent complete cycle includes the years 1997–2002.

Table 4: Trend Productivity and Nominal Unit Labor Costs in Euroland, 2000–2002 (changes over previous year)

| | Weight ^a in percent | Trend productivity ^b | Nominal unit labor costs ^c | | |
|-------------|-----------------------------------|---------------------------------|---------------------------------------|------|-------------------|
| | | | 2000 | 2001 | 2002 ^d |
| Germany | 30.8 | 0.9 | 0.3 | 0.7 | 2.0 |
| France | 19.0 | 1.3 | 0.6 | 0.7 | 1.2 |
| Italy | 16.6 | 1.1 | 1.9 | 1.7 | 1.6 |
| Spain | 11.6 | 0.8 | 2.6 | 3.5 | 2.8 |
| Netherlands | 5.5 | 1.1 | 3.5 | 3.5 | 3.9 |
| Belgium | 3.1 | 1.1 | 2.1 | 2.1 | 2.1 |
| Austria | 3.2 | 2.0 | 0.1 | 0.4 | 0.4 |
| Finland | 1.9 | 2.5 | 1.4 | 2.0 | 1.1 |
| Greece | 3.1 | 2.4 | 3.7 | 3.8 | 4.1 |
| Portugal | 3.7 | 1.3 | 5.0 | 4.5 | 3.2 |
| Ireland | 1.4 | 3.3 | 5.5 | 5.9 | 4.2 |
| Luxembourg | 0.1 | 1.5 | 2.8 | 3.8 | 2.3 |
| Euroland | 100.0 | 1.2 | 1.5 | 1.7 | 2.1 |

^aBased on the number of employed persons in 2000. – ^bReal GDP per employed person; average annual change over 1997–2002. – ^cRate of increase of compensation of employees per worker minus trend productivity growth. – ^dForecast.

Source: See Table 2.

Notably, differences across countries in the rate of increase of unit labor costs calculated in the way described above are significant, reaching from 0.1 percent in Austria to 5.5 percent in Ireland. These differences can be explained by differences in wage growth on the one hand and differences in trend productivity growth on the other hand. They are a main factor behind the differences in consumer price inflation that can be observed across euro area countries,¹⁵ and thus an important mechanism promoting adjustments in the real exchange rate within the currency area. Changes in real exchange rates are essential in order to meet the requirements of the national economies. Fixing the real exchange rates by trying to achieve the same inflation rate in every country is neither desirable nor feasible. That said, relatively high unit labor cost growth can result in a loss of competitiveness that would dampen economic growth in the medium term. Such a development should be avoided particularly in an economy suffering from underutilized resources and high unemployment.

5 Outlook: Upswing Will Slowly Gain Momentum

The leading indicators currently do not paint a uniform picture of the cyclical perspectives for the euro area in the second half of 2002. On the one hand, the variables used in the calculation of the EUROFRAME indicator like the short-term real interest rate continue to signal an imminent upswing. This is further underlined by the indicator-based forecast of the European Commission¹⁶ that points at a growth rate of real GDP in the third quarter that reaches or even exceeds the growth rate of potential

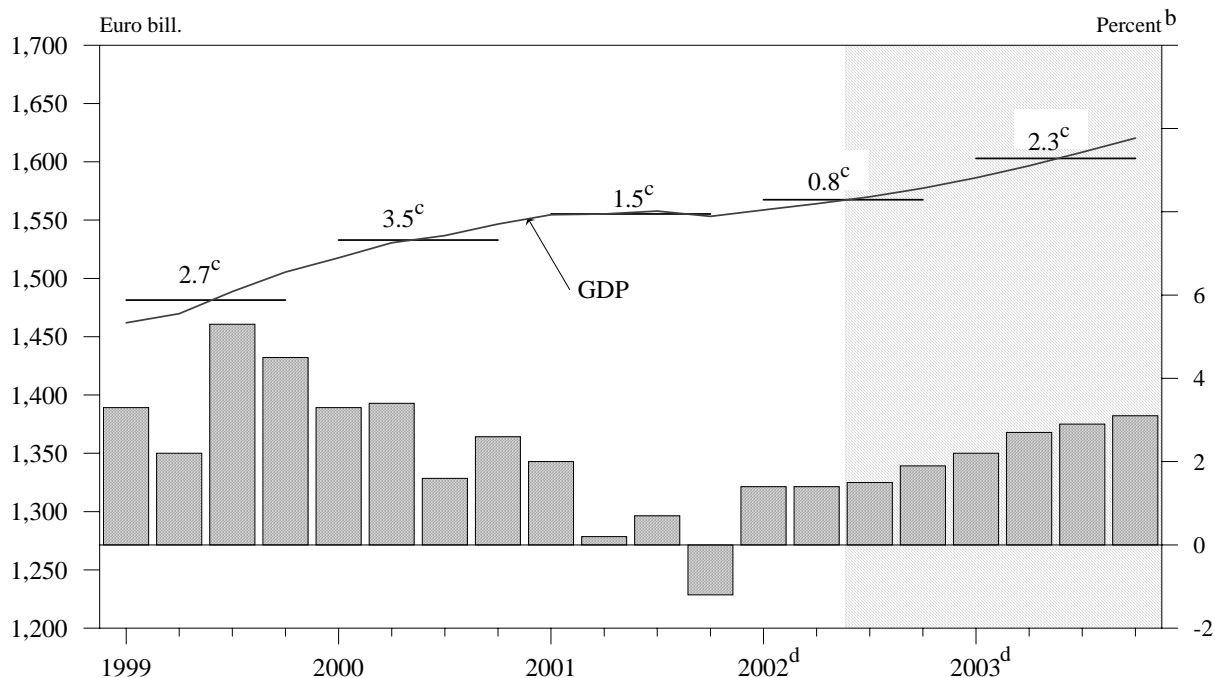
¹⁵Additional factors which may influence inflation in the individual countries asymmetrically include the change in the terms of trade, developments in indirect taxation and changes in the pricing power of firms.

¹⁶See http://europa.eu.int/comm/economy_finance/indicators_en.htm.

output. Yet, these indicators also suggested a dynamic expansion of economic activity for the first half of 2002. On the other hand, some confidence indicators have deteriorated perceptibly since the middle of this year. Industrial confidence and consumer confidence have declined during this summer. Also, the purchasing manager index has fallen in the past months even though it remains above the 50-percent line and thus still signals an upswing. In our view the deterioration of the confidence indicators is related to the collapse of stock prices at the beginning of the summer. We expect the deterioration to be temporary and not the start of a renewed downswing. All in all, cyclical dynamics will yet be moderate in the second half of 2002.

In view of its low level at the beginning of this year, real GDP in the euro area will increase by 0.8 percent in 2002 on average, compared to 1.4 percent last year. In the course of this year economy-wide production will rise by 1.5 percent. The pace of economic expansion will be somewhat higher in the second half of this year than in the first half but the growth rate will still be considerably lower than that of potential output (Figure 4). Exports will increase only moderately due to the sluggish recovery in the most important trading partners of the euro area (Benner et al. 2002) and due to the strong appreciation of the euro in recent months. Moreover, private households will not expand their expenditures by much in view of the deteriorating situation on the labor market. Yet, investment will probably end the downward trend that started at the beginning of 2001 and will gain momentum in the course of the second half of this year when the full effect of last fall's interest rate cuts will materialize. We expect that the Harmonized Index of Consumer Prices will, on average, exceed its level in the previous year by 2.1 percent in 2002. The situation on the labor market will continue to deteriorate in view of weak economic activity. The unemployment rate will increase slightly until the end of this year. It will amount to 8.3 percent this year on average, compared to 8.0 percent in 2001.

Figure 4: Real GDP^a in Euroland



^aSeasonally adjusted. – ^bAnnualized quarterly rate of change in percent. – ^cPercentage change over previous year. – ^dForecast starting in 2002 III.

Source: Eurostat (2002), own forecast.

In the course of next year, economic activity will gain momentum. Starting in spring, real GDP will probably expand at a faster rate than potential output (Table 5). On the one hand, we expect that dynamics in the world economy will increase (Benner et al. 2002) and that the dampening effects stemming from the appreciation of the euro will gradually fade so that exports will rise strongly (Figure 5). On the other hand, economic activity will continue to be stimulated by monetary policy next year. Financing conditions for companies in the euro area will deteriorate with the rise in interest rates that we expect for the first half of 2003, but they will remain favorable. Since sales and profit expectations will improve with the increasing dynamics in the world economy, investment will expand strongly next year. Private households will increase their consumption expenditures considerably faster than this year. This is due to a larger rise in real incomes and to the gradual improvement of the situation on the labor market. The unemployment rate will decline somewhat during the upswing, we expect it to be 8.2 percent next year on average. Real GDP will increase by 2.3 percent in 2003, after only 0.8 percent this year (Table 6).

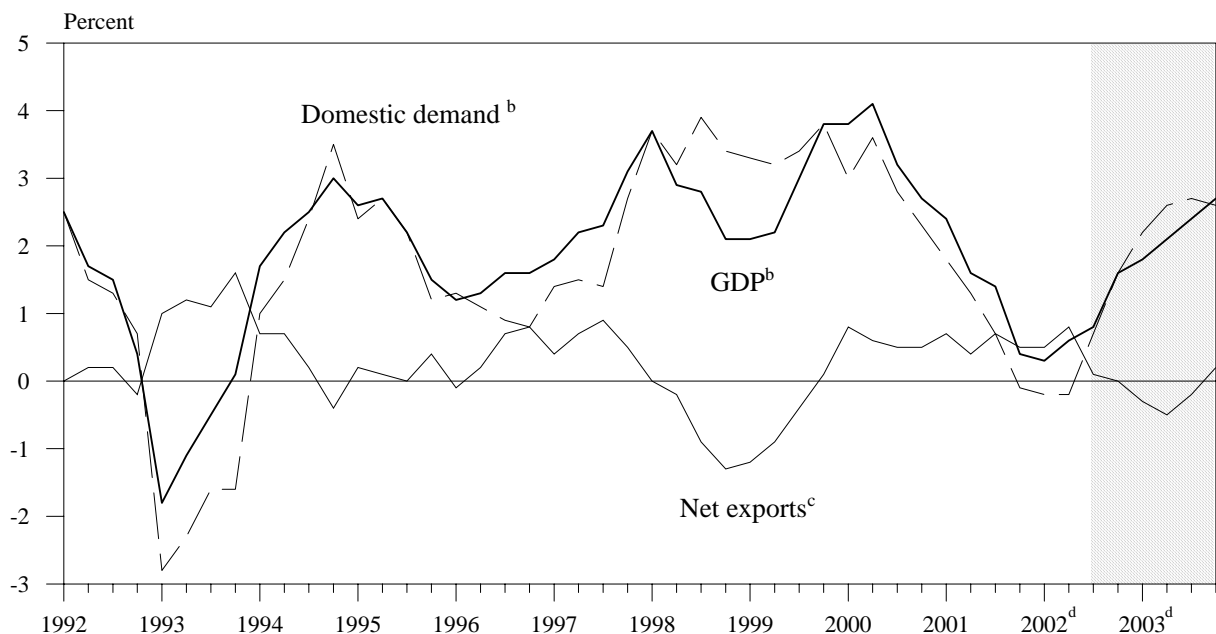
The increase in consumer prices will remain moderate in the forecast horizon. While the scope for raising prices will increase somewhat due to the upswing, the rate of capacity utilization will still be below its normal level at the end of 2003. Consequently, inflation risks from this side seem to be limited. Inflation will remain moderate also because the ECB will gradually tighten monetary policy. If – as we assume in this forecast – there are no strong increases in oil and food prices that have been especially volatile in the recent past, the inflation rate should remain below 2 percent next year. We expect that the Harmonized Index of Consumer Prices will increase by 1.6 percent in 2003 on average, compared to 2.1 percent this year.

Table 5: Quarterly Data on the Economic Development in Euroland, 2001–2003

| | 2001 | | | | 2002 | | | | 2003 | | | |
|---|------|------|------|------|------|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | 1.Q. | 2.Q. | 3.Q. | 4.Q. | 1.Q. | 2.Q. | 3.Q. ^a | 4.Q. ^a | 1.Q. ^a | 2.Q. ^a | 3.Q. ^a | 4.Q. ^a |
| Gross domestic product ^b | 2.0 | 0.2 | 0.7 | -1.2 | 1.4 | 1.4 | 1.5 | 1.9 | 2.2 | 2.7 | 2.9 | 3.1 |
| Domestic demand ^b | 0.6 | 1.0 | -1.1 | -0.9 | 0.2 | 0.8 | 2.5 | 2.7 | 2.6 | 2.8 | 2.6 | 2.6 |
| Private consumption ^b | 4.0 | 2.1 | 0.4 | -0.1 | -0.7 | 1.6 | 1.8 | 2.0 | 2.2 | 2.2 | 2.3 | 2.2 |
| Public consumption ^b | 1.1 | 1.7 | 1.2 | 1.5 | 3.1 | 1.5 | 1.3 | 1.5 | 1.4 | 1.4 | 1.4 | 1.2 |
| Fixed investment ^b | -1.5 | -2.5 | -2.5 | -3.6 | -2.3 | -3.2 | 2.0 | 4.0 | 4.6 | 4.6 | 5.0 | 5.2 |
| Change in stocks ^c | -1.5 | 0.0 | -1.0 | -0.3 | 0.5 | 0.3 | 0.8 | 0.4 | 0.0 | 0.2 | -0.1 | 0.0 |
| Net exports ^c | 1.5 | -0.8 | 1.8 | -0.3 | 1.2 | 0.6 | -0.9 | -0.7 | -0.3 | 0.0 | 0.4 | 0.5 |
| Exports ^{b,d} | -0.5 | -4.6 | -1.3 | -6.6 | 0.5 | 8.0 | 1.7 | 2.2 | 3.4 | 4.6 | 5.3 | 5.6 |
| Imports ^{b,d} | -4.4 | -2.8 | -6.1 | -6.4 | -2.9 | 6.9 | 4.4 | 4.5 | 4.4 | 5.0 | 4.5 | 4.5 |
| Unemployment rate ^e | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.3 | 8.4 | 8.5 | 8.4 | 8.3 | 8.2 | 7.9 |
| Consumer prices (HICP) ^f | 2.3 | 3.1 | 2.4 | 2.1 | 2.6 | 2.1 | 2.0 | 1.9 | 1.5 | 1.4 | 1.7 | 1.8 |
| Money stock M3 ^b | 5.9 | 6.9 | 8.7 | 9.8 | 4.8 | 6.3 | 3.0 | 3.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 3-month money market rate | 4.7 | 4.6 | 4.3 | 3.3 | 3.4 | 3.5 | 3.4 | 3.4 | 3.5 | 3.7 | 4.0 | 4.0 |
| Long-term interest rate | 5.0 | 5.2 | 5.1 | 4.8 | 5.1 | 5.3 | 4.9 | 5.2 | 5.4 | 5.6 | 5.7 | 5.7 |
| US dollar/euro exchange rate ^g | 0.92 | 0.88 | 0.89 | 0.90 | 0.88 | 0.92 | 0.99 | 1.00 | 1.02 | 1.00 | 1.00 | 1.00 |
| Real effective exchange rate ^h | 88.7 | 86.8 | 88.0 | 88.6 | 88.0 | 90.4 | 91.7 | 92.1 | 92.8 | 92.1 | 92.1 | 92.1 |

^aForecast. – ^bAnnualized quarterly rate of change in percent. – ^cContribution to change in GDP. – ^dIncluding intra-Euroland trade. – ^eIn percent of the labor force, harmonized according to the ILO concept. – ^fChange over previous year in percent. – ^gUS dollar/euro. – ^hBroad group. Based on the consumer price index. Index 1999 I = 100.

Source: Eurostat (2002), ECB (2002c), OECD (2002b), own calculations and forecasts.

Figure 5: GDP, Domestic Demand and Net Exports in Euroland^a

^aAt constant prices. – ^bPercentage change over previous year. – ^cChange of net exports over previous year in percent of GDP in the same quarter of previous year. – ^dForecast starting in 2002 III.

Source: Eurostat (2002), own forecast.

Table 6: Real GDP, Consumer Prices and Unemployment Rate in Euroland, 2000–2003

| | Weights in total ^a | Real GDP ^b | | | | Consumer prices ^{b,c} | | | | Unemployment rate ^d | | | |
|-------------|-------------------------------|-----------------------|------|-------------------|-------------------|--------------------------------|------|-------------------|-------------------|--------------------------------|------------------|-------------------|-------------------|
| | | 2000 | 2001 | 2002 ^e | 2003 ^e | 2000 | 2001 | 2002 ^e | 2003 ^e | 2000 | 2001 | 2002 ^e | 2003 ^e |
| Germany | 30.3 | 2.9 | 0.6 | 0.4 | 1.8 | 2.0 | 2.4 | 1.4 | 1.2 | 7.8 | 7.8 | 8.2 | 8.2 |
| France | 21.4 | 4.2 | 1.8 | 1.1 | 2.6 | 1.9 | 1.8 | 1.7 | 1.5 | 9.3 | 8.5 | 8.9 | 8.8 |
| Italy | 17.9 | 2.9 | 1.8 | 0.5 | 2.2 | 2.7 | 2.3 | 2.4 | 1.8 | 10.4 | 9.5 | 9.0 | 8.9 |
| Spain | 9.6 | 4.2 | 2.7 | 2.0 | 3.0 | 3.5 | 2.8 | 3.3 | 2.0 | 11.3 | 10.7 | 11.2 | 10.8 |
| Netherlands | 6.3 | 3.5 | 1.1 | 0.5 | 2.4 | 2.3 | 5.2 | 3.8 | 2.1 | 2.8 | 2.4 | 2.8 | 3.3 |
| Belgium | 3.8 | 4.0 | 1.0 | 0.6 | 2.5 | 2.7 | 2.4 | 1.5 | 1.4 | 6.9 | 6.6 | 6.9 | 6.9 |
| Austria | 3.1 | 3.3 | 0.8 | 0.5 | 2.5 | 2.0 | 2.3 | 1.7 | 1.7 | 3.7 | 3.6 | 4.1 | 4.2 |
| Finland | 2.0 | 6.1 | 0.7 | 1.5 | 4.0 | 3.0 | 2.6 | 2.0 | 1.8 | 9.8 | 9.2 | 9.3 | 9.0 |
| Greece | 1.9 | 4.1 | 4.1 | 2.5 | 3.5 | 2.3 | 3.6 | 3.8 | 2.7 | 11.1 | 10.4 | 9.9 | 9.3 |
| Portugal | 1.8 | 3.6 | 1.7 | 1.2 | 1.8 | 2.8 | 4.4 | 3.3 | 2.6 | 4.1 | 4.1 | 4.4 | 4.9 |
| Ireland | 1.7 | 11.5 | 5.9 | 4.0 | 5.0 | 2.8 | 4.0 | 4.4 | 2.8 | 4.2 | 3.8 | 4.5 | 4.4 |
| Luxembourg | 0.3 | 7.5 | 3.5 | 3.0 | 4.5 | 5.2 | 2.4 | 1.9 | 1.9 | 2.3 | 2.0 | 2.3 | 2.4 |
| Euroland | 100.0 | 3.5 | 1.5 | 0.8 | 2.3 | 2.3 | 2.5 | 2.1 | 1.6 | 8.5 ^f | 8.0 ^f | 8.3 ^f | 8.2 ^f |

^aBased on GDP in current prices of 2001. – ^bPercentage change over previous year. – ^cHarmonized Index of Consumer Prices (HICP). – ^dStandardized unemployment rates according to the ILO concept. – ^eForecast. – ^fBased on the number of employees in 2000.

Source: ECB (2002c), OECD (2002b), own calculations and forecasts.

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