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## Quo vadis, Euroland?

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## Quo Vadis, Euroland?

by Jörg Döpke, Klaus-Jürgen Gern, Enno Langfeldt,  
Joachim Scheide, and Markus Schlie

### CONTENTS

- Stage Three of the European Monetary Union (EMU) will start on January 1, 1999. The new currency area, for which the name "Euroland" has been coined, will comprise 11 countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain.
- The project of a single currency has enhanced economic convergence among the participating countries to some degree, but differences with respect to the business cycle have remained pronounced. This can also be expected for EMU. A single monetary policy for Euroland will not affect regions uniformly, given the substantial differences between the participating countries with respect to, for example, institutional arrangements in financial markets and in labor markets, the public share in the economy or the structure of production.
- It is often argued that monetary policy in Europe is currently too tight; consequently, the upswing is at risk or even deflation is around the corner. This view is not supported by the facts. Various indicators suggest that monetary policy is actually quite easy. Given that European short-term interest rates are bound to converge around summer at a historically low level and key interest rates will hardly be raised substantially in the immediate future, monetary policy will remain loose for the time being. This policy increasingly bears some risk of accelerating inflation. In any event, there is no risk of outright deflation in Euroland.
- It is still an open question whether the European Central Bank (ECB) will use a monetary aggregate as an intermediate target (monetary targeting) or try to directly adjust monetary policy to (forecasted) inflationary developments (inflation targeting). Empirical work suggests that money demand in Euroland is sufficiently stable to pursue monetary targeting. Even if instability were to occur in the transition period and right after the introduction of the euro, this would not necessarily imply the superiority of inflation targeting because under such circumstances the reliability of inflation forecasts is reduced as well. The advantage of implementing the monetary targeting strategy that had proved to be successful in Germany would be that it allows the ECB to gain some of the Bundesbank's reputation.
- In 1997 public deficits in all countries of Euroland were kept within the limit of 3 percent of GDP set in the Maastricht Treaty. However, further consolidation is necessary in most countries in order to meet the obligations of the Stability and Growth Pact. Ultimately, the fiscal positions have to be sustainable in the long term. A rough calculation suggests that at present only a few of the prospective EMU countries have a sustainable fiscal position. In addition, fiscal policy seems to be less sustainable because in some countries one-off measures contributed significantly to the reduction of the 1997 deficits.
- After EMU is established, bilateral exchange rates as possible shock absorber cease to exist and other mechanisms of adjusting to a negative (external) shock are necessary in order to prevent unemployment from rising. The most important adjustment mechanism left is flexibility of wages. It would be counterproductive to increasingly negotiate wage settlements at the European level. Against the background of the rising need for differentiation, decisions that affect employment should, to the contrary, be more and more decentralized.

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## I. The New Currency Area Euroland

Stage Three of the European Monetary Union (EMU) will start as scheduled on January 1, 1999. The new currency area, for which the name "Euroland" has been coined, will comprise eleven countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. De facto the euro currency area will be even larger because there are several countries like Denmark and Greece which are likely to peg their exchange rate to the euro.

In 1997, Euroland's population was slightly higher than that of the United States while GDP amounted to roughly 80 percent of the US level (Table 1).<sup>1</sup> Real GDP growth was significantly lower in Euroland than in the US partly due to a lagged position in the business cycle, and inflation was also somewhat smaller. Marked differences between the two currency areas exist with respect to the situation in the labor market and with respect to the external balance. While

Euroland suffers from an unemployment rate of more than 12 percent, the US economy is close to full employment. On the balance of payments side, the United States ran a current account deficit of about 2 percent of GDP while Euroland had a surplus of almost the same size.

The future European Central Bank (ECB) will, according to its statute, be obliged to keep the price level in Euroland stable. Its monetary policy will therefore be determined by the development of output and prices in Euroland as a whole; specific developments in individual member countries will play only a minor role. In order to be able to conduct monetary policy, the ECB will need a reliable data base for the new currency area. Up to now, however, official data for Euroland are not available. Our analysis is therefore based on own estimates of Euroland data, which have been constructed by aggregating individual country data.<sup>2</sup> With respect to quarterly and monthly data, which are of great importance for the judgment of the current state of the business cycle, it turned out to be impossible to get a comparable data set for some of the smaller countries. We therefore based our quarterly figures for Euroland on the five biggest economies (France, Germany, Italy, the Netherlands, and Spain) whose GDP is equivalent to about 88 percent of Euroland's total output.

Table 1 – Key Indicators of Euroland and the US, 1997

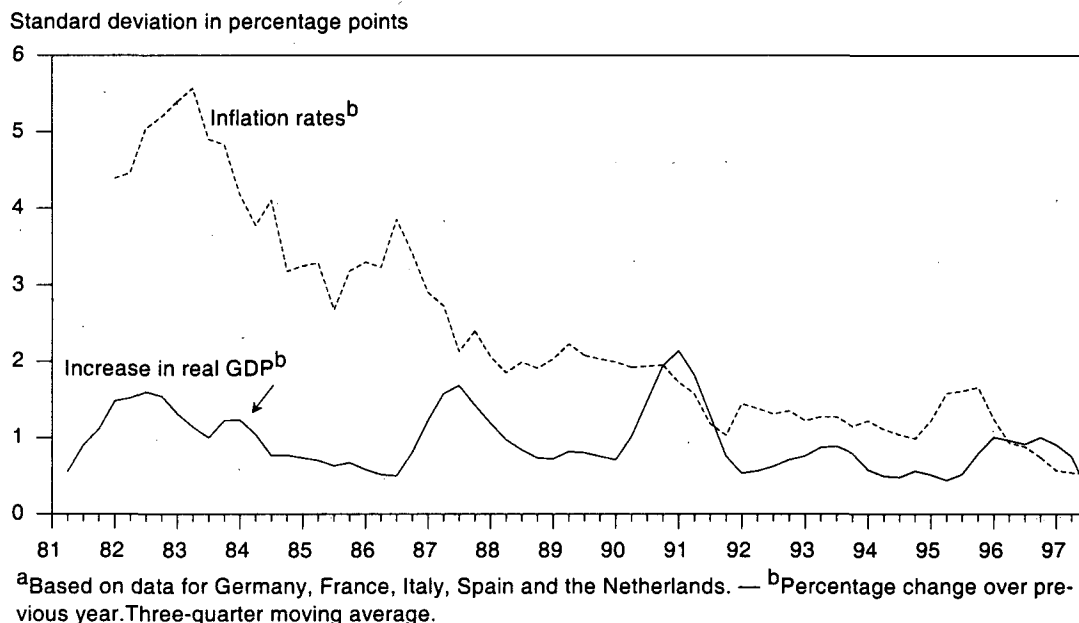
	Euroland	United States
Population (mill.) <sup>a</sup>	285.26	265.55
GDP (bill. ECU)	5,684.9	7,127.6
GDP growth (%)	2.4	3.8
Inflation (%)	1.7	2.3
Unemployment (%)	12.3	4.9
Current account (% of GDP)	2.0	-1.9

<sup>a</sup>The data refer to 1996.

## II. Convergence Mainly in Nominal Terms

The project of a single currency has, to some degree, enhanced economic convergence among the participating countries. This is particularly true for variables that are used to evaluate whether the countries can be members of EMU (inflation, public sector deficit, gross public debt and long-term interest rates). However, the largest progress with respect to the convergence of these variables was already achieved during

the 1980s. During that time, the standard deviation of inflation rates in the five largest EMU countries decreased much more strongly than during the 1990s (Figure 1). Differences in inflation declined also vis-à-vis other industrial countries. The reduction in inflation was thus a worldwide phenomenon and not mainly due to the project of the European Monetary Union.

Figure 1 – Monetary and Real Convergence in Euroland, 1981–1997<sup>a</sup>

Source: OECD (1998), own calculations.

Furthermore, convergence has been largely confined to the nominal side. The divergences with respect to the real development have been reduced to a much smaller extent. The standard deviation of real GDP growth in the five largest EMU countries was only marginally lower during the 1990s than in the 1980s.

Notwithstanding, the business cycles in the five major EMU countries have been closely related. This is shown by the bilateral correlation coefficients of real GDP growth rates or, respectively, the deviations of national real GDP from its trend (Table 2). With respect to the synchronization of business cycles the investigated countries can be split into two groups of

particularly close correlations: one is formed by France, Italy and Spain, the other consists of Germany and the Netherlands.

However, even in the case of Germany and the Netherlands, where the exchange rate has remained unchanged since the early 1980s, the correlation coefficient for real GDP growth rates is far from unity. This is an indication that the future common monetary policy will not necessarily lead to a fully synchronized development of economic activity in Euroland. In the EMU countries, there are still substantial differences with respect to institutional arrangements in financial and labor markets, the role of the public sector or the structure of production.

Table 2 – Cyclical Synchronization in Euroland, 1980–1997

	Germany	France	Italy	Netherlands	Spain
Germany	1.00	<i>0.45</i>	<i>0.52</i>	<i>0.67</i>	<i>0.55</i>
France	0.37	1.00	<i>0.75</i>	<i>0.35</i>	<i>0.74</i>
Italy	0.45	0.73	1.00	<i>0.54</i>	<i>0.76</i>
Netherlands	0.62	0.27	0.54	1.00	<i>0.45</i>
Spain	0.41	0.78	0.73	0.35	1.00

Note: Above the diagonal and in italics the correlation coefficients of year-over-year percentage changes of real GDP, beneath the diagonal correlation coefficients of output gaps are shown. The gaps are given by the deviation of real GDP from its trend level in percent, using a Hodrick-Prescott filter. The calculations are based on quarterly data for 1980:1–1997:3.

Source: Own calculations.

Therefore, a common stance of monetary policy has different effects on economic activity in the individual countries. This is indicated by large differences in the interest rate elasticity of output in the major European countries (Dornbusch et al. 1998). There is also empirical evidence that monetary policy affects output in the individual countries with different time lags. In

addition, economic fluctuations in the countries do not merely reflect effects from monetary policy. If disturbances are separated into demand- and supply-side shocks, there is only a small group of EMU countries which has similar determinants of the business cycle (Eble et al. 1997: 10).<sup>3</sup>

### III. Diverging Business Cycles within Euroland

The present cyclical upswing in Euroland started in 1993 (Figure 2). In 1995, it was interrupted due to a marked appreciation of European currencies vis-à-vis the US dollar and a pronounced increase in long-term interest rates. In the course of 1997, the upswing regained momentum. At the end of last year, overall capacity utilization was back to normal. However, there are significant differences between the countries which are going to participate in EMU. While some countries like the Netherlands and Ireland are presently in a boom, other countries like Italy still have a significant negative output gap.

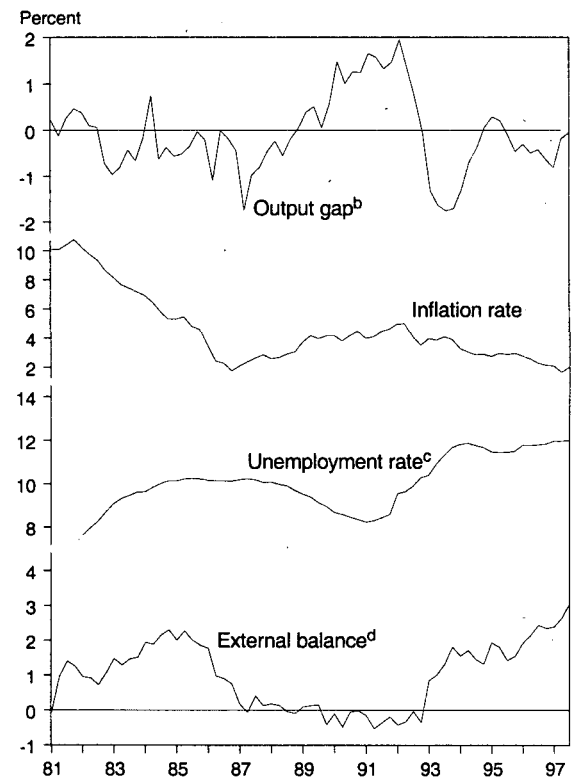
Euroland's exports expanded strongly last year. Since 1995, Euroland currencies have depreciated vis-à-vis the US dollar and the pound sterling with the result that the competitiveness of companies has improved strongly. However, in the final quarter of 1997 export growth slowed down partly reflecting the financial crisis in Southeast Asia that had abruptly stopped the strong growth performance of the affected countries and led to a drastic devaluation of their currencies.

Domestic demand expanded differently across EMU countries. While it was the driving force of the upswing in Spain, the Netherlands, Portugal and Ireland, there was only a small contribution to growth in countries like France, Italy and Germany, where a slight acceleration of domestic demand could only be observed in the second half of 1997.

Supported by low interest rates, a rising capacity utilization, and improving sales and profit expectations, investment growth accelerated in

the course of last year. Investment in construction developed less favorably than investment in machinery and equipment as there was still a considerable excess supply in the commercial real estate markets. Public investment expenditures were postponed due to the efforts to reach

Figure 2 – Business Cycle Indicators in Euroland, 1981–1997<sup>a</sup>



<sup>a</sup>Based on data for Germany, France, Italy, Spain and the Netherlands. — <sup>b</sup>Deviation of real GDP from its trend level in percent. Trend calculated with a Hodrick-Prescott filter. — <sup>c</sup>OECD-standardized unemployment rate. — <sup>d</sup>Real exports minus imports in percent of real GDP.

Source: OECD (1998), own calculations.

the reference value of the Maastricht Treaty. Contrary to 1996, business inventories increased markedly.

All in all, the increase in private consumption in Euroland (1997: 1.5 percent) was as high as in 1996. In the Netherlands, Finland and Portugal rapid consumption growth continued, in Spain and Ireland growth even accelerated from an already high level. Contrary to that, the expansion of consumption was rather weak in Germany and Austria. The major factor influencing consumption was the development of real disposable income. Some countries like the Netherlands, Portugal and Ireland that had already made progress with respect to the con-

solidation of their fiscal budgets refrained from raising taxes and cutting transfers while others like Germany, France and Italy put an additional fiscal burden on private households. In Ireland, Finland, the Netherlands and Spain, the income growth of households was supported by a marked increase in employment.

Inflation in Euroland remained low last year. Consumer prices were only 1.7 percent higher than a year ago. In most countries, inflation rates declined somewhat from 1996. The low inflation was supported by a favorable development of unit labor costs, but there was also a significant contribution from exceptional factors like declining raw material prices.

#### IV. Monetary Policy in Euroland: Expansionary or Deflationary?

It is often argued that monetary policy in Europe is restrictive; therefore, economic activity would be weak, disinflation would continue or even the risk of deflation may arise. The alternative view is that the policy stance is actually loose, and more stimulative effects could be expected as money market rates in Europe converge at a relatively low level; in contrast, then, an acceleration of inflation would be likely in the near future. We look at various concepts to gauge the stance of monetary policy and its likely impact on output and prices until the end of 1999.

The relationship between monetary policy and output can be assessed by looking at the correlation coefficients of various monetary indicators<sup>4</sup> and the rate of change of real GDP for various time lags (Table 3). For the period 1980–1997, there is often a close link; the coefficients usually reach the maximum at a lead of 2 to 4 quarters. The highest correlation can be found for the growth rate of real M1 and real M3.<sup>5</sup> The coefficients for the short-term interest rates, the yield spread and the exchange rate (ecu vis-à-vis the US dollar) also show the expected sign, however, their size is considerably smaller.<sup>6</sup>

Table 3 – Correlation between the Change in Selected Indicators of Monetary Policy and the Change in Real GDP in Euroland, 1980–1997<sup>a</sup>

	Quarters									
	t-5	t-4	t-3	t-2	t-1	t	t+1	t+2	t+3	t+4
Change in <sup>b</sup>										
– real money stock M1	0.59	0.60	0.60*	0.57	0.51	0.43	0.31	0.21	0.13	0.07
– real money stock M3	0.60	0.61*	0.57	0.51	0.49	0.50	0.49	0.53	0.55	0.54
Level of										
– short-term interest rates	-0.33	-0.36	-0.36*	-0.34	-0.30	-0.28	-0.20	-0.20	-0.09	-0.00
– yield spread <sup>c</sup>	0.26	0.31	0.35	0.37*	0.36	0.32	0.21	0.03	-0.16	-0.29
– ecu/dollar exchange rate	0.19*	0.16	0.14	0.10	0.03	-0.04	-0.12	-0.18	-0.20	-0.22

<sup>a</sup>Based on data for Germany, France, Italy, Spain and the Netherlands. — <sup>b</sup>Percentage change over previous year. — <sup>c</sup>Long-term interest rate minus short-term interest rate. — \*Maximum correlation.

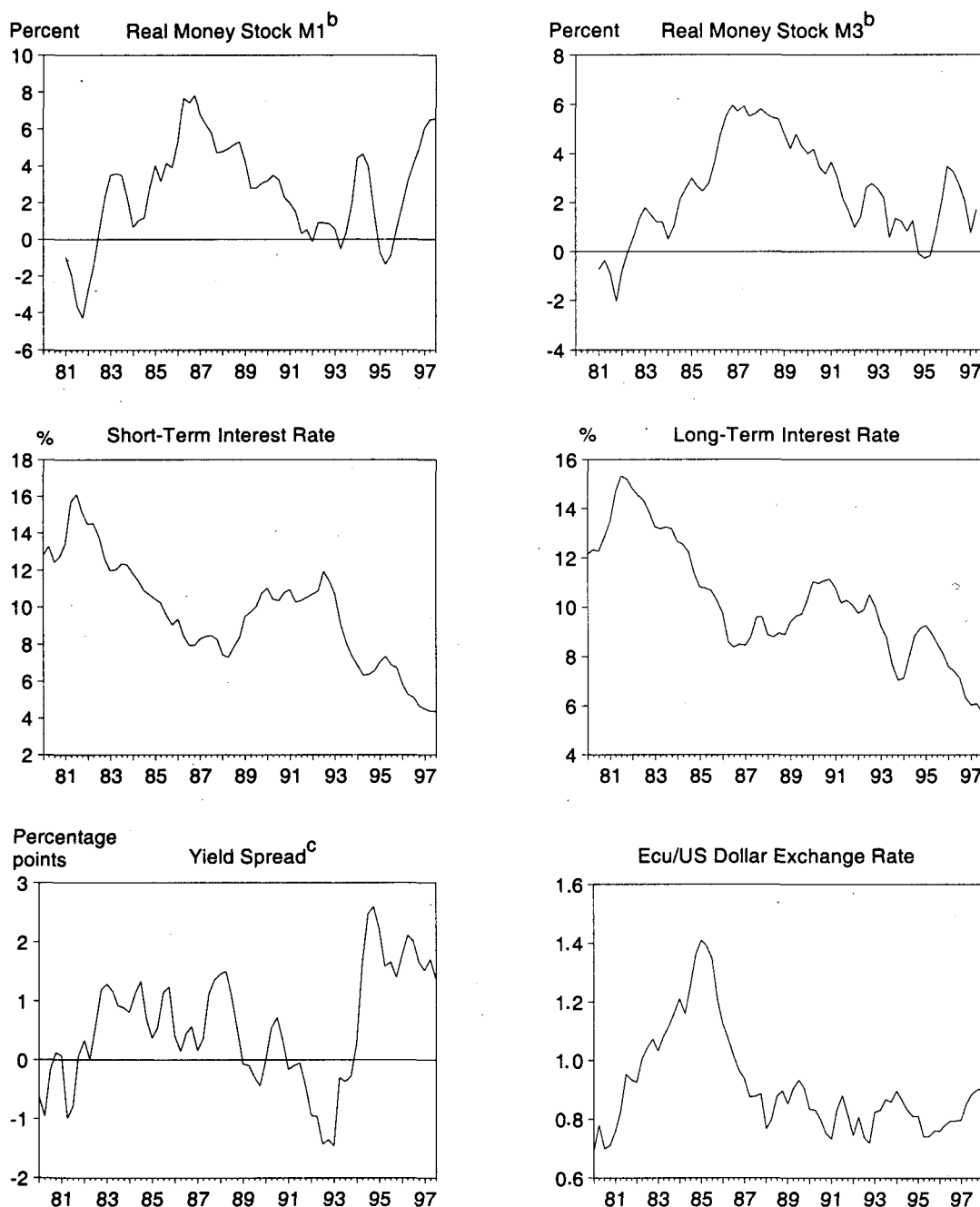
Source: Own calculations.



The expansion of real M1 in Euroland has accelerated markedly since the beginning of 1996; at the end of 1997, it was about as high as before the strong upswing in the second half of

the 1980s (Figure 3). At the same time, the growth rate of real M3 has lost some momentum. However, this observation should be taken with caution because the calculation of broad

Figure 3 – Indicators of Monetary Policy in Euroland, 1981–1997<sup>a</sup>



<sup>a</sup>Based on data for Germany, France, Italy, Spain and the Netherlands. — <sup>b</sup>Percentage change over previous year. — <sup>c</sup>Long-term interest rate minus short-term interest rate.

money at the European level proves to be quite difficult.<sup>7</sup> Also, shifts between the broad aggregate and monetary capital play a larger role and may have worsened the quality of M3 as an indicator for monetary policy. All in all, we think that real M1 is more appropriate and an adequate indicator.

Recently, long-term as well as short-term interest rates have reached historical lows. Furthermore, in spite of the recent decline of bond yields, the interest rate differential remains positive and is a lot higher than the average for 1984–1996 (0.6 percentage points) which can be interpreted as reflecting a neutral course of monetary policy.

The behavior of real interest rates also suggests that monetary policy is expansionary. Both long-term and short-term rates are — when current inflation is accounted for — below the long-term average; recently, they have been even lower than ever in the past 15 years. It may be true, however, that the calculation of real rates is problematic because inflationary expectations may deviate from actual inflation rates which have, in addition, been quite different across Euroland countries in the past.

Another possibility to judge the present policy stance is to use the Taylor rule. With this equation (Box 1) one can calculate the money market rate which is compatible with an inflation rate of, for example, 2 percent given a judgment about capacity utilization. Assuming that the equilibrium real short-term interest rate is

3 % and the output gap in Euroland is zero, the money market rate reflecting a neutral monetary policy would be around 5 %. The actual rate, however, is currently substantially lower; this, too, indicates a rather expansionary course.

During the coming months, short-term interest rates in Euroland will converge at a level of slightly above 3.5 %. They will probably remain unchanged for a while. On average, capacity utilization is roughly at its normal level, and inflation is close to 2 percent, a rate which is obviously acceptable to most central banks and probably also to the future ECB. The low interest rate level seems to suggest that market participants do not see a major risk of higher inflation. However, according to our judgment, the favorable conditions for inflation will not persist: First, we expect raw material prices to rise again after the major impact from the Asian crisis will be over; second, with the continued upswing, firms will see more room to raise prices; and third, wage increases next year will probably not be as moderate as in 1998.

In order to estimate the effects of monetary policy on inflation, we use the well-known P-star model (Krämer and Scheide 1994). In this approach, the price level is determined in the long run by the money stock, while in the short run, other factors play a role as well, e.g. import prices and unit labor costs. The difference between the price level determined by money (“equilibrium price level”) and the actual price level — the so-called price gap — can serve as a

#### Box 1 – The Taylor Rule for Monetary Policy

According to one version of the Taylor Rule, the money market rate  $i^*$  is determined as follows:

$$i^* = ir^E + \pi^e - 0.5(GDP^{POT} - GDP) + 0.5(\pi - \pi^{TAR}),$$

where

- $ir^E$  = equilibrium real interest rate
- $\pi^e$  = expected inflation rate
- $GDP^{POT}$  = real GDP at normal capacity utilization
- $GDP$  = actual GDP
- $\pi$  = actual inflation rate
- $\pi^{TAR}$  = target inflation rate.

The rule implies that the central bank reacts to deviations of real output from its trend level as well as trying to realize a certain target inflation rate. Accordingly, the central bank is to raise interest rates in the case of capacity utilization rising above average and in the case of (expected) inflation exceeding the target inflation rate, respectively. On average, the equilibrium real interest rate corresponds to the money market rate plus expected inflation (Fisher condition).

measure for the impact of monetary policy on future inflation. The forecast for 1998 and 1999

is derived from the P-star model for Euroland (Box 2). The main characteristics of this model

Box 2 – A P-Star Model for Euroland

The P-star model is based on the assumption that the quantity theory of money holds. This implies that in the long run inflation is determined by the change of money ( $m$ , all variables in logs), the velocity of money ( $v$ ) and the transaction volume (real GDP). If all variables are at their equilibrium level ( $*$ ), the price level is given by:

$$p^* = m + v^* - q^*.$$

However, the adjustment to this long-run solution is not instantaneous. Furthermore, inflation in the short run may be influenced by other variables, for example, the import price inflation and the change of unit labor costs (see Krämer and Scheide 1994; Scheide and Solveen 1998). Hence, an error correction model has been specified:

$$\Delta_4 p_t = \gamma_0 + \gamma_{1f} \sum_{f=1}^l \Delta_4 p_{t-f} + \gamma_{2i} \sum_{i=0}^m \Delta_4 p_{t-i}^M + \gamma_{3j} \sum_{j=0}^n \Delta_4 ulc_{t-j} + \gamma_4 \sum_{k=1}^4 0.25(p^* - p)_{t-k} + u_t.$$

The price gap is estimated via a long-run money demand function with potential GDP as an argument (Krämer 1996). This function is assumed — in line with most of the recent empirical evidence (see Browne et al. 1997 for a survey) — to be stable over time. OLS-estimation using quarterly, seasonal adjusted data<sup>a</sup> from 1980:1 to 1997:3 leads to the following results:

$$\Delta_4 p_t = \begin{matrix} 0.21 & + & 0.85 & \Delta_4 p_{t-1} & - & 0.35 & \Delta_4 p_{t-4} & + & 0.32 & \Delta_4 p_{t-5} & + & 0.10 & \Delta_4 p_t^M & - & 0.07 & \Delta_4 p_{t-1}^M & + & 0.05 & \Delta_4 p_{t-4}^M & - & 0.03 & \Delta_4 p_{t-5}^M & + & 0.09 & \Delta_4 ulc_{t-1} \\ (2.8) & & (13.0) & & (-3.7) & & (4.1) & & (8.5) & & (-4.5) & & (3.6) & & (-2.3) & & (2.6) & & & & & & & & & & & \end{matrix}$$

$$+ \begin{matrix} 0.14 & \Delta_4 ulc_{t-2} & - & 0.14 & \Delta_4 ulc_{t-3} & + & 0.05 & \sum_{k=1}^4 0.25(p^* - p)_{t-k} & - & 0.38 & D_t^{91.92.III.IV} & + & \hat{u}_t. \\ (3.2) & & (-3.8) & & (3.6) & & (-4.2) & & & & & & & & \end{matrix}$$

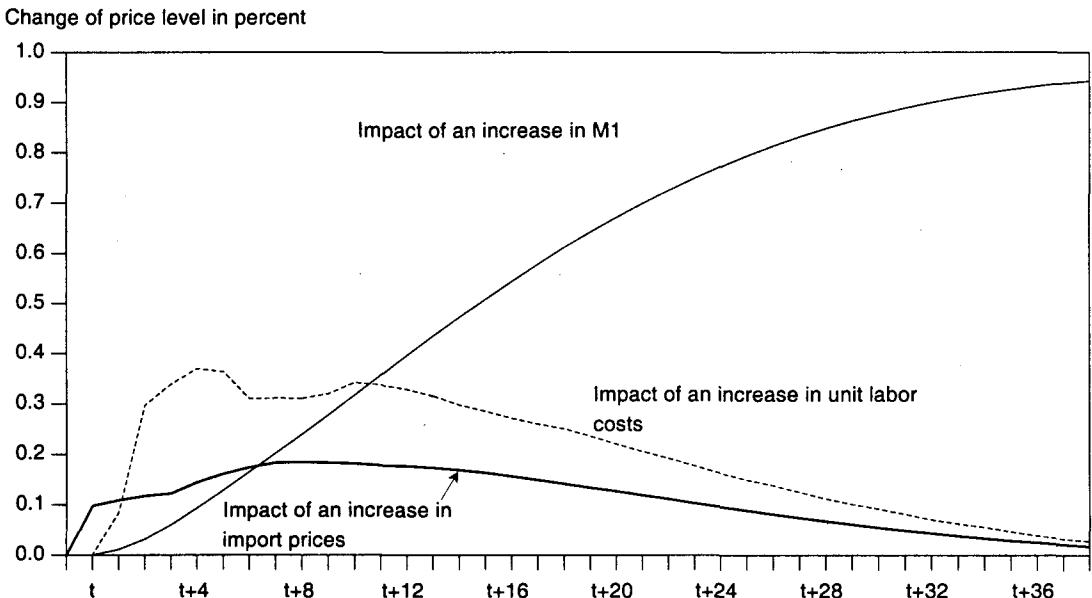
JB-Test on non-normality: 0.28 (significance level: 0.87), Breusch-Godfrey-Test on autocorrelation of first order: 0.01 (0.95), Breusch-Godfrey-Test on autocorrelation of fourth order: 1.08 (0.38), ARCH(1): 0.46 (0.50), ARCH(4): 0.74 (0.57), RESET(1): 0.10 (0.75), WHITE: 1.37 (0.19).

The following long-run money demand equation was estimated:

$$m_t = -1.86 + 1.27 q_t^* + \hat{v}_t \quad (R^2 = 0.98) \Rightarrow p_t^* - p_t = m_t + 1.86 - 1.27 q_t^*.$$

<sup>a</sup>Based on data for Germany, France, Italy, Spain and the Netherlands.

Figure 4 – The Impact of Money, Unit Labor Costs and Import Prices on the Price Level in Euroland: Results of a Shock Simulation<sup>a</sup> with the P-Star Model



<sup>a</sup>Effect of an increase in the growth rate of the exogenous variables of one percentage point for one year.

are shown in Figure 4. Higher import price inflation and a stronger increase of unit labor costs quickly raise the inflation rate, whereas a more rapid expansion of the money stock takes several years to be fully reflected in the price level. But according to the quantity theory of money — the basis of the P-star model — an increase in the money stock raises the price

level permanently, whereas the cost push factors only have a transitory effect. Given realistic assumptions about the future development of money, import prices and unit labor costs, the risk of deflation can practically be ruled out. It is rather likely that the increase in consumer prices will accelerate somewhat in the near future (Table 4).

Table 4 – Forecast of Inflation in Euroland According to the P-Star Model, 1997–1999

	Assumptions				Forecast	
	Money stock M1 <sup>a</sup>	Real GDP <sup>a</sup>	Unit labor costs <sup>a</sup>	Import prices <sup>a</sup>	Price gap <sup>b</sup>	Inflation rate <sup>a</sup>
1997:1 <sup>c</sup>	8.3	1.5	1.0	1.0	-0.6	2.1
1997:2 <sup>c</sup>	8.3	2.4	0.6	1.7	0.2	1.7
1997:3 <sup>c</sup>	8.7	2.5	1.1	3.6	1.0	2.0
1997:4	7.4	3.0	1.4	1.0	1.5	1.8
1998:1	4.0	3.2	1.4	0.5	1.0	2.0
1998:2	5.0	2.5	1.8	-0.2	0.9	2.3
1998:3	6.0	2.5	1.2	-1.5	1.1	2.2
1998:4	6.0	2.4	1.3	1.0	1.2	2.5
1999:1	6.0	2.4	1.4	1.5	1.4	2.4
1999:2	6.0	2.6	1.5	2.0	1.5	2.4
1999:3	6.0	2.6	1.6	2.0	1.6	2.4
1999:4	6.0	2.7	1.6	2.0	1.7	2.5

<sup>a</sup>Percentage change over previous year. — <sup>b</sup>Deviation of equilibrium price level from actual price level in percent. — <sup>c</sup>Ex-post values.

Source: Own calculations.

## V. European Central Bank: Monetary Targeting or Inflation Targeting?

The European Monetary Institute (EMI) has still left open whether the future ECB should use the money stock as an intermediate target or whether it should target inflation directly.<sup>8</sup> It is also possible that both strategies will be followed at the same time. Currently, monetary policy in European countries is based on different concepts. The Deutsche Bundesbank has pursued monetary targeting for many years; other countries have kept the exchange rate vis-à-vis the D-mark stable and in that way have followed the Bundesbank's strategy. For Germany, monetary targeting is hardly disputed as an adequate strategy since the money demand function has — according to a large number of empirical studies — been sufficiently stable. In-

stability of money demand has led other central banks to abandon monetary targeting and to follow a policy of inflation targeting (e.g. the United Kingdom and Sweden). Both strategies are compatible as far as the final target is concerned. The Bundesbank, too, has an explicit target for inflation when deriving the desired path for the money stock. On the road to EMU there seems to be a tendency, however, to disregard this strategy altogether; obviously, inflation targeting is the strategy that many — central banks and economists alike — favor.

There are good reasons, however, to continue to use money as an intermediate target. Several empirical analyses show that money demand is stable for a larger currency area in Europe

(Browne et al. 1997). Similarly, the trend of the velocity of money — whether it is the narrow or the broad aggregate — is fairly steady. Therefore, estimating the trend change in velocity — an important variable for deriving the target for money growth — would not pose a major problem for the currency area of EMU. In addition, there is a close relationship between various monetary aggregates and the price level not only for Germany but also for Euroland. A major argument in favor of inflation targeting therefore does not hold.<sup>9</sup>

However, it cannot be excluded that the shift towards a new regime — i.e. the move to EMU — will lead to a transitory instability of money demand.<sup>10</sup> Firms and households may change their cash holdings because transactions within the EMU area will be made with just one currency. Also, the possible role of the euro as an international reserve currency may affect the demand for money. However, if there is a structural break in the function, every strategy of monetary policy — not only monetary targeting — has problems. It follows by no means that under these conditions inflation targeting becomes the superior strategy. This concept is based on a sufficiently precise forecast of the price level, which is then used to decide whether monetary policy should react. Such a forecast, however, also depends on money market conditions. An instability of the money demand function implies that the relationships between money, interest rates, real GDP and the price level changes. This will also make the inflation forecast more difficult. Therefore, the common argument that inflation targeting should be preferred over monetary targeting under these circumstances is not convincing.

Independent of the choice of a particular strategy, monetary policy during the early phase of EMU will face major problems. One way for the ECB to reduce uncertainty about its policy would be to announce the inflation rate it wants to achieve. It is desirable to formulate an ambitious goal. A rate of 2 percent — at maximum — would make sense also because the Deutsche Bundesbank announced this target. A higher rate would be interpreted as a policy which is more generous with regard to price level stability. This would lead to a loss of confidence and make the policy of the ECB even more difficult.

The ECB should focus on the money stock also in the transition phase, one reason being the fairly stable development of the velocity of money in the past. The target inflation should be translated into a target for money growth in the way the Deutsche Bundesbank has formulated its policy in the past. The ECB could certainly benefit from a continuation of this procedure. It may be that the monetary target must be revised in the course of a year. However, this would not reduce the credibility of the ECB if such a correction is properly explained.

In the coming months, there will have to be a close cooperation between European central banks. They will have to base their decisions on the economic development in the entire EMU area. A target for money growth (M1) should be announced that is compatible with an inflation rate of no more than 2 percent. Given that the trend decline of velocity is a little less than 1 percent and the growth rate of potential output is almost 2.5 percent, an increase of 5 percent for M1 would be appropriate. Due to the uncertainty in the early phase of EMU, the ECB could announce a target range.

## VI. On the Road to a Sustainable Fiscal Policy?

In 1997, fiscal policy in the prospective EMU countries was struggling to keep the public deficit ratio within the 3 percent limit set in the Maastricht Treaty. All countries have succeeded in bringing deficits down to 3 percent of GDP

or below (Table 5, column 1). To accomplish this, taxes were raised and expenditures were cut. As a result, the structural deficit declined in all countries but Ireland.<sup>11</sup>

Table 5 – Indicators of Fiscal Position in EMU Countries, 1997<sup>a</sup>

	Budget deficit <sup>b</sup> in 1997	Structural deficit in 1997 <sup>c</sup>	Sufficient structural deficit <sup>d</sup>	Gross public sector debt <sup>b</sup> in 1997	Structural primary balance <sup>e</sup> in 1997	“Necessary” primary balance <sup>f</sup>
	(1)	(2)	(3)	(4)	(5)	(6)
Germany	2.7	2.5	1.2	61.3	0.4	1.8
France	3.0	2.6	1.4	58.0	0.9	1.7
Italy	2.7	2.4	2.3	121.6	5.3	3.6
Spain	2.6	2.2	1.2	68.8	1.9	2.0
Netherlands	1.4	1.3	1.0	72.1	2.3	2.2
Belgium	2.1	1.8	1.3	122.2	6.1	3.7
Austria	2.5	2.1	1.6	66.1	1.0	2.0
Finland	0.9	1.6	-0.6	55.8	0.3	1.7
Portugal	2.5	2.2	1.1	62.0	1.5	1.9
Ireland	-0.9 <sup>g</sup>	0.1	0.2	66.3	3.8	2.0
Luxembourg	-1.7 <sup>g</sup>	-1.8 <sup>g</sup>	n.a.	6.7	1.9	0.2

<sup>a</sup>In percent of nominal GDP. — <sup>b</sup>Maastricht definition. — <sup>c</sup>Own estimate. The structural deficit is defined as the deficit that would prevail in the case of normal capacity utilization. — <sup>d</sup>Defined as the structural deficit that in the years 1981–1996 would have been sufficient to prevent the deficit from rising above the reference value of 3 percent in the course of cyclical downturns. — <sup>e</sup>Difference between government revenues and government outlays (less interest payments on government debt) in the case of normal capacity utilization. — <sup>f</sup>Primary balance that is necessary to stabilize the public debt on 1997 levels given a differential between interest rate and nominal output growth of 3 percentage points. — <sup>g</sup>Surplus.

Source: OECD (1997), EMI (1998), own calculations.

## 1. Further Consolidation Necessary

In the Stability and Growth Pact, EMU member countries committed themselves to keep deficits within the Maastricht limit also in the future. Even during cyclical downturns, the deficits are allowed to exceed 3 percent of GDP only under exceptional circumstances, otherwise sanctions threaten to be imposed.<sup>12</sup> Because deficits typically widen during a downturn as a result of a decline in revenues combined with a rise in expenditures, structural deficits have to be kept significantly below 3 percent in normal times in order to avoid that the actual deficit exceeds 3 percent during a recession.

In the past, the effects of cyclical output variations on the fiscal balance were not equally pronounced in the individual countries. According to the experience in the 1981–1996 period, the structural deficit/GDP ratio would generally have to be brought down to a value of 1–1.5 percent in order to let the automatic fiscal stabilizers work without exceeding the reference value (Table 5, column 3).<sup>13</sup> In most countries, actual deficits turned out to be higher than would

be sufficient in light of this concept, in some cases by more than 1 percentage point. Consequently, further consolidation is necessary in most EMU countries to reduce the risk that fiscal policy has to turn restrictive during a recession. Moreover, the stability pact calls for additional measures because it says that in the medium term the budget should be balanced, i.e. structural deficits should be eliminated completely.

The level of gross public debt is below the reference value of 60 percent of GDP only in a few countries (Table 5, column 4). However, according to the Maastricht Treaty it is sufficient when “the ratio is sufficiently diminishing and approaching the reference value at a satisfactory speed.” Given that the debt-to-GDP ratios in 1997 declined in most countries with government debt above the reference level, the heads of government at their meeting in early May 1998 will probably decide that the debt criterion is satisfied. This is especially likely in the light of the recent convergence reports by the European Commission and the European Monetary Institute. However, it should be noted that it is open to debate what in this context can be re-

garded as “satisfactory speed.” Given the present fiscal positions, in a number of countries with excessive debt levels debt-to-GDP ratios are bound to decline at a very slow pace. In Italy, for example, it would take 25 years to approach a ratio of 60 percent. The Deutsche Bundesbank (1998) presented calculations as to the fiscal position that is necessary to bring down government debt to 60 percent of GDP in ten and five years, respectively. The conclusion is that in many countries consolidation has to proceed further in order to speed up the reduction of the debt ratio, and it is quite obvious that in some countries, notably in Belgium and Italy, a reduction of the debt level to 60 percent of GDP in a period of five to ten years is extremely ambitious.

## 2. Fiscal Positions Often Not Sustainable

Ultimately, the fiscal criteria in the Maastricht Treaty are meant to warrant that fiscal positions are sustainable in the long term. Judging the sustainability of fiscal policies is a difficult task, particularly because all government liabilities should be taken into account, not only the part that is explicit in the statistics.<sup>14</sup> In the following, a simple concept of sustainability will

be used to give some indication of the long-term viability of present fiscal positions.

According to this concept, a fiscal position is judged as sustainable when at a given combination of revenues and expenditure (relative to GDP), the debt service is secured in the long term. A crucial variable in this context is the “necessary” primary surplus (Box 3). This surplus is defined as the excess of government revenues over government outlays less interest payments that is necessary to stabilize the level of government debt relative to GDP.

In order to calculate the “necessary” primary balances in the EMU countries, assumptions have to be made concerning interest rates and nominal growth of potential output in the future. In the 1981–1997 period, the differential between interest rates and the rate of growth in nominal GDP in the five major EMU countries amounted to 3.25 percentage points; during the 1990s, the differential was 3.75 percentage points. However, differences among the countries turn out to be significant: While in Germany the differential between interest rate and growth rate was somewhat below 2.5 percentage points, the differential was considerably larger in France, Italy, the Netherlands and — during the 1990s — in Spain; the order of magnitude was 3 to 4 percentage points on average.

### Box 3 – The “Necessary” Primary Surplus as an Indicator of Fiscal Sustainability

The accumulation of government debt leads to a debt service in the future. While the primary balance is defined as the difference of government revenues and government expenditures less interest payments on government debt, the “necessary” primary surplus (Buiter et al. 1993) specifies the tax burden that must be borne in the future to service the debt. Given constant shares in GDP with respect to revenues and outlays, the necessary primary surplus in percent of GDP,  $ps^*$ , is determined by the current public debt ratio,  $d$ , and the future differential between the interest rate on government debt,  $i$ , and the growth rate of nominal GDP,  $\gamma$  (see Boss and Lorz 1995: 155–162):  $ps^* = (i - \gamma) \cdot d$ .

The comparison of the current primary surplus<sup>a</sup> and the necessary primary surplus gives an indication whether the fiscal position is sustainable if the course of fiscal policy is continued in the future. In case of the former being at least as high as the latter, current fiscal policy can be judged as sustainable.

The concept has some caveats. First, estimates for future interest rates and potential output are obviously subject to considerable uncertainty. Second, it should be noted that the course of fiscal policy is understood in a technical sense as a combination of certain levels of public revenue and expenditure (in terms of GDP). A sensible analysis of the implications of existing government programs for the development of future expenditures is not provided. For example, given prospective demographic developments (Siebert 1998b) there is a considerable future increase in expenditures implicit in current social security programs. This means that, other things being equal, those programs have to be adjusted to prevent the deficit ratio from rising.

<sup>a</sup>Due to the long-term orientation of the concept, it is better to use cyclically adjusted primary balances that are calculated using structural deficits as a starting point.

The differential between interest rates and the rate of growth is affected by, among other things, the degree of price level stability. Investors claim a risk premium to account for the possibility of inflation in the future. Obviously, this premium has been significantly smaller in Germany than in most other countries. It is open to speculation what the future risk premium will amount to in Euroland. Probably, the European Central Bank will have more credibility with respect to maintaining price stability than central banks in most European countries used to have in the past because it is likely that some reputation will be transferred from the Bundesbank. Consequently, the differential between the interest rate and the growth rate can be expected to be well below the weighted average of the five major EMU countries in the past. In order to account for the fact that there is still uncertainty about the future stance of the ECB, we have chosen a differential somewhat above the value experienced in Germany in the past. For a rough calculation of the primary surplus of EMU member countries that is necessary to stabilize debt levels we have factored in a differential of 3 percentage points.<sup>15</sup>

When the "necessary" primary surplus calculated as described above is compared with actual primary balances in 1997 (Table 5, columns 5 and 6), it is evident that only in about half of the countries fiscal consolidation has proceeded to a point where the rise in the debt level relative to GDP has come to a halt or is even reversed, so that in that sense fiscal positions can be judged as sustainable for these economies. Particularly for the large countries Germany and France, the need for further consolidation is still considerable. In addition, it has to be taken into account that in a number of countries one-off measures contributed significantly to the decline of the deficit in 1997.

Extra revenues or reductions in expenditures due to such a kind of measures by definition fully show up in the structural deficit. Because of their one-off character, however, the relevant structural deficit is underestimated while the primary surplus is overestimated.<sup>16</sup> Consequently, additional policy action aimed at deficit reduction is necessary to keep the structural deficit at present levels in the future. Furthermore, as noted above, further consolidation is warranted in order to accelerate the pace of debt reduction to the level of 60 percent of GDP that is regarded as being compatible with a sound fiscal position in the Maastricht Treaty.

### **3. Neutral Stance of Fiscal Policy Expected for 1998 and 1999**

Contrary to last year, fiscal policy will not be restrictive in 1998 and 1999. One reason for the easing of fiscal stance is that the immediate pressure to meet the Maastricht criteria is taken away after the decision on EMU membership has been made. However, governments in the EMU countries will probably continue to keep expenditures in check, and the high level of government expenditures relative to GDP will be reduced further, albeit at a slower pace. On the other hand, in contrast to last year, there will only be sporadic increases in taxes and social contributions. In some countries even tax reductions can be expected. For example, in Italy, the private sector will get some relief from the discontinuation of taxes introduced to raise revenues in order to reach the Maastricht reference value for the public deficit. On aggregate, in both 1998 and 1999 the structural deficit in the EMU countries will stay at the level of 2.5 percent of GDP reached last year.

## **VII. Wage Policy in the Monetary Union: More Labor Market Flexibility Necessary**

The switch of responsibility for monetary policy from national central banks to the ECB has

important implications for wage policy in the member countries of the currency union. Nega-



tive external shocks — for example, an oil price hike — tend to have different impacts on the individual countries. Since exchange rates can no longer work as a shock absorber, other mechanisms of adjustment are necessary in order to prevent unemployment in the worst-hit countries from rising. Evidently, increased labor mobility can be only a small part of the solution because regional mobility of labor is limited. An alternative strategy that was used in the process of German unification is the massive provision of transfers. On a European scale, however, it seems to be no real option because it will probably not be feasible politically, not to speak of the economic costs. The most important adjustment mechanism left is flexibility in wage cost (Siebert 1998a: 5).<sup>17</sup> It would be counterproductive to increasingly negotiate about wages at the European level. Against the background of the rising need for differentiation, decisions that affect employment should, to the contrary, be more and more decentralized.

In recent years, the labor market performance has been highly differentiated across countries (see Annex Table A7). Employment growth has

been related to wage moderation: The increase in gross compensation per employee was below the growth rate of nominal GDP in all countries with positive employment growth. In the period 1994–1997, wage moderation was particularly distinct in Ireland, Spain, Finland and the Netherlands; at the same time, these countries experienced the strongest employment growth. On the other hand, the lowest degree of wage moderation was found in Germany which turned out to have the poorest labor market performance (Lehment 1998).

In 1997, the average increase in wage cost per employee in the EMU countries was reduced to 2.5 percent, following 3 percent in 1996. Combined with the continued growth in output, this resulted in unit labor costs which were essentially flat. Significant decreases in some countries, particularly Germany, Ireland and Austria, were balanced by considerable increases in Italy and Spain. In the face of continued high unemployment, overall wage growth in Europe is expected to remain moderate in 1998. Next year, however, against the background of firm economic growth and improved labor markets a slight acceleration is likely.

## VIII. Outlook: Domestic Demand Gains Momentum

We expect the upswing in Euroland to continue at a moderate pace (Table 6).<sup>18</sup> The upward momentum will increasingly be driven by domestic demand. Exports, in contrast, are bound to slow due to weaker growth in main trading partner countries and fading stimulus from devaluation. In addition, there is a dampening impact from the Asian crisis. While exports to the most heavily affected countries<sup>19</sup> are only 3 percent of total exports suggesting a very limited influence, the position of European producers competing with producers from these countries is worsened in third markets as well in the course of the drastic devaluations of Asian currencies. We assume that overall the external value of the ecu and euro, respectively, will be stable over the forecasting horizon.

Domestic demand will continue to be stimulated by monetary policy, notwithstanding a slight tightening that is expected in the course of the winter 1998/99 (Figure 5). Fiscal policy will cease to dampen demand in Euroland; structural deficits will remain more or less unchanged.

Against this background, private consumption will rise considerably in 1998 reflecting increased disposable household income that mainly is the result of an improved labor market performance. After labor markets have shown some noticeable positive trends in many of the smaller countries already in the recent past, employment will successively rise in France and Italy as well. For Germany we also expect some, albeit limited, improvement in the labor market.

Table 6 – Quarterly Data on the Economic Development in Euroland, 1997–1999<sup>a</sup>

	1997				1998 <sup>b</sup>				1999 <sup>b</sup>			
	1.qr	2.qr	3.qr	4.qr	1.qr	2.qr	3.qr	4.qr	1.qr	2.qr	3.qr	4.qr
Gross domestic product <sup>c</sup>	1.4	4.8	2.7	3.0	2.3	2.1	2.7	2.4	2.6	2.7	2.8	2.9
Domestic demand <sup>c</sup>	1.2	3.8	1.0	2.7	2.3	2.4	3.1	2.9	2.8	2.7	2.7	2.5
Private consumption <sup>c</sup>	1.9	2.5	0.9	3.1	2.7	2.2	2.6	2.8	2.7	2.7	2.7	2.7
Public consumption <sup>c</sup>	1.0	1.3	-1.5	-1.6	1.7	1.0	1.0	1.0	1.1	1.1	1.3	1.3
Fixed investment <sup>d</sup>	-6.0	6.4	1.7	4.5	3.6	4.3	4.5	4.8	5.1	5.4	5.1	2.9
Change in stocks <sup>d</sup>	0.3	0.7	0.4	0.2	-0.1	0.0	0.4	0.0	0.0	-0.3	-0.2	-0.3
Net exports <sup>d</sup>	0.1	1.1	1.7	0.4	0.0	-0.2	-0.3	-0.4	0.0	0.1	0.2	0.4
Consumer prices <sup>e</sup>	2.1	1.7	2.0	1.7	1.7	2.1	2.0	2.0	2.3	2.2	2.3	2.4
Money stock M1 <sup>e</sup>	8.3	8.3	8.7	7.4	4.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0
3-month money market rate	4.5	4.4	4.4	4.3	4.1	3.9	3.6	3.8	4.2	4.2	4.2	4.2
Long-term interest rate	6.0	6.1	5.7	5.6	5.2	5.5	5.5	5.7	5.9	5.9	6.1	6.1
Exchange rate vis-à-vis US <sup>f</sup>	0.85	0.87	0.92	0.89	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92

<sup>a</sup>Based on data for Germany, France, Italy, Spain and the Netherlands. — <sup>b</sup>Forecast. — <sup>c</sup>In constant prices. Annualized quarterly rate of change in percent. — <sup>d</sup>Contribution to change in GDP. — <sup>e</sup>Change over previous year in percent. — <sup>f</sup>Ecu/US dollar; from 1999 onwards euro/US dollar.

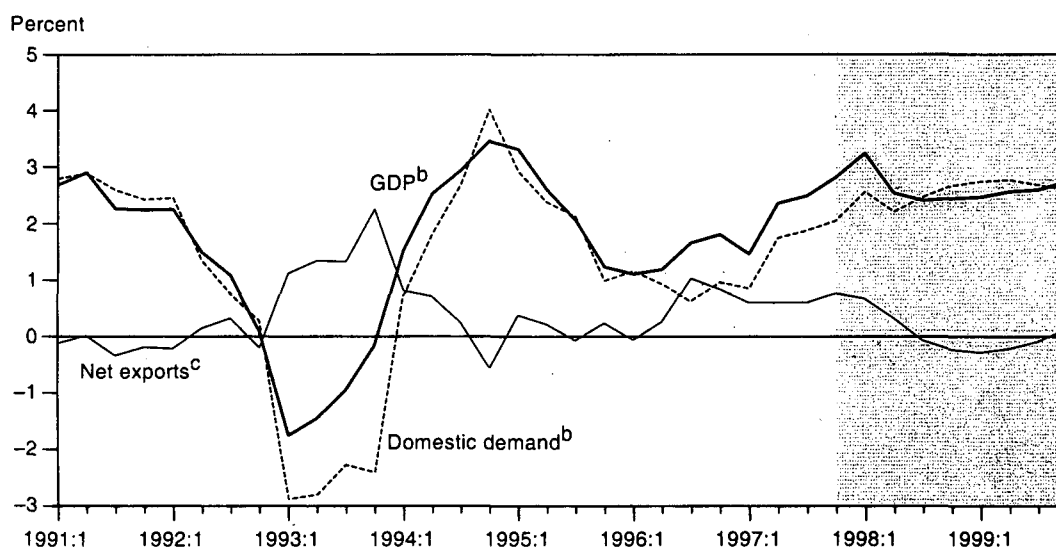
Source: OECD (1998), own calculations.

In the presence of low interest rates combined with increasing corporate profits and rising capacity utilization, investment activity will remain brisk. Next year, a further slight acceleration is likely. The upturn in corporate investment will, however, be confined largely to investment in machinery and equipment. Invest-

ment in structures is dampened by a significant excess supply in office buildings.

Summing up, real GDP in Euroland will expand at a rate of a little more than 2.5 percent which is somewhat above trend growth. Consumer prices will increase at a slightly accelerated pace of almost 2.5 percent in 1999.

Figure 5 – GDP, Domestic Demand and Net Exports in Euroland, 1991–1999



<sup>a</sup>In constant prices. Based on data for Germany, France, Italy, Spain and the Netherlands. — From 1997:4 onwards forecast. — <sup>b</sup>Percentage change over previous year. — <sup>c</sup>Change of net exports over previous year in percent of GDP in the same quarter of previous year.

Source: OECD (1998), own calculations.

## Appendix

### 1. Aggregation for Euroland

The calculations for aggregate quarterly data for GDP and its components in the EU5 countries take the OECD *Quarterly National Accounts* data base as a starting point. If necessary, the data for the individual countries are rebased to constant prices of 1990 and seasonally adjusted with Census-X-11. The next step is to convert the series into a common currency (US dollar) according to purchasing power parity. Individual countries' GDP and most GDP components are then aggregated.<sup>20</sup>

Note that exports and imports cannot be simply added unless the intra-EMU trade would have to be eliminated which is very difficult at this stage. Instead, we focus on net exports and current account balances, respectively. The in-

crease in stocks is defined as difference between GDP and the sum of all other components, i.e. this variable includes all statistical errors and omissions.

The German series are adjusted, if necessary, to account for the effect of unification. Indices are rebased to the base year 1990 and weighted according to the countries' share of GDP in total.

The procedure of calculation of EMU monetary aggregates is basically the same as described above: individual countries' monetary aggregates are converted at constant purchasing power parities and added.<sup>21</sup> For Italy, M2 is used as broad money instead of M3. Interest rates are weighted with the respective country's share in real GDP.

### 2. Tables with Annual Data for Euroland

Table A1 – Real GDP in Euroland, 1992–1999<sup>a</sup> (percentage change over previous year)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997 <sup>b</sup>	1998 <sup>c</sup>	1999 <sup>c</sup>
Germany	31.5	2.2	-1.2	2.6	1.9	1.4	2.2	2.6	2.4
France	22.1	1.2	-1.3	2.8	2.1	1.5	2.4	2.8	2.5
Italy	20.1	0.6	-1.2	2.2	2.9	0.7	1.5	2.2	2.8
Spain	9.2	0.7	-1.4	2.3	2.8	2.3	3.3	3.5	3.3
Netherlands	5.6	2.0	0.8	3.2	2.3	3.3	3.3	3.5	2.9
Belgium	3.6	1.5	-1.5	2.4	2.1	1.5	2.5	3.0	2.5
Austria	3.0	1.3	0.5	2.5	2.1	1.6	2.0	2.5	2.5
Finland	2.3	-3.6	-1.2	4.5	5.1	3.6	4.5	4.0	3.0
Portugal	1.3	1.8	0.3	0.7	1.9	3.0	3.5	3.5	3.0
Ireland	1.1	3.7	2.9	6.8	9.8	7.9	7.5	7.0	6.5
Luxembourg	0.2	4.5	8.7	4.2	3.7	3.0	3.5	3.5	3.0
Euroland	100.0	1.3	-1.0	2.6	2.4	1.6	2.4	2.8	2.7

<sup>a</sup>Based on real GDP of 1996. — <sup>b</sup>Partly estimated. — <sup>c</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A2 – Private Consumption in Euroland, 1992–1999 (percentage change over previous year)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997 <sup>b</sup>	1998 <sup>c</sup>	1999 <sup>c</sup>
Germany	31.5	2.8	0.1	1.2	2.1	1.4	0.2	2.0	2.2
France	22.1	1.4	0.2	1.3	1.7	2.1	0.8	2.4	2.7
Italy	20.1	1.0	-2.4	1.4	1.8	0.7	2.0	2.2	2.9
Spain	9.2	2.2	-2.2	0.9	1.6	1.9	3.4	3.9	3.6
Netherlands	5.6	2.5	1.0	2.2	1.8	3.0	3.1	3.4	3.3
Belgium	3.6	2.3	-1.4	1.4	1.1	1.3	1.5	2.0	2.0
Austria	3.0	3.0	0.7	1.7	2.9	2.4	0.5	1.5	2.0
Finland	2.3	-4.9	-2.9	1.9	4.6	3.8	3.5	3.5	3.0
Portugal	1.3	5.6	0.5	1.0	1.0	2.1	2.5	3.0	2.5
Ireland	1.1	4.1	2.2	6.1	4.2	6.3	7.0	6.0	5.5
Luxembourg	0.2	-0.9	1.7	2.4	2.4	1.9	3.0	3.0	2.5
Euroland	100.0	1.9	-0.6	1.4	1.9	1.7	1.4	2.5	2.7

<sup>a</sup>Based on real GDP of 1996. — <sup>b</sup>Partly estimated. — <sup>c</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A3 – Fixed Investment in Euroland, 1992–1999 (percentage change over previous year)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997 <sup>b</sup>	1998 <sup>c</sup>	1999 <sup>c</sup>
Germany	31.5	3.5	-5.6	3.3	1.0	-1.2	0.2	2.8	2.8
France	22.1	-2.8	-6.7	1.3	2.5	-0.5	0.9	5.0	5.4
Italy	20.1	-1.8	-12.8	0.5	6.9	1.2	0.6	4.7	7.3
Spain	9.2	-4.4	-10.5	2.4	7.8	0.9	4.6	6.4	7.3
Netherlands	5.6	0.6	-2.8	2.2	5.0	6.1	6.6	2.4	3.2
Belgium	3.6	1.3	-3.6	-0.1	3.2	0.6	4.0	4.0	3.5
Austria	3.0	0.1	-2.0	8.4	1.9	2.4	4.0	4.5	4.0
Finland	2.3	-16.9	-19.2	0.2	11.3	8.4	10.0	6.5	5.0
Portugal	1.3	4.6	-6.2	4.5	3.6	7.8	9.0	7.5	6.0
Ireland	1.1	-1.3	-3.4	10.2	9.6	15.9	14.5	10.0	9.0
Luxembourg	0.2	-9.0	28.4	-14.9	3.5	-1.7	8.0	4.0	3.5
Euroland	100.0	-0.6	-7.6	2.1	3.8	0.7	1.9	4.3	4.9

<sup>a</sup>Based on real GDP of 1996. — <sup>b</sup>Partly estimated. — <sup>c</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A4 – Net Export in Euroland, 1992–1999 (change of net export in percent of previous year's GDP)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997 <sup>b</sup>	1998 <sup>c</sup>	1999 <sup>c</sup>
Germany	31.5	-0.6	0.3	0.0	-0.2	0.6	1.0	0.5	0.1
France	22.1	0.9	0.9	-0.2	0.3	0.6	1.3	0.0	-0.3
Italy	20.1	0.0	3.4	0.7	0.7	0.5	-0.7	-0.1	-0.1
Spain	9.2	-0.4	3.4	0.9	-0.6	0.9	0.7	-0.5	-0.7
Netherlands	5.6	0.6	1.9	0.5	0.5	0.0	0.1	0.4	0.2
Belgium	3.6	-0.3	0.0	1.1	0.7	0.4	0.6	0.7	0.6
Austria	3.0	0.0	-0.3	-1.2	-0.3	0.2	0.6	0.5	0.1
Finland	2.3	2.1	4.2	1.0	0.9	0.2	2.3	2.0	2.0
Portugal	1.3	-3.2	1.4	-1.0	0.2	-0.8	-1.3	-0.5	-0.9
Ireland	1.1	4.0	2.4	1.4	4.9	0.6	1.2	2.0	1.8
Luxembourg	0.2	5.5	0.1	4.2	0.8	1.3	-0.1	1.3	1.0
Euroland	100.0	0.1	1.5	0.2	0.2	0.5	0.6	0.2	0.0

<sup>a</sup>Based on real GDP of 1996. — <sup>b</sup>Partly estimated. — <sup>c</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A5 – Change in Stocks in Euroland, 1992–1999 (percent of previous year's GDP)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997 <sup>b</sup>	1998 <sup>c</sup>	1999 <sup>c</sup>
Germany	31.5	-0.4	-0.1	0.8	0.2	-0.3	1.1	0.3	0.3
France	22.1	-0.6	-1.5	1.7	0.3	-0.5	0.1	0.3	-0.1
Italy	20.1	0.1	-0.6	0.6	0.1	-0.5	0.8	0.0	-0.4
Spain	9.2	0.1	-1.2	0.4	0.3	-0.1	-0.5	0.0	-0.1
Netherlands	5.6	-0.4	-1.4	0.3	0.3	0.2	-0.1	0.5	-0.1
Belgium	3.6	0.1	-0.1	0.3	0.0	-0.1	0.1	0.0	0.0
Austria	3.0	-0.7	0.4	0.2	0.2	-0.6	0.1	0.0	0.0
Finland	2.3	1.5	1.2	2.6	-0.3	-0.6	-1.2	-1.1	-1.4
Portugal	1.3	0.1	0.1	-0.4	-0.4	0.0	0.0	-0.2	0.1
Ireland	1.1	-2.9	-0.3	-0.5	0.2	0.8	-0.2	-0.2	-0.2
Luxembourg	0.2	2.0	-0.2	3.0	0.4	0.7	-0.2	0.2	0.1
Euroland	100.0	-0.3	-0.6	0.9	0.2	-0.3	0.5	0.2	-0.1

<sup>a</sup>Based on real GDP of 1996. — <sup>b</sup>Partly estimated. — <sup>c</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A6 – Consumer Prices in Euroland, 1992–1999 (percentage change over previous year)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997	1998 <sup>b</sup>	1999 <sup>b</sup>
Germany	31.5	5.1	4.5	2.7	1.8	1.5	1.8	1.6	2.1
France	22.1	2.4	2.1	1.7	1.8	2.0	1.2	1.5	2.1
Italy	20.1	5.1	5.2	4.1	5.1	3.8	1.8	2.1	2.5
Spain	9.2	5.9	4.6	4.7	4.7	3.6	2.0	2.4	2.8
Netherlands	5.6	3.2	2.6	2.8	1.9	2.1	2.1	2.6	2.7
Belgium	3.6	2.4	2.7	2.4	1.5	2.1	1.5	2.0	2.5
Austria	3.0	4.0	3.6	3.0	2.2	1.9	1.5	1.5	2.0
Finland	2.3	2.6	2.1	1.1	1.0	0.6	1.5	2.0	2.5
Portugal	1.3	8.9	6.5	5.2	4.1	3.1	2.1	2.5	2.5
Ireland	1.1	3.1	1.4	2.3	2.6	1.7	1.4	2.5	3.0
Luxembourg	0.2	3.1	3.6	2.2	1.9	1.4	1.4	2.0	2.5
Euroland	100.0	4.3	3.8	2.9	2.8	2.3	1.7	1.9	2.3

<sup>a</sup>Based on real GDP of 1996. — <sup>b</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A7 – Unemployment Rate in Euroland, 1992–1999 (percent of the labor force)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997	1998 <sup>b</sup>	1999 <sup>b</sup>
Germany	31.2	7.7	8.9	9.6	9.4	10.3	11.4	11.5	11.0
France	20.3	10.4	11.7	12.2	11.6	12.3	12.4	12.0	11.5
Italy	18.2	8.8	10.2	11.3	12.0	12.1	12.3	12.0	12.0
Spain	11.2	17.9	22.2	23.7	22.7	22.2	21.0	20.0	19.0
Netherlands	5.6	5.4	6.6	7.6	7.1	6.7	5.8	5.0	4.5
Belgium	3.4	10.4	12.1	13.1	13.1	12.9	12.7	12.0	11.5
Austria	3.1	5.3	6.1	5.9	5.9	6.3	6.1	5.5	5.0
Finland	1.9	13.1	17.9	18.4	17.2	16.3	14.6	13.5	12.0
Portugal	3.8	4.2	5.6	6.9	7.2	7.3	6.8	6.5	6.0
Ireland	1.2	15.1	15.7	14.7	12.1	11.9	10.3	9.5	9.0
Euroland	100.0	9.5	11.2	12.0	11.8	12.2	12.3	11.9	11.4

<sup>a</sup>Based on the number of dependent employees in 1996. — <sup>b</sup>Forecast.

Source: OECD (1997, 1998), European Commission (1997), own calculations.

Table A8 – Budget Balance<sup>a</sup> in Euroland, 1992–1999 (percent of nominal GDP)

	Weights in total <sup>b</sup>	1992	1993	1994	1995	1996	1997 <sup>c</sup>	1998 <sup>d</sup>	1999 <sup>d</sup>
Germany	34.3	-2.8	-3.5	-2.6	-3.5	-3.5	-2.7	-2.1	-1.8
France	22.4	-4.1	-6.1	-6.0	-5.4	-4.5	-3.0	-3.0	-3.0
Italy	17.6	-9.6	-10.0	-9.6	-7.0	-6.7	-2.7	-3.0	-2.5
Spain	8.5	-3.6	-6.8	-6.3	-6.5	-4.5	-2.6	-2.5	-2.0
Netherlands	5.7	-3.9	-3.2	-3.8	-3.7	-2.3	-1.4	-1.5	-1.5
Belgium	3.8	-6.9	-7.1	-4.9	-3.9	-3.2	-2.1	-2.0	-2.0
Austria	3.3	-1.8	-4.1	-4.8	-5.0	-4.0	-2.5	-2.5	-2.5
Finland	1.8	-5.7	-7.9	-6.2	-5.2	-3.2	-0.9	0.0	0.5
Portugal	1.5	-3.6	-6.1	-6.0	-5.8	-3.2	-2.5	-2.0	-2.0
Ireland	1.0	-2.5	-2.5	-1.6	-1.9	-0.5	0.9	1.0	1.5
Euroland	100.0	-4.6	-5.8	-5.2	-4.9	-4.3	-2.6	-2.4	-2.2

<sup>a</sup>From 1997 onwards according to the Maastricht definition. — <sup>b</sup>Based on nominal GDP and ecu exchange rates in 1996.  
— <sup>c</sup>Partly estimated. — <sup>d</sup>Forecast.

Sources: OECD (1997, 1998), European Commission (1997), own calculations.

Table A9 – Public Debt<sup>a</sup> in Euroland, 1992–1999 (percent of nominal GDP)

	Weights in total <sup>b</sup>	1992	1993	1994	1995	1996	1997 <sup>c</sup>	1998 <sup>d</sup>	1999 <sup>d</sup>
Germany	34.3	44.1	48.0	50.2	58.0	60.4	61.3	61.0	60.5
France	22.4	39.7	45.2	48.1	52.2	55.4	58.0	59.0	60.5
Italy	17.6	108.7	119.1	124.9	124.4	123.8	121.6	117.5	115.0
Spain	8.5	48.3	60.5	62.9	65.8	70.6	68.3	66.0	64.5
Netherlands	5.7	79.6	80.8	77.1	78.5	76.6	72.1	69.5	67.5
Belgium	3.8	129.2	135.1	133.5	131.2	126.9	122.2	118.0	115.0
Austria	3.3	58.0	62.7	65.4	69.3	69.5	66.1	65.5	65.0
Finland	1.8	41.5	58.0	59.6	58.1	58.0	55.8	52.5	50.0
Portugal	1.5	60.7	64.3	66.3	69.2	68.1	62.0	59.0	57.0
Ireland	1.0	92.3	96.3	89.1	82.2	72.7	66.3	61.0	57.0
Euroland	100.0	61.3	67.6	70.0	73.8	75.3	74.8	73.6	72.7

<sup>a</sup>From 1997 onwards according to the Maastricht definition. — <sup>b</sup>Based on nominal GDP and ecu exchange rates in 1996.  
<sup>c</sup>Partly estimated. — <sup>d</sup>Forecast.

Sources: OECD (1997, 1998), European Commission (1997), own calculations.

Table A10 – Current Account Balance in Euroland, 1992–1999 (percent of nominal GDP)

	Weights in total <sup>a</sup>	1992	1993	1994	1995	1996	1997 <sup>b</sup>	1998 <sup>c</sup>	1999 <sup>c</sup>
Germany	34.3	-1.0	-0.8	-1.0	-1.0	-0.6	0.5	0.5	0.5
France	22.4	0.4	0.8	0.6	0.7	1.3	2.5	3.0	3.5
Italy	17.6	-2.5	0.9	1.3	2.3	3.4	3.5	4.0	4.5
Spain	8.5	-3.7	-1.1	-1.4	0.2	0.3	1.0	0.5	0.5
Netherlands	5.7	2.3	4.4	5.3	5.9	6.3	6.0	7.0	7.5
Belgium	3.8	2.9	5.3	5.3	5.4	5.4	6.0	6.5	7.0
Austria	3.3	0.0	-0.3	-1.1	-2.1	-1.9	-2.0	-2.0	-2.0
Finland	1.8	-4.6	-1.3	1.3	4.1	3.8	4.0	4.5	5.0
Portugal	1.5	-0.2	0.4	-2.2	-0.8	-2.5	-2.5	-2.5	-3.0
Ireland	1.0	1.1	3.9	2.8	2.8	2.1	1.5	1.0	1.0
Euroland	100.0	-0.8	0.4	0.4	0.8	1.3	2.0	2.2	2.5

<sup>a</sup>Based on nominal GDP and ecu exchange rates in 1996. — <sup>b</sup>Partly estimated. — <sup>c</sup>Forecast.

Sources: OECD (1997, 1998), European Commission (1997), own calculations.

## Endnotes

- 1 The relative level of GDP in a common currency crucially depends on the exchange rate at which the foreign GDP is converted. In 1996, before the marked devaluation of the ecu vis-à-vis the US dollar, Euroland's GDP was only marginally lower than that of the US. The figure for 1997, however, is more in line with the relative position calculated on the basis of purchasing power parities.
- 2 Aggregation methods used are described in the Appendix.
- 3 Germany, France and the Netherlands form such a group with similar determinants.
- 4 For the calculation of aggregated series of money and interest rates, see the Appendix.
- 5 The monetary aggregates are deflated with the CPI.
- 6 One reason may be that the method of aggregating interest rates is problematic.
- 7 For example, M3 is not available for Italy; we therefore used M2 instead.
- 8 Possible alternatives were dismissed, for example nominal GDP targeting or the use of exchange rate targets.
- 9 Even if there were an instability of the demand for money function, monetary targeting would not be obsolete. Rules based on monetary aggregates may very well take account of changes in the trend of velocity. Such rules show a very good performance in securing price level stability in the medium run (cf. McCallum 1987).
- 10 The Lucas critique applies to this change in the policy regime. For an exploration of the possible effects on money demand, cf. Rother (1996).
- 11 The structural deficit is defined as the deficit that, given current policies, would prevail in the case of normal capacity utilization. In 1997, according to our calculations using a Hodrick-Prescott filter, the deviation of total output from its trend level has not been significant in most countries. This results in structural deficits (Table 4, column 2) that for most countries do not deviate markedly from actual deficits. Other estimates (e.g. OECD 1997) on the basis of larger output gaps produce a somewhat smaller structural component of the deficits.
- 12 In the case of a decline of GDP by more than 2 percent, an exception is granted regularly, while in the case of a decline of 0.75 to 2 percent the exception is at discretion. In addition, singular events that are not in the responsibility of the government can justify an exception.
- 13 For details of the calculations and a general discussion of the stability pact see Gern et al. (1997: 27–32).
- 14 For example, public debt in the form of uncovered liabilities from public pay-as-you-go pension systems are not included. In the major European countries, the volume of this implicit government debt exceeds the volume of government debt in its commonly used definition to a considerable degree (Siebert 1998b). The scope of the problem can also be seen from data on trends in old-age dependency ratios presented in EMI (1998).
- 15 The differential will be smaller in countries that experience potential output growth that is significantly above average. For example, in Ireland potential growth is probably above 5 percent per year, compared to 2–3 percent in most other EMU countries. The interest rates, on the other hand, will be pretty much the same with the result that the differential between the interest rate and the growth rate will be considerably lower in Ireland than in the other EMU countries.
- 16 One-off measures were introduced in all countries to a varying degree ranging from 0.1 percent of GDP in Spain to 0.6 percent in Finland and France and even 1 percent in Italy (Deutsche Bundesbank 1998: Table 6). They have been particularly important in Italy and France to keep the deficit within the Maastricht limit of 3 percent.
- 17 Flexibility does not only refer to contractual wages. Flexible working time arrangements may also be capable of reducing the need for dismissals in the event of a negative external shock. This would be the case when overtime worked in days of high capacity utilization can be neutralized over an extended period of, say, one or two years by working short-time in times of low demand.
- 18 For a detailed forecast for the individual countries and for Euroland as a whole, see the tables in the Appendix.
- 19 These countries include Indonesia, Malaysia, the Philippines, South Korea and Thailand.
- 20 Note that the conceptual differences between domestic product and national product are neglected in some cases. Those discrepancies show up in the increase in stocks which is calculated as a residual.
- 21 The question is whether to use fixed or current exchange rates for conversion (Funke 1997). The problem can be demonstrated with the case of a country that seriously inflates its money stock which results in price inflation and, subsequently, devaluation. The weight of this country will be reduced due to the devaluation when GDP is converted with current exchange rates so that the accelerated price inflation is not matched by a corresponding increase in the aggregate (EMU) money stock.

## References

- Boss, A., and J.O. Lorz (1995). Die öffentliche Verschuldung in der Bundesrepublik Deutschland — Ausmaß und Belastungswirkung. *Jahrbuch für Wirtschaftswissenschaften* 46 (1): 152–183.
- Browne, F.X., F. Fagun and I. Henry (1997). Money Demand in EU Countries: A Survey. Staff Paper 7. European Monetary Institute. Frankfurt am Main.
- Buiter, W., G. Corsetti and N. Roubini (1993). Excessive Deficits: Sense and Nonsense in the Treaty of Maastricht. *Economic Policy* 8 (April): 58–90.
- Deutsche Bundesbank (1998). *Stellungnahme des Zentralbankrates zur Konvergenzlage in der Europäischen Union im Hinblick auf die dritte Stufe der Wirtschafts- und Währungsunion*. Frankfurt am Main.
- Dornbusch, R., C.A. Favero, and F. Giavazzi (1998). The Immediate Challenges for the European Central Bank. NBER Working Paper 6369. Cambridge, Mass.
- Eble, S., J. Koskinen and J. Stapf (1997). Convergence of Business Cycles in Europe? A Shocking Contribution. ASP-Working Paper 317. Kiel Institute of World Economics.
- EMI (European Monetary Institute) (1998). *Convergence Report*. Frankfurt am Main.
- European Commission (1997). *1997 Annual Economic Report*. Brussels.
- (1998). *Convergence Report 1998*. Brussels.
- Funke, N. (1997). *Nominale Anker als geldpolitische Stabilisierungsziele*. Kieler Studien 267. Tübingen.
- Gern, K.-J., K.-W. Schatz, J. Scheide, M. Schlie and R. Solveen (1997). Aufschwung in den Industrieländern verstärkt sich bei expansiver Geldpolitik. *Die Weltwirtschaft* (1): 9–35.
- Krämer, J.W. (1996). *Zinsgewichtete versus herkömmliche Geldmengenaggregate*. Kieler Studien 274. Tübingen.
- Krämer, J.W., and J. Scheide (1994). Geldpolitik: Zurück zur Potentialorientierung. Kiel Discussion Papers 235. Institut für Weltwirtschaft, Kiel.
- Lehment, H. (1998). Geldpolitik und lohnpolitischer Verteilungsspielraum in der Europäischen Währungsunion. *Die Weltwirtschaft* (1): 72–84.
- McCallum, B.T. (1987). The Case for Rules in the Conduct of Monetary Policy: A Concrete Example. *Weltwirtschaftliches Archiv* 123 (3): 415–429.
- OECD (1997). *Economic Outlook*. December. Paris.
- (1998). *Main Economic Indicators*. March. Paris.
- Rother, P.C. (1996). European Monetary Integration and the Demand for Money. University of Mannheim (mimeo).
- Scheide, J., and R. Solveen (1998). Should the European Central Bank Worry About Exchange Rates? *Konjunkturpolitik*. Forthcoming.
- Siebert, H. (1998a). The Euro: A Dozen Do's and Don't's. Kiel Discussion Papers 312. Institut für Weltwirtschaft, Kiel.
- (1998b). Pay-as-You-Go versus Capital-Funded Pension Systems: The Issues. In H. Siebert (ed.), *Redesigning Social Security*. Forthcoming.