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Low-Speed Recovery in Euroland

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- The economic recovery in the euro area lost momentum in 2004. After a strong increase during the first half, real GDP rose at an annual rate of less than 1 percent in the following two quarters. Overall capacity utilization, which had increased in the first half of 2004 for the first time in several years, fell once again. While internal demand picked up somewhat, the weakening of export growth could not be compensated. In the wake of the renewed weakness, labor market conditions did not improve. Inflation accelerated at the end of last year because of the surge in oil prices.

- High oil prices and the strength of the euro will dampen the economic expansion for a while, so the recovery will continue to be rather modest during the first half of 2005. Later on, the negative effects will fade, and economic activity will accelerate somewhat. We expect real GDP to increase by 1.4 percent in 2005; the unemployment rate will remain high.

  Next year, the recovery will gain further momentum also because monetary policy will remain expansionary; we expect that the ECB will not raise key interest rates very soon. Real GDP growth will amount to 2.0 percent in 2006, and the unemployment rate will drop to 8.3 percent. Inflation will remain slightly below 2 percent in both years.

- The situation of public finances has deteriorated further. In 2004, the aggregated budget deficit rose to 2.9 percent of GDP, compared to 2.7 percent last year. In addition to Germany, France, the Netherlands, and Greece, the deficit ratio probably exceeded the 3 percent margin also in Portugal. Several governments will apparently not consolidate their budgets as intended by the Stability and Growth Pact (SGP). In the recently published Stability Programs, the budgets of several large countries are not projected to be balanced until 2008, even though growth assumptions appear very optimistic.

- In March this year, the European governments and the European Commission decided on changes in the implementation of the Stability and Growth Pact. They imply that budget deficits will be higher in the future and that the debt-to-GDP ratios will continue to rise. One reason for this is that countries can now claim special circumstances, which means that a deficit ratio above 3 percent will not automatically be called excessive. Furthermore, countries with high deficits should consolidate their budgets mainly in good times, which are defined as years in which the output gap is positive. And they are given more time than before to take corrective actions. All in all, the sustainability of public finances will deteriorate. The main target of the SGP—to balance the budgets in the medium term and to reduce government debt to below 60 percent of GDP at a satisfactory pace—will not be achieved.

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Low-Speed Recovery in Euroland

The economic recovery in the euro area lost considerable momentum in 2004. After a strong increase in the first half of the year, real GDP rose at an annual rate of less than 1 percent in the following two quarters. Overall capacity utilization, which previously had increased for the first time in several years, fell once again. The main reason for this was that export growth decelerated as a consequence of the slowdown in the world economy and the appreciation of the euro. Though domestic demand picked up somewhat, it was not strong enough to compensate for weaker exports. Fixed investment could recover after a prolonged period of weakness; however, private consumption rose only modestly. Against the background of the economic slowdown, unemployment stayed high. Consumer prices picked up considerably near the end of 2004 because of the surge in oil prices; in the first two months of this year, the inflation rate amounted to slightly less than 2 percent.

All in all, economic expansion has been very sluggish in recent years. In addition, the economy has very often been affected by shocks, so that a recovery has repeatedly been interrupted after a short period of time. To be sure, no country is isolated from influences from abroad or from shocks stemming from sharp increases in important raw material prices, but the weakness of domestic demand which has been observed for several years is a major challenge to economic policy. This, however, pertains only to a few countries, especially Germany. According to our estimates, potential output growth has slowed considerably to 1 percent in Germany in recent years, whereas this rate has remained roughly constant in the rest of the euro area, amounting to 2 ¼ percent (Benner et al. 2004). This implies that real GDP in the euro area cannot be expected to grow by more than 2 percent over an extended period of time.

In the near future, economic activity will be dampened by the high oil price and the negative effects stemming from the appreciation of the euro. Therefore, the recovery will be rather modest in the first half of this year. This forecast is supported by the confidence indicators, which have recently deteriorated; they can be quite successfully used for a short-term forecast (see Appendix). In the later course of this year, the dampening factors will fade so that the recovery will accelerate somewhat. This tendency is expected to continue next year.

This forecast implies for monetary policy that the ECB will not tighten monetary policy very soon. The recent economic data have also been a negative surprise for the central bank. At the beginning of March, the ECB therefore lowered its forecast for real GDP in the euro area; in addition, the immediate risks to price level stability have become a little less important. However, if there is no increase in key interest rates, the period of low rates, which has also led to a substantial increase in liquidity, will be prolonged. This will raise the risks to stability in the medium term. While this fact alone would imply that rates should be raised very soon, the moderate speed of the recovery will probably prevent an early tightening by the ECB. An increase can therefore be expected only for 2006 when the recovery will have strengthened.

Many governments have continued to pursue an unsound fiscal policy. Especially against the background that the budgets have not been consolidated as fast as originally intended, the rules and the targets of the Stability and Growth Pact (SGP) have recently been changed. However, the new elements are not useful in returning to a credible and a sound fiscal policy—quite the opposite is true: It is now even less likely that the main target of the SGP, namely a balanced budget, will be achieved; instead, budget deficits will remain high in the foreseeable future, and government debt in relation to GDP will continue to rise. One additional reason for this outlook is the fact that many governments are once again overly optimistic about economic growth in the future, so they will probably consolidate less than would be necessary to reduce budget deficits as intended.

1 In the Doldrums Again

Economic activity in the euro area has slowed down since summer 2004. In the second half of last year, real GDP merely increased at an annualized rate of 0.8 percent, after having expanded at a healthy rate in the first half (Figure 1). For the year as a whole, real GDP grew by 2.0 percent.[1] So the increase in production corresponds approximately to trend growth, which we estimate at 1.8 percent.[2]

The pace of expansion differed considerably across the individual member states. While industrial production in France and Spain expanded strongly, expansion in Germany, Italy, and the Netherlands was weak.[3] A potential cause for this difference is the development on the housing markets. In France and Spain, strongly increasing housing prices supported domestic demand: On the one hand residential investment expanded, on the other hand increasing wealth of the private households stimulated consumption. In contrast, the housing markets in Germany and also in the Netherlands weakened.

The sluggish growth of economic activity after the middle of the year was mainly due to a turnaround of foreign demand. After exports had increased strongly during the first half of 2004, they expanded much slower than imports in the second half. This reflects the dampening effects of the preceding appreciation of the euro. Private consumption increased only slightly in the second half of the year. The consumer confidence indicator published by the European Commission suggests that households are in depressed mood. This may be due to the strained labor marked conditions and uncertainty about upcoming structural labor market reforms. Corporate investment has improved after it was restrained in the first half of 2004. However, industrial confidence deteriorated even though industrial new orders rose.

The situation on the labor market has hardly changed. The number of employed persons in the total economy has increased moderately; while employment in the industrial sector has contracted, employment in the service sector has expanded. The unemployment rate has almost stagnated; most recently it has amounted to 8.8 percent. The increase in consumer prices accelerated in the course of 2004. The Harmonized Index of Consumer Prices (HICP) rose at an annualized rate of 2.5 percent in seasonally adjusted terms. Last year on average, the HICP increased by 2.1 percent mainly due to the strong rise in energy prices. The core inflation rate increased on average by 1.9 percent. Since the beginning of 2005 the acceleration in prices has leveled out; in February the year-over-year inflation rate was 2.0 percent, the core inflation rate amounted to 1.6 percent.

2 Fiscal Policy: High Deficits Persist

In 2004 the aggregated budget in the euro area exhibited a deficit of 2.9 percent in relation to GDP, following 2.7 percent in the previous year (Table 1). Besides Germany, France, the Netherlands, and Greece also Portugal may exceed the 3 percent laid down in the Stability and Growth Pact (SGP). According to our own estimates as well as those of the OECD (2004b), economy-wide capacity utilization remained nearly unchanged in 2004; thus the increase in the actual deficit was not cyclical. Therefore, fiscal policy in the euro area as a whole was on a slightly expansive course.

In the course of next year, the structural deficit is expected to decline somewhat. This is mainly due to special measures, which like those in the case of Germany imply that the fiscal burden in the future will rise (Benner et al. 2005). Against the background of a more favorable cyclical development, the budget deficit will decline slightly in 2006. Structural deficits will remain largely unchanged.

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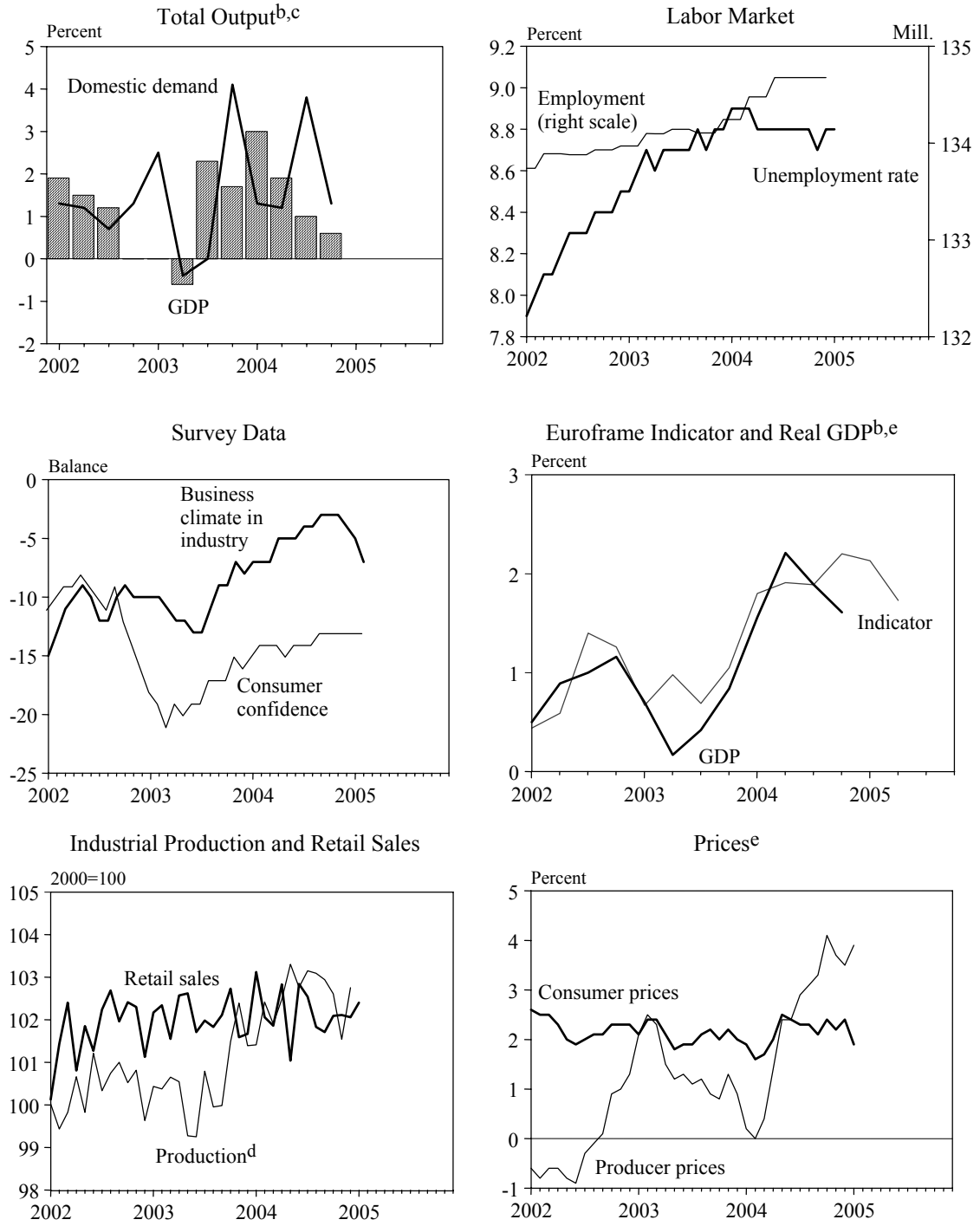
[1] This includes the working-day effect, which accounts for 0.2 percentage points of real GDP growth.

[2] For a detailed analysis of the potential output in the euro area, see also Benner et al. (2004).

[3] For Germany, the working-day effect accounts for 0.6 percentage points of real GDP growth.

Figure 1:
Business Cycle Indicators[a] for Euroland, 2002–2005



[a]Seasonally adjusted. — [b]At constant prices. — [c]Annualized percentage change over previous quarter. — [d]Industry excluding construction. — [e]Percentage change over previous year.

Source: EUROFRAME (2005); Eurostat (2005); ECB (2005b).

Table 1:
Indicators of Fiscal Positions in Euroland, 2003–2006 (percent of nominal GDP)

	Gross public sector debt				General government budget balance			
	2003	2004[a]	2005[b]	2006[b]	2003	2004[a]	2005[b]	2006[b]
Germany	64.2	66.0	67.9	69.2	–3.8	–3.7	–3.5	–3.2
France	63.7	65.6	67.5	68.0	–4.1	–3.7	–3.3	–2.9
Italy	106.2	105.8	105.0	104.5	–2.4	–3.0	–3.5	–3.6
Spain	51.4	48.9	46.5	43.5	0.4	–0.8	–0.1	0.0
Netherlands	54.1	55.5	56.8	56.5	–3.2	–3.1	–2.8	–2.3
Belgium	100.0	94.0	90.0	85.5	0.4	0.0	–0.5	–0.3
Austria	64.5	62.5	61.0	60.0	–1.1	–1.4	–2.0	–2.0
Finland	45.6	47.0	48.5	49.8	2.3	2.0	1.7	2.0
Greece	109.9	110.0	108.5	106.3	–4.6	–5.9	–4.1	–3.5
Portugal	60.3	61.5	62.2	62.8	–2.8	–3.2	–3.3	–3.4
Ireland	32.1	28.6	26.2	24.0	0.1	0.0	–0.9	–0.5
Luxembourg	5.3	7.0	7.5	8.0	0.8	–1.5	–1.0	–0.6
Euroland	70.7	71.1	71.6	71.4	–2.7	–2.9	–2.8	–2.5

[a]Partly estimated. — [b]Forecast.

Source: Eurostat (2005); own calculations and forecasts.

Table 2:
Key Figures of the Updated Stability Programs[a], 2004 and 2008

	GDP growth[b]		General government budget balance[c]		Gross public debt[c]		Expenditures[c]		Revenues[c]	
	2001–2004	2005–2008	2004[d]	2008	2004[d]	2008	2004[d]	2008	2004[d]	2008
Germany	0.5	1.9	–3.8	–1.5	65.5	65.0	47.5	43.5	40.0	39.0
France	1.3	2.5	–3.6	–0.9	64.8	62.0	54.0	51.7	50.4	50.7
Italy	0.6	2.2	–2.9	–0.9	106.0	98.0	47.3	46.2	45.1	44.0
Spanien	2.5	3.0	–0.8	0.4	49.1	40.0	40.6	39.8	39.9	40.2
Netherlands[e]	0.3	2.2	–3.0	–1.9	56.3	58.3	48.0	46.0	45.0	44.1
Belgium	1.6	2.3	0.0	0.6	96.6	84.2	49.6	48.5	49.6	49.1
Austria	1.4	2.4	–1.3	0.0	64.2	59.1	50.0	45.8	48.7	45.8
Finland	2.6	2.4	2.0	2.0	44.6	41.1	48.5	48.5	50.5	50.5
Greece	4.0	4.0	–5.3	–2.5	112.1	102.5	48.5	46.3	43.2	43.8
Portugal[e]	0.1	2.6	–2.8	–1.8	62.0	61.4	48.0	44.6	45.2	42.8
Ireland[e]	4.8	5.2	0.1	–0.6	30.5	30.0	34.3	33.8	35.2	33.2
Luxembourg[e]	2.9	3.8	–1.4	–1.0	5.0	4.5	44.8	45.7	43.4	44.7
Euroland[f]	1.2	2.4	–2.8	–0.9	71.1	67.2	47.5	45.0	43.7	42.9

[a]Some Stability Programs include alternative scenarios concerning the GDP growth. This table reflects the basic scenario. — [b]Average annual growth rate. Partly estimated. — [c]Percent of GDP. — [d]Figures for 2004 are taken from the Stability Programs. — [e]Projections until 2007 only. — [f]Average for the countries above.

Source: Stability Programs; own calculations and estimates.

It seems that most governments do not intend to pursue a policy of sustained budget consolidation. In the updated Stability and Convergence Programs, especially the bigger countries do not aim at a balanced budget until 2008 anymore (Table 2). Moreover, economic growth is assumed to be significantly above trend in many cases. The projections for output growth, especially in the countries with high deficits, are up to more than twice as high as the growth in

the previous four years. For Germany, a GDP growth of 1.9 on average for the years 2005–2008 is supposed. Given our calculation of potential growth of 1 percent this seems to be unrealistically high. Also in the past, GDP growth assumptions in the Stability and Convergence Programs proved to be overly optimistic. In other countries, too, growth forecasts are on the high side so that it seems likely that additional measures will be necessary in order to achieve the budget targets.

3 The "Reform" of the Stability and Growth Pact: Less Sustainable Fiscal Policies

In the middle of March, the European governments and the European Commission discussed changes in the SGP. Apparently, in recent years the Pact has not worked as desired. For example, Germany and also more and more other countries have had high budget deficits, often reaching some 3 percent relative to GDP even when adjusted for the cycle. In addition, it was not feasible to force governments for a change in their policies, because the governments themselves decided how the excessive-deficit procedures should be handled. While the Pact seemed to fail in leading to sound fiscal policies, governments nevertheless agreed that it should be maintained in principle. In the Report to the European Council entitled "Improving the Implementation of the Stability and Growth Pact" (in the following: Council Report), the changes in the SGP are described.

It is desirable to have clearly defined rules in terms of budget surveillance. Governments should be urged to change their fiscal policies without the consent of the Ecofin Council if their policies have become unsound. This would imply that the role of the European Commission is to be strengthened, because it is against the idea of the Stability and Growth Pact that the governments themselves decide whether a procedure against one country should be continued or not, as they did in November 2003.[4] Instead, it should be the rule that a warning is issued according to pre-announced criteria and that the sanction mechanisms should then also be implemented automatically. However, such changes in the rules were not implemented according to the Council Report. Obviously, governments are not willing to give so much power to the European Commission or—as is sometimes suggested—an independent group of economic experts.

Furthermore, there is a number of changes which imply a greater "flexibility" of the targets of the SGP. They imply that a deficit ratio of more than 3 percent should not automatically be defined as excessive; instead, there are now more exceptions—in addition to those already mentioned in the Pact—and countries will have more time for correcting the high deficits. In the following, we are going to discuss those changes which make budget consolidation dependent on the state of the business cycle and which define special circumstances which allow higher deficits. We conclude with remarks on the size of government debt, which is crucial for the issue of fiscal sustainability.

3.1 Budget Deficits Will Be Higher

The Council Report makes clear that the reference values of the SGP—a 3 percent deficit ratio and a 60 percent debt ratio—remain unchanged; also, the medium-term objective remains a budget in balance or in surplus. These statements are certainly useful as they are in line with the original intention of the SGP. However, there are now several modifications which raise doubts whether "… the need to reduce government debt to below 60 percent of GDP at a satisfactory pace …" (Council Report: 16) can be met in reality.[5]

According to the Council Report, budget consolidation efforts shall take account of cyclical conditions. The structural budget deficits should

[4] Very early in the discussion, this point was recognized as a major shortcoming of the rules of the SGP. See the analysis by Scheide and Solveen (1997).

[5] See also the comments in EUROFRAME (2005).

be more strongly reduced in good times, whereas they may remain unchanged or may be reduced only slightly in bad times. In the Council Report, "good times" are defined as "periods where output exceeds its potential level" (Council Report: 11), i.e., when there is a positive output gap.[6] Therefore, the periods in which a reduction of the structural deficit is seen as appropriate are very limited. For example, the countries with excessive deficits can claim that actual output in the years 2001–2004 was lower than potential output, so that budget consolidation should not have taken place; the same will apply to 2005 and probably to 2006. This seems to justify ex post the actual increase in structural budget deficits in recent years. Even in the mentioned "good times," the deficit should be reduced by only 0.5 percent of GDP, which is given as a benchmark in the Council Report. Against the background that structural deficits in a few member states are close to—or even above—3 percent of GDP, this implies that the (still valid) medium-term objective of budgets close to balance or in surplus will not be reached in the foreseeable future, as this would require many years of consolidation. The target of a balanced budget can only be achieved if the structural budget deficits are reduced considerably every year in a pre-announced way, and that this course should not be made dependent on the state of the business cycle. Instead, the budgets should be balanced in the near future according to the rules of the SGP.

There are also other reasons why the cycle-oriented strategy proposed in the Council Report may not lead to the desired outcome. First, it requires a commonly agreed estimate of potential output; however, estimates on this crucial variable differ considerably. For example, the German government still assumes that the growth rate is relatively high. According to this assumption, real GDP has to grow by more than 2 percent for a number of years until the output gap becomes positive. If this assumption is too optimistic, budget consolidation would not be achieved. Second, a consolidation which depends on the cyclical situation requires that fiscal policy is sufficiently flexible. However, the legislative process can be very time-consuming so that a quick response to a "good year" in terms of the business cycle may not be possible. This is also one of the reasons why many economists are not in favor of "fine tuning" by fiscal policy measures (see, e.g., Taylor 2000). In addition, experience shows that such a strategy of rapid consolidation in "good times" has not worked in the past, although it was agreed upon by the member states. For example, many governments did not reduce the structural deficits in the boom year 2000.

Another modification in the Council Report implies that each country can claim that special expenditures are necessary so that budget deficits above 3 percent in relation to GDP would not automatically be qualified as excessive. In the context of the so-called "other relevant factors" (Council Report: 15), "special consideration" will be given to efforts related to "fostering international solidarity … the unification of Europe …" and so on. This implies that a budget deficit can be higher because of special circumstances. As a consequence, government debt will also be higher, because it can hardly be expected that a country would keep the deficit lower than otherwise if circumstances are favorable. The same holds for measures which improve economic growth; for example, this is supposed to apply to public investment or to measures of structural reforms. The rule is not transparent, as these factors are not clearly defined and can therefore be subject to different interpretations. According to the German government, such factors include the costs of German unification. However, these costs are not at all the reason why the German budget deficit has exceeded 3 percent of GDP in recent years. All in all, considering special circumstances will lead to higher deficits and will make public finances less sustainable.

The same consequence, namely higher deficits, follows from the change in the initial deadline for correcting the excessive deficit (Council Report: 18). In "case of special circumstances," the deadline for correcting an excessive deficit can be set one year later. Sanctions are therefore

[6] The criticism also applies—although to a lesser extent—to the case when "good times" are defined as periods in which actual GDP growth is higher than the growth rate of output potential, i.e., when the negative output gap declines.

even less likely than under the old rules. In effect, the deficits are allowed to be higher than under the "old rules" of the SGP.

3.2 Sustainability Is the Key

The most important question related to the SGP reform is whether fiscal policies will become more sustainable in the future. For this, the debt-to-GDP ratio is the relevant reference, because sustainability depends—given the growth rate of potential output and the real rate of interest—on this ratio (see, e.g., Boss and Lorz 1995). In general, fiscal policy can still be sustainable if there is a budget deficit on average over the cycle. The size of the deficit at which the debt-to-GDP ratio is stabilized depends among other things on the medium-term growth rate of nominal GDP. Accordingly, the deficit in Ireland can be a lot higher because of the high growth rate of potential output, whereas it is much lower in Germany with a relatively low growth rate.[7] Although there is no consensus in the economic literature whether the ratio of 60 percent can be seen as optimal, even critics of the Pact accept that 60 percent is a useful reference.[8] In some countries where fiscal policy is oriented at a debt-to-GDP ratio, the value is even lower; for example, in the United Kingdom it is 40 percent of GDP.

When the SGP was implemented, the target was to reduce the debt-to-GDP ratio in the euro area; at that time, it amounted to around 70 percent, the same level as today. In order to reach the target, the government budgets were to be balanced on average over the cycle. Another reason for the balanced budget was that the implicit debt which is due to unfounded liabilities of the government was very high. It is still high today and in some countries even increasing. For example, the implicit debt in Germany was 270 percent in relation to GDP in the year 2002 (Sachverständigenrat 2003: 276). This debt results from the liabilities in the pay-as-you-go systems of social insurance.

In the past few years, the (explicit) debt has increased in several euro area countries, especially in those with a high or excessive deficit. In France and Germany, the debt-to-GDP ratio amounted to about 65 percent. In Italy, a country with a traditionally high debt, the ratio has hardly been reduced in recent years; in 2004, it amounted to about 106 percent, although the target was to reduce it relatively quickly to 60 percent. When the debt-to-GDP ratio is taken as a reference for fiscal policy, the problem countries will have to take substantial measures to reduce government debt relative to GDP. This would imply that budget deficits would have to be reduced considerably: the same recommendation follows from the current procedures of the SGP in connection with excessive deficits in order to secure the sustainability of public finances.

If the debt ratio is applied, the fiscal policy of several governments in recent years cannot be considered as sustainable. A budget deficit of 3 percent relative to GDP in normal times—i.e. a few countries have a structural deficit of this size—is not in conformity with the SGP, no matter whether the deficit or the debt ratio is used as reference. If, for example, the deficit in Germany remained at this level, the steady state level for the debt ratio would be over 100 percent in relation to GDP, given the outlook for nominal GDP growth in the medium term.[9] The probability that this will happen is even higher when budget consolidation is postponed again and again, because the government still assumes that there will be a strong upswing with growth rates of 2 percent or more for several years. The consequences of such a lax fiscal policy could be dramatic: If there are doubts concerning the

[7] This makes clear that the reasoning in terms of the debt ratio is not symmetric: While the ratio is mentioned as a reference for those countries which currently have a problem with high deficits, it is apparently not applied to countries with a high growth rate and which could therefore run budget deficits much higher than 3 percent of GDP.

[8] See, for example, the analysis by Wyplosz (2005).

[9] A deficit ratio of 3 percent is given as a benchmark, because it implies that the debt-to-GDP ratio would then converge to 60 percent; the underlying assumption is that the growth rate of potential nominal GDP is 5 percent per annum. Such a high rate, however, is completely unrealistic for Germany even when the most optimistic estimates of potential output growth are considered; according to our estimate it is less than 3 percent. Also for the euro area as a whole, the estimate has to be corrected: the medium-term growth rate of nominal GDP is probably no more than 4 percent. This implies that the reference value for the budget deficit should actually be reduced.

sustainability of public finances, the risk premium on interest rates for government bonds would increase. In order to prevent such an increase, drastic actions may be necessary, either drastic cuts of government expenditures or drastic increases in taxes would be the likely outcome. This would not only reduce the welfare of citizens, it would also undermine the credibility of governments. In such a scenario, the pressure on the central bank would also increase substantially, as governments would urge the ECB to pursue an inflationary monetary policy.

All in all, the recent softening of the SGP poses a risk for macroeconomic stability in the European Union. The risk that budget deficits will be higher and that fiscal policy will become less sustainable in the future has increased. The recent modifications of the SGP allow budget deficits to be higher than originally intended or to remain high for a longer period of time. Therefore, it is likely that the debt-to-GDP ratio which in 2004 was already higher than 70 percent for the euro area as a whole will not come down sufficiently in the coming years.

There is a problem of enforcing rules, which is a common problem for economic policy and which is intensively discussed in the economic literature. The experience with the SGP in recent years is a demonstration of this problem. In our view, the failure of the SGP to produce the desired sound fiscal policy was not due to wrong targets but rather due to the fact that several governments have not pursued a strict course of budget consolidation—contrary to their repeated statements in various documents (see also Deutsche Bundesbank 2004). Now that the rules have been made softer, it is uncertain whether governments are more willing to stick to their commitments.

4 Monetary Policy Will Remain Expansionary

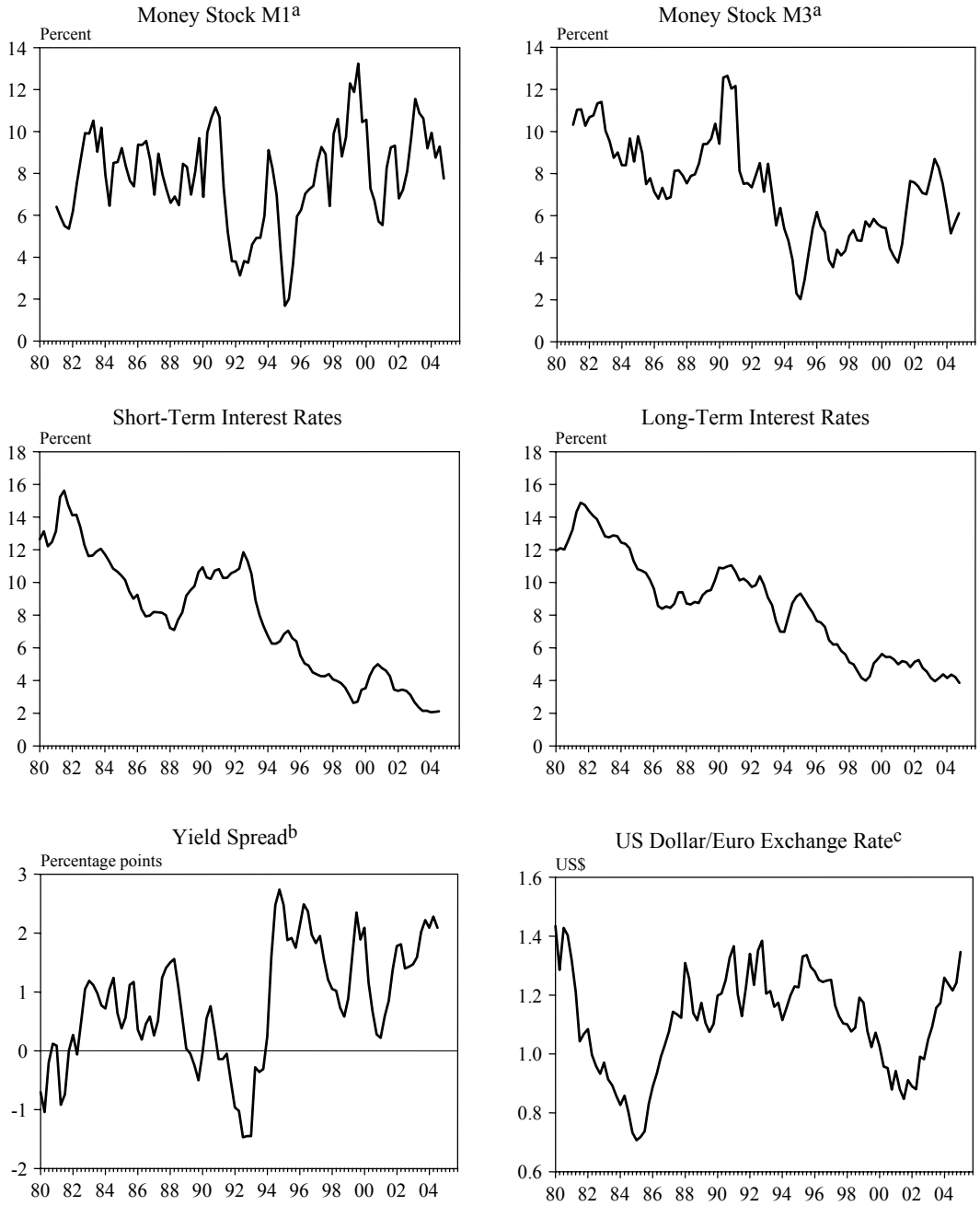
Monetary conditions have improved slightly in recent months. Since June 2003, key interest rates have remained unchanged, the minimum bid rate on the main refinancing operations of the Eurosystem having been at 2.0 percent. Money market rates (3-month EURIBOR) were only slightly higher at the beginning of March 2005; apparently, markets do not expect that interest rates will be raised very soon. Judged by real interest rates, the ECB continues to be on an expansionary course. If nominal rates are adjusted for core inflation, the real rate is close to zero, i.e., well below the long-term average of 2.5 percent. Long-term rates have come down worldwide in recent months. In the euro area, the yield on 10-year government bonds was 3.6 percent at the beginning of March and thus close to their historical lows they had reached in early 1999 and early 2003 (Figure 2).

One reason for the low level of interest rates seems to be the ample liquidity which has been created in the course of the low interest rate policy.[10] The recent decline probably also reflects the weakening of economic activity in the euro area expected for the near future. In real terms, the long-term rates have remained well below their historical average; this is true when rates are adjusted either with the core rate of inflation or with inflationary expectations. For more than one year, markets have expected an inflation rate of more than 2 percent for the euro area. Money growth has accelerated in recent months; M3 went up by a little more than 6 percent at the beginning of 2005. Also credit growth has accelerated. Finally, the financing conditions for firms have improved in the wake of the price increases on stock markets.

While all these factors have led to a slight improvement of monetary conditions, they have deteriorated somewhat because of the appreciation of the euro. The euro has advanced against all major currencies, in particular against the US dollar. However, the gains did not continue during the first months of this year. In the past 12 months, the euro appreciated against the dollar by about 5 percent. In real effective terms, the currency gained only 2 percent. The competitiveness of European exporters has deteriorated only modestly so that the impact on output and inflation will be rather limited this year.

[10] For an analysis on the low level of real interest rates in the world, see also Benner et al. (2005).

Figure 2:
Indicators of Monetary Policy in Euroland, 1980–2005



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

Source: ECB (2005b).

The expansionary course of monetary policy is not only reflected in the low level of the real interest rate; also, interest rates have been low if they are compared to the Taylor interest rate. This rate is calculated quite differently in the literature. First, there are many Taylor rules differing, for example, in terms of the variables used and the coefficients for the reaction of the central bank to the inflation gap and the output gap. Also, there are many different estimates for

the variables entering the equation, i.e., the growth rate of potential output and the equilibrium real interest rate. Given the Taylor equation in its original version (Taylor 1993)[11] the uncertainty of the inputs is reduced to these two variables. Table 3 summarizes the calculations using three different methods. For the equilibrium real interest rate we assume on the basis of theoretical considerations that it should equal the growth rate of potential output. This means, the lower the growth rate is, the lower the real interest rate is. While this would lead to a relatively low Taylor rate, a low growth rate of potential output also implies a lower negative output gap leading to a higher Taylor rate. As a consequence of these two effects, the three methods of calculating the Taylor rate lead to very similar results: In 2004, the money market rate should have been between 3.2 and 3.5 percent, while the actual rate was 2.1 percent (Figure 3). All in all, the statement that the interest rate is low is relatively independent of the method used.

This also holds for the neutral rate of interest for which the calculations come to very similar results. This interest rate should prevail if the inflation target is met and if the output gap is zero. According to the three estimates, the rate should be between 3.2 and 3.7 percent. During the first half of 2004, the Taylor rate increased slightly because the rate of capacity utilization went up. For some time, the Taylor rate has been more than 100 basis points higher than the actual interest rate.

The fact that short-term interest rates have remained very low has been one reason for the ECB to prepare the markets for a rate hike. This seems appropriate also because the reasons for the low interest rate policy are no longer given. In addition, the ECB has repeatedly stated that there are upside risks for price level stability also because of the ample liquidity in the euro area.[12] However, key rates will probably not be raised very soon because the immediate risks to price level stability are small, given, among other things, the moderate increase in wages in the euro area. In addition, economic activity is unexpectedly sluggish and will accelerate only in the later course of this year. Therefore, we assume that the ECB will keep rates unchanged for this year. There will be a moderate tightening of monetary policy next year; we expect the main refinancing rate to reach 2.5 percent by the end of 2006. For this outlook it is assumed that the monetary overhang will not lead to a much stronger acceleration of nominal GDP growth. If this happened, the ECB would have to raise rates faster given its mandate to secure price level stability.

5 Modest Wage Inflation

Over the past year, the rate of wage increases continued to decline on a euro area level, extending the trend towards lower wage rises, which has been prevalent since early 2003. In the second half of 2004, the year-on-year rate of change in the compensation of employees even dropped quite substantially, from 2.2 percent in the second quarter to only 1.5 percent in the third quarter. This deceleration of wage inflation, however, was mainly due to a special factor related to the timing of wage payments in the Italian public sector (ECB 2005a: 38). The rise of other wage cost indicators also slowed down significantly. Growth of negotiated wages has decreased to slightly less than 2 percent, down by nearly 1 percentage point since the second half of 2002. In addition, increases in hours worked were not fully compensated; hourly wage costs have risen at a slower rate than monthly gross wages for some time now. This contrasts with an opposite tendency that prevailed in the years 1999–2002, in large part due to the introduction of the 35-hour work week in France.

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[11] The following equation is used here as in our previous analyses:

(1) $i = r + \pi + 0.5(\pi - \pi^*) + 0.5(y - y^*)$,

where i is the short-term interest rate, r is the equilibrium real rate, π is actual inflation, π^* is the inflation target, y is real GDP, and y^* is potential output. We assume an inflation target of 1.75 percent, which is in line with the ECB's notion ("below, but close to 2 percent"). Furthermore, we use the core rate of inflation (HICP without energy and unprocessed food).

[12] "… there remains significantly more liquidity in the euro area than is required to finance non-inflationary growth" (ECB 2005a: 5).

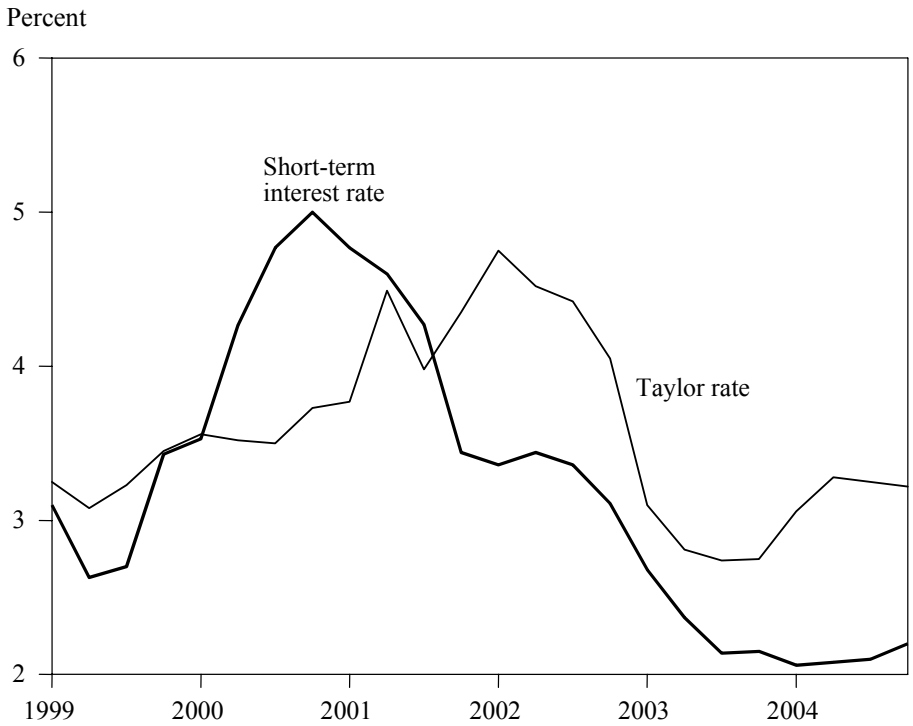
Table 3:
Calculation of the Taylor Rate and the Neutral Interest Rate in Euroland 2004[a]

Method	Potential growth (≙ real rate)	Output gap	Taylor rate	Neutral rate
OECD estimate	1.9	–1.6	3.2	3.7
HP filter	1.4	–0.3	3.5	3.2
IfW estimate	1.8	–1.3	3.4	3.6

[a]The inflation target is assumed to be 1.75 percent.

Source: OECD (2004b); own estimates and calculations.

Figure 3:
Short-term Interest Rate and Taylor Rate in Euroland, 1999–2004[a]



[a]The Taylor rate is calculated for the HICP excluding energy, food, alcohol, and tobacco. The calculations are based on the assumption of an inflation target of 1.75 percent and on the assumption of an equilibrium real interest rate to be equal to the growth rate of potential output, estimated with a Hodrick–Prescott filter.

Source: Eurostat (2005); ECB (2005b); own calculations and estimates.

Recent wage contracts indicate that the loss in purchasing power associated with the rise in oil prices will be tolerated. Demands for higher wage increases have been checked by the continued sluggishness in the euro area labor market. In a number of countries even a deceleration of wage growth in the current year can be expected (Table 4). This means that real compensation per employee will hardly rise. Given that reductions in income taxes and social security contributions implemented this year will not be significant on aggregate, real disposable income per employee will increase only slightly at best. At the same time, however, this wage development supports employment growth, since in combination with a cyclical improvement in productivity growth real unit labor costs are expected to decline considerably this year and next. In addition, the sustained wage moderation allows the ECB to keep key interest rates at low

Table 4:
Wage Increases[a] in Euroland, 2002–2006 (percentage change over previous year)

	2002	2003	2004[b]	2005[b]	2006[b]
Germany	1.5	1.6	0.1	0.7	1.0
France	2.4	2.3	3.0	2.7	2.3
Italy	2.5	3.8	3.0	2.4	2.5
Spain	4.2	4.2	3.7	3.7	3.4
Netherlands	6.2	3.9	2.5	0.5	1.5
Portugal	4.4	4.1	3.0	2.7	2.5
Austria	1.7	2.1	2.5	2.5	2.5
Belgium	3.7	2.5	2.8	2.5	2.5
Greece	9.2	4.0	6.5	5.0	4.5
Finland	1.9	3.3	4.0	3.5	3.5
Ireland	5.0	4.7	5.0	4.5	4.5
Luxembourg	3.7	2.1	3.3	3.0	3.0

[a]Compensation of employees per worker. — [b]Forecast.

Source: European Commission (2004); own forecasts.

Table 5:
Compensation of Employees, Productivity, and Unit Labor Costs in Euroland, 2002–2006 (percentage change over previous year)

	2002	2003	2004[a]	2005[b]	2006[b]
Compensation of employees per worker	2.5	2.3	2.0	1.9	1.9
Productivity[c]	0.4	0.4	1.7	1.2	1.4
Unit labor costs	2.1	1.9	0.3	0.7	0.5

[a]Partly estimated. — [b]Forecast. — [c]Real GDP per worker.

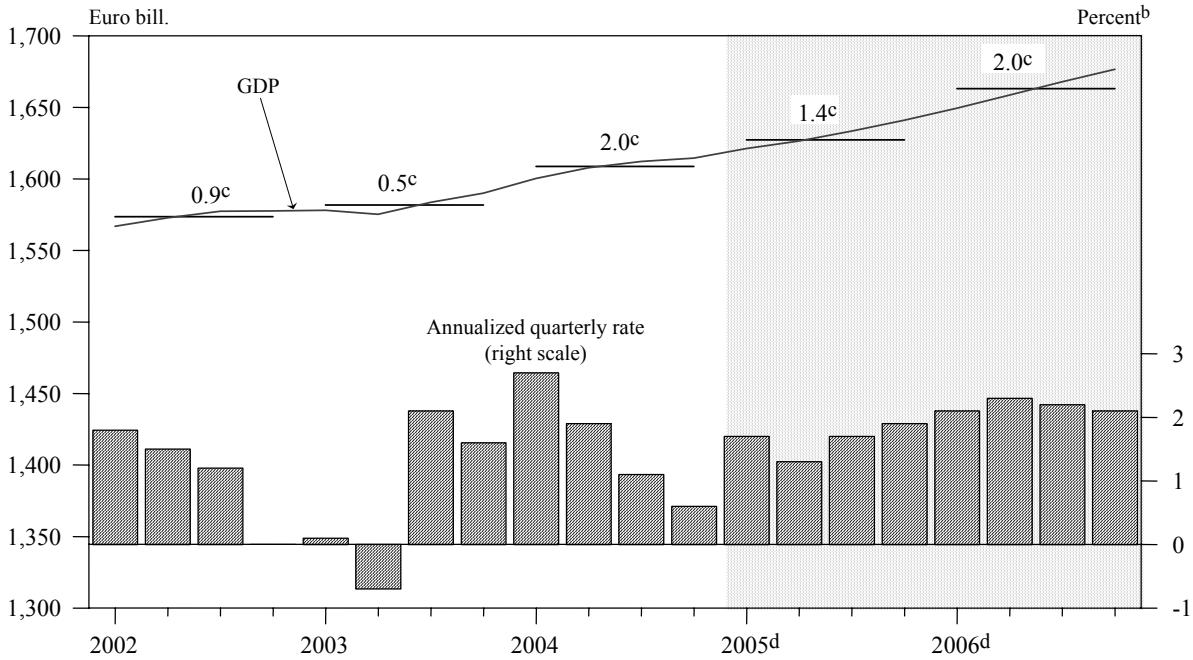
Source: ECB (2005b); own calculations and forecasts.

levels. Inflationary pressure from the wage front is not in sight also further down the road, as a pickup in wage growth next year is unlikely given an only moderate acceleration of output growth, capacity utilization remaining at relatively low levels, and an increasing competition on the labor market in important countries. Thus, with nominal unit labor costs rising at rates being considerably below 2 percent, developments in wages continue to be conducive to the ECB's goal of attaining price level stability this year and next (Table 5).

6 Outlook: Capacity Utilization Increases Gradually

Leading indicators suggest that economic activity in the euro area will be moderate in the first half of 2005 (Figure 4). The industrial sentiment indicator compiled by the European Commission declined during the past month and consumer confidence is still at a low level (Figure 1). In the first half of this year, real GDP is expected to increase more slowly than potential output. Domestic demand will expand only modestly due to the dampening effects of the rise in oil prices (Figure 5). Private households are likely to increase their consumption at a slow pace in view of their uncertain income situation. Export growth will also be moderate. Due to the past appreciation of the euro, the continuous expansion of the world economy will not lead to a

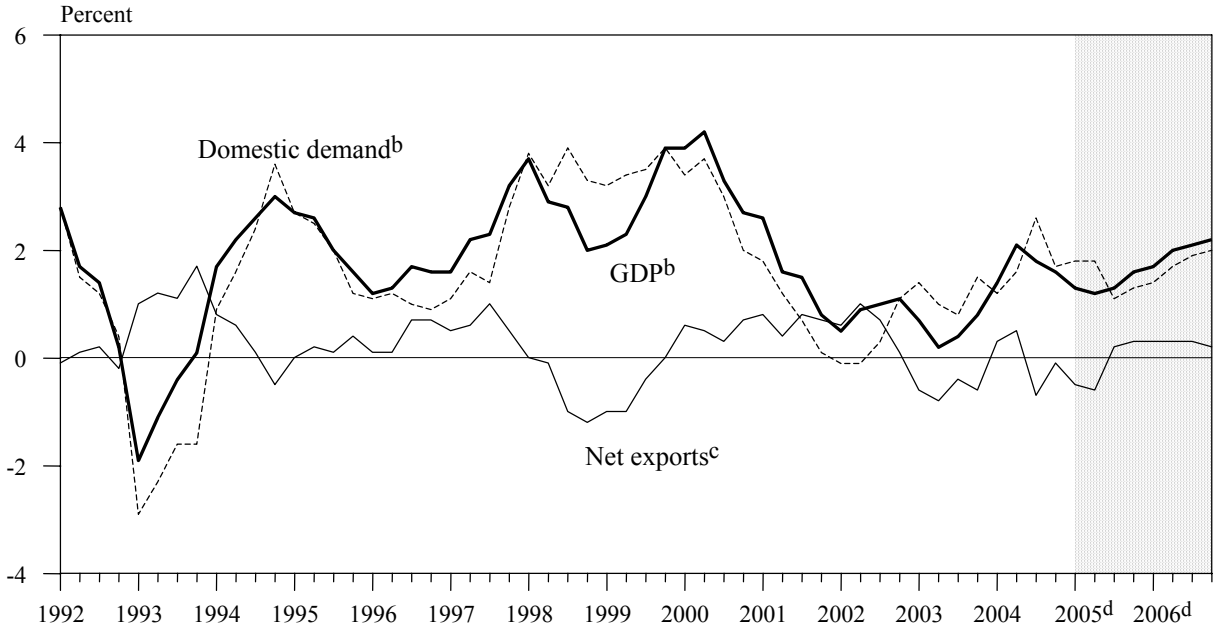
Figure 4:
Real GDP[a] in Euroland, 2002–2006



[a]Seasonally adjusted. — [b]Annualized quarterly rate of change in percent. — [c]Percentage change over previous year. — [d]Forecast starting in 2005 I.

Source: Eurostat (2005); own forecast.

Figure 5:
GDP, Domestic Demand, and Net Exports in Euroland[a], 1992–2006



[a]At constant prices. — [b]Percentage change over previous year. — [c]Change of net exports over previous year in percent of GDP in the corresponding quarter of previous year. — [d]Forecast starting in 2005 I.

Source: Eurostat (2005); own forecasts.

Table 6:
Quarterly Data on the Economic Development in Euroland, 2004–2006

	2004				2005				2006			
	I	II	III	IV[a]	I[b]	II[b]	III[b]	IV[b]	I[b]	II[b]	III[b]	IV[b]
Gross domestic product[c]	3.0	1.9	1.0	0.6	1.7	1.3	1.7	1.9	2.1	2.3	2.2	2.1
Domestic demand[c]	1.3	1.2	3.8	1.3	1.5	1.0	1.3	1.6	1.9	2.0	2.1	1.9
Private consumption[c]	3.1	0.2	0.3	1.8	1.1	1.1	1.2	1.3	1.7	1.9	1.9	1.8
Public consumption[c]	0.9	1.6	1.5	0.7	1.5	1.3	1.3	1.2	1.3	1.3	1.3	1.1
Fixed investment[c]	–0.4	1.9	2.6	2.4	1.7	2.1	2.1	2.5	2.7	2.9	3.0	2.9
Change in stocks[d]	–0.5	0.4	2.6	–0.4	0.2	–0.3	–0.1	0.0	0.1	0.0	0.0	0.0
Net exports[d]	1.6	0.7	–2.6	–0.7	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.3
Exports[c,e]	5.7	11.4	5.2	1.9	1.5	3.5	4.3	4.5	4.5	5.3	5.1	5.4
Imports[c,e]	1.5	10.1	13.1	3.9	1.1	2.9	3.4	3.9	4.3	5.0	4.8	4.9
Unemployment rate[f]	8.9	8.8	8.8	8.8	8.8	8.8	8.8	8.7	8.6	8.5	8.4	8.3
Consumer prices (HICP)[g]	1.7	2.3	2.2	2.3	2.0	1.8	1.7	1.5	1.9	1.9	2.0	2.0
Money stock M3[c]	4.5	4.9	7.9	7.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
3-month money market rate	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.3	2.3	2.4	2.4	2.6
Long-term interest rate	4.1	4.2	4.1	3.8	3.6	3.8	3.9	4.0	4.2	4.3	4.4	4.5
US dollar/euro exchange rate	1.25	1.20	1.22	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Real effective exchange rate[h]	106.1	103.7	104.5	107.1	106.2	106.2	106.2	106.2	106.2	106.2	106.2	106.2

[a]Partly estimated. — [b]Forecast. — [c]Annualized percentage change over previous quarter. — [d]Contribution to change in GDP, in percentage points. — [e]Including intra-Euroland trade. — [f]Percent of the labor force, according to the ILO concept. — [g]Percentage change over previous year. — [h]Broad group. Based on the consumer price index. Index 1999 I = 100.

Source: Eurostat (2005); ECB (2005b); OECD (2004b); own calculations and forecasts.

Table 7:
Real GDP, Consumer Prices, and Unemployment Rate in Euroland, 2003–2006

	Weights[a]	GDP[b]				Consumer prices[b,c]				Unemployment rate[d]			
		2003	2004[e]	2005[f]	2006[f]	2003	2004[e]	2005[f]	2006[f]	2003	2004[e]	2005[f]	2006[f]
Germany	29.3	–0.1	1.6	0.6	1.3	1.1	1.7	1.3	1.1	9.1	9.5	9.4	9.2
France	21.4	0.5	2.3	1.7	2.3	2.2	2.3	1.6	2.3	9.5	9.6	9.5	9.0
Italy	17.9	0.4	1.1	1.0	2.0	2.8	2.3	1.7	2.0	8.4	8.0	8.1	7.9
Spain	10.3	2.5	2.7	2.4	3.0	3.2	3.0	2.6	2.8	11.3	10.8	10.3	9.9
Netherlands	6.3	–0.9	1.3	1.2	2.1	2.2	1.4	1.4	1.7	3.7	4.7	4.7	4.1
Belgium	3.7	1.3	2.7	2.2	2.5	1.5	1.9	1.6	1.9	7.9	7.8	8.0	7.7
Austria	3.1	0.8	2.1	2.3	2.5	1.4	1.9	2.1	2.2	4.3	4.5	4.4	4.0
Finland	2.0	2.5	3.4	2.9	3.5	1.3	0.2	0.7	1.6	9.0	8.9	8.6	8.1
Greece	2.1	4.3	3.9	2.8	3.8	3.4	3.0	3.5	3.2	9.7	10.3	9.5	9.3
Portugal	1.8	–1.2	1.1	1.4	2.6	3.3	2.5	1.8	2.4	6.2	6.7	6.6	6.1
Ireland	1.9	3.7	5.7	4.3	5.4	4.0	2.3	1.9	3.0	4.6	4.5	4.3	4.0
Luxembourg	0.3	2.1	4.4	3.4	3.3	2.6	3.2	2.3	2.8	3.7	4.2	3.8	3.5
Euroland	100.0	0.5	2.0	1.4	2.0	2.1	2.1	1.8	1.9	8.7[g]	8.8[g]	8.6[g]	8.3[g]

[a]Based on nominal GDP of 2003. — [b]Percentage change over previous year. — [c]Harmonized Index of Consumer Prices (HICP). — [d]Standardized unemployment rates according to the ILO concept. — [e]Partly estimated. — [f]Forecast. — [g]Based on the number of employees in 2003.

Source: ECB (2005b); OECD (2004a); own calculations and forecasts.

strong increase in exports. In the second half of this year, economic activity will gradually strengthen, one reason being that the dampening impact of higher oil prices will fade. The expansion of private investment is likely to accelerate on the back of improved sales and profits expectations given that financing conditions continue to be favorable. With income perspectives starting to improve, consumption expenditures should pick up (Table 6). The expansion of exports will remain modest; while the pace of worldwide economic activity loses momentum, the dampening effects of the euro appreciation will fade. Real GDP is expected to increase by 1.4 percent this year on average (Table 7). The unemployment rate will decline only slightly.

Next year, the recovery will strengthen further. On the one hand the dampening impact of the rise in oil prices and the appreciation of the euro will disappear, on the other hand the stance of monetary policy continues to be expansionary. With increasing capacity utilization and improving profitability, corporate investment will gain momentum. Private consumption is expected to support domestic demand increasingly reflecting brightened income prospects. Under the assumption of an unchanged real effective exchange rate, exports are likely to accelerate against the background of a faster pace of worldwide economic activity. All in all, real GDP will increase by 2.0 percent. The unemployment rate will decline to 8.3 percent in 2006 on average (Table 7).

The increase in consumer prices is likely to slow down in 2005, with low capacity utilization and declining energy prices. Next year, firm's scope for raising prices will increase gradually due to the acceleration of economic activity. The ECB is likely to raise interest rates slightly to prevent an increase in inflationary expectations. In 2005, the HICP will increase by 1.8 percent, and by 1.9 percent in 2006.

Appendix: The Role of Confidence Indicators in Short-Run Forecasts of Economic Activity in the Euro Area

Leading indicators play a major role in forecasting economic activity in the short run. National accounts data are usually available only with a publication lag of two months, and leading indicators can inform about the developments in these two months. Moreover, leading indicators often contain additional information on the future development of economic activity. Among the leading indicators, confidence indicators play a prominent role. They will be analyzed here with respect to the euro area.

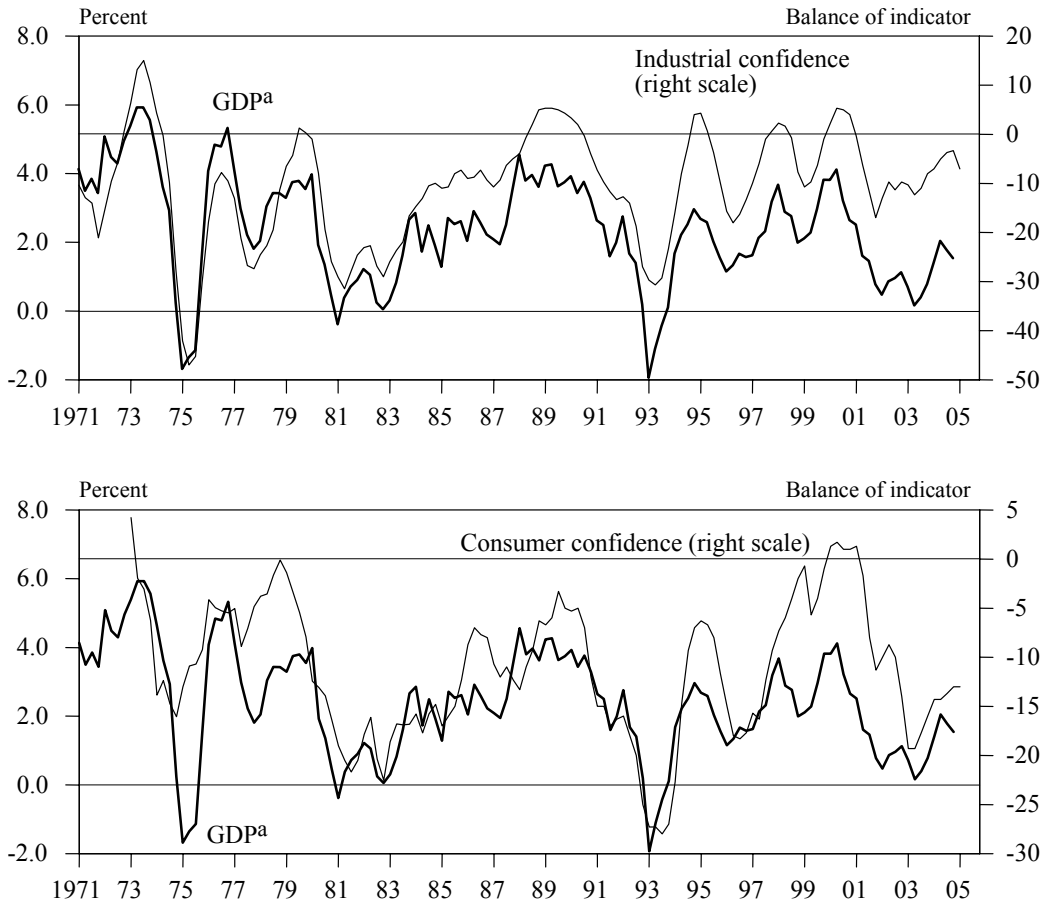
In the EU, industrial and consumer confidence indicators are published by the European Commission, which has commissioned national institutions to compile them. The indicators are made available in a timely fashion; for the current month they are collected in the middle of the month and published at its end. Indicators for a particular quarter are published at the end of that quarter, whereas GDP data are only published two months later.

For the analysis we use quarterly data for the euro area.[13] The reference series is real GDP. Figure 6 shows the reference series (change over the previous year) and the indicators since 1971 or 1973. Obviously, there is a close relationship between GDP growth and the levels of the indicators.

This impression is confirmed by the calculation of cross-correlation coefficients between the growth rate of GDP (year over year) and the indicators for leads of up to four quarters and lags of up to two quarters. The upper part of Table 8 shows the correlations for the full sample of 1971(1973)–2004. The lower part of the table shows the correlations for the period 1993–2004.

[13] Historical series for the indicators are available for the euro area back until 1985. We extended industrial confidence back to 1967 and consumer confidence back to 1973 by aggregating national indicators for Germany, France, Italy, Belgium, and the Netherlands (from 1971 onwards). We also extended the reference series back to 1970 using the data of Fagan et al. (2005).

Figure 6:
Confidence Indicators and Real GDP in the Euro Area, 1971–2005



[a]Year-over-year change in percent.
Source: European Commission (2005); Fagan et al. (2005); own calculations.

Table 8:
Relationship between Confidence Indicators and the Year-on-Year Change in Real GDP: Cross-Correlation Coefficients for Various Leads and Lags

Lead of indicators (quarters)[a]	4	3	2	1	0	–1	–2
				1971–2004			
Industrial confidence	0.17	0.38	0.59	0.72	0.74	0.62	0.41
Consumer confidence[b]	0.28	0.40	0.51	0.60	0.67	0.63	0.54
				1993–2004			
Industrial confidence	0.07	0.35	0.63	0.82	0.88	0.66	0.39
Consumer confidence	0.51	0.67	0.78	0.82	0.79	0.57	0.32

[a]Negative sign: lag. — [b]1973–2004.

Source: European Commission (2005); own calculations.

Table 9:
Relationship between Confidence Indicators and the Quarter-to-Quarter Change in Real GDP: Cross-Correlation Coefficients for Various Leads and Lags

Lead of indicators (quarters)[a]	4	3	2	1	0	–1	–2
				1971–2004			
Industrial confidence	0.35	0.51	0.57	0.55	0.39	0.18	–0.01
Consumer confidence[b]	0.30	0.38	0.43	0.45	0.45	0.33	0.21
				1993–2004			
Industrial confidence	0.30	0.51	0.62	0.62	0.49	0.14	–0.07
Consumer confidence	0.50	0.56	0.58	0.53	0.41	0.13	–0.06

[a]Negative sign: lag. — [b]1973–2004.

Source: European Commission (2005); own calculations.

Comparing the two periods serves to check the stability of the relationships. We find that, independent from the sample period, the highest correlation occurs contemporaneously. However, the differences are not large when looking at a lead of one quarter. With 0.7, the correlations are quite high in the full sample period. In the period since 1993, they are even higher by 0.1; in this sample, the correlation coefficient for consumer confidence is relatively high even for a lead of two quarters.

The correlations are much smaller when the reference is the change in real GDP against the previous quarter (Table 9), and the lead/lag relationships are different, too. For industrial confidence, the maximum is now at a lead of 1–2 quarters, though at lower correlation coefficients of only 0.57 (1971–2004) and 0.62 (1993–2004). For consumer confidence, significant differences between the two sample periods can be observed. Over the whole sample the maximum lead is zero to one quarter, with a correlation coefficient of 0.45, in the 1993–2004 sample the lead is 2 to 3 quarters with a correlation of 0.58 and 0.56, respectively. Overall, there is a close relationship between the indicators and the business cycle with some lead of the indicators. The relationship seems to have become closer in recent years.

Further, we want to investigate by how much the confidence indicators can contribute to lowering the forecast error of a quantitative forecast model. The starting point is a forecast model that in the first step forecasts the change in real GDP against the previous quarter, Δy, as a function of the contemporaneous indicator I by using the regression equation

$$(1)\quad \Delta y_t = \sum_{i=1}^{p} \alpha_{1i} \Delta y_{t-i} + \sum_{j=0}^{q} \beta_{1j} I_{t-j} + D_{1t} + \varepsilon_{1t} \ .$$

Here, α and β are the parameters to be estimated, ε is an error term, and D is a vector of deterministic variables such as a constant, a trend or dummy variables. The first step, thus, exploits the publication lead of the indicator.

In the second step, Δy is forecast using the one-quarter lagged indicator, using a regression equation of the form

$$(2)\quad \Delta y_t = \sum_{i=1}^{p} \alpha_{2i} \Delta y_{t-i} + \sum_{j=1}^{q} \beta_{2j} I_{t-j} + D_{2t} + \varepsilon_{2t} \ .$$

Now, the forecast lead of the indicator is exploited. Additional forecast steps using this approach would require a relationship between Δy and I lagged by two quarters, which however, turned out to be insignificant. Alternatively, one can use a model that represents the indicator as depending on its own past value and on Δy:

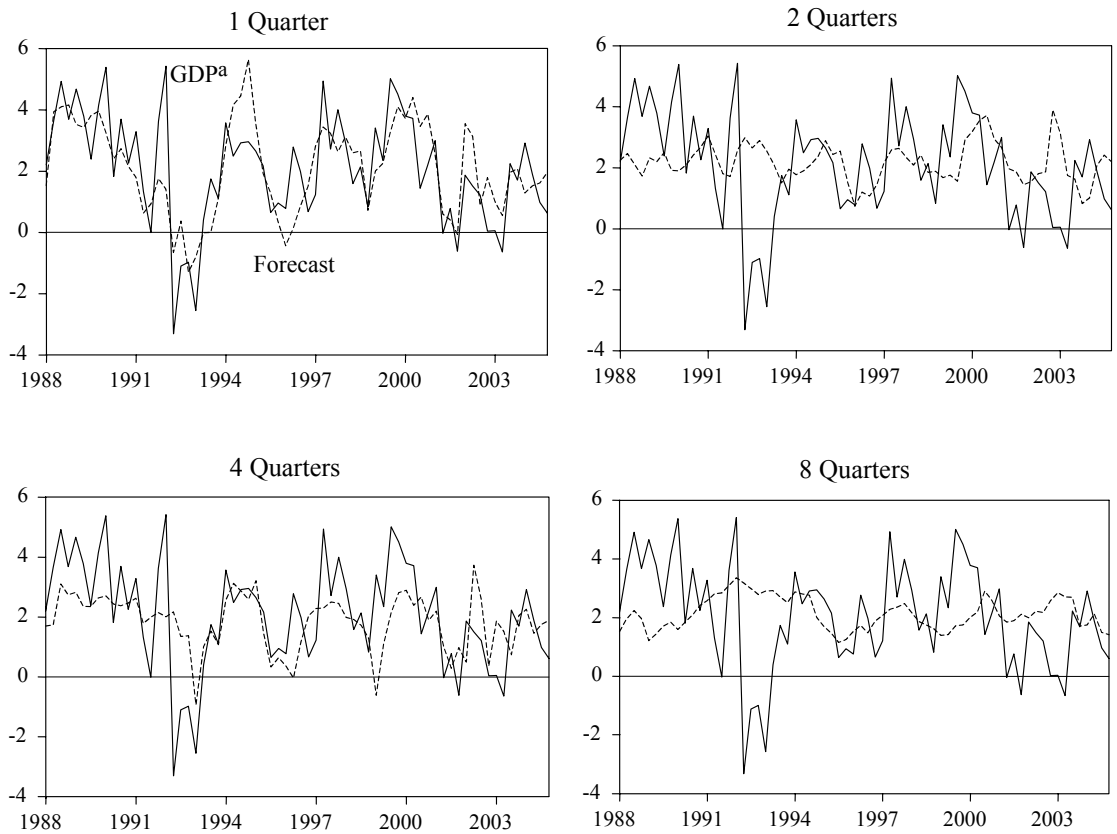
$$(3)\quad I_t = \sum_{k=1}^{m} \delta_k \Delta y_{t-k} + \sum_{l=1}^{n} \mu_l I_{t-l} + D_{3t} + \varepsilon_{3t} \ .$$

Here, δ and μ are, again, parameters to be estimated. Using (3) in conjunction with (1) or (2), we can calculate many forecast steps for Δy and I. For the first 8 steps, the forecast performance of the complete model is now compared to a model that does not use the information of the confidence indicators; for simplicity we choose an autoregressive model for Δy.

We use both industrial confidence and consumer confidence simultaneously. We find a significant contemporaneous relationship with GDP growth for both indicators. In addition, we find industrial confidence in the United States, as represented by the purchasing managers' index (ISM), significant in explaining business confidence in the euro area. Overall, we thus have a vector autoregressive model (VAR) with 4 variables. The empirical specification of this model follows the specification procedure outlined in Benner und Meier (2004) and Borbély and Meier (2005).

We analyze the historical forecast performance over the period of 1988Q1–2004Q4. The performance measure is the root mean squared forecast error (RMSE). The parameters of the models are reestimated before each forecast step using only the data available at that time. Figure 7 shows the forecasts of the indicator-based model compared to the reference series for different forecast horizons. Obviously, the one-step forecasts are relatively close to the original series, while for more than one step the forecasts are more far off. Table 10 shows the RMSE of the indicator-based model and of the autoregressive model for forecasts of the quarter-to-quarter changes in real GDP at annual rates. For the first forecast step, the forecast error of the indicator-based model is significantly lower than that of the autoregressive model. For the second forecast step, the indicator-based model's RMSE is still lower than that of the autoregressive model; the difference is, however, not significant at conventional significance levels. From the third forecast step on, the autoregressive model has a lower RMSE; there is, thus, no information to be exploited in the vector autoregressive model.

Figure 7:
Real GDP and Forecasts of the Indicator-Based Model for Different Forecast Horizons, 1988–2004



[a]Quarter-over-quarter at annual rate in percent.

Source: Eurostat (2005); own calculations.

Table 10:
Forecast Errors of the Indicator-Based Model and the AR Model[a]

Forecast steps	1	2	3	4	5	6	7	8
Indicator-based model	1.2*	1.6	1.7	1.9	2.0	2.0	2.0	2.0
AR model	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8

*Significant at 10 percent according to the test of Diebold und Mariano (1995).
[a]Measure: Root mean squared forecast error (RMSE).

Source: Own calculations.

All in all, the analysis shows that confidence indicators contain important information for forecasts of real GDP growth in the euro area. Most importantly, they are published with a lead with respect to the national accounts data. While they serve to improve short-run forecasts of GDP, short-run forecast errors will remain high even if one uses the information contained in the indicators. For the annualized quarter-to-quarter real GDP growth in the euro area in the first quarter of 2005, the indicator-based model currently produces an estimate of 0.5 percent, that is, an increase which is as moderate as in the previous quarter. The confidence interval for this forecast at an error probability of 33 percent (1 standard error) lies between –0.6 and 1.7 percent. Our forecast, which takes into account additional information from other leading indicators, economic considerations as well as special effects such as the problems associated with trading-day adjustment in Germany, lies in the upper part of the confidence interval of the indicator-based model.

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