

# The role of short-term economic indicators in the analysis of price developments in the euro area

*This Article addresses the use of short-term indicators in the regular assessment of price developments. It is a sequel to two previous articles on the Eurosystem's monetary policy strategy and the role of monetary aggregates in this strategy, which were published in the January and February 1999 issues of the Monthly Bulletin respectively. The analysis of short-term economic indicators is an important feature of the second pillar of the monetary policy strategy, i.e. the broadly based assessment of the outlook for future price developments and the risks to price stability in the euro area as a whole. While monetary data, as covered by the first pillar, contain information which is vital for the formulation of the appropriate monetary policy stance, the second pillar recognises that, in addition, information from other sources is required. Thus, within the broadly based assessment of current and future price developments, the analysis of price information which can be derived from financial market indicators, various survey data on inflation expectations and the evaluation of forecasts of inflation is complemented by the regular analysis of a wide range of short-term economic indicators. Such an analysis is by no means mechanical. Rather, it has to be seen against the background of the behavioural and structural uncertainties which normally characterise the relationship between consumer price changes and changes in other macroeconomic variables.*

## I The importance of short-term economic indicators in a broadly based assessment of price developments

### The monetary policy strategy rests on two pillars

As explained in the article in the January 1999 issue of the Monthly Bulletin (The stability-oriented monetary policy strategy of the Eurosystem), the Governing Council of the ECB has defined price stability in the euro area as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) of below 2%. Price stability according to this definition is to be maintained over the medium term. Ultimately, inflation is considered to be a monetary phenomenon, conditional on monetary expansion and subject to control by means of monetary policy. Against this background, the Governing Council recognised that it was important to give money a prominent role in the Eurosystem's strategy. To signal this, it has announced a quantitative reference value for monetary growth as one pillar of the overall stability-oriented strategy. This pillar was explained in more detail in the February 1999 issue of the Monthly Bulletin (in the article entitled Euro area monetary aggregates and their role in the Eurosystem's monetary policy strategy). The same article showed that the overall performance of prices in the euro area is closely linked to

longer-term trends in the money stock. In particular, the general trend towards lower rates of inflation over the 1980s and 1990s and the effective achievement of price stability over the past two years can be clearly associated with longer-term trends in money growth.

In addition, complementing the analysis of monetary growth in relation to its reference value, a broadly based assessment of the outlook for price developments and the risks to price stability in the euro area plays an important role in the monetary policy strategy. Money is therefore accorded a prominent, but not exclusive, role. In its broadly based assessment the Governing Council systematically analyses all the other information on the economic and financial situation. Since monetary policy measures only have an impact on prices with a relatively long lag, the assessment of price developments must be forward-looking. The analysis is conducted using a wide range of short-term economic indicators, information derived from financial market indicators, survey data on inflation expectations and forecasts of inflation. This information is combined to form an overall view of the outlook for prices as input into the

formulation of the appropriate monetary policy stance. This picture is continuously updated as new information becomes available. The information made available for the meetings of the Governing Council is regularly reviewed in the section of the Monthly Bulletin entitled Economic developments in the euro area. This Article is focused on one aspect of this analysis of price developments, namely the use made of short-term economic indicators.

### **The assessment of price developments using a wide range of short-term economic indicators**

In the short to medium term price developments are influenced not only by monetary trends but also by a host of non-monetary factors. The monitoring and analysis of a wide range of economic indicators help to identify the forces which determine the overall price climate and thereby to distinguish between more temporary factors, on the one hand, and underlying movements, on the other.

The first category contains factors of a largely exogenous nature, which tend to have a one-off effect on the price level, but which can nevertheless initiate or reinforce price pressures. Examples on the external side are oil and commodity price changes and, on the domestic side, changes in rates of VAT. The second category concerns the forces generated by the underlying dynamics of the domestic economy, as reflected in overall demand and supply conditions. As regards overall demand conditions, the strength of private and government consumption, private and public investment, exports and imports and their respective determinants have to be assessed. As far as overall supply conditions are concerned, the labour and capital sides of the production process have to be distinguished, as reflected in measures relating to labour market tightness and the rate of utilisation of capital.

The assessment of price developments does not consist in mechanically accounting for price changes on the basis of changes in the relevant short-term indicators, as the effects on prices of certain developments often vary depending on the precise circumstances. For example, a one-off change in indirect taxes may per se only lead to a one-off change in the price level. However, the ultimate impact on prices of such a tax change is highly dependent on the overall conditions prevailing in the economy. These largely determine the extent to which such tax changes can be quickly passed on to consumers and the reaction of other economic agents to such a change, i.e. the probability of second-round effects. If, for instance, an increase in VAT is implemented at a time when overall demand in the economy is strong and the labour market is tightening, there is a greater likelihood that it will be passed on to prices relatively quickly. Moreover, the price increases, in turn, may subsequently be incorporated into wage claims, triggering or reinforcing an inflationary process to which monetary policy will have to react. Similar considerations apply to other factors influencing short-term price developments, such as import prices, which give rise to different short-term dynamics, depending on the circumstances in which they occur.

All central banks undertake a detailed analysis and assessment of price developments. Nonetheless, the introduction of the euro makes this task more complex, as it may produce or may already be producing behavioural and institutional changes. The most obvious of these in terms of euro area developments is probably the changing relative importance of domestic as opposed to external developments. Moreover, apart from increased competitive pressures within the euro area following the introduction of the single currency, globalisation may be a further factor influencing the interplay of prices and their determinants. Additional problems of a somewhat different nature are caused by the fact that, while the statistical coverage of the short-term indicators available for the euro area as a whole is generally

sufficient, in a number of cases the coverage falls short of that in individual countries.

Overall, the assessment of the outlook for price developments for the euro area is subject to considerable uncertainty, which means that a number of caveats must be borne in mind. These have to be addressed by analysing as wide a range of indicators as

possible. The aim is to produce an assessment of the future outlook for prices by constructing an overall picture taking into account monetary developments, financial market information, inflation forecasts and survey data, as well as a thorough assessment of price developments on the basis of the available short-term economic indicators.

## 2 Price indicators for the euro area

### Main focus is on the HICP

The analysis of price developments requires, in the first instance, a conceptually and statistically sound measure of prices. For monetary policy purposes the Eurosystem has decided to focus on developments in the overall Harmonised Index of Consumer Prices (HICP) for the euro area. Conceptually, the focus on a consumer price index is due to the fact that consumer goods and services are at the very end of the production process in the economy. The prices of all other goods and services including, for example, investment goods have an intermediate character and their

development will be one of the factors determining consumer price developments. A consumer price index, therefore, may be considered to sum up all inflationary and deflationary price developments in the economy. This is consistent with the general public's focus on consumer prices. Given this focus, the choice of the euro area HICP can be explained by the fact that this is the only index which fulfils a number of crucial statistical requirements: a high degree of harmonisation, sufficient coverage and timely availability (see Box I below for further details of the HICP and the main sub-categories).

#### Box I

##### The Harmonised Index of Consumer Prices

The Governing Council of the ECB has defined price stability in terms of the Harmonised Index of Consumer Prices (HICP) for the euro area. This index was originally created for the assessment of price convergence in Stage Two of Economic and Monetary Union. As a result, it was, to a large extent, harmonised across the EU Member States in respect of coverage, standards for the procedures for quality adjustment and numerous technical details. Further harmonisation and broadening of the coverage, for example to include expenditure on education and health services, are planned for this year and next year. However, the HICP series already meet the requirements of the ECB for policy analysis in terms of reliability, comparability and timeliness. Eurostat publishes data for the HICP on a monthly basis, approximately three weeks after the end of the respective month. Data for the period from 1995 onwards are currently available. Backdata are being compiled in some countries.

In addition to total HICP, Eurostat publishes data for 77 different sub-components of the HICP. These sub-components comprise prices for specific types of goods and services (e.g. fish, second-hand motorcars and banking services) and are grouped in more aggregated sub-indices (e.g. food, industrial goods and services). In its Monthly Bulletin, the ECB currently focuses on data for total HICP and five main components (see the table below).

## Weights of main components of the HICP for the euro area

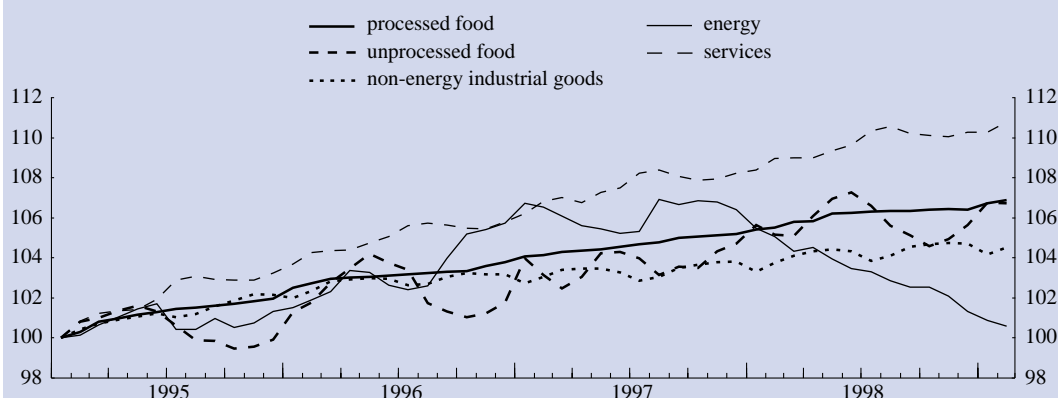
	Consumer spending weights for 1999, in percentages
Processed food	13.4
Unprocessed food	9.0
Non-energy industrial goods	32.5
Energy	8.8
Services	36.3

Source: Eurostat.

The developments in the five main components of the HICP are different from one another (see the chart below). Unprocessed food prices (e.g. meat, fruit and vegetables) and, in particular, energy prices (e.g. electricity, gas and other fuels) have shown a high degree of short-term volatility. The volatility of unprocessed food prices is closely related to seasonal factors and unusual changes in weather conditions. Energy prices are to a large extent determined by the world market price of oil, which can be extremely volatile at times. By contrast, price changes for processed food (e.g. bread, beverages and tobacco), non-energy industrial goods (e.g. shoes, cars and computers) and services (e.g. rentals for housing, travel expenses and transportation services) have displayed a fairly smooth development over time. Price developments with regard to services are less influenced by either weather conditions or global market conditions and – to a greater extent than other price developments – are determined by wage and capital costs as opposed to intermediate input costs. They therefore tend to show a relatively low degree of short-term volatility.

## Breakdown of the HICP in the euro area by main components

(index: January 1995=100; monthly data)



Source: Eurostat.

The HICP includes a number of prices of goods and services provided by public sector entities that are only partly determined by market forces. Pricing in these cases is often administrative in nature, based on costs or other considerations, and not noticeably responsive to changes in demand. Changes in such administrative prices are frequently known up to a year ahead, which makes it possible to estimate their impact on overall HICP in advance. The importance of prices of a wholly or partly administrative nature varies across countries in the euro area, but they often include electricity, water supply and postal services. The privatisation of state-owned enterprises (e.g. in telecommunications services and public transport) has lowered the share of administrative prices in the overall HICP in recent years, and increasing competition in these sectors may well give rise to a somewhat different pattern of price developments in the sub-components concerned in the future.

For analytical purposes it can be useful to construct various measures of the HICP excluding certain volatile items or administrative prices. For example, in the March 1999 issue of the Monthly Bulletin the development of the HICP excluding energy was presented. However, these more limited indices do not represent the ECB's position regarding "underlying" or "core" measures of consumer price inflation, for which there is no agreed best definition.

Actual HICP developments have now been consistent with price stability as defined by the Governing Council of the ECB for almost two years. In the current situation the analysis of price developments is, therefore, mainly concerned with the question of whether or not price stability can be expected to continue. It should be noted that the definition of price stability is symmetric in the sense that neither a situation of sustained increases of more than 2% nor a situation of sustained declines in consumer prices would be regarded as consistent with this definition. A precise lower limit, however, was not given, the main reason for this being the fact that there is uncertainty surrounding the existence and magnitude of the so-called measurement bias in the HICP, which arises from, inter alia, the fact that the measurement of prices does not take sufficient account of accompanying quality changes in the products sold. This notwithstanding, it seems likely that, owing to improved data collection and compilation techniques, the measurement bias in the HICP will be lower, for example, than estimates that were published for the United States (the Boskin Report). So far no reliable estimates are available of the measurement bias in the euro area; however, any such bias is likely to be slightly positive, which suggests that the true increase in the HICP might be somewhat overestimated.

### Other price indicators

In addition to the Harmonised Index of Consumer Prices, attention is also given to other price indicators in the context of analysing price developments, in particular prices at earlier stages of the production chain and import prices (considered in Section 3 below). These other price indicators point, for instance, to whether price increases are caused by higher demand or by supply bottlenecks, but there is not necessarily a stable and simple relationship between these prices and the consumer price index. One indicator which appears frequently in the analysis of price developments is the industrial producer price index. It refers to

the prices of manufactured goods at every stage of the production chain prior to the final purchase by the consumer. Industrial producer prices are, like consumer prices, determined by a wide range of factors, including the outlays for intermediate goods, labour and capital. In addition, production costs are influenced by the development of productivity.

As less than half of the value of consumption expenditure relates to manufactured goods, one would not expect industrial producer and consumer prices to exhibit a close positive relationship at all times. In fact, while the broad trend of both industrial producer and consumer prices has been downward during the 1990s, actual developments in the two indices have differed considerably (see Chart I).

**Chart I**  
**Consumer and industrial producer prices in the euro area**

(annual percentage changes; monthly data)



Sources: ECB calculations based on national non-harmonised data and Eurostat.

There are a number of factors that serve to weaken the relationship. First, industrial producer prices refer to manufactured goods, whereas consumer prices include services as well as goods. In addition, the composition of the baskets of goods is quite different for the two indices. Second, a change in industrial producer prices may not be passed on in consumer prices as a result of adjustments in wholesalers and retailers profit margins, on

account, for example, of cyclical factors or competitive pressures. Finally, indirect taxes and subsidies are included in the measurement of consumer prices but not in that of producer prices. This argues against a simplistic and overly narrow focus when assessing price developments; while some indicators may point in one direction, their influence can be completely overshadowed by other factors.

### **3 Key short-term indicators for analysing price developments**

As mentioned above, the ongoing analysis of short-term indicators is an important part of the overall assessment of price developments. It should be emphasised that, in practice, the relationship between developments in the respective indicators and price developments is not straightforward. Rather, the assessment of price developments consists in incorporating information from possibly conflicting indicators into the overall framework, thereby forming a consistent picture of the overall price climate. While the indicators mentioned below are far from representing an exhaustive set of factors influencing price developments, their discussion provides some insight into the type of analysis required.

#### **Indicators of overall excess demand or supply**

Conceptually, the most comprehensive measure of overall demand and supply conditions is the difference between the actual and potential levels of output of the economy as a whole, i.e. the output gap. Potential output can be defined, in terms of growth rates, as the rate of growth of real GDP that is sustainable in the medium term. Its evolution is determined by the growth of the capital stock and labour supply and the rate of growth of productivity. If actual output growth is above the potential level of growth, a positive output gap may develop that could lead to inflationary pressures, and vice versa in the case of a rate of growth below that of

potential. These price pressures are regarded as becoming stronger as the output gap increases.

The output gap cannot be used as a summary measure for guiding monetary policy decisions. While the concept as such is straightforward in theoretical terms, there are a number of reasons why, in practice, it can at best be used as a complementary indicator in the assessment of price developments. One of the most important reasons is that the level of potential output of an economy and, therefore, the size of the output gap cannot be determined with the necessary level of precision. There are a number of alternative concepts and techniques available for estimating potential output, the relative merits and drawbacks of which are subject to ongoing debate and research. In addition, the degree of price pressures corresponding to a certain output gap could depend on whether or not the constraining factor is capital or labour.

However, while estimates differ quite significantly across institutions with regard to the level of potential output, there is more uniformity in the estimates of the changes. Against this background of methodological and empirical difficulties, the Eurosystem has assumed a medium-term trend growth rate for real GDP for the euro area of 2-2.2% per annum, which is also in line with the estimates of most international organisations. A comparison of actual real GDP growth with the trend growth rate shows that on average

since the beginning of the 1990s the euro area economy has been growing somewhat below, rather than above, trend. However, there has been a period of above-average growth over the past two years, indicating that the degree of excess productive capacity has been declining. While this points to possible, albeit slight, price pressures, current projections suggest weaker real GDP growth in 1999 compared with 1998.

It should be noted that the concept of trend real GDP growth fulfils a similar function in the first pillar of the monetary strategy of the Eurosystem. The trend growth rate and the Eurosystem's definition of price stability, together with the trend in the velocity of circulation of money, determine the reference value for the growth rate of money, as explained in the February 1999 issue of the Monthly Bulletin.

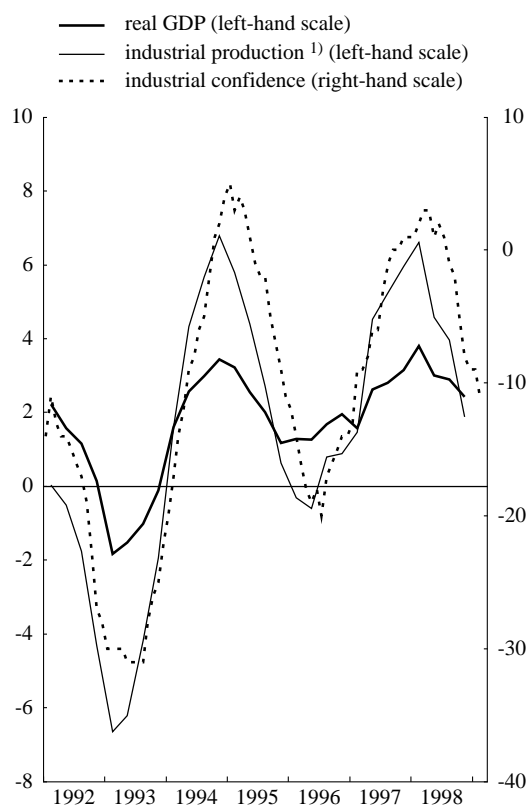
### Indicators of output and demand conditions

An analysis of both the sectoral output developments and the main components of demand provides additional information on the development of the economy and thereby on the possible impact on the overall price climate.

With regard to the breakdown of output by sector, an important component of overall output is industrial production. Although industrial output amounts to no more than one-third of the total, in cyclical terms it is the most sensitive component of output (see Chart 2) and data are available at a monthly frequency with a relatively small time lag. Further evidence of developments in the industrial sector can be derived from surveys on industrial confidence, such as those produced by the European Commission, which are available with an even shorter time lag and exhibit a close relationship with actual industrial production. This information facilitates an early identification of the direction and strength of activity and thereby contributes to a timely identification of price pressures.

**Chart 2**  
**Real GDP growth, industrial production and industrial confidence in the euro area**

(annual percentage changes, monthly percentage balances for industrial confidence; quarterly data otherwise)



Sources: Eurostat and European Commission Business and Consumer Surveys.

1) Quarterly averages of monthly data.

However, given that industrial production refers largely to tradable goods, the prices of which are determined in world markets rather than by domestic factors, price developments in this sector may appear to be detached from developments in industrial output. During 1998 industrial producer prices decreased sharply as a result of strong declines in both energy and commodity prices and increased international competitive pressures. Developments in the construction sector, which accounts for some 15% of total industrial output in the euro area, are likely to follow different patterns, as demand and costs are predominantly determined by factors within the euro area.

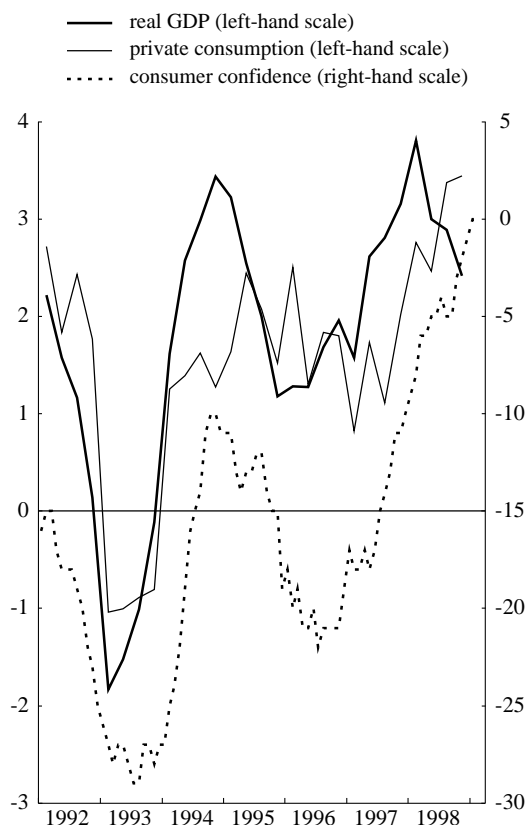
Demand developments in the services sector are also likely to be largely determined by domestic factors. They may be expected to give clearer indications as to the concomitant price developments, with increased demand being more likely to be reflected in both prices and output. However, data availability for the services sector is, in general, less satisfactory than that for the industrial sector. Overall, recent developments at the sectoral level, which are characterised by a slowdown in industrial output growth since mid-1998 and sustained growth in the services sector, illustrate that there may be prolonged divergences between the different sectors, giving rise to divergent sectoral price developments.

Turning to the main components of aggregate demand, private consumption, which comprises around 60% of total real GDP in the euro area, plays a major role in explaining overall growth patterns (see Chart 3). Consumption is to a large extent determined by real earnings of private households. In this respect, wages per capita may affect consumer prices not only via labour costs and output prices, but also via disposable income and demand. A second factor, which might influence private consumption, is financial wealth. In this respect, the direct effects of household financial wealth on consumption are considered to be of limited importance for the euro area, although a rise in house or equity prices may have some indirect effects through their impact on confidence. Chart 3 also shows, however, that the relationship between consumer confidence and consumption is somewhat weaker than that between industrial confidence and production.

Government consumption, which accounts for 15% of overall GDP in the euro area, to a large extent reflects real wages and salaries paid to public sector employees as well as spending on military equipment. This demand component does not usually cause pronounced fluctuations in aggregate demand, but discretionary fiscal policy can have an impact on the cyclical position of the

**Chart 3**  
**Real GDP growth, private consumption and consumer confidence in the euro area**

(annual percentage changes, monthly percentage balances for consumer confidence; quarterly data otherwise)



Sources: Eurostat and European Commission Business and Consumer Surveys.

economy. More importantly, over the medium to long term fiscal policy can have positive effects by fostering consumer and industrial confidence, while confidence would be adversely affected if fiscal policies were not considered sustainable in the long run. The reason for the higher volatility of overall GDP compared with consumption lies in the development of investment, stockbuilding and net exports. Analysing investment patterns is not only important in order to gauge the likely pressures on prices arising from cyclical movements in aggregate demand, but also because investment has an important bearing on the supply side of the economy. Although stockbuilding is a very small component of demand, its contribution to growth can be



sizable in the short term, and corrections to inventory positions play an important part in explaining short-term movements in GDP. Stockbuilding can easily account for more than 1 percentage point of the change in GDP from one year to the next, but it should be borne in mind that the quality of national accounts data on stocks is questionable.

### Indicators of supply conditions

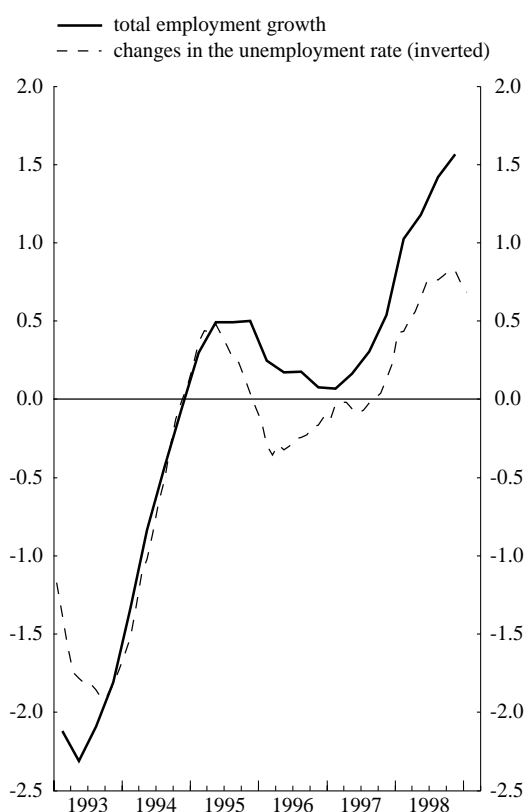
As already noted, price pressures tend to arise when demand and output exceed the production capacity of the economy. Labour market developments and capacity utilisation provide a broad indication of the tightness of supply conditions relative to demand, and thus point to possible price pressures at the level of factor costs and producer prices. At the same time, however, these developments tend to explain the behaviour of wage and profit incomes respectively. This serves to emphasise the dual role that some indicators may play in the explanation of price changes via both the demand and income channel, on the one hand, and the cost channel, on the other.

The rate of unemployment is probably the most prominent indicator of labour market tightness, although it cannot be regarded as an accurate summary measure. In principle, a decrease points to a reduction in excess labour supply and thus to an improved bargaining position of employees. Although the development of unemployment and employment are clearly related (see Chart 4), changes in the unemployment rate do not necessarily correspond to changes in employment. In the period since mid-1997 overall employment growth has picked up considerably, to annual rates of change of well above 1% (i.e. 2.2 million people), while in this same period the rate of unemployment has decreased by a cumulative 1 percentage point (i.e. 1.4 million people), after having remained broadly stable for the previous year and a half. The difference of around 800,000 people can be accounted for by a tendency for previously economically inactive persons

**Chart 4**

### Employment growth and changes in the unemployment rate in the euro area

(annual percentage changes, annual percentage point changes in the unemployment rate; quarterly data for employment, monthly data for unemployment)



Sources: ECB calculations based on available national non-harmonised data and Eurostat.

to enter, or re-enter, the labour force, adding to the available non-employed labour supply.

There is also a problem with the reliability of the unemployment figures themselves as a summary measure of slack in the labour market. The unemployment rate for the euro area as a whole, as published by Eurostat, is calculated according to ILO definitions and counts those out of work but actively seeking a job. This becomes more meaningful as a measure of labour market tightness and wage bargaining power the higher the number of unemployed persons who are attractive to employers in terms of their skills and other qualifications. The significant proportion of long-term unemployed, however, suggests, for instance, that a large number of these

job-seekers may not possess the necessary skills required to fill the existing vacancies. Such a mismatch in the labour market can also partly be seen in the simultaneous existence of unemployment and vacancies. However, this conclusion is dependent on the degree of flexibility in the level and structure of wages.

Hence a high unemployment rate does not, in itself, indicate downward pressure on wages. For reasons relating to the specific regulations and institutional features governing individual labour markets, a substantial part of measured unemployment is of a structural nature. Various estimates suggest that this is indeed the cause of the bulk of the unemployment in the euro area. This implies that it may well be the changes in employment and unemployment, rather than the underlying levels, that provide the most relevant indication of upward or downward wage pressures. To the extent that a reduction in measured unemployment, as observed over the past year, is not matched by a concomitant reduction in structural unemployment, labour market tightness and the potential for wage pressures increase. This suggests that comprehensive labour market reforms, directed at increasing flexibility and removing rigidities, contribute both to bringing unemployed persons into work and to containing wage pressures.

Whether wage increases constitute a direct threat to cost and price stability depends to a large extent on the accompanying developments in productivity. Wage increases in excess of productivity growth give rise to an increase in nominal unit labour costs. In this context, account needs to be taken of the fact that over an economic cycle productivity developments are not generally synchronised with wage demands. In the early phase of a recovery productivity tends to improve strongly, while wage increases are still moderate as a consequence of the higher unemployment following a recession, and vice versa in the later stages of a recovery. This phenomenon exacerbates the cyclical movements in unit labour costs, feeding

through to movements in producer prices, to the extent that profit margins are not adjusted accordingly.

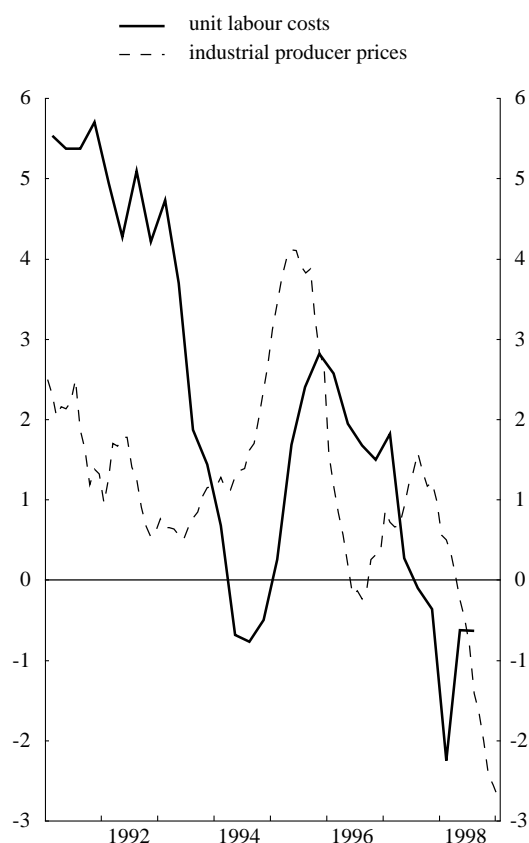
It should be noted, however, that wages are only one component of total costs and may affect producer prices to differing degrees and with a variable time lag. This is particularly evident when looking at the weak relationship evident in Chart 5. Depending on the developments of commodity prices, for instance, an increase in unit labour costs need not be reflected in upward pressure on industrial producer prices.

Increases in marginal costs of production and hence pressure on output prices may also be indicated by an increase in capacity utilisation,

### Chart 5

#### Unit labour costs and industrial producer prices in the euro area

(annual percentage changes, quarterly data; monthly data for producer prices)



Sources: ECB calculations based on available national non-harmonised data and Eurostat.

given that this implies a more intensive use of equipment and machinery, involving higher maintenance costs and higher overtime premium payments to employees (see Chart 6). This type of analysis suggests the existence of a normal rate of utilisation, which is fairly stable over time and above which such cost pressures occur. However, at times, this relationship may be rather weak, with other factors playing a more important role in the evolution of industrial producer prices, as has been the case since mid-1997.

An increase in capacity utilisation also reflects a pick-up in demand and production relative to available capacity and, depending on the market structure in which the individual firms operate, may point to a possibility of raising mark-ups. Current and expected profits are

an important factor in the financing of investment, which, in turn, is necessary to relax the constraints implicit in high rates of capacity utilisation.

### Other factors

Further information on price pressures can be derived from various other indicators. Among these, external factors play an important role. Economic activity in the rest of the world affects exports of the euro area and is therefore an important aspect in the assessment of total demand. However, external factors can also influence consumer prices in a more direct way.

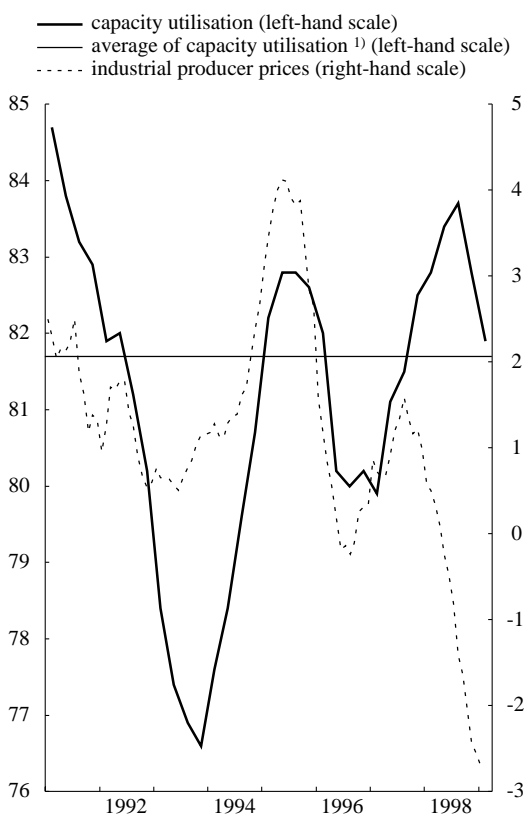
External price developments affect the prices of imported goods measured in foreign currency, while exchange rate movements condition the extent to which such changes are mirrored in import prices expressed in euro. A change in import prices affects consumer prices both directly and indirectly. Some components of imports (e.g. coffee and oil) enter into consumption almost directly and therefore have a direct impact on consumer prices (proportional to their weight in the HICP). In addition, as noted above, import prices may also affect costs and prices in earlier stages of production, i.e. at the level of producer prices, and should ultimately have an impact on the prices paid by consumers.

An appreciation of the exchange rate tends to reduce the impact on domestic consumer price increases of a given external price increase. The impact of exchange rate movements on import prices is, however, also complex. It depends on, inter alia, the market structure, pricing behaviour in the industries concerned and whether firms view exchange rate movements as being temporary or permanent. For example, if importers view a change in the exchange rate as temporary, they may refrain from adjusting prices on account of competitive pressures and adjustment costs.

**Chart 6**

### Capacity utilisation and industrial producer prices in the euro area

(in percentages, annual percentage changes for producer prices; quarterly data, monthly data for producer prices)



Sources: European Commission Business and Consumer Surveys and Eurostat.

1) Average of capacity utilisation over the period from 1985.

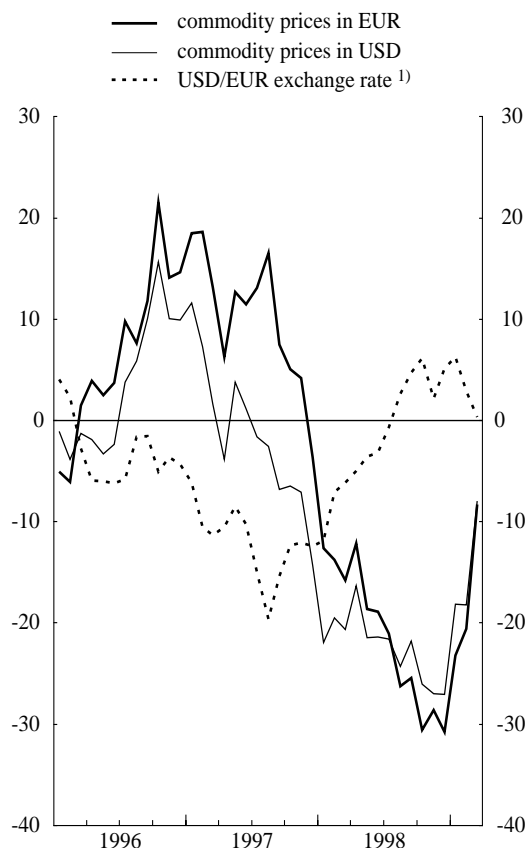
The effects of exchange rate movements on import prices may also vary with the category of imports. Primary products with a well-defined world market price contracted in a foreign currency (e.g. oil prices) form a homogeneous group for which the pass-through can be expected to be relatively rapid and complete. In the case of heterogeneous products such as manufactured goods, however, the pass-through is influenced by the state of domestic demand and the degree of competition in the relevant domestic sectors. It may therefore be protracted and incomplete, even in the medium term. Changes in world market prices that are not offset by exchange rate movements also affect the competitive position, which, in turn, affects net exports and aggregate demand conditions.

As indicated above, the importance of external factors for the development of consumer prices has been evident over the past few years. The significant fall in commodity prices, in foreign currency, since the beginning of 1997 was partly offset by a depreciation of the exchange rate during most of 1997. As a result, commodity prices expressed in ECU declined to a lesser extent than prices measured in terms of US dollars during 1997 (see Chart 7). By contrast, the continued fall in commodity prices during 1998 was reinforced by an appreciation of the exchange rate. Accordingly, commodity prices in ECU fell faster than prices in US dollars in the course of 1998. In the first few months of 1999 both commodity prices in dollar terms and exchange rate movements of the euro led to a partial reversal and gave rise to a comparative increase in import prices.

Those commodities that enter almost directly into consumption had a direct effect on consumer prices in 1998, in particular consumer prices for energy. Moreover, the fall in commodity prices, again notably energy prices, has also resulted in lower industrial producer prices. While the lower commodity prices have had a clear impact on industrial producer prices in those industries with a relatively high share of input goods (e.g. the intermediate goods industry), the impact has

**Chart 7**  
**Commodity prices and the exchange rate**

(annual percentage changes; monthly data)



Sources: HWWA-Institut für Wirtschaftsforschung, Hamburg, and ECB calculations.

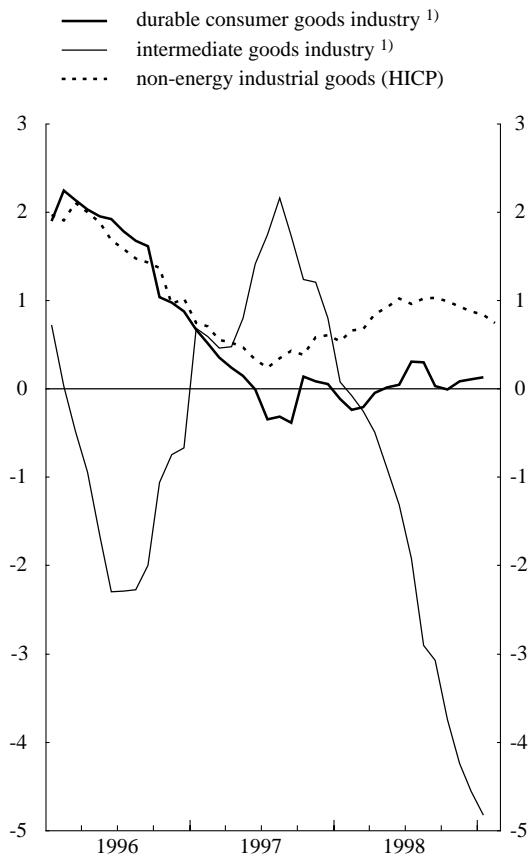
1) USD/ECU up to December 1998.

been more muted in industries with a relatively low weight of input goods, as shown by industrial producer prices for durable consumer goods (see Chart 8). The relatively modest decline in the annual increase of these prices partly explains the broadly stable development in prices for non-energy industrial goods in the HICP.

In addition to external factors, consumer prices can also be affected by changes in costs of a more specific nature, such as changing weather conditions, which may result in significant volatility in the prices of seasonal food. Furthermore, changes in fiscal policy can influence price developments. Examples of this are changes in indirect taxes and subsidies. Government-induced price impulses can also relate to changes in income taxes, property

**Chart 8**  
**Industrial producer prices and non-energy industrial goods in the HICP in the euro area**

(annual percentage changes; monthly data)



Source: Eurostat.  
 1) Industrial producer prices.

taxes and, in particular, non-wage labour costs. Social security contributions are the largest component of non-wage labour costs. They affect compensation per employee paid by the employer and therefore have a direct effect on firms total labour costs. As mentioned above, the effects of such factors may be seen as transitory as they tend to have a one-off impact on the price level. However, they can nevertheless cause price pressures or reinforce existing ones and therefore need to be monitored closely. Moreover, there can also be more fundamental effects arising from fiscal policies, in particular when these are not considered to be sustainable in the long term.

Finally, there are other types of shocks that may, in addition, affect aggregate supply and demand and thereby the price climate. First, political events may result in considerable changes in demand and cost conditions and, therefore, the development of prices. One example is German unification in 1990. Second, shocks in financial markets, such as the sharp depreciation of the Mexican peso in 1994 and that of many Asian currencies in 1998, affect consumer prices in the rest of the world through lower prices for imported consumer goods and, more indirectly, via their effect on net exports.

**4 Concluding remarks**

The second pillar of the monetary policy of the Eurosystem is a broadly based assessment of the outlook for price developments and the risks to price stability in the euro area as a whole. This involves a wide-ranging analysis of all the economic and financial information available. Short-term economic indicators as discussed above along with financial market indicators, survey data and forecasts of inflation play an

important role within the second pillar. However, such analysis can by no means be regarded as mechanical. Rather, it needs to take into account the complex relationships between these variables and price developments against the background of institutional and structural changes occurring, among other factors, as a consequence of the introduction of the euro.