

Global and European setting

World economic activity

The global economy maintained its strong growth in the second quarter of 2006, with economic activity in both the industrial countries and the emerging markets remaining expansionary. Nevertheless, at the same time new risk factors have emerged to put a damper on the future outlook. Resurging oil prices may be having retarding effects, accelerating the worldwide increase in price risks. What is more, the US economy is likely to be less of a driving force than previously. However, none of this will fundamentally threaten the continuation of the global upturn, not least since, following the reassessment of investment risks on the financial markets, in particular those associated with emerging market economies, as well as in the property sector of major industrial countries, the conditions for a sustained worldwide economic recovery have improved. Lastly, the global tightening of monetary policy, now also adopted by Japan, is designed to give monetary protection to the sustainability of global growth. In this context, it should be borne in mind that real interest rates in the industrial countries are, by historical standards, still quite low and, in terms of greatly improved returns on investment in fixed capital, continue to exert a stimulating effect.

Global economy still on growth path

In the meantime, something of a shift in expansionary forces can be observed among the industrial countries. This is evidenced by the fact that this spring, for the first time since 2001, the euro area boasted the fastest quarter-on-quarter growth of seasonally adjusted real gross domestic product (GDP) of

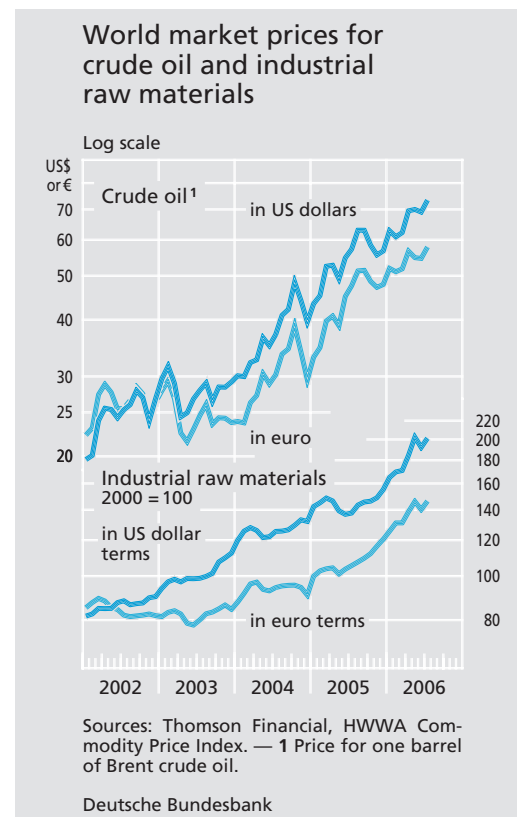
Shift of focus in global growth patterns

all members of the triad of industrial countries. The decisive factor here was the accelerated pace of economic growth in the euro area, along with a slowdown in the pace of economic expansion both in the USA and Japan following strong first-quarter growth.

These shifts in the international growth pattern may well be contributing to a reduction in global imbalances. Despite a surge in oil prices, the US first-quarter current account deficit stood at 6½% of GDP, ½ percentage point below the figure for the final quarter of 2005. According to provisional figures, the combined GDP of the major industrial countries rose during the second quarter by a seasonally adjusted ¾% on the previous quarter. It was up by 2¾% on the year.

*Renewed
distinct rise in
energy prices at
start of Q2*

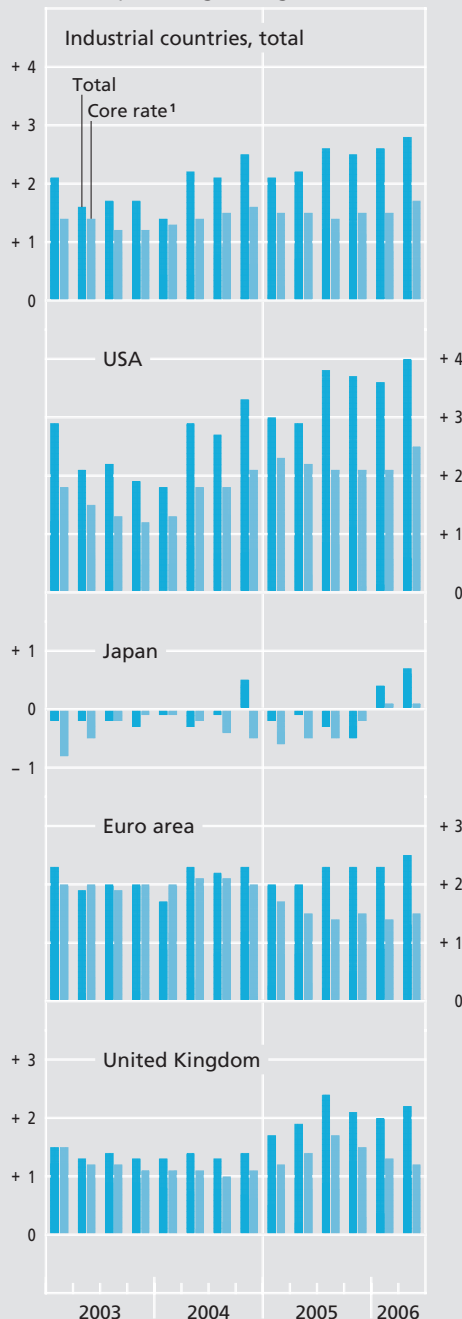
Of the various burdens weighing on global economic activity since the beginning of the second quarter, the most significant is the renewed surge of oil prices, which went up from just under US\$60 a barrel (for Brent crude oil) in mid-February to US\$74 in late April/early May. After a brief period of fluctuation around the US\$70 mark, prices rose again in July, with the price for Brent crude reaching yet another (record) high of US\$78 by the beginning of August. As this report went to press, oil was trading at US\$72 per barrel. In euro terms, the increases since the middle of February have been somewhat more moderate due to the appreciation of the euro. At the end of the period under review, the price of a barrel stood at €56. The latest price surges on the oil markets at the start of the second quarter and also after mid-year were mainly triggered by geopolit-



ical tensions in the Middle East, which intensified in July. This situation was aggravated by the unrest in Nigeria, which has somewhat calmed down since then but at the time led to considerable losses in output. In addition, prices were temporarily driven higher by forecasts of another season of severe hurricane activity in the Gulf of Mexico. During August, additional temporary market strains were caused by reports of the potential closure of North America's largest oil field. If forward quotations are any guide, prices are not likely to go down significantly in the medium term. World market prices for other raw materials, especially industrial raw materials, have likewise risen sharply since the start of the second quarter.

Consumer prices in the industrial countries

Quarterly, annual percentage change



Sources: national statistics, Eurostat and Bundesbank calculations. — 1 Excluding energy and food; Japan: excluding fresh food and petroleum products; euro area: HICP; United Kingdom: CPI; the latter two excluding energy and unprocessed food.

Deutsche Bundesbank

The recent surge in energy prices has caused inflation in the industrial nations to accelerate noticeably. Year-on-year consumer price inflation climbed from 2.4% in March to 3.0% in June. The last time prices rose that sharply was in September 2005, when mineral oil products became vastly more expensive in the wake of hurricane damage in the USA. During the second quarter, the indirect effects of rising energy costs on the prices of other goods also appear to have been more pronounced. Core inflation (excluding food and energy) consequently rose by 0.2 percentage point to 1.8% between March and June. Excluding Japan, where inflation, though rising, still remained very low as this report went to press, consumer prices in the industrial countries were up in the second quarter by 3.3% on the year.

Stronger upward price pressure in industrial countries

On the whole, financial market corrections in emerging economies have not visibly dampened these countries' real economic activity. In the medium term, however, it is quite possible that revised inflation expectations for the USA, in conjunction with higher long-term interest rates, will have a negative impact on the cyclical dynamics there. In the second quarter the major Latin American economies remained on a growth path. In Brazil, interest rate cuts over the past few months have given a visible impetus to domestic activity. In the second quarter, Mexican industry was boosted especially by foreign demand. Economic developments in South-East Asia up to the end of the period under review were being supported by buoyant demand for goods from the industrial countries and China alike. China was hardly affected by the

Economic trends in the emerging market economies

turmoil on international financial markets, its second-quarter GDP posting a year-on-year rise of 11¼%, following on from a first-quarter figure of 10¼%. The oil-producing countries saw their revenues improve further in the last few months owing to the renewed upsurge in oil prices. This should provide additional stimulus to aggregate growth. Given the pronounced stock market corrections in the Middle East and in Russia, the prospects for sustainable overall economic growth in these countries also look much more favourable.

USA

According to initial estimates, the US economy grew by just over ½% in seasonally and working-day adjusted terms in the second quarter, representing a marked deceleration compared to the first-quarter result (+1½%). For all that, it was still up by 3½% on the year. This slowdown is chiefly attributable to the subdued increase in private consumption. Real expenditure on new residential construction had even gone down by 1½% on the quarter, following a modest decline in the two preceding quarters. Rising interest rates, coupled with signs that the US property market is settling down, probably had a major influence on the development of these two components of demand. Private consumption was also affected by the noticeable slackening of employment growth and the additional burden on household purchasing power caused by the further rise in energy prices. However, consumption received some support from the continued decline in the saving ratio which, at -1½% in the second quarter, indicated a transactional depletion of net assets. Not only private consumption but also

private non-residential investment showed a clear loss of momentum. Year-on-year real spending on new machinery, equipment and software was down slightly, while investment in structures increased substantially. Inventory changes and real foreign trade both made a minor contribution to growth. The positive external stimulus was mainly attributable to a moderate increase in exports combined with virtually unchanged activity in imports. In the regular summer revision of the national accounts, GDP growth for the 2003-2005 period was revised downwards slightly, with the US economy reporting average growth during this time of 3¼%.

Due to the development in energy prices, US consumer prices in the second quarter rose a great deal more sharply than in the recent past, standing at a seasonally adjusted 1.2% above the previous quarter's level following a quarter-on-quarter rise of 0.6% in the first quarter. Year-on-year, this represented a 4.0% increase, following a 3.6% increase in the first quarter. In the meantime, core inflation (excluding food and energy) took a visible upward turn, rising by 0.3 percentage point on the first quarter to 2.4%. This trend continued in July at an overall rate of 4.1%; year-on-year core consumer price inflation stood at 2.7%. The quarterly personal consumption expenditure (PCE) deflator, for which data was available only until June as this report went to press, rose from 2.0% in the first quarter to a second-quarter figure of 2.3%.

Against the backdrop of a downturn in economic momentum during the second quarter,

the US Federal Reserve decided in August not to tighten monetary policy any further. According to its June forecasts for 2006 and 2007, the Fed expects a slight slowdown in economic growth spread across the year as a whole. Overall output during the forecasting horizon will subsequently rise more or less in step with potential output growth.¹ According to the Federal Reserve's projection, consumer price inflation – as measured by the core personal consumption expenditure deflator – will lie somewhere in the range of 2¼% to 2½% in the course of this year and between 2% and 2¼% in 2007. Hence, the outlook for prices is being assessed somewhat less favourably than at the start of 2006.

Japan

In Japan, the economic upswing also lost some of its momentum in spring. After seasonal adjustment, real GDP saw a quarter-on-quarter rise of just ¼%, with a second-quarter figure exceeding the previous year's result by 2%. In the preceding quarter the Japanese economy had managed to grow by ¾%. This deterioration in GDP was mainly the result of a marked decline in public investment and was compounded by additional dampening effects stemming from private residential investment, inventory changes and foreign trade. At the same time, exports may have been adversely affected by weaker growth in the important US market. On a brighter note, private consumption and, in particular, private non-residential investment grew faster than in the winter months. This suggests that the positive underlying trend in Japan's domestic economy remains solid.

In the wake of this upturn in the economy and sustained growth in the number of persons in work, it would appear that deflationary tendencies have now ceased. Against this backdrop, in mid-July the Bank of Japan abandoned its zero interest rate policy and raised its interest rate to ¼%. The price climate in Japan can now be deemed favourable from a cyclical vantage point, too. Consumer price inflation averaged 0.7% for the April-June period, compared with a year-on-year figure of 0.4% in the first quarter, while core inflation (excluding fresh food and mineral oil products) remained at 0.1% in the second quarter, broadly unchanged from its level in the winter months.

Overall output in the United Kingdom, after seasonal and working-day adjustment, surged again between April and June, by ¾% on the period according to initial estimates. This represented a year-on-year increase of 2½%. The growth profile for the past few years taken as a whole was revised upwards slightly. GDP in the second quarter was driven mainly by the services sector, which boosted its value added by 1% after seasonal adjustment. By contrast, the production sector (including construction) made no meaningful contribution to growth, in a departure from its first-quarter performance. In the second quarter, demand was driven significantly by households' retail purchases. At constant prices, these came in at 2% above their decidedly weak level in the first quarter, after

*United
Kingdom*

¹ According to the June forecast, year-on-year real GDP growth will be between 3¼% and 3½% in the final quarter of 2006 and between 3% and 3¼% in the fourth quarter of 2007.

adjustment for seasonal and price-related variations. Particularly as a result of the renewed increase in energy costs, consumer price inflation rose markedly, from a first-quarter year-on-year rate of 1.9% to 2.2% in the second quarter, thus overshooting the official inflation target set by the Bank of England. However, core inflation (excluding energy and food) dropped by 0.2 percentage point to 1.2%. In the course of the second quarter, house prices may have passed their peak; however, they still rose by an average of just below 9% on the year in the April-July period. Given the further outlook for prices, which is to be seen against the backdrop of robust economic growth and a discernibly higher rate of capacity utilisation – compared with the situation before revision of GDP – the Bank of England was prompted to raise its benchmark interest rate at the beginning of August.

*New EU
member states*

Economic activity in the new EU member states continued to run full speed ahead during the second quarter, with seasonally adjusted industrial output 4% up on the quarter and 11¾% up on the year. All of this points to a massive surge in total output, for which no up-to-date aggregated data are available at present. Recently, exports also made a major contribution to propelling overall economic growth. The turmoil on the financial markets in May and June left its mark, especially in Hungary, where the forint has depreciated greatly. That it was more vulnerable than other new member states can be explained by its sizeable current account deficit and high level of government debt. The renewed energy price surge had a major effect

on consumer price inflation in the spring months. Year-on-year consumer price inflation for this group of countries averaged 2.4% for June, compared with 2.0% in March. Individual figures ranged from 1.5% in Poland to 6.3% in Latvia.

Macroeconomic trends in the euro area

Overall economic output in the euro area was up just under 1% in the second quarter of 2006 after seasonal adjustment, according to the Eurostat Flash Estimate. This indicates a further acceleration of the fast pace of growth which was already evident in the first quarter. Indeed, it was up by 2½% on the year. Over the first six months of the year, real GDP, which likewise stood at an annualised rate of 2½%, grew considerably faster than potential output, estimated at approximately 2%. Therefore, in 2006, aggregate capacity utilisation is expected to rise for the first time since 2000 – with the exception of the 2004 results, which were distorted by strong positive working-day effects. For the period up to March 2007 the European Commission expects this growth process to continue at a steady rate according to its short-term GDP projections.

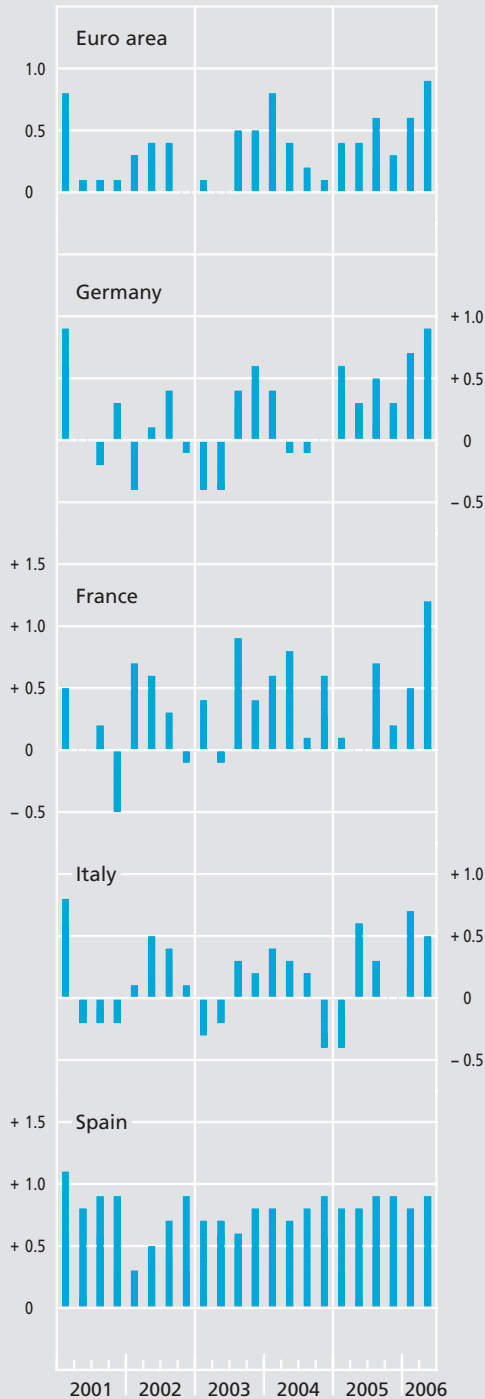
*Further
acceleration of
GDP growth in
second quarter*

That GDP rose as high as it did in the second quarter is largely attributable to the accelerated increase in industrial output which, for the April-June period, averaged 1% on the quarter and 3¾% on the year after seasonal adjustment. This was accompanied by a further noticeable rise in the degree of equipment utilisation in manufacturing during the

*Sustained
dynamic
industrial
activity*

Growth trends in the euro area

Seasonally adjusted, quarterly percentage change



Sources: national statistics, Eurostat and the ECB.

Deutsche Bundesbank

April-July period that, by the mid-year mark, had clearly surpassed its long-term average, returning to its 2001 second-quarter level.

The order situation in the industrial sector remained favourable. Over the April-May period, seasonally adjusted new orders, in terms of value, were up by ¾% from their first-quarter level and 9% higher than the previous year's level. The relatively small increase in new orders must be viewed in the context of the extensive volume of large orders placed during the preceding two quarters. Excluding the manufacture of heavy transport equipment, where large orders have a great impact, seasonally adjusted orders placed with industrial enterprises in the euro area in the April-May period were 2% higher than in the first three months of the year.

The general sentiment in industry continued to improve into the month of July. Apart from one brief interruption during autumn, industrial confidence has risen steadily since the summer of 2005. The latest figure for the indicator of sentiment is well above the multi-year average and only just below its record high achieved in spring 2000. The most recent rise is due to two factors: the more favourable assessment of order books and the more optimistic output expectations. By contrast, consumer confidence in July held steady at the level of the preceding months, thus slightly exceeding its long-term average.

Continued positive economic indicators at mid-year

As far as it is possible to tell, GDP expansion on the demand side during the second quarter was fairly broadly based. Exports to non-

More evenly balanced demand trend

euro area countries during the months of April and May, for which such data are available, rose in terms of value by a seasonally adjusted 1% from the first quarter. With the renewed increase in energy prices in the second quarter and the continued improvement in euro-area domestic demand, nominal imports rose by 1¾% after seasonal adjustment, outpacing export sales growth noticeably. These developments caused the balance of trade to drop considerably and even to dip slightly into deficit territory in May.

An increase in the volume of goods purchased by households helped to bolster domestic second-quarter demand. Once again there was a distinct leap in the demand for cars, as measured by the number of new registrations, while the demand for other consumer goods saw more subdued growth. In addition, construction investment is likely to have risen a great deal more sharply than in the winter months, when extremely inclement weather conditions considerably curbed construction activity, at least in the more northerly euro-area countries. Moreover, the findings of the European Commission spring survey on industrial investment plans point to buoyant investment activity in this sector. According to these statistics, industrial enterprises intend to enlarge their budgets for new machinery, equipment and premises by a total of 7% in real terms in 2006, compared with a 1% increase in the preceding year. In the fourth quarter of 2005 these enterprises had only planned a 5% real increase for 2006.

The number of unemployed persons in the euro area continued to fall sharply in the first

quarter of 2006. According to provisional Eurostat figures, the average number of persons without paid work in the second quarter stood at a seasonally adjusted 11.53 million. The unemployment figure for this period was therefore 1.32 million down on the year. After the elimination of seasonal factors, the standardised unemployment rate fell to 7.9%, from 8.7% a year earlier. In virtually all euro-area member states – though no current data are available for Italy and Greece – unemployment either held steady or declined. In terms of the absolute reduction in the unemployment rate, developments were particularly favourable in Germany and Spain. In the case of Germany, this may have stemmed to some extent from statistical effects. However, the level of unemployment in the two aforementioned countries, as well as in France and Belgium, still exceeds the euro-area average. During the first quarter in 2006, up until which data are available, euro-area labour costs went up by just under 2¼% on the year, at a pace virtually unchanged from the final quarter in 2005.

After easing in the months around the turn of 2005-06, euro-area consumer prices rose somewhat more sharply again in the second quarter. In seasonally adjusted terms, prices, as measured by the HICP, for the April-June period were, on average, 0.8% higher than in the first quarter. In other words, inflation was twice as high as in the two preceding quarters. Energy was the prime force driving up prices, costing 3.9% more than in the previous quarter. Even excluding the relatively volatile components of energy and unprocessed food, seasonally adjusted HICP still

*Continued
labour market
recovery*

*Higher energy
prices still
affecting
inflation*

Consumer price volatility affected by surging oil prices: The euro area and the USA compared

The extremely sharp rise in crude oil prices in recent years has also driven up consumer price inflation in the industrial countries. However, the impact this price surge on the international crude oil markets has had on the intensity of consumer price fluctuation is less apparent. This article will review and compare developments in the volatility of the euro-area Harmonised Index of Consumer Prices (HICP) and the US Consumer Price Index (CPI).

Price volatility is measured on the basis of the dispersion of month-on-month inflation rates.¹ In contrast to a measure of dispersion that is based directly on index series, this method avoids distorting effects caused by level shifts. In addition, broadly uniform price changes are not rated as being relevant to volatility. However, results are not significantly changed if alternative methods for measuring the price fluctuation ratio are applied.²

This method initially appears to confirm the notion that energy prices fluctuate much more sharply than average consumer prices for other goods. This said, the former are typically much less volatile than crude oil prices.³ What is more, the level of fluctuation intensity has also visibly shifted over time. In the 1990s, the annualised standard deviation of monthly euro-area energy price inflation rates stood at an average of approximately two percentage points. By contrast, in recent years energy price movements (measured as the average values of this measure of dispersion) have been more than twice as intense. The increase in volatility coincided with a crude oil price surge in 1999, when the cost of a barrel of Brent jumped from US\$10 in January to US\$25 in December. Since then, despite a series of strong increases in the price of crude oil, energy price volatility does not appear to have increased much further, at least not in the euro area. Nevertheless, similar to the situation in the crude oil market, more marked and drawn out periods of stronger and weaker price movements are evident.

1 The measure of volatility used here is the annualised standard deviation of the previous twelve month-on-month rates at any one time. These are calculated from the difference in seasonally-adjusted index values (in logarithmic form). In the absence of a stable seasonal pattern, original values are used in the case of euro-area energy prices. — 2 It is possible to use the dispersion of year-on-year rates and/or the standard deviation of changes in these rates as an alternative to the dispersion of month-on-month rates. — 3 One reason for this is the

In comparison to the euro area, the USA is characterised by generally more volatile energy prices. This is most probably due to the relatively low level of energy prices there. Of particular significance here is that mineral oil tax is higher in the euro area, on average. Its design as a volume-based tax leads to a linear increase in consumer prices for mineral oil products. Consequently, changes in the price of crude oil elicit smaller percentage point fluctuations in the euro-area consumer prices of mineral oil products than is the case in the USA. In addition, there has been a drastic increase in the level of volatility in US energy prices recently, a phenomenon which in its intensity is not even close to being matched in the euro area and on the crude oil market. The cause was sharply fluctuating petrol prices at US gasoline stations during the latter part of the summer and in the autumn of last year when hurricanes severely hampered operations not just at oil production facilities but also at refineries in the Gulf of Mexico.⁴ While volatile crude prices quotations clearly influenced mineral oil product prices paid by consumers, refining bottlenecks will also have played an important role.⁵

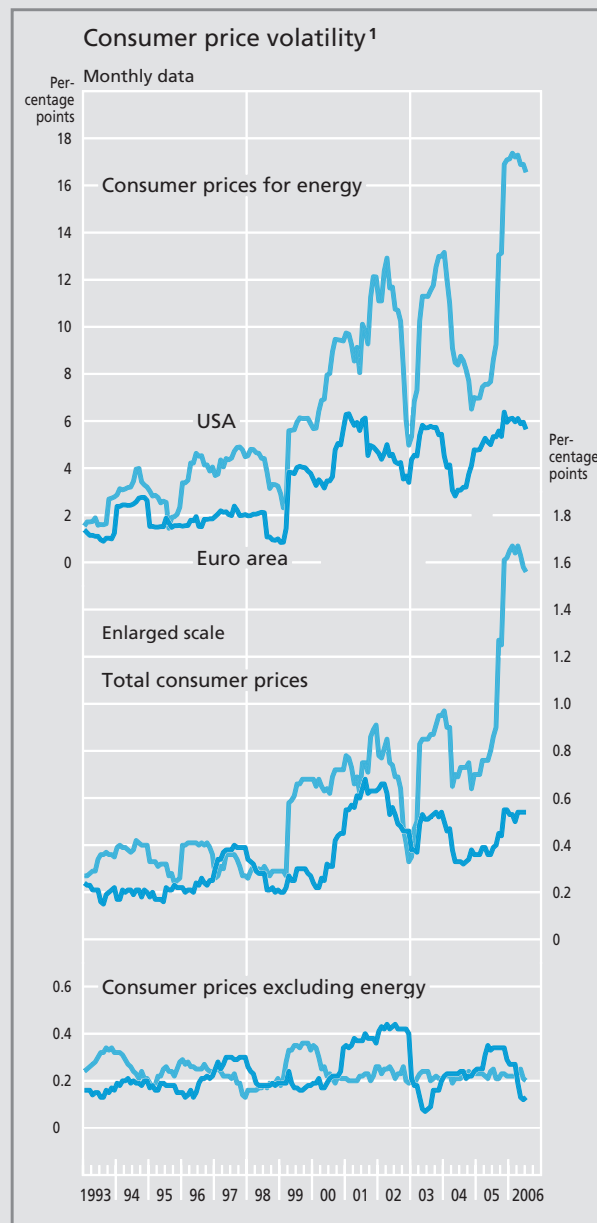
Being subject to such relatively strong fluctuations gives energy prices a decisive influence on the volatility of the overall indices. This is reflected in the broader spread of headline rates in the USA compared with the euro area.⁶ Individual (weighted) fluctuations in the rates of change of energy and core component prices are not the only contributor to volatility in the overall index. Other defining factors are the nature and the intensity of the relationship between these fluctuations (measured statistically as covariance). Although this relationship varies greatly over time, if one focuses solely on the years 2004 and 2005, the relationship which prevailed in the USA during that period was positive. By contrast, the euro area showed a negative contemporaneous correlation between the rates of change for energy prices and for all other consumer prices taken together. Thus, while the increase in energy prices has become more pronounced,

higher prices paid by consumers for mineral oil products caused by refining costs, taxes and, where relevant, profit margins. Another is that the relevant index also includes the prices of other sources of energy that are less subject to fluctuation. By contrast, exchange rate fluctuations do not make any practical contribution to the variability of the volatility of consumer prices for energy. — 4 In September 2005, the seasonally adjusted cost of fuel for US consumers was up nearly 16% on the month. November saw petrol prices go back down

taken as an average, the increase in other prices has tended to fall, which in turn has curbed the volatility of the overall euro-area index.

It is particularly worth noting the differences between the two regions with regard to consumer price volatility once energy is excluded. Over the long term, standard deviations in the inflation rates for the CPI basket of goods excluding energy in the USA and the comparable euro-area HICP basket appear to share an almost equally low average value. However, while price volatility in the USA has hardly veered away from this level since the start of the decade, the corresponding euro-area indicator fluctuated relatively sharply. On occasion, the spread in volatility between overall HICP and its sub-index (excluding energy) was extremely narrow.

From a statistical viewpoint this result comes as a surprise, as the scope of the sample on which the US price survey is based is comparatively limited. This means that the index excluding energy would actually be expected to display the larger price fluctuation. One possible explanation is that the volatility of euro-area HICP excluding energy is driven by changes to administered prices, which, though intermittent, are still quite a significant factor. What is more, the stable volatility level of the CPI sub-index excluding energy in the USA might also reflect a relatively evenly-spread adjustment of market-based prices as well as greater price flexibility. Given the relatively uneven movement of HICP excluding energy over time, it is doubtful whether the rate of change in question can be referred to as the "core inflation measure", ie an indicator of medium-term price pressure in the euro area. In any case, it is no substitute for the careful analysis of sufficiently disaggregated price movements nor for a thorough examination of the determinants of consumer price inflation, both of which are standard procedure in central banks.



by more than 17%. Since the standard deviation of inflation rates is computed across the respective preceding twelve-month period, the measure of volatility used here remains exceptionally high in the ensuing period as well. — 5 Measured in terms of the standard deviation of daily yields, the price volatility of petrol futures traded at the New York Mercantile Exchange shot upwards in September 2005 and, even now, is still above the corresponding indicator for comparable crude oil contracts – even though the situation has returned to a semblance

of normality. — 6 Assuming the same quantity of consumption applies, these higher inflation rates for US energy sources - deriving from lower prices - would have to be offset by a corresponding reduction in its weight in the overall index. The actual index weights, however, are quite similar to one another, suggesting a higher level of energy consumption in the United States. This means that the large variations in energy price volatility are also reflected noticeably in the margin of fluctuation for overall rates.

Euro-area consumer prices

Annual percentage change

Item	2005		2006	
	Q3	Q4	Q1	Q2
HICP, total	2.3	2.3	2.3	2.5
<i>of which</i>				
Energy	12.7	11.1	12.2	11.6
Unprocessed food	0.8	1.4	1.4	1.6
HICP excluding energy and unprocessed food	1.4	1.5	1.4	1.5
<i>of which</i>				
Industrial goods	0.1	0.3	0.4	0.6
Services	2.2	2.1	1.9	2.0
Processed food	1.8	2.2	2.0	2.2

Deutsche Bundesbank

rose by 0.4%, which was a somewhat steeper rise than before. This was triggered by higher prices for services (+0.5%), processed food (+0.4%) and industrial goods (+0.3% excluding energy). Overall HICP was therefore up in the second quarter by 2.5% on the

year, as against 2.3% in the first quarter. Finland (1.6%) and the Netherlands (1.8%) continued to have the lowest inflation rates, with Greece (3.4%), Luxembourg (3.7%) and Spain (4.0%) recording the highest. In July, the year-on-year euro-area HICP inflation rate came in at 2.4%. This somewhat more modest increase was due mainly to baseline effects in energy prices.

In recent years, energy price surges have not only fuelled the general trend towards rising inflation but also contributed to price volatility. Compared with the USA, euro-area consumer prices have fluctuated less intensely. If, however, energy is disregarded, the volatility of all other consumer prices has itself been subjected to quite hefty swings in recent years. Given these relatively shaky dynamics for HICP (excluding energy) over time, it is therefore doubtful whether the corresponding inflation rate can truly be referred to as a "core inflation measure", ie as an indicator of medium-term euro-area price pressure (see the notes on pages 18 and 19).

*Consumer price
volatility*