

## THE EUROPEAN ECONOMY: MACROECONOMIC OUTLOOK AND POLICY

### 1. Introduction

The world economy last year expanded somewhat faster than 2005. Economic dynamism shifted from the US towards Europe. After approximately three years of continued high growth, the US economy started to cool down markedly in 2006. As a consequence, the world economy has surpassed its peak and will decelerate somewhat during the next few months. The present slowdown of world economic growth will be temporary and quite modest. Partly due to the real depreciation of the dollar, US economic growth will start to speed up again from the second half of 2007 onwards.

The economic recovery in the European Union continued to gain pace last year. With a rate of 2.9 percent, the EU recorded the highest GDP growth since 2000. Output in the EU is expected to grow by 2.2 percent in 2007 and 2.5 percent in 2008. The growth gap between Europe and Japan, on the one hand, and the United States, on the other, will almost disappear this year.

The recovery of the European economy is largely driven by domestic demand. In 2006, private consumption increased notably almost everywhere. Improved labour market conditions and higher wages will further stimulate private consumption. Foreign demand began to show a somewhat weaker development during the second half of 2006. This will continue during the first part of 2007 and lead net exports to contribute negatively to GDP growth in 2007. In 2008, the stronger world economy will reverse this.

A topic that is regularly being discussed among ECB watchers is the stabilisation policy cost for individual countries of having a common monetary policy. This almost per definition implies that monetary policy is

inappropriate for some countries. This chapter provides stress indicators whose evolution over time shows how adequate the single monetary policy has been over the past eight years for each of the EMU member countries. Especially Ireland and Germany stand out for different reasons. Whereas Ireland shows the highest levels of overall stress and mostly would have preferred to have had higher interest rates, Germany suffered from too high rates. Furthermore, especially Germany appears to have received a lower political weight in monetary policy decisions of the ECB than suggested by its economic weight.

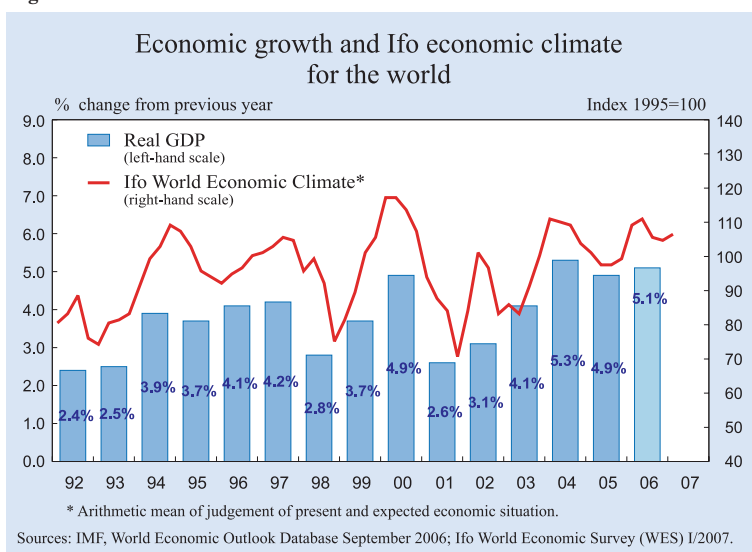
### 2. The current situation

#### 2.1 The global economy

With a growth rate of 5.1 percent for world GDP, the world economy last year expanded almost as fast as in 2004, the year of the highest growth since 1973. This was due to both structural and business cycle reasons. The trend growth rate of world GDP is, with roughly 4 percent during this decade, about one percentage point higher than during the 1990s. Especially the integration of fast growing emerging regions like China, India, Russia and Eastern Europe into the world trading system has brought this about. On top of that, the world economy in 2006 was in a global upswing for the third year in a row.

World GDP growth was able to keep its high pace due to high company profits, booming asset markets and low long-term interest rates. The oil price increase during the first part of 2006 restrained growth only marginally. In August, the price of crude oil reached a new record of 78 US dollars per barrel. It then sank to a level below 60 dollars at the end of 2006. The price increase substantiated the fears that investments of oil-producing countries to increase their oil supply were insufficient and that supply in the Near East remained insecure due to political tensions. The subsequent fall in the oil price indicates though that these fears have receded over time.

Figure 1.1



As Figure 1.1 shows, the Ifo Economic Climate Indicator for the world captures the dynamics of the world economy very well. Although this indicator fell during the second half of 2006, it is still well above its long-run average. The fall in the indicator is only due to reduced confidence with respect to future economic developments. The assessment of the current situation has been improving for five consecutive quarters now. The indicator therefore suggests that the world economy has just surpassed its peak and will decelerate somewhat during the next few months.

## 2.2 United States

During 2006, economic dynamism shifted from the US towards Europe. After approximately three years of continued high growth, the US economy started to cool down markedly after the first quarter of last year. During the last three quarters of 2006, annualised quarter-to-quarter growth rates of real GDP have been on average below 3 percent after having been at an average of 3.8 percent over the preceding twelve quarters. Mainly domestic factors seem to have caused this slowdown of the US economy. Due to an outstanding first quarter, US GDP growth in 2006 nevertheless reached 3.4 percent (after 3.2 percent in 2005).

The successive increase in short-term interest rates since June 2004 has dampened the real estate market. The boom in the US residential property market, which lasted until the end of 2005, was an important cause of high demand growth in previous years. Strong increases in residential prices since 2003 enabled households to reach consumption levels

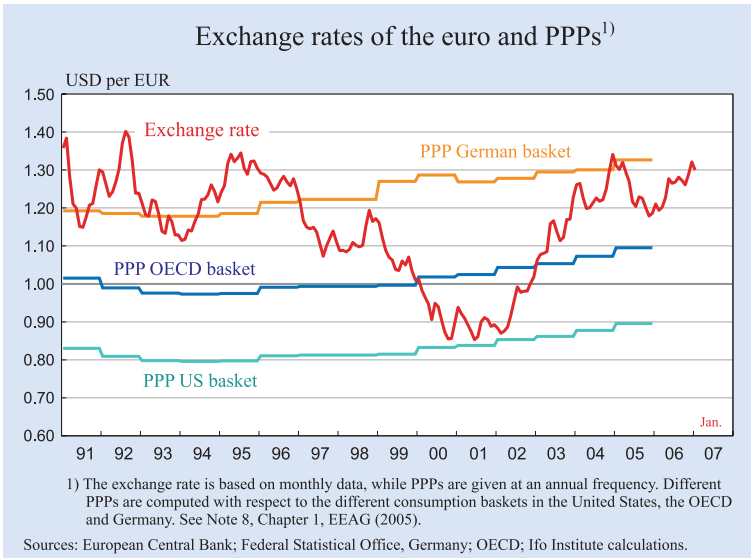
exceeding their current income for quite some time. Furthermore, since the beginning of 2002 the strong increase in residential investments has by itself contributed on average 1/2 percentage point to overall annual GDP growth. The strong increase in domestic demand and the large share of the US in world demand made the US the growth engine of the world economy. The long expected cooling down of the US real estate market last year led to a slowdown of its economy; the effects are already being felt by large parts of the rest of the world.

According to the Bureau of Economic Analysis (BEA), residential investment already started to decrease during the winter of 2005/2006. Especially from the second quarter of 2006 onwards, the decline has been quite pronounced. Accelerating growth in equipment and software investment as well as in industrial construction since the winter of 2005/2006 was not able to fully compensate for this. Due to increased firm profits and capacity utilisation rates, firms still report a high willingness to invest. Firms possess the necessary financial means and harbour positive sales expectations.

Positive developments in the labour market continued throughout 2006. According to household survey data, employment increased on average by 2.2 percent over the year. The unemployment rate has been falling continuously since mid-2003 and reached 4.5 percent by the end of last year. As a consequence, substantial wage increases occurred during the second half of 2006. Nominal wages in the business sector grew by 7 percent in 2006, which is more than during the new economy boom. In real terms, wages grew by 4 percent as at the end of the last millennium.

Despite the cooling down of real estate markets, private consumption again increased by more than disposable income in 2006. Hence, the savings ratio (personal savings as a percentage of disposable personal income), which turned negative during the first half of 2005, became even more negative (-1.3 percent in the third quarter of 2006). However, with an annual rate of increase of 3.1 percent, consumption did grow at a somewhat slower pace in 2006 than in the pre-

Figure 1.2



ceding two years (3.5 percent in 2005 and 3.9 percent in 2004).

The trade balance contributed positively to US growth during the first half of 2006. Exports – in particular those of investment goods, for example airplanes – expanded strongly at the beginning of the year. Subsequently, US exports became considerably less dynamic. In contrast, except for a slowdown in the second quarter, the growth of imports increased in 2006. Consequently, the current account deficit increased even further to 6.6 percent of GDP in 2006. The depreciation of the US dollar by approximately 10 percent during 2006 (see Figure 1.2) has so far hardly affected the trade balance.

The continued increase in the oil price until the summer of 2006 resulted in increased inflationary pressure. At its peak in June 2006, the rate of CPI inflation on a year-to-year basis was 4.3 percent. The subsequent decline in the oil price made inflation fall to 2.0 percent in November 2006. In contrast to 2005, core inflation (that is, the inflation rate corrected for the price developments of the volatile components energy and food) increased over the year, reaching a level of 2.9 percent in September but then fell to 2.6 percent in November and December 2006.

The Federal Reserve continued its policy of gradually raising interest rates – started in June 2004 – until June last year when the Federal Funds rate reached 5.25 percent. After that, the signs of a business cycle slowdown in the US induced the Federal Reserve to stop its policy of interest rate rises.

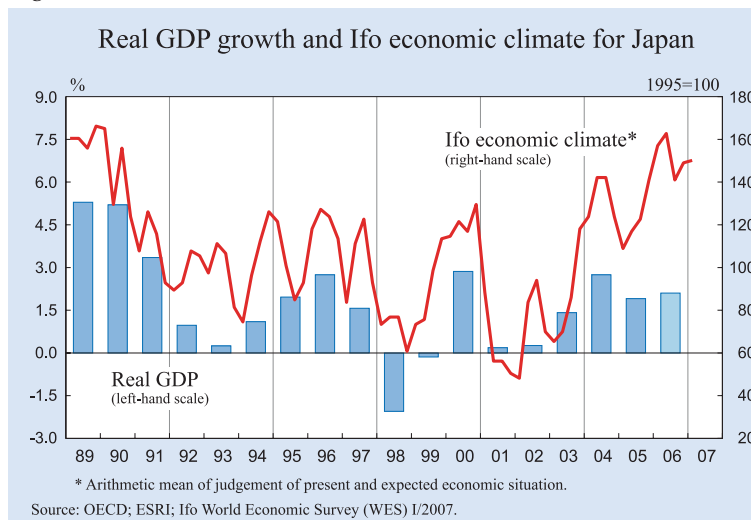
According to the Congressional Budget Office (CBO), the deficit of the US federal government during the fiscal year 2006 (which ended in September) was reduced by half a percentage point as compared to 2005 and amounted to 1.9 percent of

GDP. The most important reasons for this positive development were related to the business cycle; revenues from income and corporate taxes increased strongly by 11.8 percent and more than compensated for the extraordinary expenditure increase by 7.4 percent. The latter was mainly due to increased energy prices, a substantial rise in public health expenditures and the costs incurred by the hurricanes in the second half of 2005. 2006 expenditures to finance the US presence in Iraq and Afghanistan (111 billion US dollars) also clearly exceeded their 2005 level.

2.3 Japan, China and other Asian countries

As indicated by the World Economic Survey, in Japan the business cycle recovery continued at a somewhat

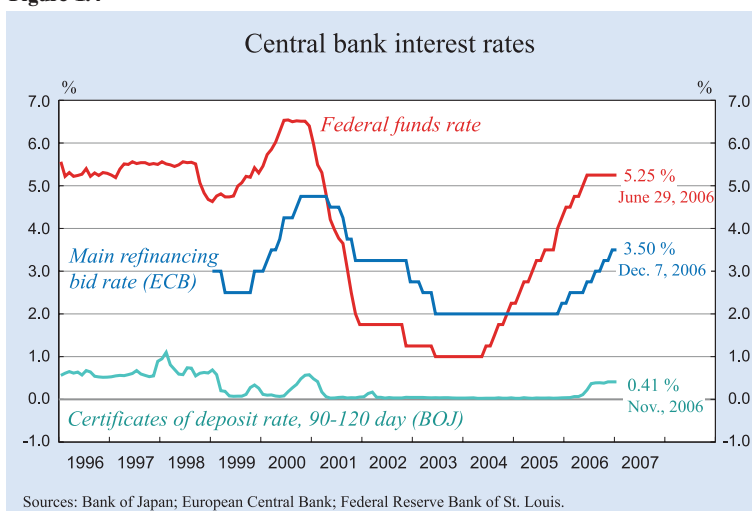
Figure 1.3



slower pace during the second half of 2006 (see Figure 1.3). In particular, the reduction in private consumption growth contributed negatively to real GDP growth. The main reasons for this retardation were a reduction in the real income of employees and exceptionally bad weather conditions in the third quarter – the quarter of the sharpest decline.

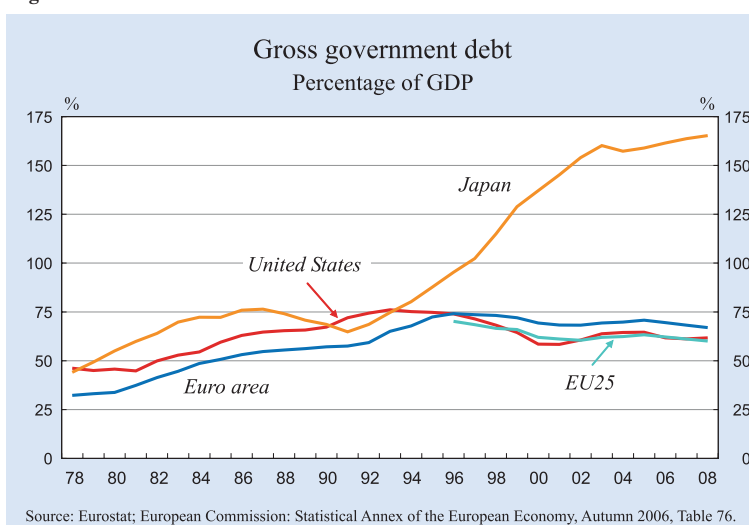
On the other hand, investment and exports became the growth engines. Especially private investment expanded strongly after having experienced only small increases in 2005. The increase in private investment by four percent last year was supported by higher firm profits. Increased exports and subdued imports made the balance contribute 0.8 percentage points to real GDP growth in 2006. According to preliminary estimates, real GDP growth will probably be 2.1 percent in 2006 (after 1.9 percent in 2005). As nominal GDP growth lies below the real growth rate, there still appears to be some deflation in terms of prices of domestically produced goods and services. Nevertheless, as compared to 2005, the problem of deflation has become smaller. The Consumer Price Index – focusing upon domestically consumed goods and services – even increased by 0.3 percent last year. Since early 2003, the unemployment rate has decreased by more than 1½ percentage points to 4.1 percent in July last year, where it has basically remained since.

Figure 1.4



Sources: Bank of Japan; European Central Bank; Federal Reserve Bank of St. Louis.

Figure 1.5



Source: Eurostat; European Commission: Statistical Annex of the European Economy, Autumn 2006, Table 76.

In July 2006, the Bank of Japan made its first interest rate move since September 2001 and thereby signalled its intention to normalise monetary policy. Since then the average interest rate on the certificates of deposit with a maturity of 180 days to one year has been close to 0.4 percent (see Figure 1.4).

The economic recovery was used by the Japanese government to reduce government spending, which is imperative, given the large (gross) public debt of over 160 percent of GDP (see Figure 1.5). Whereas government consumption only increased slightly last year, public investment experienced a strong decline.

The *Chinese* economy continues to grow very dynamically. On a year-to-year basis, economic growth in China reached a rate of approximately 10½ percent last year and thereby surpassed the upwardly revised figure of 10.2 percent for 2005. Industrial production growth is high, but rates of 20 percent in early 2006 have fallen to close to 15 percent at the end of the year. But then again, the annual growth rate of investment remains at around 30 percent. Especially in the urban areas, construction investment further increased its pace. The strong increase in retail trade sales indicates that also growth in private consumption increased further.

As growth is driven from the supply side and capacity continues to increase rapidly, inflationary pressures remain moderate. The CPI only increased by 1.4 percent during the period from January to November last year as compared to the same period in 2005. Also more restrictive monetary policy played a role here. The Peoples Bank of China raised interest rates for credits with a maturity of one year two times (in April and in August) by in total 54 basis points to a level of 6.12 percent. This was followed by other measures to reduce liquidity in the economy. For instance, the central bank enforced higher down payments for mortgage loans, issued central bank bills to commercial banks that have created excessive loans and increased reserve requirement ratios.

Exports and imports continued to grow at rates of roughly 25 and 20 percent respectively. The trade surplus reached 166 billion US dollars or more than eight percent of GDP in the first three quarters of 2006. Foreign exchange reserves exceeded the 1 trillion US dollar mark in October 2006. This made China, with a share of approximately 20 percent of world reserves, the country with the highest foreign exchange reserves in the world. Despite the move towards an exchange rate regime of managed floating in July 2005, the resulting pressure to reevaluate the renminbi has so far not induced much action on the part of Chinese authorities. During last year, only a small appreciation of slightly more than 3 percent against the US dollar took place.

In the other *East Asian* countries, that is *South Korea, Indonesia, Taiwan, Thailand, Malaysia, Singapore and the Philippines*, GDP during the first three quarters of 2006 on average grew by 5 percent in a year-on-year comparison. In the largest country of this group, *South Korea*, a slowdown in growth due to a weakening of private consumption is notable. Overall, the economic expansion in the region was driven by strong export developments. Lower prices of raw materials, especially oil, during the second half of last year contributed to moderate price developments. For that reason no further increases in interest rates occurred in the region.

#### 2.4 The rest of the world

With an average annual rate of GDP growth of 4.8 percent, *Latin America* continued to grow strongly in 2006. The increased raw material prices in the first half of last year and the associated terms of trade improvement for many of the countries in the

region was one important cause. Although increased domestic demand also stimulated imports, the aggregate current account again showed a substantial surplus in 2006. In addition, a less restrictive monetary policy in central economies like *Brazil* and *Mexico* stimulated investment. Based on increased real incomes, private consumption expanded as well.

Cyclical developments in *Russia* remained favourable. After a slow phase at the beginning of 2006, GDP growth picked up again, reaching approximately 6.5 percent on a year-to-year basis. In view of the terms of trade improvements, caused by increased prices of raw material and expansionary fiscal policy, domestic demand turned into the driving force of economic growth. Private consumption increased by 12 percent in 2006. High capacity utilisation rates have induced firms to increase investment expenditures since spring last year. Supported by high oil and gas prices, last year's government budget surplus almost reached the same record level of 7.5 percent of GDP as in 2005.

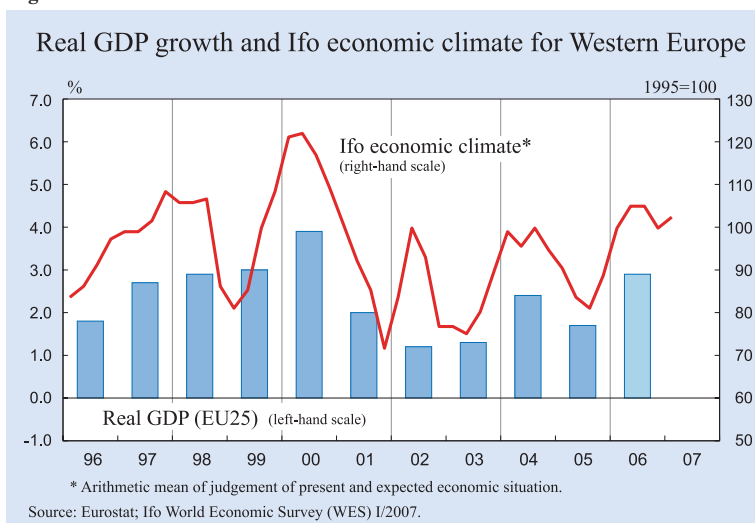
High growth in *Russia* also continued to exert a favourable influence in the labour market. The unemployment rate fell to 7.0 percent. After high inflation at the beginning of 2006, inflation pressures were subdued during the rest of the year. The annual rise of the CPI was 9.5 percent in 2006. This was the first annual rise below 10 percent since the fall of the Iron Curtain in 1989.

#### 2.5 The European economy

The economic recovery in the *European Union* that started in mid-2003, but lost some momentum during the winter of 2004/2005, continued to gain pace last year. With a rate of 2.9 percent, the European Union recorded the highest GDP growth since 2000. Annualised quarter-to-quarter GDP growth rates reached a peak of 3.9 percent in the second quarter of last year. As also indicated by the Ifo World Economic Survey, the second half of the year showed somewhat weaker growth (see Figure 1.6). This somewhat reduced growth was mainly due to developments in France, Germany and Italy. The British and Spanish economies continued to grow at similar rates as during the first half of 2006.

Overall, macroeconomic developments in the EU were more uniform during the last few years as compared to the 1990s or the first years of the new millennium. Nevertheless, growth differentials continued

Figure 1.6



to exist. These were mainly due to different developments in private consumption and residential construction, and to a lesser extent to differences in trade and business investment. In the somewhat faster growing economies like Ireland, Spain and the UK, rising prices in property markets gave rise to wealth effects stimulating private consumption. Consumer credit expanded strongly and the savings rate of private households declined. Further expected increases in real estate prices also stimulated residential investment in these economies.

The recovery in the European economy was largely driven by domestic demand (see Figure 1.7). With the exceptions of Germany, the Netherlands and Portugal, private consumption increased significantly everywhere, mostly reaching growth rates well above 2 percent in 2006. Even in Germany, where private

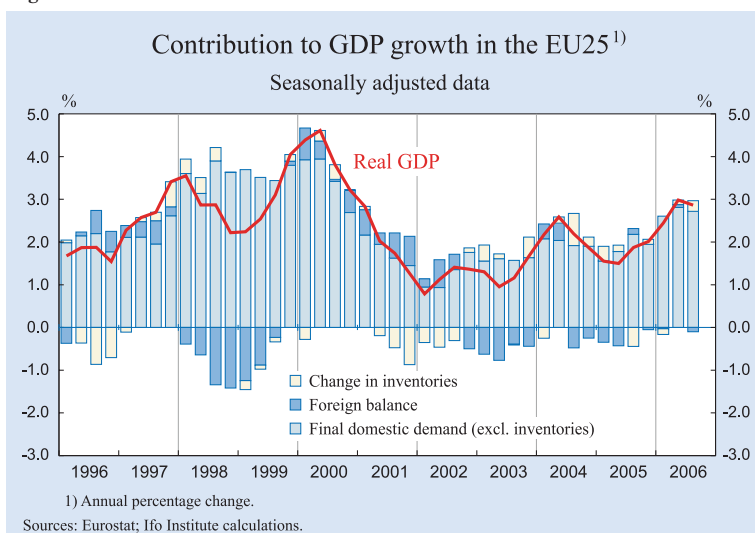
Not only investment but also foreign demand in the EU began to show a somewhat weaker development during the second half of the year. Nevertheless, exports grew strongly in 2006 by a rate of 8.5 percent. However, as imports also grew strongly, the trade balance only improved marginally (see Figure 1.8).

Accelerating employment growth, especially during the first semester, helped reduce the unemployment rate to 7.9 percent in both the EU and the euro area in 2006. Especially in Poland, Denmark, Germany, France and Spain, the reductions were substantial. The UK was the only EU country where the unemployment rate increased significantly in 2006. Although at the same time employment increased, it was insufficient to absorb the even bigger rise in the UK labour force due to migration (mainly from Eastern Europe) and increased labour force participation.

consumption basically stagnated since 2002, it grew by 0.6 percent last year.

A second important pillar of demand growth last year was private investment. Continued low long-term interest rates and improved firm profits led to further increases in growth of both residential investment and investment in machinery and equipment. However, deteriorated outlooks for the world economy started to restrain the willingness to invest somewhat during the second half of last year.

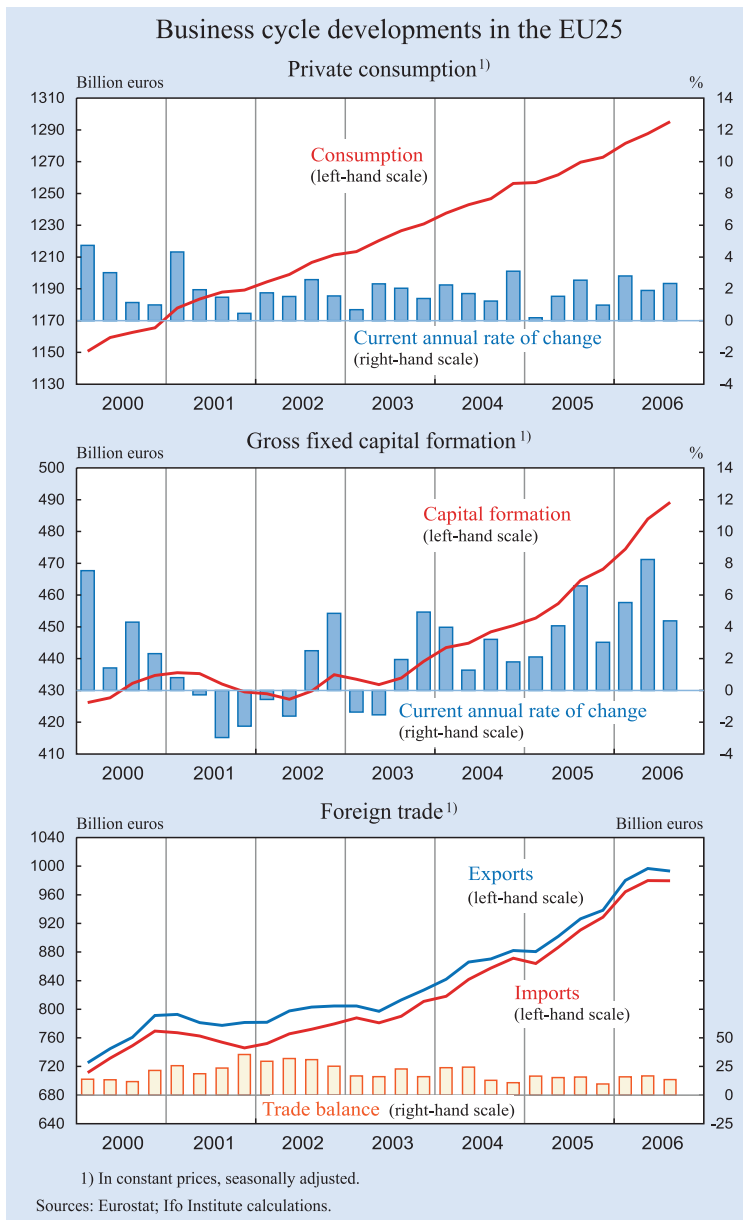
Figure 1.7



Measured by the harmonised consumer price index, headline inflation in the EU reached a peak of 2.4 percent in June last year (see Figure 1.9). After that, it fell back to 2.1 percent in November, as energy prices started falling. Inflation, excluding price changes for energy and unprocessed food, steadily increased to a rate of 1.5 percent during the year; Headline inflation in 2006 ended up at the same rate as the year before: 2.2 percent.

Overall, wages rose somewhat more last year than during the

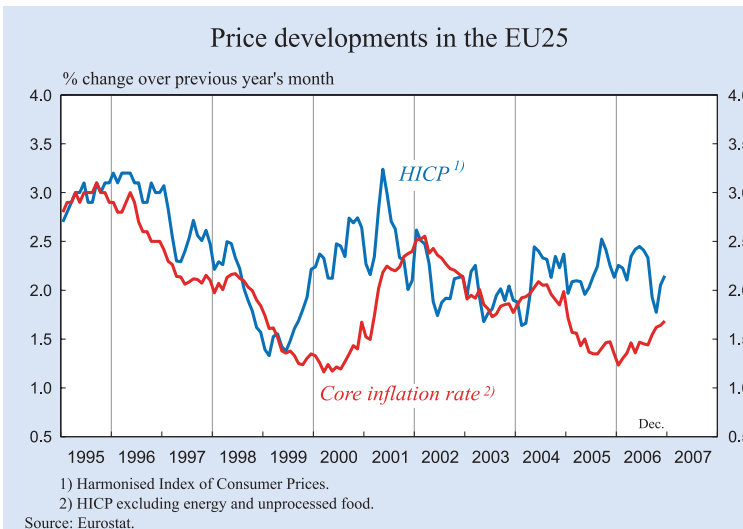
Figure 1.8



two preceding years (see Table 1.1). But with a nominal growth rate of 1.9 percent (compared to an average growth rate of more than 4 percent over all OECD countries), the increase can still be considered moderate. As in the previous years, there were substantial differences among European countries. In Germany and in the Netherlands compensation per employee in the business sector only rose by 0.6 and 1.6 percent, respectively. At the other end of the scale, in Hungary and in Poland, nominal wages increased by 5.8 and 4.7 percent, respectively.

In Germany, unit labour costs have risen by less than in most other European countries since the mid-1990s. The implied real exchange rate depreciation has led to expansionary impulses from foreign trade and has been important for improving the economic outlook for the country. Developments in Germany followed a similar course as earlier developments in the Netherlands and Denmark, which both opted successfully for a strategy of real depreciation via wage moderation in the 1980s.<sup>1</sup> In Sweden and Finland nominal exchange rate depreciation also induced export-led growth in the past (see Chapter 4 of this report).

Figure 1.9



On the other hand, Italy's and Portugal's relative unit labour costs within the EU have increased markedly. This explains why expansionary impulses from foreign trade have been lacking there for several years. For these countries, the loss of the exchange rate instrument in the monetary union could not – as hoped – be compensated by in-

<sup>1</sup> See Section 5.3 in Chapter 4 of this report for a discussion of the Danish case.

Table 1.1

**The development of various measures of wages and wage costs**  
Average annual changes in percent

		Nominal wage <sup>a)</sup>	Real wage <sup>b)</sup>	Labour productivity <sup>c)</sup>	Unit labour costs <sup>c)</sup>	Relative unit labour costs <sup>d),e)</sup>	Export performance <sup>f)</sup>
EURO	2003–05	1.6	-0.4	0.6	1.3	5.1	na
	2006	1.9	0.2	1.2	0.9	-1.1	na
DE <sup>g)</sup>	2003–05	0.6	-0.2	0.8	-0.5	-0.6	-1.1
	2006	0.6	-0.1	2.0	-1.5	-4.0	1.0
FR	2003–05	3.2	1.4	1.2	1.6	3.6	-4.9
	2006	3.0	1.3	1.3	1.7	0.2	-1.4
IT	2003–05	2.0	-0.7	-0.3	3.5	4.6	-6.8
	2006	3.4	1.3	0.2	3.7	2.7	-4.6
FIN	2003–05	3.1	2.8	2.1	1.1	3.0	-3.6
	2006	2.6	1.8	3.7	-0.6	-1.9	0.3
NETH	2003–05	1.6	0.1	1.7	0.6	2.9	-1.3
	2006	1.6	0.3	1.9	-1.0	-1.6	-0.7
IRE	2003–05	4.8	2.1	1.4	4.2	5.1	-2.3
	2006	4.5	1.7	0.9	5.0	-0.3	-3.7
ESP	2003–05	3.2	-0.9	0.5	2.9	2.0	-2.7
	2006	2.9	-0.7	0.7	2.5	0.7	-2.3
UK	2003–05	3.0	0.4	1.6	2.6	0.2	-2.5
	2006	3.6	1.3	1.7	2.9	1.6	3.8
SWE	2003–05	3.2	1.8	2.8	0.8	-1.6	0.0
	2006	2.9	1.7	2.6	0.0	0.1	-1.9
POL	2003–05	1.4	-1.0	3.4	0.2	-5.8	3.7
	2006	4.7	4.1	2.2	2.9	-0.5	3.6
HUN	2003–05	8.0	4.0	4.2	3.9	1.2	3.8
	2006	5.8	2.5	3.7	3.4	-4.2	3.9
USA	2003–05	3.6	0.9	2.4	1.6	-5.9	-2.1
	2006	7.1	4.2	1.9	4.3	-1.2	-1.0
JAP	2003–05	0.0	1.4	2.1	-2.6	-2.5	0.6
	2006	0.3	1.3	2.5	-1.0	-11.4	0.9

<sup>a)</sup> Business sector = Total economy less the public sector. – <sup>b)</sup> Nominal wage deflated by GDP Deflator. – <sup>c)</sup> Total economy. – <sup>d)</sup> Manufacturing sector. – <sup>e)</sup> Competitiveness-weighted relative unit labour costs in dollar terms. – <sup>f)</sup> Difference between growth rates of export volumes and export markets for total goods and services. A positive number indicates gains in market shares and a negative number indicates a loss in market shares. – <sup>g)</sup> The figures for Germany are compensations per employee and not wages.

Source: OECD Economic Outlook 80 database.

creased nominal wage flexibility. In a similar vein, the macroeconomic adjustment problems in Spain and Greece can at least partly be related to past real exchange rate appreciations within the euro area.

## 2.6 Fiscal and monetary policy

### *Fiscal policy*

For Europe as a whole, fiscal policy in 2006 was characterised by an aggregate budget deficit of 2.0 percent of GDP (see Table 1.2) as compared to 2.3 percent in 2005. This reduction is largely due to a stronger cyclical development than expected. The improved business cycle conditions over several quarters have led to higher firm profits and higher wage incomes, which both have increased government revenues. Firm profits have increased even more than what is usual in upswings. Despite the improved business cycle conditions, leading to in particular lower welfare spending, overall government expenditures increased slightly in most countries.

Whereas in 2005 the Czech Republic, Germany, Greece, Hungary, Italy, Malta, Portugal, the Slovak Republic and the United Kingdom all had budget deficits above the Maastricht ceiling of three percent of GDP, at least Germany and Greece managed to stay below this level in 2006. The fiscal policy stance differed substantially among European countries. Whereas the stance in Portugal turned quite restrictive last year, fiscal policy in some other countries like Denmark, the Netherlands, and Ireland – not faced with substantial budgetary problems in the medium run – became somewhat more expansionary in 2006. In Italy, the general government budget deficit increased to 4.7 percent from 4.1 percent of GDP in 2005. The explanation was a one-off refund of VAT receipts amounting to 0.9 percent of GDP.

### *Monetary conditions and financial markets*

The ECB has since December 2005 increased its main refinancing rate in six steps by in total 1.5 percentage points to a level of 3.5 percent at the end of last year.



Table 1.2

## Indicators of the public budgets in the EU 27

	Gross debt <sup>a)</sup>					Fiscal balance <sup>a)</sup>				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Germany	63.9	65.7	67.9	67.8	67.7	-4.0	-3.7	-3.2	-2.3	-1.6
France	62.4	64.4	66.6	64.7	63.9	-4.2	-3.7	-2.9	-2.7	-2.6
Italy	104.3	103.9	106.6	107.2	105.9	-3.5	-3.4	-4.1	-4.7	-2.9
Spain	48.7	46.2	43.1	39.7	37.0	0.0	-0.2	1.1	1.5	1.1
Netherlands	52.0	52.6	52.7	50.5	47.8	-3.1	-1.8	-0.3	0.0	0.1
Belgium	98.6	94.3	93.2	89.4	86.3	0.0	0.0	-2.3	-0.2	-0.5
Austria	64.6	63.8	63.4	62.1	60.9	-1.6	-1.2	-1.5	-1.3	-1.2
Greece	107.8	108.5	107.5	104.8	101.0	-6.1	-7.8	-5.2	-2.6	-2.6
Finland	44.3	44.3	41.3	38.8	37.3	2.5	2.3	2.7	2.9	2.9
Ireland	31.1	29.7	27.4	25.8	24.4	0.3	1.5	1.1	1.2	0.9
Portugal	57.0	58.6	64.0	67.4	69.4	-2.9	-3.2	-6.0	-4.6	-4.0
Slovenia	28.5	28.7	28.0	28.4	28.0	-2.8	-2.3	-1.4	-1.6	-1.6
Luxembourg	6.3	6.6	6.0	7.4	7.3	0.3	-1.1	-1.0	-1.5	-0.5
Euro area	69.2	69.7	70.6	69.4	68.0	-3.1	-2.8	-2.4	-2.0	-1.5
United Kingdom	38.9	40.4	42.4	43.2	44.1	-3.3	-3.2	-3.3	-2.9	-2.8
Sweden	51.8	50.5	50.4	46.7	42.6	0.1	1.8	3.0	2.8	2.4
Denmark	44.4	42.6	35.9	28.5	24.5	1.1	2.7	4.9	4.0	4.3
Poland	43.9	41.8	42.0	42.4	43.1	-4.7	-3.9	-2.5	-2.2	-2.0
Czech Republic	30.1	30.7	30.4	30.9	30.8	-6.6	-2.9	-3.6	-3.5	-3.6
Hungary	58.0	59.4	61.7	67.6	70.9	-7.2	-6.5	-7.8	-10.1	-7.4
Slovakia	42.7	41.6	34.5	33.0	31.6	-3.7	-3.0	-3.1	-3.4	-3.0
Lithuania	21.2	19.4	18.7	18.9	19.6	-1.3	-1.5	-0.5	-1.0	-1.2
Cyprus	69.1	70.3	69.2	64.8	62.2	-6.3	-4.1	-2.3	-1.9	-1.7
Latvia	14.4	14.5	12.1	11.1	10.6	-1.2	-0.9	0.1	-1.0	-1.2
Estonia	5.7	5.2	4.5	4.0	2.7	2.0	2.3	2.3	2.5	1.6
Malta	70.2	74.9	74.2	69.6	69.0	-10.0	-5.0	-3.2	-2.9	-2.7
EU25	62.0	62.4	63.3	62.5	61.4	-3.0	-2.7	-2.3	-2.0	-1.6
Romania	21.5	18.8	15.9	13.7	13.9	-1.5	-1.5	-1.5	-1.4	-2.6
Bulgaria	46.0	38.4	29.8	25.8	21.8	0.3	2.7	2.4	3.3	1.8

<sup>a)</sup> As a percentage of gross domestic product.

Source: European Commission.

This implies an increase of the real short-term interest rates to close to two percent (see Figure 1.10). The real effective depreciation of the euro in 2005 was to a large extent corrected again last year (see Figure 1.11). This appreciation of the euro implied more restrictive monetary conditions for the euro area last year. On the other hand, long-term interest rates

have decreased somewhat since the middle of last year, coming down from a level of 4.1 percent to 3.9 percent at the end of the year (see Figure 1.12). But overall, monetary conditions have become tighter over time.

Despite further increases in oil prices in the first semester of last year, no significant inflation pressure has arisen. So-called second-round effects have been very modest. Even in the service sector, which is in general more sheltered from international competition than the manufacturing sector, price increases have been stable. However, as the economic upswing became more and more supported by domestic demand, the risks for medium-term price stability did increase over time.

With a growth rate of about 8 percent on a year-to-year basis, M3 money supply increased

Figure 1.10

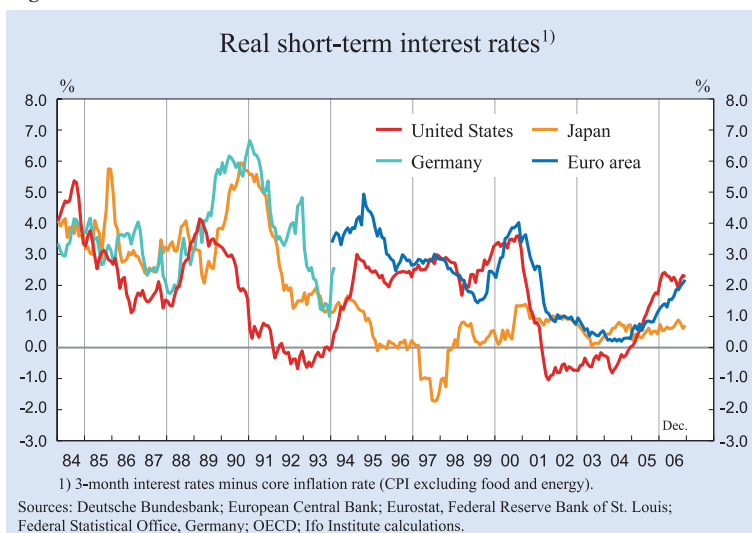
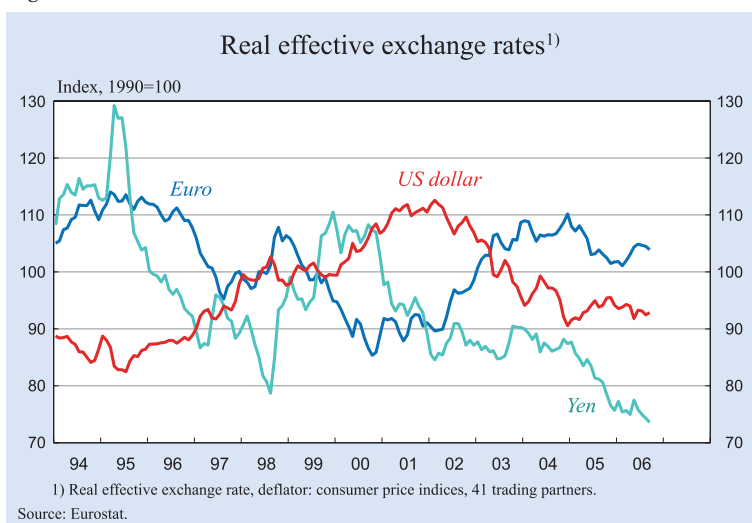


Figure 1.11



faster than the years before (see Figure 1.13). Last year was the sixth consecutive year in which M3 growth exceeded the ECB reference value of 4.5 percent. Credits to firms were one important cause of this. On a year-to-year basis, firm credits increased by more than 12 percent during the second half of last year. However, on a month-to-previous-month basis, there was a dampening of the dynamism starting in April 2006. Although residential construction loans continued to increase by double-digit rates, its rate of increase has been falling since the beginning of 2006. Consumption credit growth shows a similar – although somewhat less pronounced – tendency but with a lag of roughly half a year.

In the UK, the slowdown in economic growth induced by a cooling real estate market in 2005 was quickly overcome. The Bank of England consequently re-

versed its interest rate cut of August 2005 one year later. In November 2006, a second interest rate increase of 25 basis points was decided. With the surprise move, for many, of a hike of another 25 basis points on 11 January this year, the official bank rate paid on commercial bank reserves was raised to 5.25 percent.

Despite robust growth and strong increases in energy prices, long-term inflation pressures hardly appear to be a concern for financial markets. Except for May and June, in which there was a substantial setback, European stock markets rose throughout 2006 (see Figure 1.14). High profits and still low interest rates were the driving forces. As in the past three years, the Euro Stoxx 50 and the German DAX share indices, with growth rates of approximately 20 percent, outperformed the Dow Jones, which gained roughly 15 percent.

### 3. The economic outlook for 2007 and 2008

#### 3.1 The global economy

Given the slightly less optimistic expectations as reported by participants in the Ifo World Economic Survey, world economic growth is likely to slow down somewhat during the first half of 2007.

The substantial reduction in economic growth in large parts of the world experienced after 2000 might raise fears that the present turnaround of the business cycle will also be a sharp one (see Figure 1.1). The slowdown at the time was affected, firstly, by the rapid increase in energy prices. Secondly, the central banks in Western Europe had tightened monetary policy to stem the danger of inflation. Last but not least, the world economy weakened significantly as the boom in the US came to a sudden end. The terrorist attacks on 11 Sep-

Figure 1.12

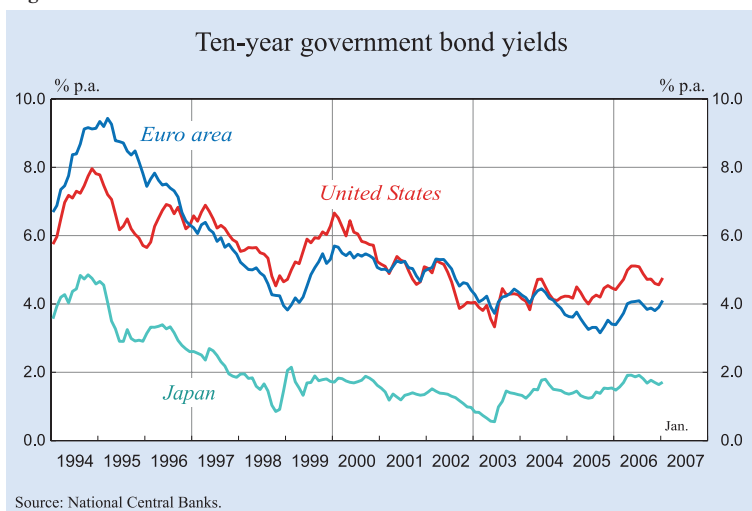


Figure 1.13

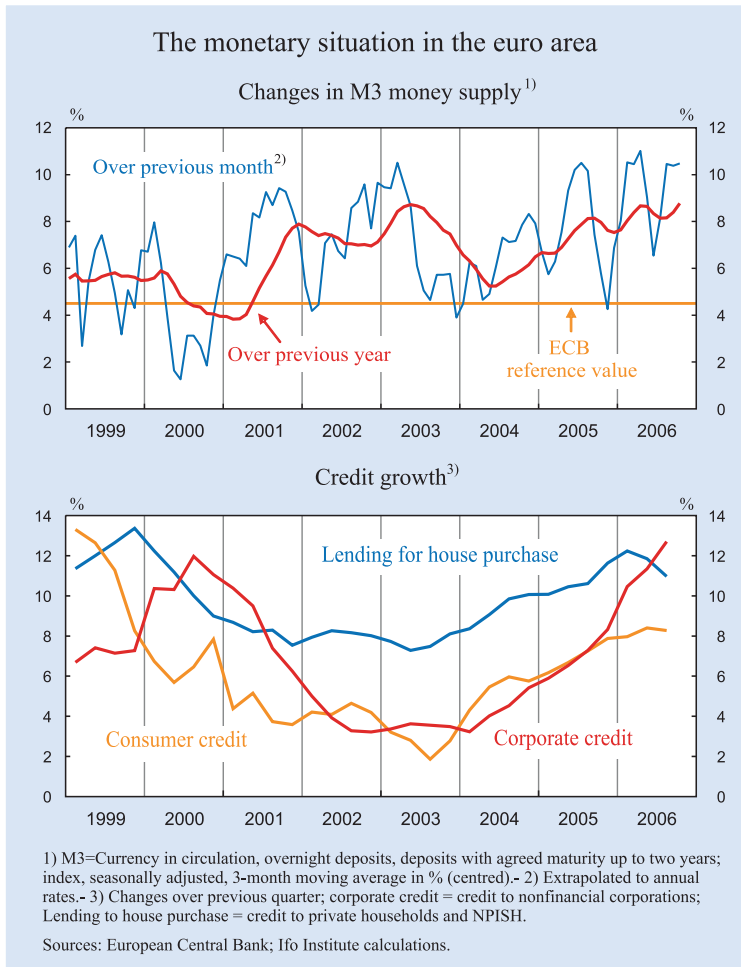
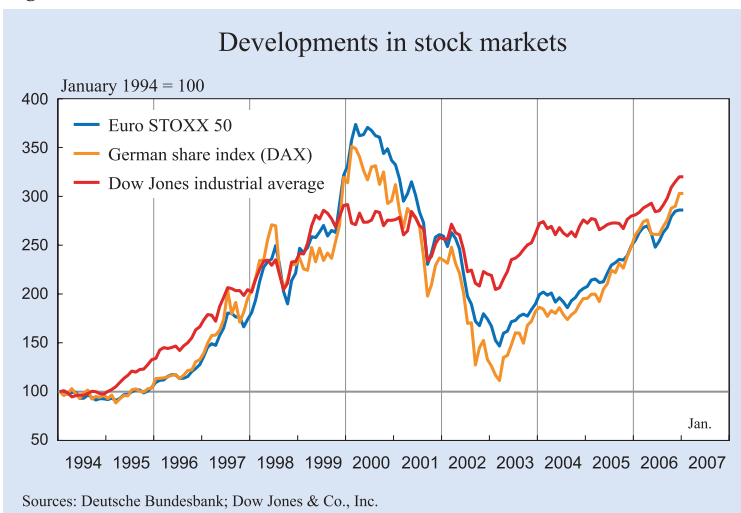


Figure 1.14



tember caused an additional shock to business and consumer confidence in the global economy.

This time around it is not likely that we will see similar developments. First, the oil price nowadays appears to move rather pro- than anti-cyclically (see

Figure 1.15 and Chapter 1 of the 2006 EEAG report). Although further increasing demand will keep raw material and oil prices high and volatile, on average, we assume the oil price will stay close to 60 US dollars per barrel over our two-year forecasting horizon.

Secondly, interest rates in the US and in Europe are likely to have reached or even passed their peaks. During 2007, we expect the US Federal Reserve to decrease its key interest rate in two steps to a level of 4.75 percent and maintain this rate until the end of 2008. Given the still prevalent inflation worries, the first step is not likely to be taken before the end of spring. The ECB will leave the main refinancing rate at its present level throughout the forecasting period.

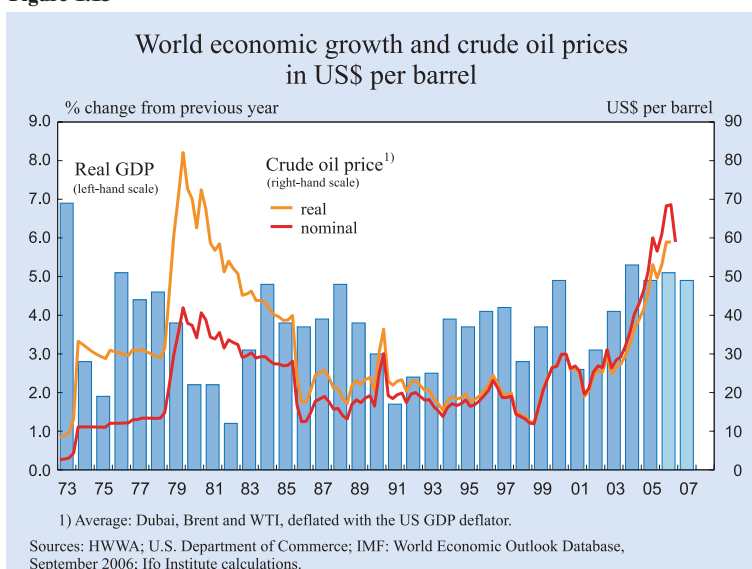
Finally, geo-political tensions do not appear to be increasing at this stage. Hence, most likely the present slowdown of world economic growth will be temporary and quite modest: We expect world economic growth slightly below 5 percent both this and next year, which is above the trend rate of growth.<sup>2</sup> After having grown by 8.5 percent last year, world economic trade will increase by 7.5 percent in 2007 and 8 percent in 2008.

We expect that the dollar will continue to depreciate and at the end of 2007 reach 1.40 dollars per euro. The average rate was 1.26 in 2006. At the end of 2006, the euro stood at 1.32. We

see three reasons for a continued depreciation of

<sup>2</sup> These growth rates are based on purchasing power parity conversions as done by the IMF. Table A2 in Appendix 1 reports growth rates using weights based on nominal GDP in US dollars. See IMF (2003) for more details.

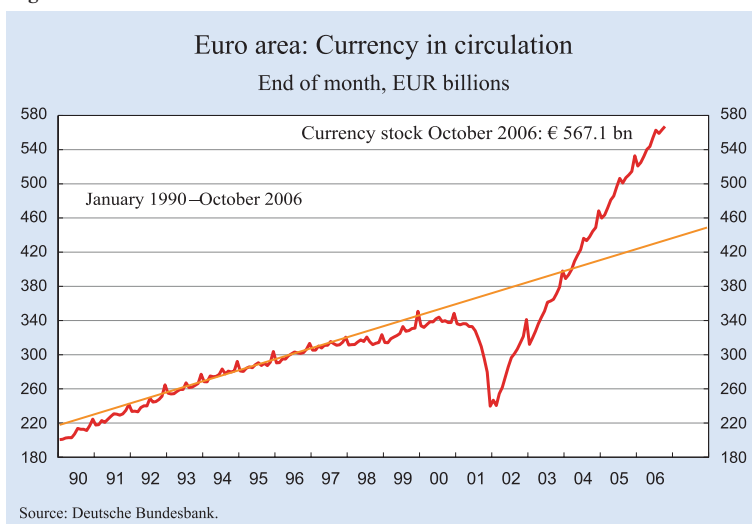
Figure 1.15



the dollar. Firstly, the positive short-term interest rate differential between the US and the euro area will become smaller when the Fed starts to cut interest rates. Secondly, looking at how quickly the amount of euro coins and notes have increased over the last few years makes it clear that the euro is more attractive than its predecessor – the Deutsche Mark – ever was (see Sinn and Westermann 2005 and Figure 1.16).<sup>3</sup> Both arguments imply a relatively less attractive dollar as compared to the euro. Thirdly, a necessary condition for ultimately resolving the US current account problem is a depreciation of the dollar.

Note that we do not assume a scenario here in which financial investors suddenly withdraw from the US and thereby trigger a much sharper depreciation of

Figure 1.16



the US dollar and most likely initiate a worldwide recession. On the contrary, we expect equity markets to remain stable and a soft landing of the US, and thus also the world economy.

### 3.2 United States

Initially, the US will continue to lose growth momentum. Private investment will be weak throughout the first half of this year. Falling residential construction is mainly responsible for this. As the number of homes sold started to stabilise in the second half of last year, residential investment is likely to stabilise during the second half of this year and 2008.

Recent wage increases and improved labour market conditions will allow private consumption to continue to support US growth. This is likely to be the case despite the negative wealth effects associated with the cooling off of the housing market. Continued high growth in machinery and equipment investment will also cushion the temporary slowdown.

As important trade partners of the US, like Japan and the EU, will also suffer some temporary fallback in growth, US exports will first continue to grow at only a moderate rate. However, the real depreciation of the US dollar together with improved cyclical conditions in Japan and the EU will stimulate US exports over time. Due to the decline in energy prices during the

second half of last year, the value of imports will initially increase at a slower pace. The consequence will be a slowly improving current account situation, with deficit levels of 6.4 and 6.3 percent of GDP in 2007 and 2008, respectively.

Hence, US economic growth will start to speed up again from the second half of 2007 onwards. After growth of 3.4 percent last

<sup>3</sup> According to the Financial Times (27 December 2006), the value of euro notes in circulation currently exceeds the value of circulating US dollar notes.

year, GDP will grow by 2.5 percent in 2007 and 2.8 percent in 2008. The unemployment rate will initially tend to increase somewhat. On average it will reach 4.9 percent in both 2007 and 2008.

The inflation rate will initially come down due to a so-called base effect, that is, the price increases due to earlier oil price increases will cease to affect the year-on-year inflation rate. After that, and following the business cycle improvement, inflation will increase slightly again. On average it will reach 2.7 percent in 2007 and 2.6 percent in 2008.

For fiscal 2007, the economic slowdown will reduce government revenues in the US. Furthermore, it is questionable whether or not the announced budget cuts will be sufficient to counteract the sharply increasing health expenditures. Therefore, the US government deficit will increase somewhat during 2007 and 2008 to a level of approximately three percent of GDP in 2008.

### 3.3 Japan, China and other Asian countries

In *Japan*, increased firm profits and a tightening of the labour market will improve household incomes this year. This will stimulate private consumption considerably. The slowdown of the world economy will reduce export growth and investment. Also, reinforced fiscal consolidation efforts will result in a negative growth contribution from public spending (see Figure 1.17). Overall, GDP will grow by 2.0 percent this year. A small increase in both consumer and producer prices will induce the Bank of Japan to gradually tighten its monetary policy by raising interest

rates. Improved business-cycle conditions in the US will stimulate Japanese exports in 2008 and allow GDP to then grow by 2.2 percent.

It is still the objective of the *Chinese* government to decrease income disparity between rural and urban areas, which, via lower saving rates, will stimulate private consumption growth. This together with strong investment will counteract slower export growth caused by the world economic slowdown. GDP growth will slightly decrease to 10 percent per year. So far, there are no signs that the Chinese economy is overheating. Inflation will remain somewhere between 1 and 2 percent. Downside risks in China include an escalation of the trade and exchange rate disputes with the US and the EU. Increased Chinese imports following from the domestic policy to decrease income disparities could help soften the disputes.

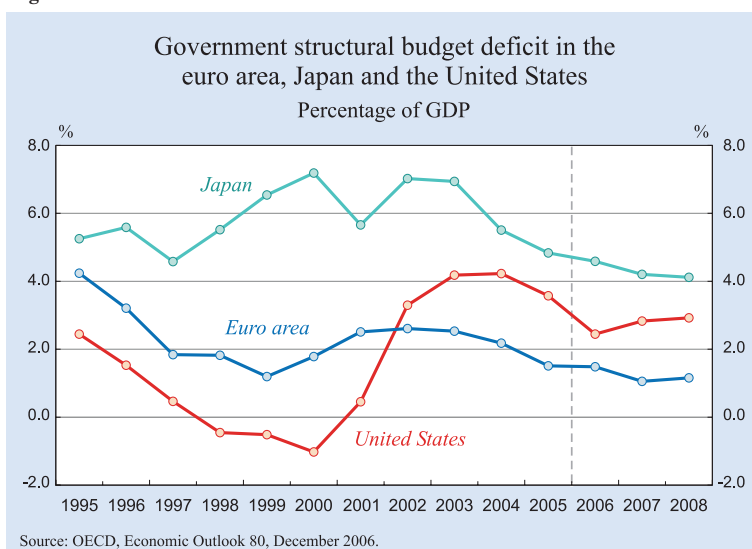
In the remaining *East Asian* countries, that is, *South Korea, Indonesia, Taiwan, Thailand, Malaysia, Singapore and the Philippines*, GDP growth rates in 2007 and 2008 will fall to around 4.5 percent (after having been 5.2 percent last year). The economic slowdown in the main trading partner countries and the somewhat increased political uncertainty in the region associated with, for instance, North Korean nuclear armaments are the underlying causes of this.

### 3.4 The rest of the world

As compared to last year, the economic expansion in *Latin America* will only slow down moderately. GDP growth will reach 3.8 percent in 2007 and 4.0 percent in 2008. In *Brazil*, domestic demand will be largely supported by private consumption. Increases in social welfare spending and in real incomes will more than compensate for reduced growth in export demand caused by the weaker expansion of the world economy and in particular the US. In *Mexico*, such compensating domestic factors are largely lacking, implying a fall in growth from 4.7 percent last year to 3.5 percent in the subsequent two years.

Over the forecasting period, the *Argentinean* economy will also

Figure 1.17



slow down. The recovery after the severe economic crisis in 2002 is coming to an end. Furthermore, in many areas production is reaching full capacity limits. Inflation will keep on falling and be 9.5 percent in 2007 and 6.5 percent in 2008. GDP growth will be around 6 percent in both years (after being close to 8 percent last year).

In *Russia*, GDP growth is expected to reach 6.0 percent in both 2007 and 2008. Trade will continue to increase and, as last year, imports will expand more strongly than exports. Due to the large amount of raw

materials in Russian exports, the actual development of the trade balance to a large extent depends on price developments in oil and gas markets. The unemployment rate will fall somewhat further to 6.4 percent in 2008. Despite continued increases in fiscal spending and the lower oil prices at the end of last year, we expect the substantial government budget surplus of 6.5 percent of GDP to only fall slightly. The government intends to use the surplus to reduce taxes, increase infrastructure investment, reform the education and health sectors and increase foreign-exchange reserves. Inflation will continue to decline. Although

### Box 1.1

#### The US current account deficit

In this year's forecast, we assume that the slowdown of the US economy, together with a moderate but continuous depreciation of the dollar, will gradually reduce the US trade and current account imbalances. Here, we shortly summarise the arguments put forward to explain the large US current account deficit, which stood at 6.6 percent of GDP in 2006, and point out that almost independently of the theoretical framework used, a depreciation of the US dollar appears inevitable. As a consequence, the European economy would be negatively affected. The Box is a follow-up of Chapter 2 of the 2006 EEAG report.

The large and still increasing current account deficit of the US is mainly being financed by Japan and China, some European countries and to an increasing extent the oil-exporting world. There is now a broad consensus about the following three proximate causes of current imbalances.

- Both private and government savings in the US have fallen over time and imply low total national savings. The asset market boom up to 2001 and increasing residential prices since then have created wealth effects that allowed private consumption to increase faster than disposable income.
- The US current account deficit is a mirror image of high savings in the rest of the world and/or low worldwide investment. For instance, the increased urge to save for retirement, as current pay-as-you-go systems in many countries are becoming unsustainable, might have led to increased savings and thereby low real interest rates.
- There is a strong preference by investors elsewhere for US assets. One reason might be that markets continue to expect sustained high productivity growth in the US. Another explanation is Asian exchange rate policies that hold local currencies at artificially low values against the dollar.<sup>a)</sup> Finally, political risks in many countries might cause people to instead invest in a safe haven like the US.

These factors together can explain the combination of current account imbalances, the strong dollar, low world real interest rates, and the low expected returns on US assets we are observing.<sup>b)</sup> While there is considerable debate on the extent to which the current pattern of global trade imbalances in general, and the US current account deficit in particular, should be cause for concern, there is little doubt that the US cannot run a current account deficit of 6.6 percent of GDP indefinitely.

By definition, a reduction in the US current account deficit must be accompanied by an increase of US (private and/or public) savings relative to that of the rest of the world, that is, spending must increase in the rest of the world relative to the US. The implication is a slowdown of the US economy, a realignment of international relative prices, or both. Hence, all scenarios involving a narrowing of the US trade deficit are characterized by a depreciation of the dollar in real effective terms.

Looking at the fairly small bilateral trade volumes of Europe with the US, one could get the impression that the direct macroeconomic impact of a slowdown (or a switch in expenditures away from imports towards domestically produced goods) in the US on Europe through the trade channel would be small. However, an inspection of bilateral trade volumes understates the full impact of the trade channel. US and European firms compete in third markets, and an expansion in US exports triggered by a dollar depreciation would pose a competitive threat to European exporters. Furthermore, trade relations between the US and EU member countries differ substantially. These asymmetries in trade patterns imply that not all countries would be affected to the same extent.

In addition to trade linkages, the weakening of the US dollar would have a non-negligible negative wealth effect on European investors by reducing the value of their dollar-denominated claims.<sup>c)</sup> There is considerable heterogeneity across Europe both in terms of net asset positions and financial holdings in the United States. Accordingly, to the extent that a correction of global imbalances produces a shift in the financial environment (for example an increase in world interest rates), as well as in US asset values and the euro-dollar exchange rate, this probably will have differing effects across Europe.

<sup>a)</sup> As discussed in Chapter 2 of the 2006 EEAG report, the cause might be the desire of Asian countries to follow a path of export-led growth and to build up foreign exchange reserves for precautionary reasons. In this way they hope to avoid situations like those that occurred in the Asian crisis of 1997–98.

<sup>b)</sup> For more discussion, see, for instance, Bernanke (2005), Blanchard et al. (2005), Caballero et al. (2006) or Chapter 2 of the 2006 EEAG report.

<sup>c)</sup> Lane and Milesi-Ferretti (2006) estimate the impact of currency realignments on net external positions using different scenarios. In their scenarios involving "large" currency movements in the short run, exchange-rate-induced capital losses are – with around 5 percent of GDP – significant for the euro area, but much smaller than for China and Japan.

part of the government revenues generated by the high oil price is “sterilised” in a stabilisation fund, the central bank will nevertheless hardly be able to meet its own inflation targets of 8.5 percent this year and 5.5 in 2008. We expect inflation to be 9 percent this year and around 7½ percent in 2008.

### 3.5 Risk and uncertainties for the world economy

Our forecast above depicts the most probable scenario for the world economy. As always, there are up- and downside risks. On the upside, the US economy could swing back to its previous high growth path more quickly than laid out here. Decreasing oil prices together with a looser monetary policy stance might bring this about. But most of the risks to the presented forecast scenario are on the downside. We assume no worsening of the geopolitical situation, a more or less stable oil price and no abrupt depreciation of the US dollar. If, for instance, energy prices were to increase instead, this might lead to higher wage demands. In such a scenario, to remain credible monetary policy is bound to respond by taking a restrictive course. Furthermore, we have assumed that the demand-reducing effects caused by the fall in house prices in the US will be moderate. However, the economic slowdown and developments in the housing market might reinforce each other, leading to a much stronger fallback in US economic growth.

The expectation of only a moderate slowdown of the world economy rests on fairly optimistic assumptions regarding US economic developments and the path towards the elimination of existing global imbalances. If the US were to slide into a more severe recession instead of what is implied by the soft landing scenario, the entire world economy would be affected. The mechanism could be both reduced demand from the US and disappointed investor growth expectations. Financial markets might no longer be willing to extend credit to the US, thereby triggering a sudden capital flow reversal. The consequence could be an abrupt depreciation of the dollar and a lowering of US prices relative to the rest of the world. In such a scenario, the dollar would depreciate substantially, the risk premium on financial markets would sharply increase and the real estate market in the US could collapse. But at present, financial markets seem largely to believe in the soft landing scenario. However, there is a risk in taking too much comfort from this. Financial crises in the past, mainly in emerging market economies, show that financial markets tend to accept unsustainable developments for a long time

before suddenly reacting to them. (See Chapter 5 of the 2004 EEAG report as well as Chapter 2 of the 2006 EEAG report.)

### 3.6 The European economy

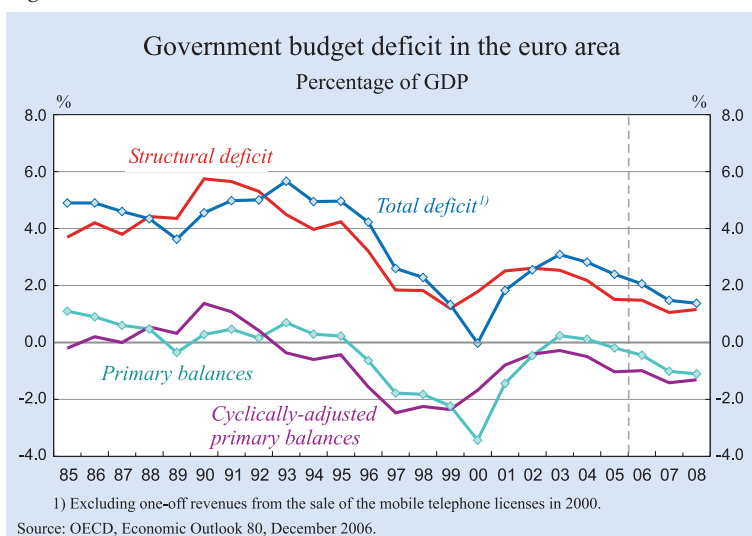
Last autumn, the ECB signalled increased inflationary pressures due to the oil price increases and the improving performance of the European economy. Improved labour markets may increase wage pressure. Furthermore, in 2006 the ECB on several occasions adjusted its projections upward for both economic growth and inflation. However, given the moderate slowdown of the world economy, stable inflation expectations in Europe and the appreciation of the euro, the ECB is likely to keep its refinancing rate at the prevailing level. After the somewhat unexpected interest rate increase by the Bank of England last January, it is also likely that short-term interest rates will not change very soon in the UK either.

Due to the assumed appreciation of the euro and the decline in the inflation rate, which tends to raise the real interest rate, overall monetary conditions in the euro area in 2007 will become less accommodative than last year. The same holds for the UK, the largest EU economy outside the euro area.

Long term interest rates – as measured by the ten-year government bond yield – will more or less remain at the present level of approximately 4 percent, keeping the yield curve relatively flat.

The stance of fiscal policy in Europe is assumed to become somewhat less accommodative as structural deficits in several countries are expected to decline (see Figure 1.18). Although last autumn, the EU Economic and Financial Affairs (Ecofin) Council decided to effectively extend the deadline for Germany to correct its excessive deficit, the new German government took action to reduce the deficit below three percent of GDP. The increase in VAT by 3 percentage points on 1 January this year is the cornerstone of this policy towards fiscal consolidation (see Box 1.2). Although part of the generated tax revenues will be used to decrease ancillary wage costs, fiscal policy in Germany has become contractionary this year: The structural deficit will be reduced by more than ½ percentage point of GDP to around 1 percent of GDP. The actual deficit will fall this year to 1.6 percent of GDP, as compared to 2.3 percent of GDP last year (see Table 1.2).

Figure 1.18



Other countries where fiscal policy will also be contractionary this year due to efforts to reduce the structural deficits include Italy, Greece, Portugal and Hungary. As with Germany, Italy will also try to consolidate public finances by increasing tax revenues. Instead of raising the VAT – as in Germany – income tax progressivity has been increased. However, as tax revenues appear to have surpassed expectations last year, resistance to tax increases seems to be rising. The initially scheduled reduction in the budget deficit by 35 billion euros (close to 2.4 percent of GDP) for

**Box 1.2****The German VAT increase**

The government has raised the standard VAT rate by 3 percentage points from 1 January 2007. Under the assumption that this tax increase is fully shifted on to prices, the CPI will rise by 1.5 percent. At the same time, the social security payroll contributions have been reduced by 1.3 percentage points: health insurance contributions have increased by 0.6 percentage points, pension insurance contributions by 0.4 percentage points, whereas unemployment insurance contributions have decreased by 2.3 percentage points. Since employers and employees each pay half of total social security contributions, labour costs will decline by about 0.5 percent and net nominal wages will increase by 1 percent. If the decrease in employers' contributions is fully reflected in prices, the combined effect of the VAT increase and the reduction of social security contributions on products sold in Germany will be about 1¼ percent. This implies that the real net wage of employees who are subject to social security contributions will decline by only a small amount of about ¼ percent. Civil servants, retired persons, the self-employed and the unemployed will not gain from the reduction of the employee's social security contributions but will suffer from the net price increase: Their real income will decline by 1¼ percent.

The fiscal reform package concerns several other areas: savers' tax-free amount, the private home owner allowance and commuter tax deductions. There are further reductions in subsidies and a tighter means-testing for unemployment benefits. All in all, the fiscal package will reduce the disposable income of the private sector by slightly less than 0.8 percent of GDP. If one includes in addition the reduction of the wage bill in the public sector and some other minor measures undertaken, disposable private income will be reduced by more.

The fiscal package will reduce the structural deficit but will also have adverse effects on consumer spending and GDP. The magnitude of the effect depends on how consumers react to changes in disposable income that are generated by changes in taxes. If consumers base their saving and spending decisions on current income, consumption would fall more or less proportionally to the reduction in income (somewhat more than 1 percent). But there is a strong argument that at least some consumers are forward-looking and realise that today's public deficits will lead to higher taxes in the future. If taxes are then actually raised and current disposable income declines, this does not change permanent income and consumption expenditure will remain constant ("Ricardian equivalence"). If one assumes that, as a rule-of-thumb, consumers who base their decisions on current income have a share of two thirds and the rest consists of "Ricardians", consumption would decrease by about 0.7 percent.<sup>a)</sup> Leakage effects due to imports reduce the permanent effect on real GDP to somewhat less than 0.5 percent.

In addition, the fact that the price rises due to the VAT increase were anticipated triggered an increase in residential construction and consumption (especially durables like cars or household equipment) at the end of last year through intertemporal substitution effects. During the first part of this year, such effects are likely to add to the contractionary effects. As we have never observed such a large change in indirect taxes in Germany, there is uncertainty regarding the magnitude of the intertemporal substitution effects. Available data for retail sales up to November suggest that this effect may not be very high (GDP growth is likely to have increased by 0.2 percentage points in 2006 and therefore will fall by 0.2 percentage points in 2007).

Due to trade linkages, the negative effect of the fiscal package on German domestic demand will also dampen the other European economies somewhat. This is aggravated by the fact that German import prices will increase relative to the prices of domestically produced goods and services and German export prices will decline. The price competitiveness of German firms will improve, which will lead to higher exports and lower imports for Germany. The opposite holds true for its trading partners.

<sup>a)</sup> A higher share of "Ricardians" – as some studies suggest – would reduce the effect of the tax increase on consumption.



2007 was already cut by 5 billion euros last autumn.

To avoid possible EU sanctions, Greece and Portugal have also initiated consolidation measures. Finally, the new government of Hungary has approved an austerity package – including mainly tax increases – to reduce the government budget deficit, which amounted to 10.1 percent of GDP last year.

Due to upcoming elections, the budget deficit in France will most likely not be reduced substantially this year and is projected to reach 2.6 percent of GDP. Expansionary fiscal policy is also to be expected in Spain; the surplus is to be reduced by 0.4 percentage points to 1.1 percent of GDP this year.

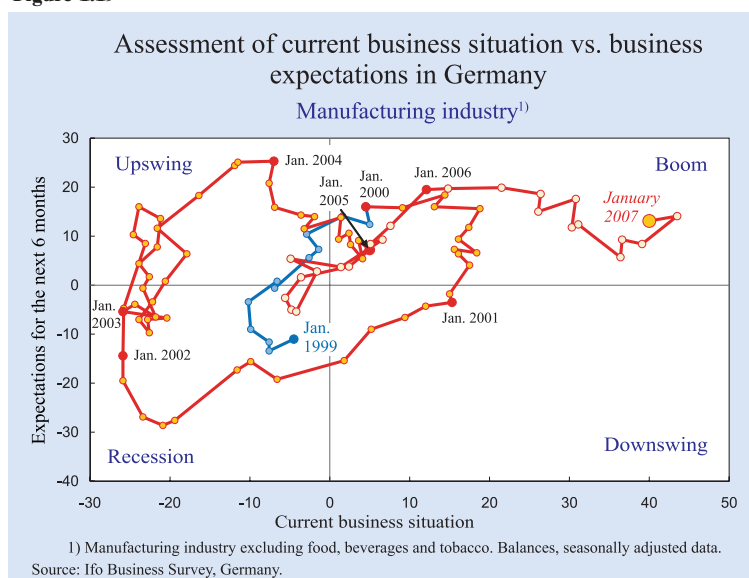
Overall, aggregate euro area government net borrowing will fall further this year to 1.5 percent of GDP. Roughly two thirds of this reduction will be of a structural nature. Also for the EU as a whole, fiscal policy will become somewhat less accommodative this and next year. The aggregate government debt ratio in the EU will fall by 1 percentage point to 61.4 percent of GDP.

### *The cyclical situation*

According to our estimates, which are based on the median of several filter techniques (see Chapter 1 of the 2006 EEAG report), the output gap in the euro area has been basically closed since mid-2006. This situation will approximately persist throughout 2007 and 2008; aggregate demand will not be sufficient to produce significant positive output gaps. The challenge facing the European economy is to use the present upswing to improve the growth potential. This requires structural reforms, in particular improved conditions for a better utilisation of the labour force.

Under conditions of a closed output gap, the tendency for wage moderation, which has characterised many European countries in recent years, will fade. As a result, unit labour costs will start rising slightly more. Given still-low inflation expectations, high but decreasing unemployment and no substantial oil price

**Figure 1.19**



changes, it is unlikely that higher wage claims will squeeze profits, even if such a risk cannot be fully excluded. Given labour cost developments elsewhere in the world and the appreciation of the euro against the dollar, relative unit labour costs of the euro area as a whole will no longer fall as they have in the last two years.

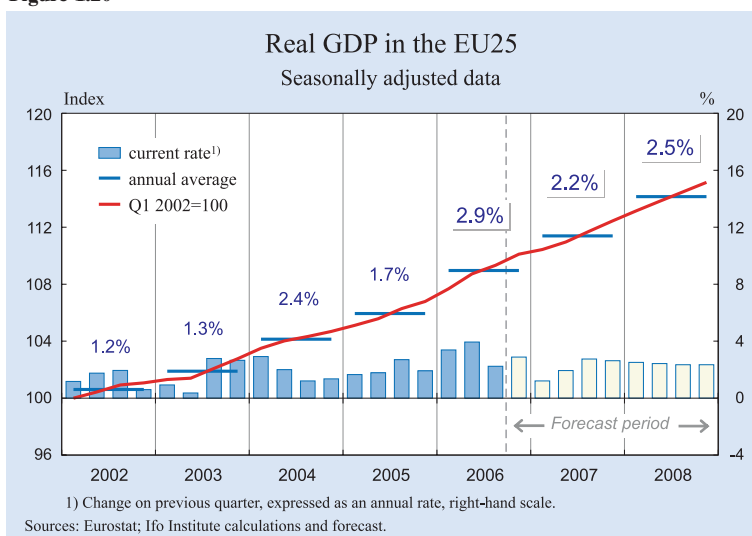
Current indicators like those of the Ifo World Economic Survey and Ifo Business Climate Index registered further improved business conditions at the end of 2006. Although leading indicators are falling somewhat, they still signal a relatively bright climate for the upcoming months. Especially for Germany, the manufacturing industry has not reported such good business conditions since 1990 (see Figure 1.19).

Other indicators also point to favourable business conditions. Equity prices have been trending upwards since early 2003 and real interest rates have been historically low since the end of 2001.

### *The demand side*

The economic expansion in the European Union will remain strong. Improved labour market conditions and higher wages will further stimulate private consumption. The German VAT increase will not subdue consumption for long. Nor will other fiscal consolidation measures (see Box 1.2). Hence, after a weak first quarter, offsetting part of the high consumption growth at the end of 2006, we expect a continued increase in private consumption.

Figure 1.20



During the first part of 2007, the somewhat more moderate expansion in the world economy will reduce European export growth to some extent. When world trade picks up again in the course of the year, it will take European exports with it. Strong domestic demand will at the same time also strengthen imports. Overall, growth of imports will outperform that of exports with the consequence that net exports will contribute negatively to GDP growth in 2007. In 2008, the stronger world economy will tend to reverse this.

With rising aggregate demand and capacity utilisation, profits as well as overall conditions for investment financing are favourable. It took until last year for business investment to pick up. And it will take some years of above-average investment growth to compensate for the long period of weak business investment in the past. Hence, there is still mounting pressure to modernise the capital stock. Overall, investment will continue to grow substantially in 2007 and 2008, although, with rates of approximately 4 percent, at a somewhat more moderate pace than last year in which it grew by close to 5 percent.

#### *Growth, employment and inflation*

On average, output in the EU is expected to grow by 2.2 percent in 2007 and 2.5 percent in 2008 (see Figure 1.20). The growth gap

between Europe and Japan, on the one hand, and the US, on the other, will almost disappear this year, basically because growth in the US will decelerate significantly (see Figure 1.21). Given much higher population growth in the US, per capita GDP growth in both Europe and Japan will outperform that in the US over the forecasting horizon.

Our positive assessment of the European economy depends on endogenous business cycle developments. After a downturn in the early 2000s, the trough in output and investment was reached in

the first quarter of 2004. Since then, the EU is experiencing a recovery that gathered pace during the first half of 2006. According to the Ifo Institute (2006), such an upswing normally lasts around four years. Endogenous buoyancy forces accompanied by continuingly dynamic exports is likely to remain strong enough to withstand restraining effects from contractive fiscal measures in some countries, notably the VAT increase in Germany.

The labour market situation in Europe will improve further and thereby support real disposable income. Employment will increase moderately (see Figure 1.22). The unemployment rate will continue to fall, albeit at a considerably slower pace than in 2006. We project a reduction to an average of 7.7 percent in 2007 and 7.4 percent in 2008 (see Figure 1.23).

Figure 1.21

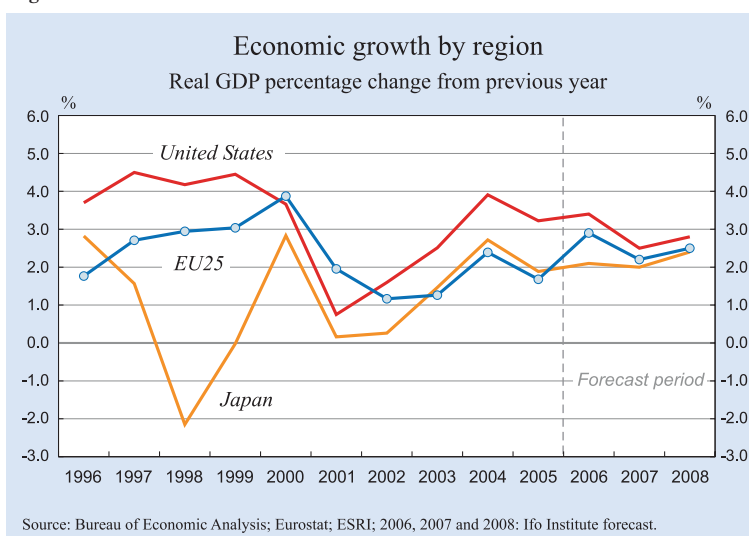
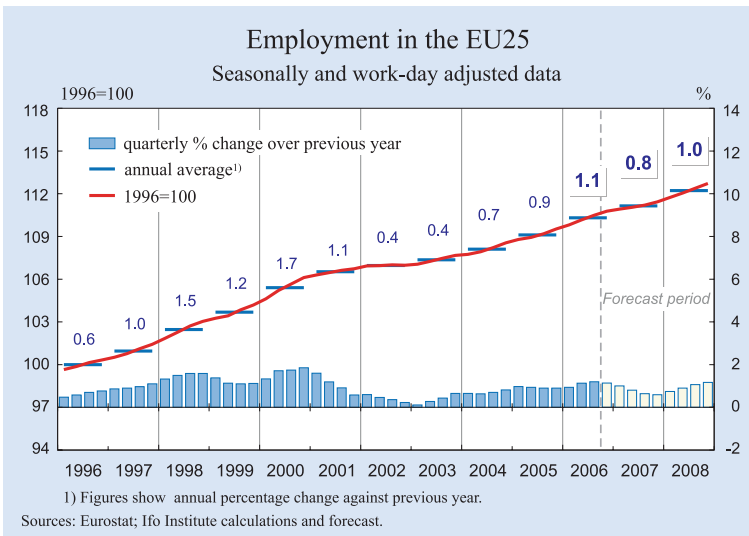


Figure 1.22



Price increases in the EU will be moderate. The inflation rate, as measured by the Harmonised Index of Consumer Prices (HICP), will be 2.2 percent in 2007 and 1.9 percent in 2008. The German VAT increase will lead to a 1/4 percentage point increase of the inflation rate in both the euro area and the EU as a whole in 2007.

*Differences in output growth within Europe*

The general recovery in the EU is associated with smaller differences in the growth performance among countries this and next year than in the past (see Figure 1.24).

In the first half of this year, the largest EU economy, Germany, will be somewhat restrained due to the massive VAT increase. But this will only be a

temporary phenomenon and the economic upturn will continue. The dynamism of both residential and non-residential fixed capital formation will remain strong. The negative effect of the VAT hike will not be enough to reduce consumption (see Box 1.2). The persistent high government budget deficits have meant that tax increases have been anticipated. These expected tax increases can at least partly explain weak private consumption and increased saving rates in past years. Permanent income is therefore affected much less than current measured disposable income.

All in all, German real GDP will expand by 1.7 percent in 2007 and 2.2 percent in 2008. Unemployment will continue to decrease. However, mainly because of the VAT increase, the inflation rate in 2007, at 2.5 percent, will be considerably higher than in previous years.

We expect similar patterns for output growth also in France, Italy and Spain, albeit somewhat less pronounced than in Germany. This year, economic growth will experience a moderate slowdown as compared to last year; in 2008 output growth will be higher again. In the UK, economic developments will remain almost as strong as last year. Private consumption will continue to increase by somewhat more than 2 percent. As sales prospects of firms remain promising, investment will rise substantially. The weakening of the world economy will increase the UK trade deficit somewhat. Overall, GDP will grow by 2.4 percent in both this and the next year. Inflation remains moderate at around 2 percent.

Economic growth in the new EU member countries will remain strong. For the region as a whole, GDP will grow by 4.6 percent in 2007 and 4.9 percent in 2008. Inflation will remain high, with rates between

Figure 1.23

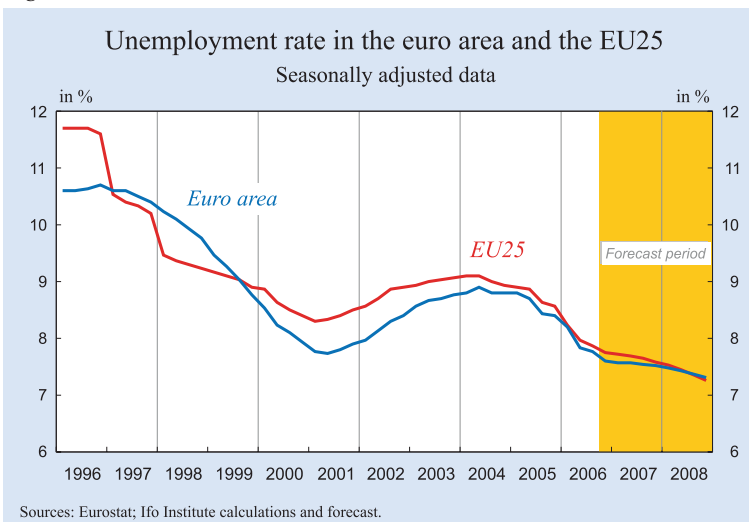
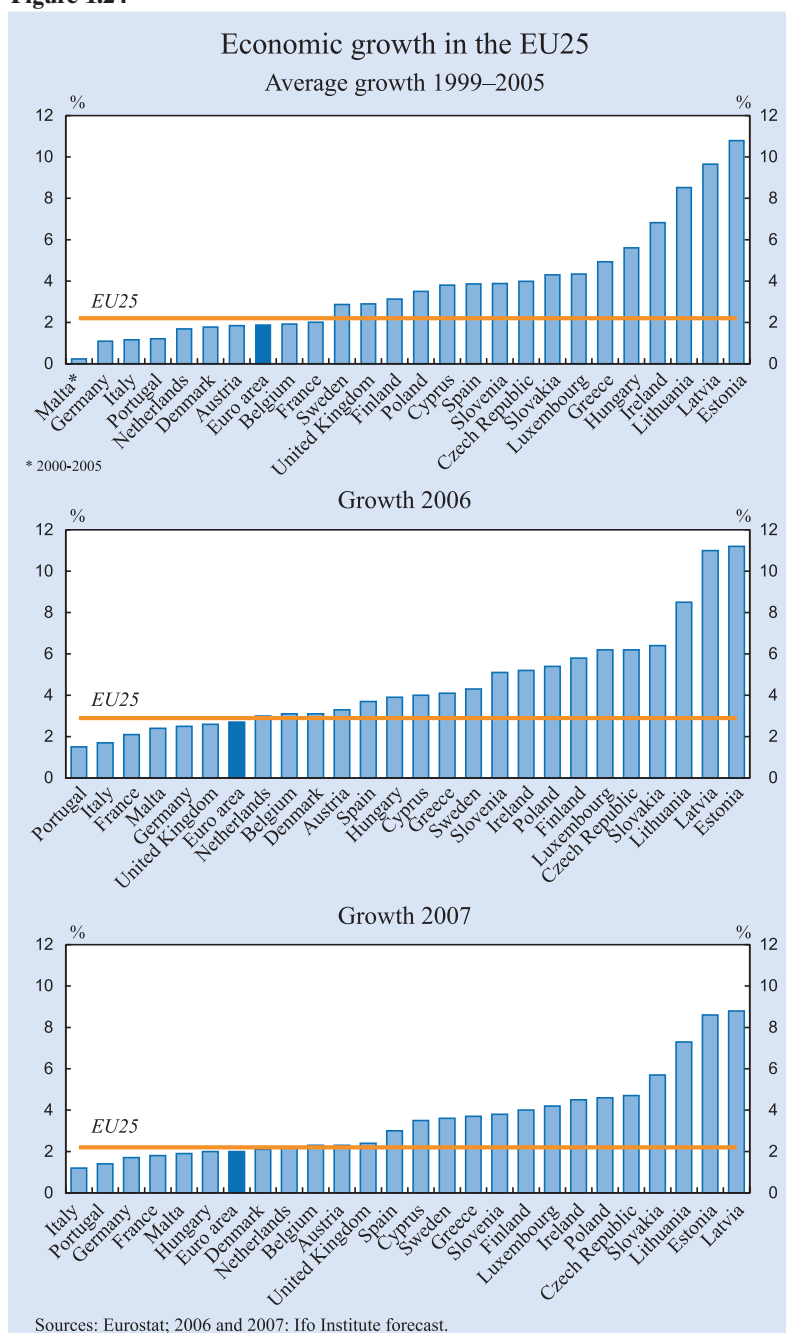


Figure 1.24



2.1 and 7.0 percent. Whereas most of these countries will grow at an above-average pace, Malta and Hungary will underperform (see Chapter 3 for more details).

Early this year, Romania and Bulgaria entered the EU. Both countries are growing fast. Nevertheless, due to their small share of less than 1 percent in total European GDP, their contribution to EU growth will be very modest. Inflation rates are expected to remain relatively high in both countries.

#### 4. Macroeconomic policy

Our macroeconomic forecast is thus one of a continued upturn with slightly less growth than last year. Actual output will grow somewhat faster than potential output.<sup>4</sup> During 2008, an increase in pace is likely. As compared to other regions in the world, the slowdown this year will be modest. At the same time, potential growth is relatively low, reducing the scope for a substantial growth push in 2008.

Raising potential growth in Europe will require structural reforms in labour, product and service markets. This has been a recurrent theme in previous EEAG reports. In this report, we analyse the often praised Scandinavian model in this respect (Chapter 4), discuss the role tax competition can play in stimulating growth (Chapter 5) and go into the obstacles economic nationalism may impose on the growth process (Chapter 6).

Cyclical stabilisation via monetary and fiscal policy is one element in any strategy to raise potential growth. Smoothing business cycles reduces economic frictions, lowers average costs and reduces uncertainty.<sup>5</sup> Macroeconomic stability increases the willingness to accept structural change. However, stabilisation policy has become harder to pursue over the past decade. Structural deficits and high debt-to-GDP ratios have reduced the room of manoeuvre for fiscal policy during the past years of low growth. European integration and, more gener-

<sup>4</sup> In Chapter 1 of the 2006 EEAG report, we estimated the trend growth rate in the euro area to have declined from about 2<sup>1</sup>/<sub>4</sub> percent in 2000 to approximately 1<sup>3</sup>/<sub>4</sub> percent in 2005.

<sup>5</sup> Evidence on the growth-enhancing effects of macroeconomic stabilisation is discussed in Chapter 3.

ally, globalisation have also lowered the effectiveness of national fiscal policy. In a monetary union, it is also impossible to adapt monetary policy to the needs of each individual member country.

#### 4.1 Fiscal policy

Business cycle developments have been a tailwind for fiscal consolidation in many European countries. Nevertheless, the overall fiscal deficit of the EU countries as a share of GDP fell by only 0.3 percentage points last year, and no more than a 0.4 percentage point fall is forecasted for this year. This will result in an EU budget deficit of 1.6 percent of GDP this year (see Table 1.2). The EU-wide government debt ratio has hardly fallen and decreases in the next few years will also be very small unless stronger consolidation efforts are made (see Figure 1.5).

Given the future budget pressures from demographic developments, as has been discussed in earlier EEAG reports, the reductions in budget deficits that are occurring are only moderate. It is true that the fiscal consolidations in Germany in Italy will have substantial effects this year: The overall EU budget deficit will be reduced by close to  $\frac{1}{2}$  percent of GDP. Two thirds of this can be considered as structural. Given the position of the business cycle and a current structural deficit of still approximately  $1\frac{1}{2}$  percent of GDP, we consider this to be a step in the right direction but it is insufficient. In fact, we are worried that – as has frequently happened in the past – the opportunity created by the current upswing will not be used enough to strengthen public finances. On the contrary, the cyclical improvement in fiscal balances may be taken as an excuse for complacency, thus weakening the efforts for fiscal consolidation. This may exacerbate fiscal problems in the next downturn and when demographic factors set in with full force.<sup>6</sup>

As discussed in Chapter 1 of our 2006 EEAG report, in a monetary union like the euro area, there are a number of reasons for a deficit bias of fiscal policy at the national level. These include myopic behaviour by governments and voters, lobbying of interest groups for specific expenditure increases (the common-pool problem), a desire by political parties to favour their own constituencies while in power (strategic considerations), and attempts to raise output above its equilibrium level through aggregate demand increases (the time inconsistency problem).

As adverse effects of fiscal profligacy can partly be shifted on to other member countries, all of these effects are exacerbated in a monetary union with centralised monetary policy.

The watering-down of the stability pact leads to pessimistic conclusions on fiscal discipline and the possibilities to achieve an appropriate balance between fiscal and monetary policy in the long run. One should be aware that currently low long-term interest rates are now holding down the interest costs for government debt. Although the reasons for the low, long-term interest rates are not well understood, it is risky to count on interest rates remaining as low as they are now (see Figure 1.12).<sup>7</sup>

#### *Government expenditures*

Furthermore, on the structural front, instead of cutting expenditures, taxes are being raised in several European countries. Examples include the VAT increase in Germany and the increase in income tax progressivity in Italy. This is counter to what most economists – including ourselves – recommend. To reduce tax distortions that hold back labour supply and reduce incentives to invest, especially marginal tax rates need to be cut. This can be achieved by lowering government transfers. To further economic growth in the long run, governments should also re-focus spending on those categories that foster growth, like infrastructure, R&D investment and education. These types of expenditures had to bear a disproportionate share of the burden of fiscal consolidation in the past.

Comparing the second half of the 1990s with the average for the years 2001 to 2005 (the last five years for which comparable data are available) reveals that the government expenditure share in GDP in the euro area has fallen by 2.3 percentage points (see Figure 1.25). Only in two euro area countries, Portugal and Luxembourg, did this share go up. Of the remaining EU countries, only Cyprus, Malta and the UK report increasing shares. In 19 EU countries, government expenditure as a share of GDP actually decreased between 1995 to 1999 and 2001 to 2005. The reduction in the size of government has been largest in Slovakia, Estonia, Lithuania, Finland and Sweden (see Figure 1.25). Note, however, that the latter two Scandinavian countries initially had government expenditure shares far above the European average.

<sup>6</sup> See Calmfors (2006) for an elaboration of this view.

<sup>7</sup> See our discussion in Chapter 2 of the 2006 EEAG report.

Figure 1.25

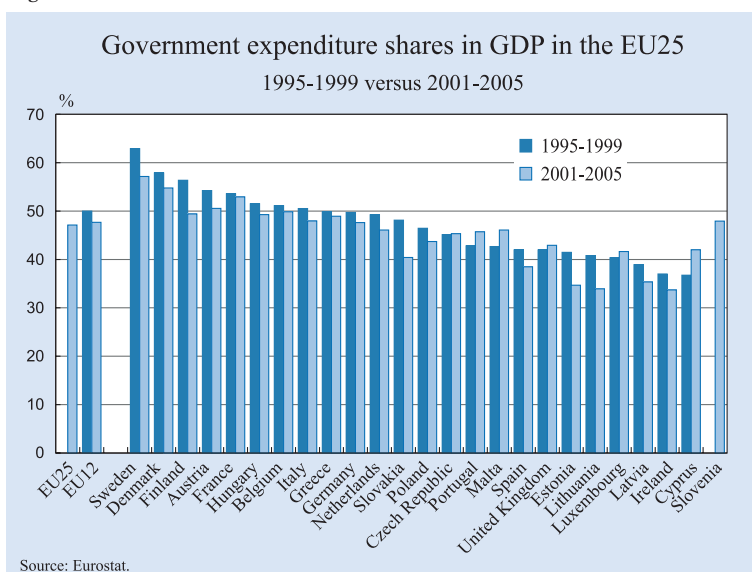


Figure 1.26

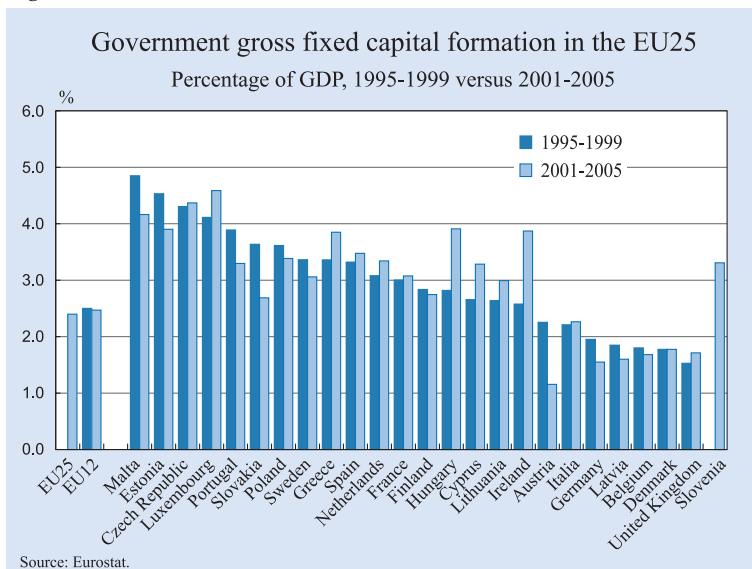
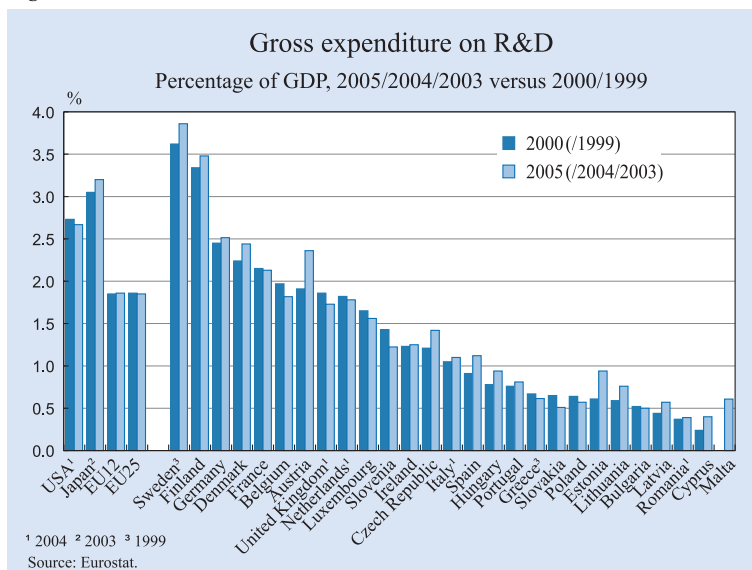


Figure 1.27



In that sense, some form of convergence with respect to government size appears to be taking place (see also Table 4.1 of Chapter 4).

With respect to the type of spending, some shifts have been made towards more public investment. Despite the reduction in government expenditure shares across Europe, government investment as a share of GDP has more or less stayed constant over the last decade (see Figure 1.26). Differences among countries are, however, substantial. Roughly half of the countries have seen increased public capital investment shares; the other half has experienced falling shares. Sharp increases have occurred in Ireland and Hungary; sharp falls in Austria and the Slovak Republic.

The Lisbon Strategy focuses attention on research and education. This would imply a re-allocation of government spending towards these areas in a growth enhancing way. Research ought to receive higher priority at the expense of, for example, subsidies to agriculture.

The EU goal for R&D spending as a share in GDP, as set by the Lisbon Summit strategy, is at least 3 percent in 2010. According to the latest Eurostat data, R&D expenditure as a percentage of GDP in the EU25 stood at 1.85 percent in 2005 (see Figure 1.27). This is virtually the same level as in 2000, the year in which the European Council set the strategic goal for the next decade “of becoming the most competitive and dynamic knowledge-based economy in the world”. R&D intensity has remained significantly lower in Europe than in both Japan and

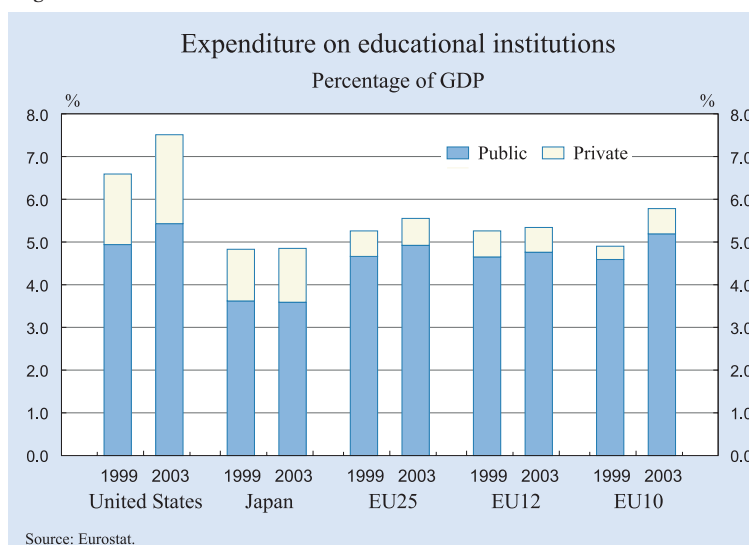
the US. Japan alone increased its R&D expenditure relative to GDP after 2000, whereas it remained quite stable in Europe and decreased somewhat in the US. However, the EU average hides wide discrepancies among member states. Only Sweden and Finland meet the Lisbon goal of R&D spending of at least 3 percent of GDP (see also Figure 4.5 in Chapter 4).

With only three years to go until 2010, Europe is still far off target for R&D spending and the progress made so far is very modest. R&D expenditures in both the government and the business sector still need to rise substantially. With respect to the public part, at least, Germany, Portugal and Latvia have announced their intention to prioritise R&D spending. Partly due to budgetary problems in Germany, the share of government R&D in GDP steadily decreased from 0.83 percent in 1996 to 0.76 percent in 2004. For similar reasons, in Portugal this share went from 0.49 percent in 2000 to 0.44 percent in 2003. Given that both countries still have considerable budgetary problems, it is questionable to what extent plans to raise this share are realistic.

A third type of investment in which public policy plays an important role is education. In an increasingly globalised world, where low-wage competition from countries like China, India and Brazil will intensify, structural change towards human-capital intensive sectors in Europe is necessary to cope with the situation. Also sustainable productivity growth requires continued investment in a highly skilled and adaptable workforce. Economies endowed with a skilled labour force are better able to create and make effective use of new technologies.<sup>8</sup> Educational attainment in Europe falls short of what is required to ensure that adequate skills are available in the labour market and that new knowledge that can subsequently be diffused across the economy is produced.

With respect to expenditures on education, developments in the euro area have basically stagnated since

Figure 1.28



1999 (see Figure 1.28). The 0.3 percentage point increase in the share of these expenditures in GDP in the EU25 are almost exclusively due to increased spending in the ten new member countries. There, two thirds of the increase was financed by the public sector. The US has increased its lead. There, both public and private expenditures on education increased by close to 1/2 percentage point between 1999 and 2003. The small role played by the private sector in funding education in Europe is notable. Whereas more than 25 percent of all educational institutions are financed privately in both Japan and the US, this share is only slightly above 10 percent in Europe.

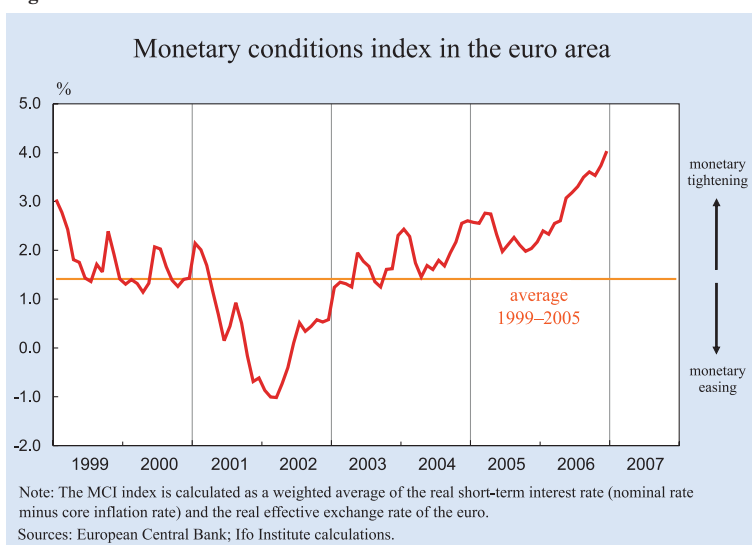
Although European countries should not opt for a uniform growth strategy, as we discussed in our 2006 EEAG report, it seems clear that expenditures on R&D and education are too low in most EU states. They do not seem to be sufficient for the most developed countries to reach the aspired technological frontier.

#### 4.2 Monetary policy

After having increased its main refinancing rate in six consecutive steps from 2 percent in early December 2005 to 3.5 percent in December 2006, the ECB is now standing at a crossroad: Are inflation expectations and growth prospects still high enough to warrant another rise, or should the interest rate be cut to cope with the forecasted mild slowdown? In our forecast we assume that the different tendencies will balance each other and that the ECB will keep its interest rate at the present level at least until the end of 2008.

<sup>8</sup> For example, the complementarity between a skilled work force and ICT investment is stressed in Section 4.3 in Chapter 4 of this report. See also Chapter 2 in our 2006 report and Chapter 2 of our 2005 report.

Figure 1.29



### Monetary conditions

On the one hand, monetary policy affects aggregate demand and prices via interest rates. On the other hand, it may have an effect via exchange rate developments. The so-called monetary conditions index (MCI) captures both dimensions.<sup>9</sup> Whereas in the second half of 2005 the MCI for the euro area did not move much, it increased sharply during 2006, implying more restrictive monetary conditions in the euro area (see Figure 1.29). In 2005, the real depreciation of the euro more than compensated for the already increasing real interest rate.

In 2006, both the real appreciation of the euro and the increased real short-term interest rate moved the MCI in the same upward direction. Since the introduction of the euro, monetary conditions – measured by the MCI – have never been as restrictive as they are now. Holding nominal and real interest rates approximately constant, a likely continuation of the real appreciation of the euro will imply stricter monetary conditions throughout this and the next year. Based upon some correlation analyses, the smoothed MCI in the past on average has had a lead of approximately one year with respect to the European Sentiment Indicator (ESIN) of the euro area. Hence, by keeping the main refinancing rate fixed, monetary conditions will exert a restrictive influence on the euro area business cycle during this and the next year.

<sup>9</sup> The MCI is calculated as a weighted average of the real short-term interest rate and the real effective exchange rate (based on consumer price indices) relative to their values in a base period. The relative weights of the interest rate and the exchange rate component are 6 to 1. As with the MCI published by the European Commission (DG ECFIN), these weights reflect each variable's relative impact on GDP after two years as derived from simulations in the OECD's Interlink model.

### The monetary pillar of the ECB

Ever since its inception, the ECB has been criticised for its monetary policy strategy (see De Haan et al. 2005 for a discussion). A particularly controversial element in the ECB strategy is the role of money. In addition to a broad assessment of the risks to price stability, the ECB uses a quantitative reference value for the annual growth rate of a broad monetary aggregate (M3) to assess whether monetary developments pose a risk to price stability. Initial ECB comments as well as the initial

labelling of monetary developments as the first pillar within the two-pillar strategy have suggested that money would be a dominant input into ECB policy decisions.<sup>10</sup>

After an evaluation of its monetary policy strategy, the ECB Governing Council decided in May 2003 that the introductory statement of the ECB President after a Governing Council meeting would henceforth start with the economic analysis to identify short- to medium-term risks to price stability. The monetary analysis will then follow to assess medium- to long-term trends in inflation in view of the close relationship between money and prices over extended horizons. Duisenberg explained these changes at the beginning of the press conference on 8 May 2003: “The introductory statement will henceforth present first economic analysis, followed by monetary analysis. It concludes by cross-checking the analyses conducted under these two pillars.”

This decision was widely interpreted as implying that money had become less important in the ECB monetary strategy. The ECB kept to its two-pillar strategy but reduced the prominence of the monetary pillar by putting it second and discussing it after what initially was labelled the “broadly-based assessment”. In this way, the monetary pillar is mainly used to cross-check what has since been labelled the “economic analysis”. According to De Grauwe (2003): “The ECB is downgrading the importance of the money stock (M3) in

<sup>10</sup> When, for instance, ECB President Duisenberg was asked during a press conference on 13 October 1998 about the relative importance of money, he noted that “... it is not a coincidence that I have used the words that money will play a prominent role. So if you call it the two pillars, one pillar is thicker than the other is, or stronger than the other, but how much I couldn't tell you”.



its monetary policy strategy, and rightly so. It just did not make sense anymore to pretend that the money stock is the most important variable to watch. This variable is so much polluted by noise that it rarely gave the right warning signal of future inflation.” Svensson (2003) summarised and interpreted the Governing Council decision similarly and concluded that “[t]his is a change in the right direction, but it is not enough”.

However, on various occasions, the ECB has stressed that, as in the past, the monetary analysis still plays a role in its monetary strategy. Berger et al. (2006) challenge this view by showing that in the actual press releases of the ECB the monetary pillar has not played a significant role – at least not during the Duisenberg era. Furthermore, according to the econometric analysis of the same authors, actual ECB interest rate decisions are barely influenced by considerations based on the monetary pillar. Policy intentions based on future developments in the real economy and on prices are the main factors explaining actual policy changes. This is in line with, for instance, Gerlach (2004), who concludes that most econometric estimates of reaction functions for the euro area fail to find that money growth plays a role in the ECB’s interest rate decisions.

Sometimes, it is argued – also by the ECB – that monetary developments can be useful to assess asset market prices. However, the ECB at the same time has often stated that it does not explicitly target asset prices, thereby limiting the relevance of the argument. Furthermore, the argument implicitly assumes that it is actually possible to distinguish ex ante between a change in asset prices due to fundamental factors and those due to non-fundamental factors. Only if central banks have information that is superior to that of the private sector, would they be able to make such better judgments of asset market prices. As Mishkin (2001) puts it: “Without an informational advantage, the central bank is as likely to mis-predict the presence of a bubble as the private market and thus will frequently be mistaken.” For the same reason, Bernanke and Gertler (2000) argue that a central bank dedicated to price stability should pay no attention to asset prices per se, except insofar as they are signals of changes in expected inflation. This is why the ECB indeed uses asset price developments in its economic pillar. Neither of the two pillars, however, should be directed towards assessing asset market developments.

In our view, the ECB would be ill-advised to disregard monetary factors, but that taking proper account of these does neither necessarily entail monitoring the growth rate of M3 nor does it require a separate monetary pillar. One should use all information available to make the best forecast possible of inflation (and real activity) in the economy.<sup>11</sup>

What has become more and more important in research on monetary policy as well as actual central bank practice is the role of expectations in the formulation of monetary policy. According to modern monetary theory, a central bank has basically two key instruments at its disposal to achieve price stability. First, it can directly affect the money market interest rate by setting refinancing rates. The extent that the money market rate affects other – and for private decisions more relevant – interest rates in the economy depends on future expected developments of the money market rate. Long-term interest rates will hardly react to changes in the refinancing rate if markets believe that these will only last for a short period. On the other hand, if markets expect money market rates to be affected for longer periods of time, long-term interest rates will change. More generally, market *expectations* are the second important channel via which a central bank can affect economic behaviour. Even without actual policy rate changes, a credible central bank can influence expectations of future developments in prices and the real economy and thereby affect interest rate expectations, which will lead, to a certain extent, to self-fulfilling prophecies. Monetary policy over time has more and more become the art of expectation management.

#### *A Taylor rule for ECB policy*

When using so-called Taylor rules to analyse the appropriate stance of monetary policy, it is again important to take a forward-looking perspective.<sup>12</sup> When exploring different ECB Taylor rules for the euro area, Sauer and Sturm (2007) conclude that only forward-looking specifications (by either taking expectations derived from surveys or assuming rational expectations) give estimated Taylor rules in line with both theoretical models and communicated behaviour of the ECB itself.

<sup>11</sup> This view is the dominating one among academic economists. See, for example, Gerlach (2004) for a succinct formulation.

<sup>12</sup> In 1993, John Taylor of Stanford University established a relationship between the central bank interest rate and two indicators: the deviation of inflation from its target and the output gap (Taylor 1993). The Taylor rule interest rate is generally seen as a benchmark interest rate for actual monetary policy.

For that reason, we explore a forward-looking Taylor rule in this section. Our “modified” Taylor rule is based on the idea that in order to ensure medium-term price stability, the central bank interest rate is managed to keep expected output growth and inflation at their target rates.<sup>13</sup> Any deviations of the expected inflation and growth rates from their targets will induce the central bank to adjust the interest rate. If the short-term interest rate is above this modified Taylor interest rate, it indicates that monetary policy is more restrictive than one would expect based on anticipations of inflation and output growth. If the actual interest rate is below the modified Taylor rate, it indicates that monetary policy is more expansionary than the inflation and economic growth expectations would suggest. The formula for the modified Taylor rate is as follows:

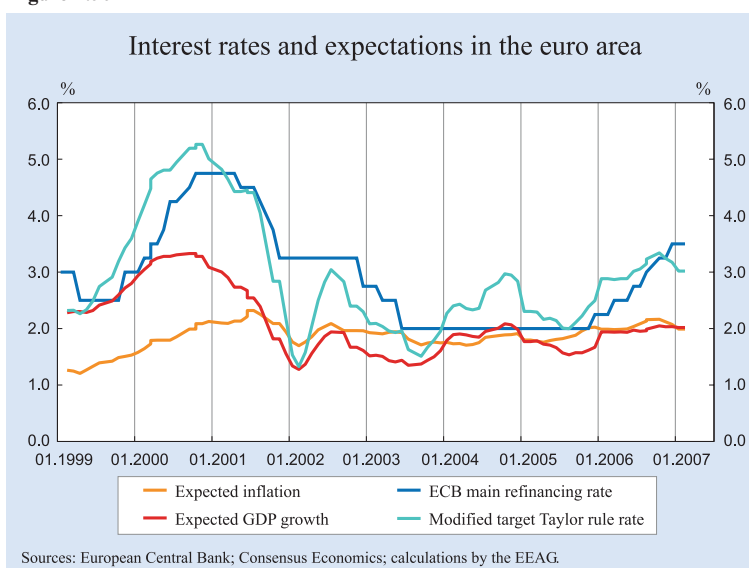
$$i^* = \bar{i} + \alpha(\pi^e - \bar{\pi}) + \beta(\Delta y^e - \Delta \bar{y}),$$

where  $i$ ,  $\pi$  and  $\Delta y$  indicate, respectively, the nominal interest rate, the inflation rate and the GDP growth rate. Bars indicate equilibrium or target levels and the superscript  $e$  expectations for the next twelve months as compared to the preceding twelve months.<sup>14</sup> Expected growth and inflation rates are taken from consensus forecasts as published on a monthly basis by Consensus Economics Inc.  $\alpha$  and  $\beta$  are the weights

<sup>13</sup> In our formulation, real economic developments are proxied by growth rates instead of output levels, as is more common in the Taylor rule literature. Under the assumption of constant potential output growth, this implies that instead of the level of the output gap, we include the expected change in the output gap. To underline this difference, we therefore label our estimated reaction function as the “modified” Taylor rule. For instance, Walsh (2003) and Geberding et al. (2004) have argued that such a “speed limit policy”, or “difference rule”, performs quite well in the presence of imperfect information about the output gap. Given that output gaps are notoriously difficult to measure and tend to be revised substantially over time, this appears quite plausible. Growth rates, on the other hand, are much less prone to data revisions. Secondly, the use of growth cycles has the advantage that they in general have a clear lead over classical cycles. Furthermore, most theoretical models abstract from long-run growth. When allowing for trend growth, it is possible to specify Taylor rules in terms of output growth rates. Finally, expectations and forecasts are normally formulated in terms of growth rates and are therefore readily available.

<sup>14</sup> The intercept term in this specification,  $\bar{i}$  we interpret as the neutral nominal interest rate. The neutral interest rate corresponds to the nominal interest rate that would prevail if all prices were flexible. Woodford (2003) refers to this rate as the Wicksellian natural rate of interest. Put more practically, the neutral interest rate is equal to the nominal interest rate that would prevail if inflation is at target and output growth equals its trend rate.

Figure 1.30



given by the central bank to deviations from the inflation and growth targets.

The more expected growth exceeds trend growth, the higher the modified Taylor interest rate will be. In the same way, the more expected inflation exceeds its target, the higher the Taylor interest rate will be. We use data at the frequency of the ECB Governing Council meetings since 1999 to estimate the implicit weights given by the ECB itself.

In practice, it is commonly observed that, especially since the early 1990s, central banks worldwide tend to move policy interest rates in small steps without reversing direction quickly. To capture such interest rate smoothing, the previous equation is viewed as the mechanism by which the target interest rate,  $i^*$ , is determined. The actual interest rate  $i$  adjusts only slowly to this target according to  $i = \rho_{i-1} + (1-\rho)i^*$ , where  $\rho$  is the smoothing parameter. In our estimation procedure we follow this approach as well.

Figure 1.30 shows, besides the modified Taylor rule rate (without interest smoothing), the actual main refinancing rate set by the ECB, the expected inflation rate and the expected GDP growth rate for the next twelve months according to consensus forecasts.<sup>15</sup> Except for the winter of 2001/2002, in which

<sup>15</sup> The estimation results imply the following equation in which all estimated parameters are statistically significant and the residuals do not show any signs of autocorrelation or heteroscedasticity:

$$i = \rho_{i-1} + (1-\rho)[2.96 + 1.54(\pi^e - 1.87) + 1.65(\Delta y^e - 2.11)]$$

both growth and inflation expectations plummeted, the estimated modified Taylor rule appears to lead actual ECB interest rate decisions quite well. If the Taylor rate lies above the ECB main refinancing rate, then the chances for an interest rate increase are higher than for a decrease. The reverse holds for Taylor rates below the actual ECB interest rate.

Lower expected inflation in the euro area over the next twelve months caused the modified Taylor rate to fall below the actual rate at the end of last year. Despite that, actual inflation rates were above target until September 2006 and inflation expectations remained stable throughout 2006 at around 2 percent – thereby indicating that ECB monetary policy is credible.

To summarise, not only does our monetary condition index indicate that monetary policy was rather restrictive in 2006, also our expectations-based Taylor rule suggests that the ECB main refinancing rate is above target. We therefore do not expect another increase in the interest rate soon. If anything, a decrease is more likely.

Nevertheless, given the rhetoric of the ECB – stressing the upward risks with respect to inflation due to the abundant liquidity in the eurosystem as well as oil price and wage developments – we expect a constant refinancing rate at 3.5 percent, equivalent to a 3.7 percent, three-month money market rate. While many would still consider it to be roughly neutral, our Taylor rule estimates and the continuing appreciation of the euro suggest that this rate exerts contractionary effects.<sup>16</sup>

As we argued last year (EEAG 2006), slow progress on the side of fiscal authorities to reduce deficits may force the ECB to keep interest rates high to keep inflation around target. Hence, stronger fiscal consolidation efforts, as recommended above, could create room for lower interest rates.

#### *How well does “one size fit all”?*

A topic that is regularly discussed among ECB watchers is the cost for the euro area countries of having a common monetary policy. A single monetary policy almost by definition implies that policy will not be appropriate for everybody. The larger the difference

between the actual monetary policy and the monetary policy preferred by individual member countries, the more likely it is that the ECB will be under political pressure. In line with Clarida et al. (1998), we will henceforth label this difference *country-specific stress* – stress in a monetary system occurs when for whatever reason a central bank is unable to set its policy instrument optimally.<sup>17</sup> We provide stress indicators whose evolution over time supplies important information concerning the adequacy of the single monetary policy for each of the EMU member countries (see Box 1.3).

The main results of this exercise are reported in Table 1.3. Assuming the ECB had conducted monetary policy for Ireland alone, it would on average have set the interest rate 1.2 percentage points higher. At the other extreme is Germany. There, the interest rate would, on average, have been almost 0.4 percentage points lower. Belgium and Italy are the countries with the lowest absolute levels of such structural stress in the euro area.

Table 1.3 also shows the difference in the neutral rate between the euro area and three EU countries outside the euro area under the assumption that the behaviour of the central banks of the latter could be well described by the reaction function of the ECB.<sup>18</sup> Whereas for both Denmark and Sweden, the differences are not very large, a difference of more than 0.4 percentage points for the UK is more substantial.

Besides overall structural stress, Table 1.3 reports the deviations between the modified Taylor rate for the euro area and the corresponding country-specific Taylor rates that are due to cyclical differences. By construction these differences sum to zero over the estimation sample for each country.<sup>19</sup> Not only was structural stress the highest for Ireland, but also with respect to cyclical deviations, Ireland shows the strongest cyclical stress: The Root Mean Squared Error (RMSE) – measuring the degree of volatility – exceeds those of all other countries. This is explained by both a more pronounced growth cycle in Ireland than elsewhere and different timing of the cycle.

<sup>17</sup> Clarida et al. (1998) were the first to propose a so-called stress indicator, which they used to analyse the causes of the 1992/93 crisis of the European Monetary System (EMS).

<sup>18</sup> It is not possible to carry out this analysis for the new EU member countries as data on GDP growth and inflation expectations back to 1999 are not available.

<sup>19</sup> Differences in the number of ECB Governing Council meetings during the years allows the sum of the reported year averages to differ from zero. Whereas in 1999 there were only ten relevant meetings, in 2001 to 2004, eleven meetings took place. In 2005 and 2006, we take twelve meetings into account and in 2000 13 such meetings.

<sup>16</sup> The 99 percent confidence interval around our estimated neutral nominal interest rate of 2.96 percent equals [2.63, 3.29], which does not include 3.5 percent.

## Box 1.3

## Computing stress

In theory, the unobserved optimal monetary policy rule for a country depends upon both structural and preference parameters. The former relate to how the economy works, whereas the latter summarise the preferences of the central bank. We assume that all EMU member countries voluntarily decided to participate, thereby signalling that in principle the institutional set-up of the ECB – and thereby the preference parameters as implied by the ECB – is preferred over the situation prevailing before the euro.<sup>a)</sup> However, at the same time, we also assume that the functioning of the economy, that is, the structural parameters, is basically the same across all member countries. As the ECB has to take into account developments on the aggregate European level, asymmetries in inflation and cyclical developments across countries will generate differences between the actual interest rate and the interest rate that would have applied if the same Taylor rule as that of the ECB had been applied on the national level, responding to national inflation and growth instead of to the euro area aggregates. We call the difference *country-specific stress*. Hence,

$$S = (i - i_j^*) = (i^* - i_j^*) + (i - i^*) = S_j^* + (i - i^*)$$

$$i_j^* = \bar{i}_j + \alpha(\pi_j^e - \bar{\pi}_j) + \beta(\Delta y_j^e - \Delta \bar{y}_j) = \bar{r} + \bar{\pi}_j + \alpha(\pi_j^e - \bar{\pi}_j) + \beta(\Delta y_j^e - \Delta \bar{y}_j),$$

where  $\alpha$  and  $\beta$  are taken from the estimated Taylor rule for the euro area as a whole and  $j$  indicates an individual euro area member. A negative value for  $S_j$  implies that – given the estimated ECB reaction function – actual monetary policy of the ECB for country  $j$  is more accommodative than what could be expected using country-specific data. If, on the other hand,  $S_j$  is positive, monetary policy appears too tight for country  $j$ .

Following Flaig and Wollmershäuser (2006), we analyse the development of the dispersion of expected real GDP growth and inflation across the euro area countries. Again we use consensus forecasts figures to capture the forward-looking aspect of monetary policy.<sup>b)</sup> We are able to decompose country-specific stress ( $S_j^*$ ) into, on the one hand, structural and cyclical components and, on the other hand, inflation- and growth-driven stress.<sup>c)</sup>

Structural stress is defined as the difference between the estimated neutral interest rate for the euro area and the implied neutral interest rate for the country in question. We split up the neutral nominal interest rate in the neutral real interest rate and the inflation target which we proxy for each country by its expected inflation average over the sample. We assume the neutral real interest rate to be the same across all European countries, that is  $\bar{i}_j = \bar{r} + \bar{\pi}_j$  where  $r$  is the real interest rate.<sup>d)</sup> Given this assumption, the difference between the neutral nominal interest rate for the euro area and that for a specific country is solely due to the long-run inflation differential.<sup>e)</sup> For the euro area as a whole the estimated nominal and real neutral rates are about 3 percent and 1.1 percent, respectively.

<sup>a)</sup> In implementing this concept, Flaig and Wollmershäuser (2006) take the optimal monetary policy rule to correspond to the policy rule that was adopted by the country in the pre-EMU period. They thereby take an extreme position. Besides keeping the structural parameters constant over time and country-specific, they also assume that the euro was forced upon the participating countries and that each individual nation would prefer a central bank with a similar behaviour as its own before the establishment of the monetary union. Hence, they keep the preference parameters in the policy rule constant over time and country-specific. For many countries the move to a more independent and thereby more credible central bank actually was (and still is) a strong motive for participating in the monetary union. This did not only apply for most southern European countries, which were in this way able to lower both their interest rates as well as their inflation rates substantially, but also for a country like Finland (see Section 5 in Chapter 4 of this report).

<sup>b)</sup> As Consensus Economics Inc. does not publish inflation and growth forecasts for Luxembourg, we are not able to include this country in our analysis. Given its GDP share of approximately 0.3 percent of euro area GDP, this will hardly affect the results.

<sup>c)</sup> We concentrate on the difference between the euro area optimal interest rate and the country-specific optimal interest rate, that is, we focus on  $S_j^*$  in the above equation and neglect the term  $(i - i^*)$  – the difference between the actual interest rate and the optimal interest rate for the euro area. This latter term is constant across countries and therefore irrelevant for a cross-country comparison.

<sup>d)</sup> Following Laubach and Williams (2003) or Giammaioli and Valla (2003), it would be possible to let the neutral real interest rate be a function of the trend growth rate. While the estimated ECB policy rule and the cyclical stress measures would not be affected by this, it would introduce a second structural source for stress, “stress due to different trend growth rates”, and therefore increase overall stress levels somewhat.

<sup>e)</sup> Hence, we allow target inflation rates to differ across countries and approximate these targets by the average expected inflation rate since 1999. Restricting the country-specific target inflation rate to be equal to the target inflation rate for the euro area implies that there are no longer any structural differences and inflation differentials are solely attributed to cyclical stress. Overall stress is only affected by such a change to a small extent.

With inflation expectations above 3<sup>1</sup>/<sub>2</sub> percent during the first half of 2006 and expectations as low as 1<sup>1</sup>/<sub>4</sub> percent in 2005, cyclical fluctuations in inflation were rather strong in the Netherlands during the past eight years. These cyclical changes in inflation expectations would have warranted a 1.6 percentage point higher main refinancing rate for the Netherlands in 2001 and a 1.25 percentage point lower one in 2005. Cyclical stress in Germany, on the other hand, has been relatively low overall. Only the year 2003, in which inflation expectations in Germany were rather low, stands out in this cyclical

perspective; combined also with cyclically low growth, the main refinancing rate should have been almost 0.7 percentage points lower from a purely German perspective that year.

For Denmark and Sweden, if their central banks had used the same reaction function as the ECB, the cyclical stress would have been comparable to the situation in countries like Austria and Finland and clearly lower than for countries like Ireland, the Netherlands and Portugal. The cyclical stress for the UK would, however, have been much larger than in

Table 1.3

## Decomposition of country stress level

	Structural	Cyclical								
	99–06	1999	2000	2001	2002	2003	2004	2005	2006	RMSE
Austria	0.24	0.42	0.67	0.21	0.20	0.05	0.27	-1.27	-0.48	0.65
Belgium	0.12	0.39	0.18	0.24	0.39	0.57	-0.02	-0.96	-0.63	0.57
Finland	0.19	-0.18	-0.90	-0.83	0.77	0.16	0.96	0.07	0.08	0.72
France	0.36	0.27	0.19	0.60	-0.03	-0.15	-0.52	-0.46	0.12	0.40
Germany	0.37	-0.15	-0.27	-0.13	0.18	0.69	-0.08	0.17	-0.35	0.35
Greece	-1.08	0.52	1.72	0.49	-0.68	-1.70	-0.78	0.06	0.09	1.10
Ireland	-1.20	-1.88	-2.36	-2.07	0.81	0.41	2.74	1.08	1.31	1.88
Italy	-0.16	0.27	0.14	-0.09	-0.41	-0.83	-0.30	0.41	0.72	0.54
Netherlands	-0.29	-0.72	-1.35	-1.92	-0.68	0.83	1.94	1.64	0.27	1.39
Portugal	-0.65	-1.93	-0.21	-0.45	-0.46	-0.12	0.62	0.40	1.80	1.04
Spain	-0.92	0.16	0.95	0.80	0.41	-0.66	-0.04	-0.77	-0.86	0.74
Denmark	-0.19	0.06	0.86	0.96	-0.28	-0.79	0.13	-0.57	-0.43	0.68
Sweden	0.29	1.07	0.08	0.73	-0.55	-0.68	0.21	0.05	-0.75	0.75
United Kingdom	-0.44	1.24	1.08	1.18	-0.25	-1.26	-1.36	-0.62	-0.03	1.10
of which related to differences in inflation expectations										
Austria	0.24	0.03	0.11	0.09	0.10	0.09	0.20	-0.52	-0.06	0.26
Belgium	0.12	-0.10	-0.08	0.21	0.22	0.43	0.07	-0.40	-0.29	0.31
Finland	0.19	-0.52	-0.72	-0.55	-0.16	0.25	0.94	0.34	0.44	0.57
France	0.36	0.28	0.36	0.57	0.02	-0.36	-0.58	-0.32	0.02	0.38
Germany	0.37	-0.08	-0.14	-0.22	0.12	0.59	0.19	0.00	-0.39	0.31
Greece	-1.08	-0.46	0.54	0.60	-0.06	-0.36	-0.17	-0.20	0.00	0.46
Ireland	-1.20	0.19	-0.63	-0.86	-0.45	-0.96	0.97	1.01	0.72	0.87
Italy	-0.16	-0.01	-0.05	0.22	0.11	-0.31	-0.31	0.05	0.27	0.24
Netherlands	-0.29	-0.48	-0.71	-1.58	-0.86	-0.05	1.11	1.25	1.19	1.05
Portugal	-0.65	-0.87	0.03	-0.14	-0.21	-0.43	0.27	0.48	0.68	0.50
Spain	-0.92	0.29	0.30	0.12	0.02	-0.27	0.09	-0.18	-0.35	0.27
Denmark	-0.19	-0.96	-0.74	0.33	0.10	-0.11	0.45	0.47	0.42	0.55
Sweden	0.29	0.44	-0.03	-0.19	-0.93	-0.83	0.35	0.84	0.30	0.63
United Kingdom	-0.44	-0.74	0.17	0.68	0.23	-0.40	-0.27	0.08	0.14	0.45
of which related to differences in growth expectations										
Austria		0.39	0.56	0.13	0.10	-0.04	0.07	-0.75	-0.42	0.45
Belgium		0.48	0.26	0.03	0.17	0.14	-0.09	-0.57	-0.34	0.38
Finland		0.34	-0.18	-0.28	0.93	-0.09	0.02	-0.27	-0.35	0.49
France		0.00	-0.17	0.03	-0.04	0.21	0.06	-0.14	0.10	0.20
Germany		-0.07	-0.13	0.10	0.06	0.10	-0.27	0.17	0.03	0.20
Greece		0.98	1.19	-0.11	-0.62	-1.34	-0.61	0.27	0.09	0.88
Ireland		-2.07	-1.73	-1.21	1.26	1.37	1.77	0.07	0.59	1.46
Italy		0.28	0.18	-0.30	-0.52	-0.53	0.01	0.35	0.45	0.43
Netherlands		-0.25	-0.64	-0.34	0.18	0.89	0.83	0.38	-0.92	0.69
Portugal		-1.06	-0.24	-0.30	-0.25	0.31	0.36	-0.08	1.12	0.64
Spain		-0.13	0.66	0.68	0.38	-0.39	-0.12	-0.59	-0.51	0.55
Denmark		1.02	1.60	0.63	-0.38	-0.67	-0.32	-1.04	-0.85	0.96
Sweden		0.63	0.11	0.92	0.38	0.15	-0.14	-0.79	-1.05	0.70
United Kingdom		1.98	0.90	0.50	-0.48	-0.86	-1.09	-0.69	-0.17	1.04

countries of relatively similar size like France or Germany. Especially GDP growth expectations have not been synchronised with the euro area. Hence, if similar cyclical deviations persist, they provide a good argument for the UK to remain outside the euro area.

It is not surprising that we estimate higher stress in smaller countries. Due to their size, the ECB – when focusing upon the euro area as a whole – gives more weight to large economies. From a purely European perspective and assuming the ECB takes a truly

aggregate euro area perspective, it makes more sense to weigh stress levels by country shares in GDP.<sup>20</sup> To be able to aggregate stress indicators to the euro area, we furthermore neglect the sign of the stress level at a country level.<sup>21</sup> Hence, aggregate stress in the euro area is computed as a weighted average of absolute country-specific stress levels. Such a stress indicator can serve as a useful measure of relevant divergence tendencies in the euro area.

<sup>20</sup> By construction these weighted stress levels sum to zero over the euro area member countries for each point in time.

<sup>21</sup> We make the simplifying assumption that too high and too low interest rates are causing stress to an equal degree.

Table 1.4

## Decomposition of the absolute stress levels, weighted by country GDP

	Total	Structural	Cyclical								
	99–06	99–06	99–06	1999	2000	2001	2002	2003	2004	2005	2006
Germany	0.110	0.108	0.082	0.045	0.079	0.040	0.063	0.203	0.029	0.084	0.104
Spain	0.100	0.096	0.065	0.019	0.100	0.083	0.047	0.069	0.018	0.081	0.089
France	0.096	0.076	0.067	0.059	0.051	0.128	0.029	0.034	0.111	0.099	0.031
Netherlands	0.079	0.018	0.077	0.046	0.085	0.122	0.043	0.053	0.123	0.103	0.036
Italy	0.081	0.029	0.078	0.048	0.025	0.033	0.073	0.149	0.054	0.109	0.129
Ireland	0.030	0.022	0.029	0.034	0.042	0.037	0.015	0.010	0.049	0.019	0.024
Greece	0.027	0.023	0.018	0.014	0.036	0.013	0.014	0.036	0.024	0.005	0.003
Belgium	0.019	0.004	0.018	0.014	0.007	0.013	0.015	0.021	0.016	0.036	0.023
Austria	0.018	0.007	0.016	0.013	0.021	0.012	0.008	0.006	0.012	0.039	0.015
Portugal	0.018	0.012	0.014	0.036	0.004	0.009	0.008	0.006	0.012	0.009	0.033
Finland	0.012	0.004	0.011	0.005	0.018	0.018	0.015	0.008	0.019	0.003	0.003
Euro Area	0.592	0.399	0.476	0.333	0.468	0.509	0.331	0.595	0.467	0.588	0.491

The use of economic weights should assure that no systematic differences in stress levels occur in the long run. Hence, in case the political weights attached by the ECB to each member country equal their economic weight, then all stress should be more or less randomly distributed across the individual countries. Table 1.4 shows that this is not the case: Especially the large countries, and in particular Germany, have much higher weighted absolute stress levels and therefore implicitly have received a lower political weight than suggested by their economic share in euro area GDP. Hence, this analysis suggests that developments in small member countries have received a more than proportional weight in the monetary policy decisions of the ECB.

Our measure of aggregate stress in the euro area as defined above on average equals 0.6 percentage points and does not show a clear trend over time (see Table 1.4). Hence, these results do not suggest that the degree of business cycle synchronisation has steadily increased during the past eight years. This speaks against the argument that the monetary union would automatically reduce differences in cyclical developments among the member countries.

Nevertheless, stress levels are not constant over time. Figure 1.31 shows how overall stress and some of its subcomponents have evolved. In particular, during 2003 and in the summer of 2005 stress levels were relatively high

in the euro area. In 2003, mainly low inflation in Germany and low growth in Italy were responsible for this. On the other hand, in the aftermath of the burst of the New Economy bubble, we see a clear fall in absolute cyclical stress levels, indicating that a common shock hit the euro area. This allowed the ECB to reduce stress in all member countries at the same time.

In 2000 and 2001 the largest part of euro area stress was accounted for by France and the Netherlands. Over time the burden first shifted to Germany (2002 and 2003) and later to especially Spain and Italy (see Figure 1.32). Whereas for Germany and Spain problems were mainly of a structural nature, the Italian and Dutch stress levels were to a larger extent caused by cyclical problems.

Figure 1.31

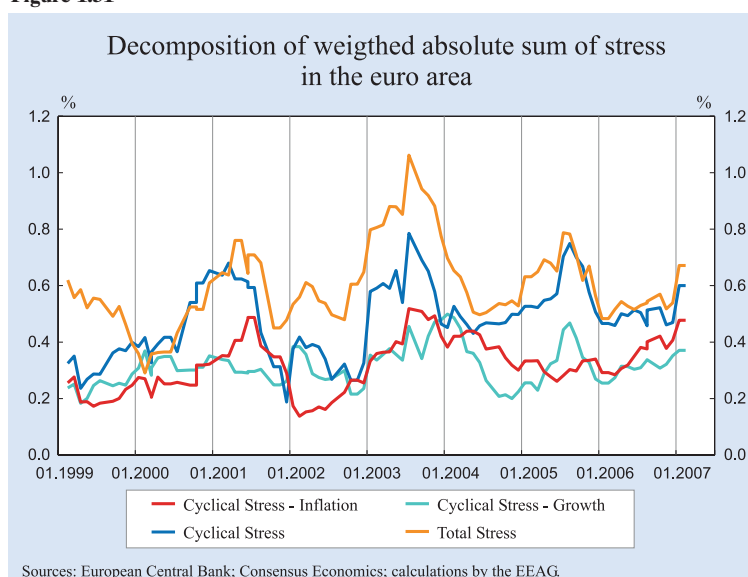
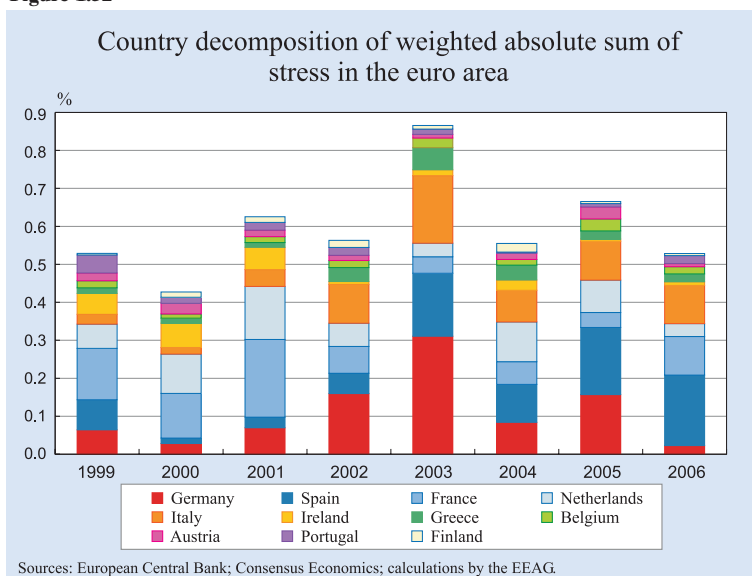


Figure 1.32



## References

- Berger, H., J. de Haan and J.-E. Sturm (2006), "Does Money Matter in the ECB Strategy? New Evidence Based on ECB Communication", *CESifo Working Paper* 1652.
- Bernanke, B. (2005), "The Global Saving Glut and the U.S. Current Account Deficit", Sandridge Lecture, Virginia Association of Economics, Richmond, Virginia, Federal Reserve Board.
- Bernanke, B. and M. Gertler (2000), "Monetary Policy and Asset Price Volatility", *New Challenges for Monetary Policy*, Federal Reserve Bank of Kansas City, 77–128.
- Blanchard, O., F. Giavazzi and F. Sa (2005), "International Investors, the U.S. Current Account, and the Dollar", *Brookings Papers on Economic Activity* 1, 1–65.
- Caballero, R., E. Farhi and P.-O. Gourinchas (2006), "An Equilibrium Model of Global Imbalances and Low Interest Rates", *MIT Working Paper* 06-02.
- Calmfors, L., (2006), "The Revised Stability and Growth Pact – A Critical Assessment", *The Journal for Money and Banking of the Bank Association of Slovenia* 55, 22–26.
- Clarida, R., J. Galí and M. Gertler (1998), "Monetary Policy Rules in Practice: Some International Evidence", *European Economic Review* 42, 1033–67.
- De Grauwe, P. (2003), "The Central Bank That Has Missed the Point", *Financial Times*, May 13.
- De Haan, J., S. C. W. Eijffinger and S. Waller (2005), "The European Central Bank: Credibility, Transparency, and Centralization", MIT Press, Cambridge, Mass.
- EEAG (2006), *Report on the European Economy 2006*, CESifo, Munich.
- Financial Times (2006), "Euro Notes Cash in to Overtake Dollar", 27 December 2006.
- Flaig, G. and T. Wollmershäuser (2006), "Does the Euro-Zone Diverge? A Stress Indicator for Analyzing Trends and Cycles in Real GDP and Inflation", mimeo.
- Geberding, C., A. Worms and F. Seitz (2004), "How the Bundesbank Really Conducted Monetary Policy: An Analysis Based on Real-Time Data", *Bundesbank Discussion Paper* 25/2004.
- Gerlach, S. (2004), "The Two Pillars of the European Central Bank", *Economic Policy* 19, 390–439.
- Giammarioli N. and N. Valla (2003), "The Natural Rate of Interest in the Euro Area", *ECB Working Paper* 233, Frankfurt am Main.
- Ifo Institute (2006), "ifo Konjunkturprognose 2007: Konjunkturelle Auftriebskräfte bleiben stark", Munich, 14 December.
- IMF (2003), "How Should We Measure Global Growth", *IMF World Economic Outlook*, September.
- Laubach, T. and J. C. Williams (2003), "Measuring the Natural Rate of Interest", *Review of Economics and Statistics* 85:4, 1063–70.
- Mishkin, F.S. (2001), "The Transmission Mechanism and the Role of Asset Prices in Monetary Policy", *NBER Working Paper* 8617.
- Sauer, S. and J.-E. Sturm (2007), "Using Taylor Rules to Understand ECB Monetary Policy", *German Economic Review*, forthcoming.
- Shiller, R. J. (2005), "Irrational Exuberance", Princeton University Press, Second Edition, Princeton, N.J.
- Sinn, H.-W. and F. Westermann (2005), "The Euro, Eastern Europe, and Black Markets: The Currency Hypothesis", in P. de Grauwe (ed.), *Exchange Rate Economics: Where Do We Stand?*, MIT Press: Cambridge, Mass., 207–38.
- Svensson, L. E. O. (2003), "In the Right Direction, But Not Enough: The Modification of the Monetary-Policy Strategy of the ECB, Briefing paper for the Committee on Economic and Monetary Affairs (ECON) of the European Parliament", [www.princeton.edu/~svensson](http://www.princeton.edu/~svensson).
- Taylor, J. B. (1993), "Discretion Versus Policy Rules in Practice", *Carnegie-Rochester Conference Series on Public Policy* 39, 195–214.
- Walsh, C. E. (2003), "Implications of a Changing Economic Structure for the Strategy of Monetary Policy", in *Monetary Policy and Uncertainty: Adapting to a Changing Economy*, Jackson Hole Symposium, Federal Reserve Bank of Kansas City, 297–348.
- Woodford, M. (2003), "Interest and Prices: Foundations of a Theory of Monetary Policy", Princeton University Press, Princeton, N.J.

## Appendix 1: Forecasting Tables

Table A1

### Real gross domestic product, consumer prices and unemployment rates

	Weighted (GDP) in %	Gross domestic product			Consumer prices			Unemployment rate <sup>d)</sup>		
		in %						in %		
		2006	2007	2008	2006	2007	2008	2006	2007	2008
EU27	34.3	2.9	2.2	2.5	2.2	2.2	1.9	7.9	7.7	7.4
Switzerland	1.0	2.7	2.2	1.5	1.1	0.5	0.9	4.0	3.2	3.1
Norway	0.6	2.7	2.4	2.3	2.2	2.1	2.2	3.6	3.3	3.4
Western and Central Europe	36.0	2.9	2.2	2.5	2.2	2.2	1.9	7.7	7.5	7.2
US	32.9	3.4	2.5	2.8	3.2	2.7	2.6	4.7	4.9	4.9
Japan	12.3	2.1	2.0	2.2	0.3	0.3	0.5	4.2	4.0	3.7
Canada	2.7	2.8	2.2	2.4	2.2	2.0	2.0	6.4	6.6	6.5
Industrialised countries total	83.8	3.0	2.3	2.6	2.3	2.1	2.0	6.0	5.9	5.8
Newly industrialised countries										
Russia	1.8	6.5	6.0	6.0	9.5	9.0	7.5	7.0	6.8	6.4
East Asia <sup>a)</sup>	4.7	5.2	4.4	4.6	.	.	.	.	.	.
China	5.1	10.5	10.0	10.0	.	.	.	.	.	.
Latin America <sup>b)</sup>	4.6	4.8	3.8	4.0	.	.	.	.	.	.
Newly industrialised countries total	16.2	6.9	6.2	6.3	.	.	.	.	.	.
Total <sup>c)</sup>	100.0	3.6	2.9	3.2	.	.	.	.	.	.
World trade, volume		8.5	7.5	8.0	.	.	.	.	.	.

<sup>a)</sup> Weighted average of Korea, Taiwan, Indonesia, Thailand, Malaysia, Singapore and the Philippines. Weighted with the gross domestic product of 2005 in US dollars. – <sup>b)</sup> Weighted average of Brazil, Mexico, Argentina, Columbia, Venezuela, Chile and Peru. Weighted with the gross domestic product of 2005 in US dollars. – <sup>c)</sup> Sum of the listed groups of countries. Weighted with the gross domestic product of 2005 in US dollars. – <sup>d)</sup> Standardised unemployment rates.

Sources: EU; OECD; IMF; National Statistical Offices; 2006, 2007 and 2008: calculations by the EEAG.



Table A2

## Real gross domestic product, consumer prices and unemployment rates in European countries

	Weighted (GDP) in %	Gross Domestic Product			Consumer Prices <sup>a)</sup>			Unemployment rate <sup>b)</sup>		
		in %						in %		
		2006	2007	2008	2006	2007	2008	2006	2007	2008
Germany	20.9	2.5	1.7	2.2	1.8	2.5	1.5	8.4	8.2	8.0
France	15.7	2.1	1.8	2.1	2.0	1.5	1.7	9.2	8.8	8.6
Italy	13.1	1.7	1.2	1.4	2.2	1.8	2.0	7.1	6.9	6.8
Spain	7.8	3.7	3.0	3.3	3.5	3.2	2.9	8.3	7.7	7.5
Netherlands	4.5	3.0	2.2	2.5	1.6	1.4	1.5	4.0	3.8	3.7
Belgium	2.7	3.1	2.3	2.6	2.3	2.0	1.9	8.5	8.4	8.2
Austria	2.2	3.3	2.3	2.6	1.7	1.6	1.7	4.9	4.8	4.6
Greece	1.6	4.1	3.7	3.9	3.3	3.1	2.9	9.1	8.9	8.7
Finland	1.4	5.8	4.0	3.4	1.2	1.5	1.3	7.9	7.8	7.7
Ireland	1.4	5.2	4.5	4.9	2.7	2.6	2.4	4.4	4.5	4.3
Portugal	1.3	1.5	1.4	1.3	3.2	2.6	2.2	7.4	7.3	7.2
Slovenia	0.3	5.1	3.8	4.2	2.3	2.4	2.1	6.1	6.1	5.9
Luxembourg	0.2	6.2	4.2	4.5	3.0	2.8	2.5	4.8	4.7	4.5
Euro area <sup>c)</sup>	73.2	2.7	2.0	2.3	2.2	2.1	1.8	7.8	7.6	7.4
United Kingdom	17.1	2.6	2.4	2.4	2.2	2.0	1.9	5.5	5.7	5.6
Sweden	2.7	4.3	3.6	3.1	1.6	1.9	2.1	6.5	6.4	6.2
Denmark	1.9	3.1	2.1	2.0	1.9	2.1	2.0	3.9	3.8	3.7
EU16 <sup>c)</sup>	94.8	2.7	2.1	2.3	2.2	2.1	1.9	7.4	7.2	7.0
Poland	1.9	5.4	4.6	5.0	1.3	2.1	2.2	14.6	14.0	13.3
Czech Republic	0.8	6.2	4.7	4.5	2.1	2.6	2.5	7.2	6.9	6.7
Hungary	0.8	3.9	2.0	2.7	4.0	3.8	4.1	7.5	7.5	7.3
Romania	0.6	6.5	5.0	5.5	6.7	7.0	6.9	7.8	6.9	6.5
Slovak Republic	0.3	6.4	5.7	6.0	4.2	3.5	3.7	13.4	13.0	12.4
Lithuania	0.2	8.5	7.3	7.5	3.7	3.3	3.4	5.8	5.3	5.0
Bulgaria	0.2	5.7	5.8	6.1	7.2	5.6	4.9	8.6	8.2	7.9
Cyprus	0.1	4.0	3.5	3.8	2.3	2.1	2.2	5.2	5.3	5.2
Latvia	0.1	11.0	8.8	9.4	6.4	6.1	6.2	7.2	6.6	6.3
Estonia	0.1	11.2	8.6	9.1	4.3	4.1	4.2	5.2	4.5	4.3
Malta	0.0	2.4	1.9	2.2	2.8	2.4	2.3	7.5	7.5	7.1
EU Acceding Countries	5.2	5.8	4.6	4.9	3.1	3.4	3.4	10.2	9.7	9.2
EU27 <sup>c)</sup>	100	2.9	2.2	2.5	2.2	2.2	1.9	7.9	7.7	7.4

<sup>a)</sup> Western Europe (except for Switzerland): harmonised consumer price index (HCPI). – <sup>b)</sup> Standardised. – <sup>c)</sup> Sum of the listed countries. Gross domestic product and consumer prices weighted with the gross domestic product of 2005 in US dollars; unemployment rate weighted with the number of employees in 2004.

Sources: EUROSTAT; OECD; IMF; 2006, 2007 and 2008: calculations by the EEAG.

Table A3

## Key forecast figures for the euro area

	2005	2006	2007	2008
	Percentage change over previous year			
Real gross domestic product	1.4	2.7	2.0	2.3
Private consumption	1.4	1.9	1.6	1.8
Government consumption	1.3	1.9	1.5	1.6
Gross fixed capital formation	2.3	4.8	3.9	4.2
Net exports <sup>a)</sup>	-0.2	0.2	-0.1	0.0
Consumer prices <sup>b)</sup>	2.1	2.2	2.1	1.8
Government financial balance <sup>c)</sup>	-2.4	-2.0	-1.5	-1.3
Unemployment rate <sup>d)</sup>	8.6	7.8	7.6	7.4

<sup>a)</sup> Contributions to changes in real GDP (percentage of real GDP in previous year). – <sup>b)</sup> Harmonised consumer price index (HCPI). – <sup>c)</sup> 2006, 2007 and 2008: forecast of the European Commission. <sup>d)</sup> Standardised.

Source: Eurostat; 2006, 2007 and 2008: forecasts by the EEAG.

## Appendix 2: Ifo World Economic Survey (WES)

The Ifo World Economic Survey (WES) assesses worldwide economic trends by polling transnational as well as national organisations worldwide on current economic developments in their respective countries. This allows for a rapid, up-to-date assessment of the economic situation prevailing around the world. In 2006, approximately 1000 economic experts in 90 countries were polled. WES is conducted in cooperation with the International Chamber of Commerce (ICC) in Paris and receives financial support from the European Commission. The survey questionnaire focuses on qualitative information: assessments of a country's general economic situation at present and expectations regarding important economic indicators by the end of the next six months. It has proved to be a useful tool, since it reveals economic changes earlier than conventional business statistics.

The individual replies are combined for each country without weighting. The grading procedure consists in giving a grade of 9 to positive replies (+), a grade of 5 to indifferent replies (=) and a grade of 1 to negative (-) replies. Overall grades within the range of 5 to 9 indicate that positive answers prevail or that a majority expects trends to strengthen, whereas grades within the range of 1 to 5 reveal predominantly negative replies or expectations of weakening trends. The survey results are published as aggregated data at the national or country group level. The aggregation procedure is based on country classifications. Within each country group or region, the country results are weighted according to the share of the specific country's exports and imports in total world trade.

In October 2006, the World Economic Climate – the arithmetic mean of the present and expected judgements of the economic situation – deteriorated somewhat for the second time in succession. The climate indicator now stands at 104.7 (after 105.6 in July: 1995=100), which is still considerably above its long-term average (1990–2005: 94.3). Similar to the July survey, only the future economic outlook has been slightly downgraded, whereas the assessment of the current economic situation has further improved.

### 1. World economy: Present economic situation continues to improve

According to the October results, the index of the current economic situation continued to improve and is

approaching the all-time high that was reached six years ago, at the end of 2000. But, as economic expectations – the second component of the economic climate index – have been again downgraded, the overall economic climate deteriorated somewhat. This data constellation is typical for the late phase of an upswing.

The data mainly reflect business sentiments in the *US, Germany, China and Japan* – countries that account for more than 30 percent of total world trade. In both Asian countries, the economic climate improved relative to the July survey, with both its two components – present economic situation and expectations – pointing upward. Particularly *China's* economic weight in the world economy is strongly increasing and has almost reached the weight of Germany, measured by the share of imports and exports in total world trade. The economic climate index has risen somewhat also in the *US*. However, while the present economic situation deteriorated somewhat, according to the surveyed experts, the economic expectations for the coming six months have been upgraded, pointing to a moderate downturn in the near future. The German picture is completely different. Here the assessments of the present economic situation are approaching the all-time high of 2000. However, given the VAT (value added tax) rise from 16 to 19 percent in 2007, the outlook signals some economic cooling in the next six months.

For a global, medium-term forecast a look at the Ifo Business Clock, which shows the development of the two components of the economic climate index over the last six years, visualises the trend. In the second half of 2006, the economic climate index started to approach a regular contraction phase. However, as the economic environment remains favourable, with strong Asian economies, moderate inflation rates and stabilising or even falling interest rates, a soft landing appears likely.

### 2. Western Europe: Forecasts of economic slowing

The panel's assessment of the current economic situation has followed a positive trend since July 2005 and is now approaching the all-time high of 2000. However, the overall economic climate indicator slipped slightly in October, due to less optimistic economic expectations for the next six months in the majority of the Western European countries.

The assessment of the present economic situation improved in almost all countries of the euro area, except *Finland*, where a very favourable level was reached already in July 2006, and *Greece*, where the present economic situation has stabilised at a satisfactory level. The most positive assessments of the current situation were made in *Ireland, Finland, the Netherlands, Austria, Spain, Belgium and Germany*. While in the other countries of the euro area the present economic performance was assessed close to or above the satisfactory level, it remained unfavourable in *Portugal*. However, the economic expectations for *Portugal* are highly optimistic for the first half of 2007. *Austria and Greece* were the only countries in the euro area, where the outlook for the coming six months has brightened over the July survey. In all the other countries of the euro area, economic expectations have been downgraded somewhat, particularly in *Germany, Ireland, Italy and the Netherlands*.

In the Nordic countries outside the euro area – *Denmark, Norway and Sweden* – the economic climate remains highly favourable. In Denmark and Norway, the present economic situation has been given the highest possible marks on the WES scale and the outlook for the first half of 2007 promises further strengthening of the economy. In both countries, the surveyed economists stated that shortages of *skilled labour* is the most important economic problem at present. It also ranks second, after *unemployment*, in *Sweden*, where the present economic situation is also assessed very favourably. Expectations point to further improvement.

In the *UK*, the surveyed economists forecast a deterioration of the economic situation in the coming six months from the currently favourable level. A similar forecast has been given by the surveyed experts in *Switzerland*.

Along with *unemployment, lack of international competitiveness* is ranked as an important economic problem in the majority of the Western European countries, particularly in *Italy, Portugal, Belgium, Sweden and the UK*.

### 3. North America: US economy cools at a slower pace

According to the latest survey results, the economic climate indicator in North America deteriorated

only slightly in the October survey. In the *US*, the decline was mainly due to less favourable assessments of the present economic situation, while expectations for the next six months are still slightly negative. Expectations have, however, been upgraded somewhat. Oil prices have declined, inflation remains stable and fewer WES experts expect rising interest rates. This data constellation points to a soft landing of the *US* economy and eases the fears of stagflation. However, the WES experts again reported the public deficits to be the most important economic problem at present.

Also in *Canada*, business sentiments continued to cool, although at a stronger pace than in the *US*. Both components of the climate index have been strongly downgraded. However, the present economic performance is still assessed with very high marks and *shortages of skilled labour* are regarded as a main impediment to further growth.

### 4. Eastern Europe: Economic climate remains satisfactory

Since the beginning of 2005, the economies in Eastern Europe have been on a stable course. This positive trend continued also in 2006. According to the October WES results, business sentiments in the region remained very positive. The overall economic climate stabilised at a satisfactory level, with both the assessments of the current economic situation and expectations for the coming six months remaining favourable. However, the countries of the region are exposed to a variety of economic problems in the opinion of respondents: *Government deficits, lack of confidence in governments' economic policy* and *unemployment* have been named most often by the surveyed economists as important economic problems at present.

Among the EU countries, the assessment of the present economic situation improved in *Bulgaria, Estonia, Hungary, Latvia, Slovenia and the Slovak Republic*, and deteriorated somewhat in the *Czech Republic, Lithuania, Poland and Romania*. However, the current economic situation is assessed as above the satisfactory level in all these countries except *Hungary*. Here, government deficits and a lack of confidence in the government's economic policy have been named as the most important economic problems of the country. In the Baltic countries – *Estonia, Latvia and Lithuania* – the experts classified *lack of*

*skilled labour* as the most important impediment to stronger growth. In *Poland and the Slovak Republic*, *unemployment* is seen as the most important economic problem. In the majority of the Eastern European EU countries, economic expectations remained positive and have been downgraded only slightly in the *Czech Republic, Estonia and Slovenia*, while they become strongly pessimistic in *Hungary*.

In the other Eastern European countries, economic trends observed in October are different. The present economic performance has been assessed more positively than in the July survey in *Albania and Croatia*. The majority of surveyed economists in *Albania and Croatia* forecast that the current favourable situation will persist. *Serbia and Montenegro* are now separated, as *Montenegro* proclaimed its independence in June 2006. As no separate economic data are thus far available, the two countries are again reported together. The assessment of the present economic situation improved somewhat for the two countries, but remained below the satisfactory level. However, the surveyed economists expect an economic rebound in the region.

### 5. CIS: Highly favourable economic climate

The economic climate remained highly favourable in the CIS countries covered by WES (*Russia, Kazakhstan and Ukraine*) in October. This holds true particularly for *Russia and Kazakhstan*, where the present economic performance is assessed with highly favourable marks and expectations promise further economic strengthening in the first half of 2007. In the *Ukraine*, the assessment of the current economic situation has not yet reached the satisfactory level. According to WES experts, the country's sluggish economic growth translates into a *lack of confidence in the government's economic policy*. However, the outlook for the coming six months has brightened somewhat. In all three surveyed CIS countries, the WES experts emphasised *lack of international competitiveness* as one of the most important economic problems. In *Kazakhstan*, *shortages of skilled labour and inflation* are also regarded as problematic.

### 6. Asia: Economic climate improves

In October, the economic climate index in Asia improved, after it had deteriorated twice, first in April

and then in July 2006. The improvement resulted from both more favourable assessments of the present economic situation and upgraded economic expectations for the coming six months.

The above pattern could also be observed in six economies of the region, including the main economies – *Japan, China and India* – as well as *Malaysia, the Philippines and Thailand*. The overall economic situation is assessed as very favourable in all these countries, except *Thailand*, where the assessment has not yet reached the satisfactory level. The forecasts for the next six months are very optimistic in all countries mentioned above, except *Malaysia*, where the surveyed economists expect a cooling-down of the economy. The current economic performance was assessed as below the satisfactory level only in *Indonesia, Thailand and Taiwan*. However, while in *Indonesia and Thailand* the economic expectations are very positive, in *Taiwan* – Asia's sixth-largest economy – the surveyed economists expect further economic deterioration. WES experts also forecast slowing exports that may hurt the economy, which is already strained by low consumer spending and corruption accusations against President Chen Shui-bian.

*Lack of confidence in the government's economic policy* is seen as a problem in *Taiwan* and several other countries in the region, for example, the *Philippines, Thailand, Indonesia and Sri Lanka*. The expectations for the next six months have been downgraded somewhat also in *Bangladesh*, and to a stronger degree in *South Korea and Singapore*. However, in *Singapore and Bangladesh*, the present economic performance is assessed as very positive, and in *South Korea* as satisfactory. The assessments of the present economic situation remained positive in *Vietnam and Pakistan*. In both countries, the panel's forecasts for the next six months remained highly optimistic. In *Hong Kong* the assessment of the current economic situation improved over the previous July survey and is now clearly above the satisfactory level. The economic expectations, however, remained cautious. In *Sri Lanka* the present economic situation is expected to stabilise at the current satisfactory level.

While the rest of the world is struggling to remain competitive with Asian products, there are several countries in the region where the surveyed economists reported *lack of international competitiveness* as one of the most important economic problems. Among

them are *Taiwan, Indonesia, Pakistan, the Philippines and Malaysia*. The WES experts in the three biggest economies of the region – *China, India and Japan* – are less worried about their countries' *international competitiveness*. While in *China*, *unemployment* still ranks as the most important economic problem, in the other two economies the economists instead emphasised government budget deficits.

## 7. Oceania: Economic stabilisation

In *Australia*, the economic expectations for the coming six months have again improved somewhat. The assessment of the present economic situation continued to deteriorate slightly but remained above the satisfactory level. As a result, the overall economic climate index has even improved somewhat relative to the previous survey of July 2006. Inflation has increasingly become an important economic problem. As a result *Australia's* central bank has over time raised its benchmark interest rate to 6.25 percent in November last year, reaching the highest level in almost six years.

In *New Zealand*, the economic climate index improved for the second time in succession since the beginning of 2005. Although the assessment of the current economic situation remained slightly below the satisfactory level, economic expectations have been strongly upgraded, suggesting that the trough of the recent recession has been overcome and an economic rebound is underway. In both economies, the surveyed economists stated shortages of *skilled labour* to be the most important economic problem at present.

## 8. Latin America: Economic stabilisation continues

The economic climate in Latin America continued to stabilise at a favourable level in October. On average, the present economic situation is again assessed above the satisfactory level for all countries surveyed in the region. The outlook for the coming six months, although slightly downgraded, points to an economic stabilisation. However, *unemployment* is still regarded as the most important economic problem in the majority of countries on the continent, whereas *lack of international competitiveness* ranks second.

The present economic situation has been assessed as positive in almost all countries in the region, except

*Ecuador and Paraguay*. While in *Paraguay* the economic outlook for the next six months points to an improvement, in *Ecuador* the panel's forecasts have been downgraded and point to a further economic cooling-down of the economy. In *Mexico*, both components of the economic climate index remained positive in October. The overall pattern indicates that the satisfactory economic performance will stabilise at its present level in the course of the next six months. In July, *the country* experienced some political turbulence because the second-place candidate Andres Manuel Lopez Obrador in the presidential elections was challenging the results in court. However, in October the surveyed economists indicated that there is no *lack of confidence* in President's Felipe Calderon economic policy. Instead the *lack of international competitiveness and unemployment* are seen as the most important economic problems. In the other two large economies of the region – *Argentina and Brazil* – both the assessments of the present economic situation as well as economic expectations deteriorated. Nevertheless, the present economic performance is still assessed as satisfactory and expectations point to robust growth in these countries in the first half of 2007.

The current economic situation has again been assessed as highly favourable in *Chile*, although to a lesser degree than in the previous July survey. However, the economic expectations point to robust growth in the coming six months. A similar pattern of business sentiments was observed in October in *Colombia*. In both countries *unemployment* is ranked as the economic problem number one. Highly favourable current economic performance was reported by the surveyed economists in *Peru*. The economic expectations for the next six months, although slightly downgraded, remained highly optimistic. *Uruguay, Guatemala, Trinidad and Tobago, El Salvador and Costa Rica* received very positive assessments of the present economic situation. In all these countries, economic expectations point either to an improvement or to a continuation of the current situation in the first half of 2007. In contrast, the surveyed economists in *Venezuela* expect a deterioration of the buoyant economy in the coming six months. The surveyed experts reported a strong *lack of confidence in the government's economic policy*, which seems to burden also the economies of *Paraguay, Bolivia and Ecuador*. In *Bolivia*, the present economic situation was assessed as satisfactory, but the panel's forecast has become less optimistic than in the July survey.

## 9. Near East: Economic climate cools

The economic climate continues to be highly favourable in the majority of the Near East countries. However, both the assessments of the present economic situation and economic expectations have been slightly downgraded relative to the preceding July survey. This picture was particularly prevalent in *Lebanon*, reflecting the impact of the Israeli-Hezbollah conflict on the country's economy.

The economic climate cooled somewhat in the two major oil-exporting countries, *Saudi Arabia and United Arab Emirates*. However, the present economic situation is still assessed as favourable. The outlook suggests stable economic development in the coming six months. In the other oil-exporting countries – *Kuwait, Jordan and Bahrain* – the economic climate index improved. Both the present economic situation as well as economic expectations have been assessed to be at a very high level. In *Iran*, current economic performance is regarded as satisfactory, but the forecasts for the next six months continue to point to deterioration. Here the surveyed economists reported that *inflation* is increasingly becoming an economic problem. In *Turkey*, business sentiments have cooled in 2006. However, the present economic situation is assessed as above the satisfactory level, and economic expectations point to stabilisation in the course of the first half of 2007. In *Israel*, surveyed economists forecast an economic revival in the next six months. Both capital expenditures as well as private consumption are expected to rebound in 2007. Although the assessments of the present economic situation have been downgraded somewhat, they are still in positive territory. In the majority of the surveyed countries in the region, *unemployment* is ranked as the most important economic problem at present.

## 10. Africa: Economic climate deteriorates

Due to the diversity of economic trends on this continent and due to the fact that only eight African countries were surveyed by WES in October, an aggregate climate index for Africa makes little sense. The economic climate index deteriorated particularly in *South Africa*, which has been enjoying its longest economic expansion ever. The assessments of both the present and the future economic situation have been strongly downgraded by the surveyed economists. *South Africa's AIDS epidemic*, high *unemployment of low-skilled workers* and at the same time *shortages of*

*skilled labour* continue to be the most persistent economic problems in the country. The economic climate deteriorated in the majority of the surveyed countries in the region: this was the case in the North African countries of *Morocco, Egypt and Tunisia*, but also in *Nigeria and Mauritius*. However, while in *Morocco and Tunisia* the surveyed experts assessed the present economic situation as satisfactory and expect unchanged conditions in the near-term future, the assessments of the present economic state have again fallen below the satisfactory level in *Egypt and Nigeria*. According to the poll's forecast, though, the two latter economies will rebound in 2007. In *Egypt* the surveyed economists continue to count on the export sector. In *Algeria*, the business climate remained favourable. This was not so in *Zimbabwe*, where the economic situation remains unbelievably bad since almost a decade, with no turnaround in sight.

# Ifo World Economic Survey (WES)

