



EUROPEAN CENTRAL BANK

EUROSYSTEM

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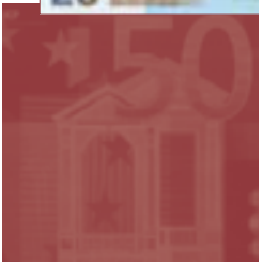
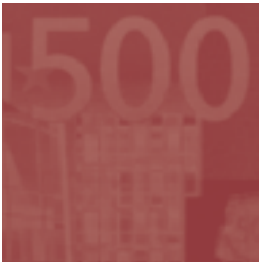
EUROPEAN CENTRAL BANK





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EUROSYSTEM



# ANNUAL REPORT 2006

In 2007 all ECB publications feature a motif taken from the €20 banknote.

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*The cut-off date for the data included in this report was 2 March 2007.*

ISSN 1561-4573 (print)

ISSN 1725-2865 (online)

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## ABBREVIATIONS

### COUNTRIES

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
GR	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
JP	Japan
US	United States

### OTHERS

BIS	Bank for International Settlements
BPM5	IMF Balance of Payments Manual (5th edition)
c.i.f.	cost, insurance and freight at the importer's border
CPI	Consumer Price Index
ECB	European Central Bank
EEA	European Economic Area
EER	effective exchange rate
EMI	European Monetary Institute
EMU	Economic and Monetary Union
ESA 95	European System of Accounts 1995
ESCB	European System of Central Banks
EU	European Union
EUR	euro
f.o.b.	free on board at the exporter's border
GDP	gross domestic product
HICP	Harmonised Index of Consumer Prices
ILO	International Labour Organization
IMF	International Monetary Fund
MFI	monetary financial institution
NCB	national central bank
OECD	Organisation for Economic Co-operation and Development
PPI	Producer Price Index
ULCM	unit labour costs in manufacturing

**In accordance with Community practice, the EU Member States are listed in this report using the alphabetical order of the country names in the national languages.**

# FOREWORD



On 1 January 2007 Slovenia became the 13th Member State to adopt the euro, and Banka Slovenije became the 13th NCB to join the Eurosystem. I would like to extend a very warm welcome to the Slovenian citizens and to praise Slovenia for its good economic performance thanks to the implementation of stability-oriented macroeconomic policies over recent years. The currency changeover from the Slovenian tolar to the euro proceeded in a very smooth and efficient manner: 94.5 million banknotes were introduced, starting with a frontloading phase in late November 2006, and the period of dual circulation of both the euro and the tolar lasted for two weeks, after which time the single currency had completely replaced the Slovenian currency. Against this background, the euro was received with great enthusiasm by the Slovenian population.

\*\*\*

The ECB's monetary policy continued to anchor medium and long-term inflation expectations at levels broadly consistent with price stability. This in particular reflected the credibility of the

ECB in conducting its monetary policy in strict compliance with its primary objective of maintaining price stability over the medium term. The solid anchoring of longer-term inflation expectations is a prerequisite for monetary policy to make an ongoing contribution towards supporting sustainable economic growth and job creation in the euro area. In 2006 average annual HICP inflation was 2.2%, unchanged compared with the previous year. This is above the ECB's definition of price stability of below, but close to, 2%. Although it reflects the oil and commodity price shocks, there is no room for complacency.

Risks to price stability continued to be clearly on the upside throughout 2006. Notable among these risks were the possibility of a stronger than anticipated pass-through of past oil price increases, unanticipated increases in administered prices and indirect taxes, and renewed oil price rises. More fundamentally, given the very favourable economic environment in 2006, with an ongoing reduction in unemployment and a further improvement in labour market performance, the prospect of stronger than expected wage developments continued to pose substantial upside risks to price stability. In this context, and in particular in view of the upcoming 2007 wage rounds, the Governing Council stressed that wage agreements should take into account the still unacceptably high level of unemployment in a number of countries, as well as their present price competitiveness positions and yearly labour productivity developments.

The Governing Council's assessment that risks to price stability prevailed was confirmed by cross-checking with the monetary analysis. The marked dynamism of monetary and credit growth in 2006 reflected a continuation of the persistent upward trend in the underlying rate of monetary expansion in the euro area that has been observed since mid-2004, adding further to liquidity accumulation. Following several years of robust monetary growth, liquidity in the euro area remained ample by all plausible measures. In a context of continued strong

monetary and credit growth, this pointed to upside risks to price stability over the medium to longer term.

To address the upside risks to price stability identified by the ECB's economic and monetary analyses throughout the year, the Governing Council adjusted the monetary policy stance in 2006 by raising the key ECB interest rates on five occasions by a total of 125 basis points. As a result, the minimum bid rate in the main refinancing operations of the Eurosystem rose from 2.25% in January 2006 to 3.50% in December 2006.

In 2006 the euro area economy expanded robustly. Notwithstanding the impact of high and volatile oil prices, real GDP rose by 2.8% in 2006, compared with 1.5% in 2005. The economic recovery gradually broadened in the course of the year, and the nature of the economic expansion became increasingly self-sustaining, with domestic demand acting as the main driver. In 2006 real GDP growth was, on average, significantly above potential. The euro area continued to benefit from the strong expansion of the world economy, while substantial gains in corporate profits and an extended period of very favourable financing conditions supported investment growth and employment.

Against this background, the Governing Council was of the view that, also after the rate adjustments in 2006, the ECB's monetary policy stance remained accommodative and that firm and timely action continued to be warranted to ensure price stability over the medium term.

\*\*\*

Fiscal developments in the euro area were relatively favourable in 2006. According to the updated stability programmes, the average fiscal deficit for the euro area stood at about 2.0% of GDP, compared with 2.4% in 2005. However, this budgetary improvement was largely the result of strong output growth and revenue windfalls and was only in small part

due to effective fiscal consolidation measures. Against the background of the current economic good times, it remains of the essence to sustain the momentum of improving public finances and to accelerate the pace of budgetary consolidation so that all countries of the euro area achieve their medium-term objective of a sound fiscal position as soon as possible. In this respect, it is crucial to set out additional concrete and credible fiscal consolidation measures and to ensure their swift implementation. Such measures have the best chance of success when they are based on a credible and comprehensive medium-term strategy, with a focus on reducing expenditure rather than increasing revenues. This helps to strengthen confidence in a fiscal policy that is both sustainable and supportive of growth and employment.

\*\*\*

With regard to structural reforms, euro area countries have become increasingly aware over recent years of the necessity to adjust to the challenges of increased global competition, ageing populations and accelerating technological change. The importance of adjusting to these challenges is highlighted by the relatively low growth of labour productivity in the euro area when compared with that of the United States: the average annual growth of labour productivity between 1999 and 2006 stood at 1.1% in the euro area and 2.2% in the United States. This situation requires in particular the very active implementation of structural reforms in the domain of research and development, education and training, and the completion of the Single Market. It is also to be noted that the reforms undertaken by a number of Member States in the labour market have started to create more job opportunities. As a result both of these reforms and of wage moderation, the euro area has seen significant employment growth over the recent period. Notably, employment in the euro area has risen by more than 12 million persons in the eight-year period since the start of Stage Three of EMU. This compares favourably with the

increase of little more than two million recorded for the same group of countries in the eight years before 1999. Stronger employment growth has also contributed to reducing unemployment over the last few years. While still high at a rate of 7.5%, towards the end of 2006 the standardised unemployment rate reached its lowest level since the series began in 1993. However, structural impediments continue to exist in the euro area and help to explain why unemployment rates are still unacceptably high and participation in the labour market is still low by international standards. It is therefore essential for each euro area country to minimise market distortions induced by national regulations and for the euro area as a whole to remove remaining barriers to market integration. This requires, in particular, sufficient wage differentiation, greater labour mobility and more flexible product, labour and financial markets. Further reforms will enhance the adjustment capacity of the euro area, foster economic growth and create additional employment opportunities.

\*\*\*

In addition to fiscal discipline and structural reforms, the smooth functioning of EMU also rests upon European financial integration. By helping to promote the development of European financial systems, financial integration contributes to increasing the potential for economic growth. It also enhances the smooth and effective transmission of monetary policy, supports the efficient operation and smooth functioning of clearing and payment systems and contributes to financial stability. Last but not least, an integrated financial system plays a decisive role as a shock absorber in the event of asymmetric shocks within the euro area. The ECB report on indicators of financial integration, published in September 2006, provides a detailed and comprehensive analysis of the progress made in the various segments of the financial system. The ECB and the Eurosystem also act as catalysts for private sector initiatives fostering financial integration. For example, the ECB and nine NCBs will contribute to the

labelling of short-term debt instruments under the Short-Term European Paper (STEP) initiative, and the ECB will regularly provide statistics on yields and volumes in the STEP market. The Eurosystem also strongly supports the Single Euro Payments Area (SEPA) project, and fully encourages all parties concerned to launch the SEPA by the beginning of 2008 and to reach a critical mass of SEPA transactions by the end of 2010. The Eurosystem is providing assistance to the banking industry with regard to the design and preparation of the new SEPA instruments and frameworks and is urging the market to proceed with the timely adaptation of retail payment systems for processing the SEPA instruments.

The Eurosystem also contributes to financial integration by providing infrastructures for payment and settlement. The TARGET2 project is well under way and will go live before the end of 2007, as scheduled. Technical preparations were undertaken in 2006, and the ECB communicated detailed information on the pricing scheme and on the different ways of participating in TARGET2. In July 2006 the Eurosystem decided to evaluate opportunities to provide settlement services for securities transactions. The objective of this project – called TARGET2-Securities – for which synergies with TARGET2 would be sought, is to allow the harmonised settlement of securities in euro in central bank money.

The Eurosystem continued to contribute to the stability of the financial system in the euro area and in the EU by monitoring and assessing major sources of risk and vulnerability, contributing to policy discussions at the European and international levels on the main regulatory and supervisory issues, and enhancing its framework and operations for the management of possible financial crises.

\*\*\*

The total number of budgeted staff positions for 2006 was 1,343 full-time equivalent (FTE) positions. This compares with 1,369 FTE



positions for 2005. In September 2006 the first six participants in the ECB's Graduate Programme, which is aimed at recent graduates with a broad educational background, joined the Bank on the basis of two-year non-convertible contracts.

In 2006 the ECB introduced general principles for mobility, which encourage members of staff to change position after every five years of service. Internal mobility represents an opportunity for staff to broaden their expertise and a means to increase synergies across business areas. In 2006 more than 80 members of staff moved internally to other positions. With staff from the 27 EU Member States, the ECB has integrated diversity management into its human resources practices, launching a diversity policy in 2006.

In addition to promoting mobility, the human resources strategy continues to focus on the development of ECB staff and management. Managerial and leadership skills continued to be strengthened through training and individual coaching. Following the launch of the diversity strategy, a specific training course for managers on "dignity at work" was implemented.

At the level of the Eurosystem, the Human Resources Conference, which was established in 2005 with the aim of further promoting the cooperation and team spirit among Eurosystem/ESCB central banks in the field of human resources management, further extended its work in 2006, in particular as regards different aspects of staff training and development.

\*\*\*

Progress continued to be made in the planning of the ECB's new premises. Following the

architects' optimisation of their design, the project moved into a planning phase in 2006. The City of Frankfurt, in collaboration with the ECB, continued to prepare a legally binding land use plan for the new premises. The process of submitting a request for the building permits is expected to be finalised by the end of October 2007, as scheduled. Construction is envisaged to start in early 2008, with finalisation foreseen by the end of 2011. A memorial and information space to commemorate the Grossmarkthalle's role in the deportation of Jewish citizens will also be constructed.

\*\*\*

In 2006 the ECB earned a surplus of €1,379 million, compared with a surplus of €992 million in 2005. As in 2005, an amount equivalent to the surplus was set aside in a provision against foreign exchange rate, interest rate and gold price risks, leaving no net profit. The provision will be used to cover losses arising from the exposure to these risks, in particular valuation losses not covered by the revaluation accounts. The size of the provision will be reviewed annually.

Frankfurt am Main, March 2007



Jean-Claude Trichet



**CHAPTER I**

**ECONOMIC  
DEVELOPMENTS AND  
MONETARY POLICY**

## I MONETARY POLICY DECISIONS

### KEY ECB INTEREST RATES INCREASED FURTHER IN 2006

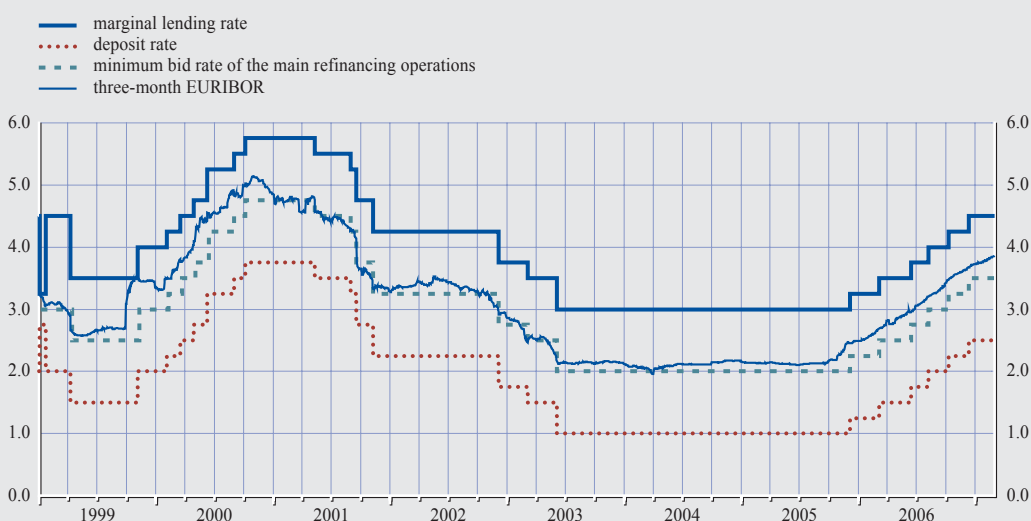
In the course of 2006 the Governing Council increased the key ECB interest rates to address upside risks to price stability identified on the basis of both its economic and monetary analyses. This withdrawal of monetary accommodation took place in an environment of robust economic growth, strong money and credit expansion and ample liquidity in the euro area. In a series of 25 basis point rate increases, the Governing Council raised the minimum bid rate of the main refinancing operations of the Eurosystem by a total of 125 basis points, from 2.25% in January 2006 to 3.50% at the end of the year (see Chart 1).

As regards price developments, average annual HICP inflation was 2.2% in 2006, unchanged compared with 2005. The headline inflation rate fluctuated over the course of the year and was strongly influenced by movements in the price of oil. Until August it followed an increasing trend, remaining significantly above the ECB's definition of price stability of below, but close to, 2%. This was mainly owing to

substantial increases in energy prices, but also partly to rises in administered prices and indirect taxes. In the remaining months of 2006, by contrast, the annual inflation rate fell below 2%, largely as a result of the significant decline in oil prices and base effects. Notwithstanding the favourable momentum of real GDP growth and positive signs from labour markets, the development of labour costs in the euro area remained moderate throughout 2006, in part reflecting strong global competition, particularly in the manufacturing sector. This helped to dampen inflationary pressures. Longer-term inflation expectations remained solidly anchored at levels broadly consistent with price stability. Nonetheless, the risks to price stability remained clearly on the upside, in particular risks of a stronger than anticipated pass-through of past oil price rises, additional increases in administered prices and indirect taxes beyond those already announced, and the possibility of renewed oil price increases. More fundamentally, the prospect of stronger than expected wage developments and potential second-round effects in wage and price-setting behaviour in the wake of past oil price increases continued to pose substantial upside risks to price stability,

Chart 1 ECB interest rates and money market rates

(percentages per annum; daily data)



Source: ECB.

Note: The rate of the main refinancing operations refers, for operations settled before 28 June 2000, to the rate applicable to fixed rate tenders. For operations settled after that date, the rate is the minimum bid rate applicable to variable rate tenders.

especially given the very favourable economic environment and improving labour market performance.

As regards economic activity, the euro area economy expanded robustly during 2006. Following a gradual and still moderate economic recovery in the second half of 2005, the expansion of economic activity in the euro area gained momentum in the first half of 2006. Economic growth gradually became more broadly based and increasingly self-sustaining, with domestic demand – in particular fixed investment – as the main driver. In 2006 on average, real GDP growth was above potential. Throughout the year, the external environment supported a sustained economic expansion. Euro area exports benefited from the continued strong expansion of the world economy, especially in the economies of the euro area's main trading partners. Investment growth became increasingly dynamic in the course of the year, benefiting from the extended period of very favourable financing conditions, corporate balance sheet restructuring and considerable gains in profits. Consumption growth in the euro area also strengthened in the course of 2006, in line with developments in real disposable income as employment growth recovered and the unemployment rate declined. Overall, notwithstanding the impact of high and volatile oil prices, real GDP rose by 2.8% in 2006, compared with 1.5% in 2005 and 1.8% in 2004. Short-term risks to the outlook for economic growth remained broadly balanced for most of the year, while medium to longer-term risks continued to lie on the downside throughout 2006, relating mainly to possible oil price rises, global imbalances and potential protectionist pressures.

Monetary and credit growth remained very robust over the course of 2006, mainly reflecting the stimulative effects of the low level of interest rates in the euro area and the strength of economic activity. Viewed from a medium-term perspective, the marked dynamism of monetary and credit growth in 2006 reflected a continuation of the persistent upward trend in

the underlying rate of monetary expansion observed since mid-2004 and added further to the accumulation of liquidity. Indeed, following several years of robust monetary growth, liquidity in the euro area remained ample by all plausible measures, which in an environment of continued strong monetary and credit growth pointed to upside risks to price stability over the medium to longer term.

To contain the upside risks to price stability, as identified through both the economic and monetary analyses of the ECB, the Governing Council adjusted the monetary policy stance in 2006 by raising the key ECB interest rates on five occasions. It stressed that, also after these rate increases, the ECB's monetary policy stance remained accommodative, with interest rates remaining at low levels, money and credit growth strong, and liquidity ample by all plausible measures. The Governing Council expressed the view that acting in a firm and timely manner was warranted to ensure price stability over the medium term. The anchoring of medium to long-term inflation expectations which results from such a commitment is a prerequisite for monetary policy to make an ongoing contribution towards supporting sustainable economic growth and job creation.

In the course of 2006 the communication of both the Governing Council's decisions and its broader assessment of the economic situation had an impact on market expectations as regards the outlook for short-term interest rates. The Governing Council clearly communicated throughout the year that future policy actions remained conditional on its regular assessment of risks to price stability and on the confirmation of its main scenario. Financial markets seem to have fully understood this message. Thus, in line with the macroeconomic data released, which on balance confirmed the Governing Council's scenario, market expectations for short-term interest rates adjusted gradually upwards over the year as it became clearer to the market that the initial rate increase in December 2005 would be followed by a gradual withdrawal of monetary accommodation.



Market uncertainty decreased further in 2006, with volatility declining to fairly low levels, notwithstanding a temporary rise over the summer period in the context of a global repricing of risk. Overall, compared with longer-term historical averages, market uncertainty relating to future monetary policy decisions reached a relatively low level.

### **MONETARY POLICY DECISIONS IN GREATER DETAIL**

At the start of 2006 economic conditions were relatively favourable. Real GDP growth had started to strengthen and broaden in the second half of 2005. Although quarter-on-quarter real GDP growth in the fourth quarter of 2005 was considerably lower than that recorded for the third quarter, sentiment indicators suggested that the underlying trend of economic growth was relatively robust. In fact, the data available at the beginning of 2006, in particular survey data, confirmed the Governing Council's assessment that the expansion of economic activity was progressively strengthening and broadening and would continue to do so in the first few months of the year, supported in particular by stronger domestic demand.

The outlook for economic growth remained relatively favourable, owing mainly to a very strong recovery in investment growth and gradually improving labour market conditions. In March 2006 the ECB staff macroeconomic projections for economic growth were consequently revised upwards in comparison with the December 2005 Eurosystem staff projections, predominantly reflecting a somewhat stronger outlook for private investment over the projection horizon. Average annual real GDP growth was projected to be in a range between 1.7% and 2.5% in 2006 and between 1.5% and 2.5% in 2007. Forecasts by international organisations and private sector institutions gave a broadly similar picture.

As regards the development of prices, annual HICP inflation was above 2% at the start of

2006 and was expected to remain so in the short run, the precise levels depending largely on future energy price developments. Beyond the short term, announced changes in indirect taxes and the indirect effects of past oil price increases were expected to have a significant upward impact on inflation, despite the assumption that wage moderation would continue. In March 2006 the ECB staff macroeconomic projections for inflation were revised slightly upwards compared with the December 2005 Eurosystem staff projections. Average annual HICP inflation was projected to be between 1.9% and 2.5% in 2006 and between 1.6% and 2.8% in 2007. Risks to this outlook for price developments remained on the upside, relating in particular to possible second-round effects of past oil price rises.

Given the strength of monetary growth in an environment of ample liquidity in the euro area, the monetary analysis confirmed the signals from the economic analysis that upside risks to price stability prevailed. Notwithstanding signs of a resumption of the unwinding of past portfolio shifts into monetary assets, the annual growth rate of the monetary aggregate M3 remained robust and, looking through the short-term effects generated by such portfolio behaviour, the underlying trend of monetary expansion remained strong, reflecting the stimulative impact of the low level of interest rates. Moreover, as regards the counterparts of M3, credit expansion strengthened further, with borrowing by households – especially loans for house purchase – and non-financial corporations rising at a marked pace.

Overall, against the background of upside risks to price stability over the medium term, as indicated by both the economic and monetary analyses of the ECB, the Governing Council further adjusted the accommodative stance of monetary policy by raising the key ECB interest rates by 25 basis points on 2 March 2006. The Governing Council took the view that, by acting in a timely fashion, it was helping to keep medium and long-term inflation expectations solidly anchored at levels consistent with price

stability and thereby making an ongoing contribution to sustainable economic growth and job creation. In particular, it emphasised that interest rates across the maturity spectrum remained at very low levels in both nominal and real terms and that the ECB's monetary policy remained accommodative.

In the following months, notwithstanding a temporary rise in market volatility in May in the context of a global repricing of risk, incoming information confirmed the Governing Council's view that an adjustment of the ECB's accommodative stance in March had been warranted to address upside risks to price stability. With real GDP growing by 0.6% on a quarter-on-quarter basis in the first quarter (which was later revised upwards to 0.8%), incoming data confirmed the view that growth was broadening and becoming more sustained. At the same time, HICP inflation rose to 2.5% in May, mainly as a result of energy price developments. Inflation rates were projected to remain above 2% in 2006 and 2007. In the June Eurosystem staff projections, the range for HICP inflation in 2006 was revised slightly upwards compared with the March ECB staff projections, to between 2.1% and 2.5% from between 1.9% and 2.5%, with risks to the outlook for price developments remaining on the upside.

The monetary analysis also continued to point to upside risks to price stability over the medium to longer term. In a context of further acceleration of monetary and credit growth, the annual growth rate of loans to the private sector reached double-digit levels. In particular, borrowing by households – especially in the form of mortgage loans – and by non-financial corporations continued to grow very strongly. These developments further confirmed that the stimulative impact of low interest rates remained the dominant factor behind the high underlying rate of monetary expansion.

Overall, a cross-check of the outcome of the economic analysis with that of the monetary analysis confirmed that upside risks to price

stability over the medium term prevailed. Thus, the Governing Council decided to increase the key ECB interest rates by a further 25 basis points on 8 June. The Governing Council emphasised that a further withdrawal of monetary accommodation remained warranted if its assumptions and baseline scenario were confirmed.

In June and July 2006, incoming data further confirmed the Governing Council's assessment that economic growth had both regained momentum and become more broadly based in the first half of the year. Sentiment indicators remained very strong and employment growth robust. Furthermore, the conditions continued to be in place for real GDP in the euro area to grow at around its potential rate. At the same time, inflation rates remained significantly above 2% in June and July and were projected to be above that level on average in both 2006 and 2007, with risks to this outlook continuing to be on the upside. Given the ongoing strong dynamism of monetary growth in an environment of already ample liquidity, signals from the monetary analysis confirmed the outcome of the economic analysis that upside risks to price stability prevailed over the medium term. In order to contain these risks and preserve the firm anchoring of longer-term inflation expectations, the Governing Council decided on 3 August 2006 to increase the key ECB interest rates by another 25 basis points. It also stressed the need to further monitor very closely all developments so as to prevent the risks to price stability from materialising.

In the course of the third quarter, incoming data on economic activity in the euro area confirmed that a significant acceleration in the economic expansion had taken place over the previous quarters. On the basis of revised data, economic activity had grown at an average quarter-on-quarter rate of 0.7% from the third quarter of 2005 to the second quarter of 2006, which was well above most estimates of the potential rate. In addition, the unemployment rate had been on a declining trend, employment growth had strengthened and employment

expectations derived from business surveys had remained favourable. Available indicators for the third quarter of 2006 further supported the assessment that economic activity would continue to expand at a robust pace, while possibly moderating from the very strong growth rates seen in the first half of the year. Overall, the conditions remained in place for the euro area economy to grow at solid rates around potential. Accordingly, in the September 2006 ECB staff macroeconomic projections, the ranges projected for real GDP growth in 2006 and 2007 were again revised upwards compared with the preceding Eurosystem staff projections, to between 2.2% and 2.8% in 2006 and between 1.6% and 2.6% in 2007, reflecting mainly the stronger than anticipated growth recorded in the first half of the year.

HICP inflation rates remained at levels above 2% in July and August, and in the September ECB staff macroeconomic projections average annual inflation was projected to lie between 2.3% and 2.5% in 2006 and between 1.9% and 2.9% in 2007. These projections represented upward revisions. The range for 2006 moved into the upper part of the range published in the June Eurosystem staff projections and the range for 2007 also shifted slightly upwards, reflecting mainly the upward revision of the projection assumption for oil prices. Later in September the picture changed somewhat as a result of a significant decline in oil prices in August and September and favourable base effects. This led to a marked decline in headline inflation rates, to below 2% from September onwards. However, the view continued to prevail that inflation was likely to rise again to levels above 2% towards the end of 2006 and in early 2007, mainly due to the impact of higher indirect taxes and, to a lesser extent, unfavourable base effects. The Governing Council thus took the view that a considerable degree of short-term volatility in the annual HICP inflation rate was likely, but that, on average, inflation would remain at levels above 2% in 2006 and 2007. Risks to price stability were seen clearly on the upside, a view confirmed by the cross-check with the monetary analysis.

All in all, these developments led the Governing Council to decide on 5 October 2006 to raise the key ECB interest rates again by 25 basis points. The Governing Council stressed that it would remain warranted to further withdraw monetary accommodation if its baseline scenario was further confirmed.

Incoming information, in particular strong survey indicators for the fourth quarter of 2006, underpinned the reasoning behind the Governing Council's decision to increase interest rates in October. It also further confirmed the assessment that economic activity was continuing to expand robustly, with domestic demand remaining the main driver in the third quarter. This confirmed the anticipated broadening of the economic recovery and pointed to a more self-sustaining nature of economic expansion in the euro area. Looking ahead to 2007, the conditions remained in place for the euro area economy to grow at solid rates around potential. While some volatility in the quarterly growth rates seemed likely to emerge around the turn of the year, associated with the impact of changes in indirect taxes, the medium-term outlook for economic activity remained favourable. This outlook was also reflected in the December 2006 Eurosystem staff macroeconomic projections, which embodied upward revisions compared with the September ECB staff projections, mainly reflecting the assumption of lower energy prices and their impact on real disposable income. Average annual real GDP growth was projected to be between 1.7% and 2.7% in 2007 and between 1.8% and 2.8% in 2008.

As regards price developments, annual HICP inflation remained below 2% in the last quarter of 2006. Given the downwardly revised assumptions for energy prices, the range for HICP inflation in 2007 in the December Eurosystem staff macroeconomic projections was somewhat lower than in the September ECB staff projections. Average annual HICP inflation was projected to be between 1.5% and 2.5% in 2007 and between 1.3% and 2.5% in 2008. The outlook for price developments remained subject to upside risks. In addition, a

cross-check of the outcome of the economic analysis with that of the monetary analysis continued to support the assessment that upside risks to price stability prevailed over the medium to longer term.

Against this background, the Governing Council decided to increase the key ECB interest rates by another 25 basis points on 7 December 2006. It said that, also after this rate increase, the ECB's monetary policy stance remained accommodative, with the key ECB interest rates remaining at low levels, money and credit growth strong, and liquidity in the euro area ample by all plausible measures. The Governing Council therefore expressed the view that it would be warranted to act in a firm and timely manner to ensure price stability over the medium term. It also said that it would monitor very closely all developments so that risks to price stability over the medium term did not materialise.

## 2 MONETARY, FINANCIAL AND ECONOMIC DEVELOPMENTS

### 2.1 THE GLOBAL MACROECONOMIC ENVIRONMENT

#### WORLD GROWTH MODERATED BUT REMAINED ROBUST

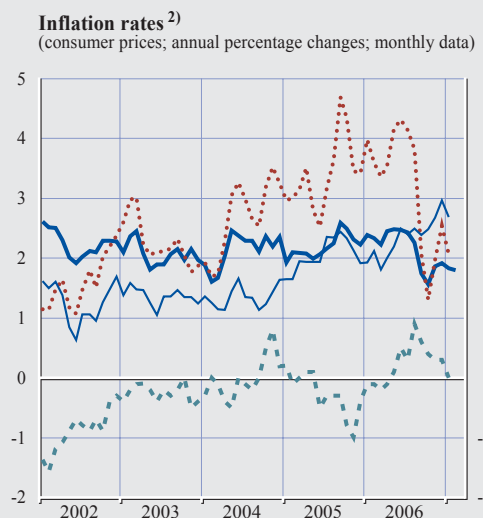
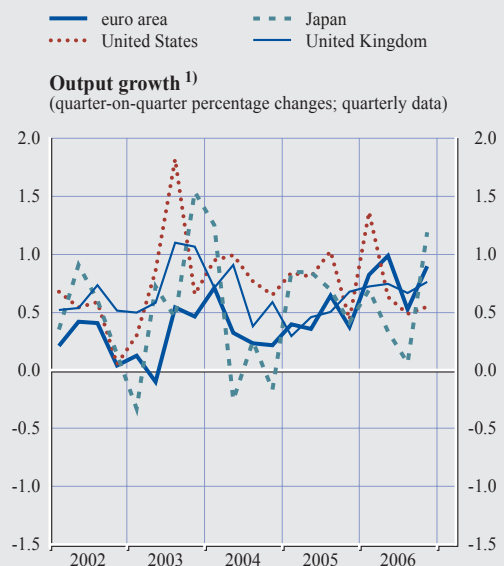
In 2006 the global economy continued to expand at a robust pace, despite some gradual moderation in the growth momentum. Strong growth in all major regions in the first half of the year was followed by some deceleration in the second half, notably in the United States (see Chart 2). Overall, however, world growth remained at levels very close to those reached in 2004 and 2005, benefiting in particular from continued favourable financing conditions, a healthy profit situation and significant improvements in corporate balance sheets throughout most of the world's economies. In addition, robust growth in some large emerging economies, coupled with strong trade activity, contributed to the robust pace of the global expansion. Even though growth became more balanced across the major industrialised economies, international external imbalances tended to increase further, mainly as a result of the energy-trade surpluses of oil-exporting countries.

Oil prices remained at elevated levels in 2006. After a historical high of USD 78 per barrel in early August, the price of Brent crude oil had retreated by December to around USD 60, the level prevailing at the end of 2005. In 2006 headline consumer price inflation, largely mirroring developments in energy prices, peaked during the summer and subsequently declined. Underlying inflationary pressures remained overall relatively contained in 2006 in most countries. In general, global inflation rates remained very close to levels reached in 2004 and 2005. For the countries of the OECD, annual headline CPI inflation was 2.6% for the year as a whole, and annual inflation excluding food and energy was 2.0%.

In the United States, the annual rate of growth in real GDP for 2006 as a whole stood at 3.3%. In the course of the year, however, economic activity decelerated, with GDP growth falling

below its potential rate. This slowdown stemmed largely from a decline in residential investment, while growth in private consumption was resilient. While household spending was negatively affected by the slowdown in the housing market and high energy prices, it was supported by robust labour income growth and

Chart 2 Main developments in major industrialised economies



Sources: National data, BIS, Eurostat and ECB calculations.

1) Eurostat data are used for the euro area and the United Kingdom; national data are used for the United States and Japan. GDP figures have been seasonally adjusted.

2) HICP for the euro area and the United Kingdom; CPI for the United States and Japan.



favourable financing conditions. Non-residential business investment grew robustly, buttressed by favourable financing conditions and high levels of corporate profitability. The contribution of net trade to growth in 2006 was zero.

The external balance deteriorated during 2006 in comparison with 2005. The widening of the goods deficit accounted for the bulk of the deterioration, reflecting solid growth in household consumption. Nevertheless, export activity showed some signs of improvement, reflecting the strength of economic growth in the rest of the world as well as the depreciation of the real effective exchange rate of the US dollar.

In the United States the annual rate of change in the CPI for 2006 as a whole was 3.2%. Consumer price inflation rose in the first half of the year on account of high resource utilisation, significant increases in energy prices and an acceleration in the owner-equivalent rent component of the CPI. After reaching a peak in the summer, inflationary pressures subsequently receded, with annual CPI inflation standing at 2.5% in December. The annual rate of inflation excluding energy and food followed a broadly similar pattern, reaching a ten-year high of 2.9% in September and subsequently recording a gradual moderation. Lower inflation rates towards the year's end may have reflected the easing of underlying price pressures as a result of more subdued aggregate demand growth as well as lower energy prices.

In the first half of 2006 the Federal Open Market Committee (FOMC) of the Federal Reserve System increased the federal funds rate target by a total of 100 basis points in four consecutive 25 basis point steps. This increase brought the target for the federal funds rate to 5.25% on 29 June. While keeping the target for its policy rate constant throughout the remainder of the year, the FOMC repeatedly noted in its statements that some inflationary risks remained, although any additional tightening of the policy stance would depend on the evolution of the macroeconomic outlook. As regards fiscal policy in the United States, the federal

budget deficit declined in the fiscal year 2006 compared with 2005, primarily owing to increased corporate and personal tax revenues. According to estimates by the Congressional Budget Office, the federal budget deficit stood at 1.9% of GDP in the fiscal year 2006.

In Japan, the economic recovery continued in 2006, with real GDP growing at 2.2% after 1.9% in 2005. GDP growth remained above potential for the third consecutive year. Economic activity was supported by a rapid expansion in private non-residential investment and the continuing strength of exports. The robustness of non-residential investment mainly reflected favourable financing conditions, rising corporate profits and strong business confidence. All in all, the domestic demand recovery was resilient, notwithstanding a significant slowdown in private consumption growth in 2006 as compared with the previous year. Export activity benefited from the stimulating effect of the weaker yen and stronger demand for machinery and equipment. Reflecting the improvement in the balance sheets of Japanese banks and their restored risk-taking capacity, as well as the effects of the ongoing recovery, bank lending increased in 2006 for the first time in ten years.

Deflationary concerns eased further in Japan in 2006. The annual rate of change in consumer prices returned to positive territory in the course of the year. Inflation remained subdued, however, owing to persistent downward pressures, especially on wages. For the year as a whole, the annual rate of change in consumer prices was 0.3% after -0.3% in 2005. In March 2006 the Bank of Japan ended its quantitative easing policy, which had been in place since March 2001, and in July raised its target for the uncollateralised overnight call rate from zero to 0.25%. In 2006 the Bank of Japan withdrew excess liquidity from the banking sector, and the level of current account balances held at the Bank of Japan by Japanese private banks decreased significantly, from JPY 31 trillion in March to around JPY 10 trillion at the end of the year.

In emerging Asia, growth remained strong in 2006 owing to resilient domestic demand, especially in the region's largest economies, despite decelerating external demand in the second half of the year. Price pressures were contained by monetary policy tightening measures across most of the region and, after the summer, by falling oil prices. Exchange rate developments were divergent: in real effective terms, the currencies of Korea, Thailand and Indonesia appreciated during 2006, whereas the currencies of other emerging Asian countries either depreciated (e.g. Hong Kong SAR and Taiwan, Province of China) or remained broadly unchanged (China, India and Malaysia). At the same time, foreign exchange reserves continued to grow in several economies in the region.

Focusing on China, the economy continued to grow strongly in 2006. Economic activity accelerated in the first half of the year on the back of a rebound in manufacturing, real estate and local government investment coupled with strong exports. Fixed capital investment and industrial value added growth moderated slightly in the second half of 2006 as a result of monetary policy tightening, including administrative measures, but overall GDP growth was almost unaffected. Inflationary pressures remained low but strengthened towards the end of the year. Following the introduction of a more flexible exchange rate regime in 2005, the Chinese renminbi continued to appreciate gradually but steadily against the US dollar in 2006, whereas it depreciated against the euro. The current account surplus exceeded the previous record level reached in 2005, contributing to the increase in China's foreign exchange reserves, which reached a cumulative level of more than USD 1 trillion.

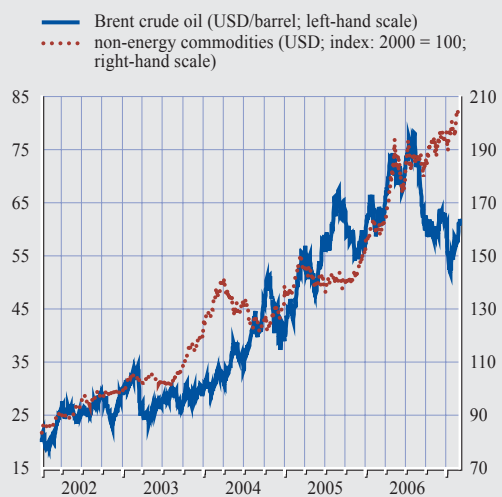
In Latin America, economic growth remained dynamic, supported by the continued favourable external environment (including high prices for the commodities exported by the region) and robust domestic demand. Among the major economies in Latin America, Argentina continued to post high real economic growth rates, although persistently high inflation posed

a challenge to the authorities. The pace of economic expansion in the region's leading economies, Brazil and Mexico, was more moderate albeit still robust, especially in the latter case, while inflation was contained. Many Latin American economies continued to take advantage of the still benign international financing conditions to engage in active debt management operations, in part through outright buybacks as well as swaps, in a bid to reduce debt servicing costs and improve maturity profiles. Coupled with improved economic fundamentals, this helped to bring about a further reduction in financial vulnerability across the region.

#### COMMODITY PRICE DEVELOPMENTS IN 2006

Oil prices rose sharply for most of 2006 (see Chart 3), with the price of Brent crude oil reaching a new historical high of USD 78 per barrel at the beginning of August (approximately 35% higher than at the start of the year). However, they subsequently declined substantially and, amid considerable volatility, reached USD 61 at the end of the year. The average price of Brent crude oil was USD 65 in 2006, which is approximately 20% above the average of the previous year.

**Chart 3 Main developments in commodity markets**



Sources: Bloomberg and Hamburg Institute of International Economics.

Global oil demand growth, which had led to capacity constraints throughout the oil supply chain since mid-2003, eased somewhat during 2006 compared with the previous years. This was mainly due to weaker oil demand from OECD countries, which partly offset the increase in demand from non-OECD countries, in particular China. However, prices were pushed up by other factors that emerged on the supply side. In particular, the surge in oil prices over the first seven months of the year reflected mainly supply disruptions and heightened concerns over the security of future oil supplies at a time when oil market fundamentals were already tight. Such fears were aggravated by the continuing geopolitical tensions in the Middle East – in particular with respect to Iran’s nuclear stand-off and the outbreak of fighting between Israel and Lebanon.

After their early-August peak, however, oil prices declined substantially as the receding threat from hurricanes in the Gulf of Mexico, a noticeable moderation in geopolitical tensions and an easing of petrol market tightness took some pressure off oil markets. The fall in prices prompted the Organization of the Petroleum Exporting Countries (OPEC) to announce in October a 1.2 million barrel per day output cut from November, which was followed by the decision in December to further cut supply by 0.5 million barrels per day from February 2007. However, an unusually mild start to the winter in most parts of the northern hemisphere, which had a dampening effect on demand for heating fuels, and limited compliance by OPEC with the announced cut exerted some downward pressure on prices towards the end of 2006 and particularly in early January 2007. Prices rebounded in the second half of January, reflecting colder weather conditions in the northern hemisphere and resultant higher demand, lower OPEC supply and increased geopolitical concerns.

The prices of non-energy commodities increased considerably throughout 2006, amid some volatility. Non-energy commodity prices as measured by the Hamburg Institute of

International Economics aggregate index (see Chart 3) soared in the first half of the year, supported mainly by surging metals prices. Solid demand from emerging Asian economies, in particular China, high energy prices, limited production growth and low inventory levels pushed most industrial metals prices higher. After reaching a peak in May, non-energy commodity prices subsequently declined somewhat but remained at elevated levels by historical standards. Higher agricultural prices also contributed to a high non-energy commodity price level towards the end of the year. In aggregate terms, non-energy commodity prices (denominated in US dollars) increased by an average of approximately 26% in 2006 compared with the previous year. In early 2007 the prices of non-energy commodities continued to increase, with the total price index reaching a new nominal high towards the end of February.

## 2.2 MONETARY AND FINANCIAL DEVELOPMENTS

### M3 GROWTH CONTINUED TO RISE, MAINLY DRIVEN BY THE LOW LEVEL OF INTEREST RATES AND THE STRENGTHENING OF ECONOMIC ACTIVITY

In 2006 monetary growth continued to rise, reaching at the end of the year the highest annual rate recorded since the start of Stage Three of EMU. Strong M3 growth was mainly driven by the low level of interest rates and the strength of economic activity in the euro area, which also supported vigorous private sector credit expansion. At the same time, rising interest rates started to affect monetary developments over the course of the year, although largely through substitution among the components of M3 rather than by curtailing overall M3 growth. Overall, the continued strengthening of monetary growth contributed further to the already ample liquidity situation and, in conjunction with strong credit expansion, pointed to upside risks to price stability over the medium to longer term.

After having declined in the fourth quarter of 2005, M3 growth accelerated in the first months

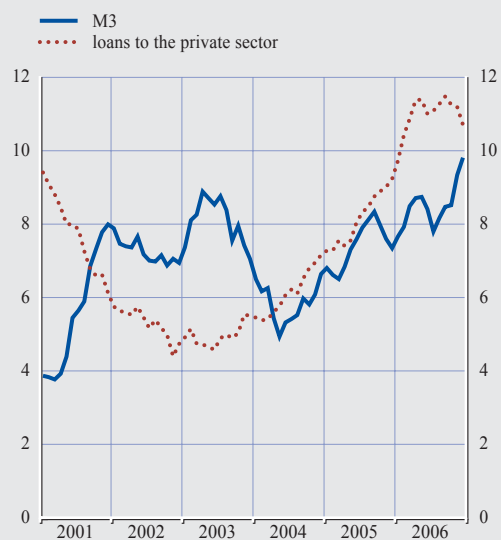
of 2006, with the annual rate of growth reaching 8.6% in the second quarter. Annual M3 growth moderated temporarily in the third quarter, before strengthening again to 9.0% in the fourth quarter. The December outturn of 9.8% represented the highest annual growth rate recorded since the start of Stage Three of EMU. Generally, developments in annual M3 growth were characterised by a rather high degree of volatility in 2006. The high variation was also visible in shorter-term dynamics of M3 (i.e. the annualised one-month, three-month and six-month rates of growth), implying that the variability of the annual rate was not mainly related to base effects.

As regards developments in the components of M3, in the first half of 2006 the largest contribution to annual M3 growth came from the expansion of overnight deposits contained in the narrow monetary aggregate M1, as had been the case in 2005. By contrast, in the second half of the year time deposits (which are included in the wider aggregate M2, but not in M1) made the largest contribution. Turning to the counterparts of M3, the strength of monetary expansion in 2006 was driven by the robust growth of MFI credit to the private sector, which, however, started to moderate slightly at the end of the year. At the same time, the pronounced declines in the net external asset position of MFIs observed up to the end of 2005 faded away in the first months of 2006. Towards the end of the year significant increases in the flow of net external assets were recorded, which appeared to have contributed to the further rise in annual M3 growth.

Overall, developments in 2006 suggest that the observed vigorous monetary growth was mainly driven by the low level of interest rates and the strength of economic activity in the euro area. These dynamic developments can be seen as a continuation of the upward trend in money growth witnessed since mid-2004, which reflected the steady rise of the annual rate of growth of loans to the private sector (see Chart 4). This suggests that the factors behind the strong M3 growth in recent years, including

**Chart 4 M3 and loans to the private sector**

(annual percentage changes; adjusted for seasonal and calendar effects)



Source: ECB.

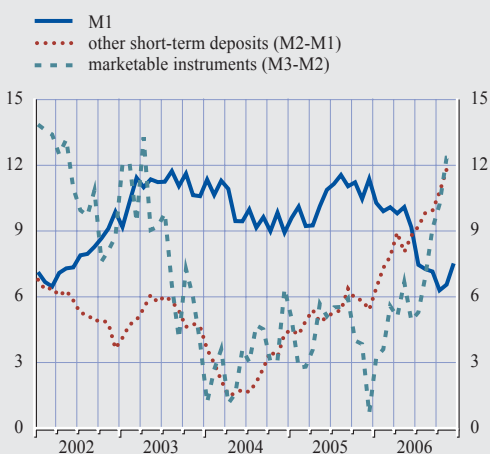
2006, differ from those underlying the strong M3 growth observed between 2001 and early 2003. In the latter case, portfolio shifts into monetary assets stemming from the heightened geopolitical, economic and financial uncertainty prevailing at that time were the main factor driving monetary expansion, while private sector loan growth was subdued. Viewed in this light, the current strength of M3 growth may be of greater concern in terms of the assessment of risks to price stability than that observed between 2001 and early 2003.

#### DIFFERING DEVELOPMENTS IN THE MAIN COMPONENTS OF M3

On the components side, the annual growth rate of M1 declined significantly in 2006, despite a small increase at the end of the year, from 10.3% in January to 7.5% in December (see Chart 5). Although the contribution to annual M3 growth fell to 3.5 percentage points at the end of 2006, it remained significant. Among the liquid assets contained in M1, the annual growth rate of holdings of currency in circulation was 11.1% in December, down from 13.5% in January, in line with expectations of a

**Chart 5 Main components of M3**

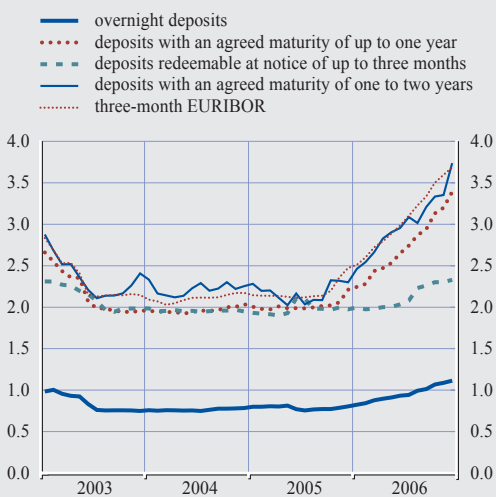
(annual percentage changes; adjusted for seasonal and calendar effects)



Source: ECB.

**Chart 6 MFI interest rates on short-term deposits and marketable instruments**

(percentages per annum)



Source: ECB.

continuation of the drawn-out process of adjustment of holdings of banknotes and coins following the euro cash changeover in January 2002. However, the main factor underlying the significant decline in M1 growth, especially in the second half of the year, was the markedly lower annual growth in overnight deposits, which stood at 6.9% in December 2006 after 9.7% in January.

By contrast, the annual growth rate of short-term deposits other than overnight deposits (M2-M1) strengthened markedly over the course of 2006, from 6.4% in January to 11.8% in December. The contribution of these other short-term deposits to annual M3 growth increased to 4.3 percentage points at the end of 2006, making them the most important contributor. This higher contribution more than offset the lower contribution from M1 and reflected a significant rise in the annual growth rate of short-term time deposits (i.e. deposits with an agreed maturity of up to and including two years), which grew by 27.3% in the year to December, by far the highest growth rate of this component of M3 since the start of the series in 1998. By contrast, the annual growth rate of short-term savings deposits (i.e. deposits

redeemable at notice of up to and including three months) declined strongly during the year.

The divergent developments in the dynamics of the short-term deposits included in M3 in 2006 were, to a large extent, explained by the widening spreads between the remuneration of time deposits (which has increased broadly in line with money market interest rates since late 2005) and that of overnight deposits (which, in line with historical patterns, reacted more slowly and more modestly to the increase in market rates) (see Chart 6). This prompted a shift out of overnight deposits into time deposits, thereby reducing M1 growth while having little impact on the growth of M3 as a whole. Overall, these developments showed that the rises in key ECB interest rates since December 2005 had a noticeable impact on monetary developments in 2006, although mostly in the form of substitution among the components of M3 rather than by constraining M3 growth.

The annual growth rate of marketable instruments (M3-M2) also increased strongly in 2006, standing at 12.4% in December after



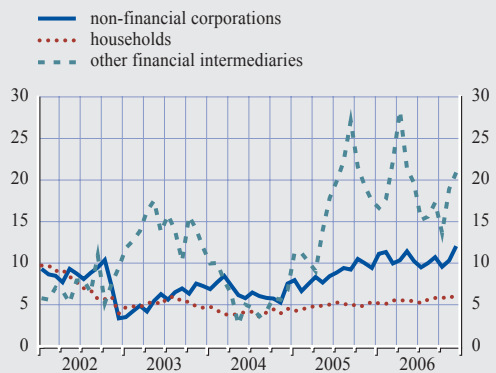
3.2% in January (see Chart 5). As a result, the contribution of these instruments to the annual growth rate of M3 rose markedly to 1.7 percentage points at the end of 2006, although this concealed quite different developments in the sub-components. The annual growth rate of money market fund shares/units was slightly negative in the first half of 2006, before turning positive in the second half of the year. The strengthening of growth in money market fund shares/units over the course of the year might reflect a partial normalisation of demand for these instruments after a prolonged period of exceptionally low growth as the portfolio shifts (which had resulted in excessive holdings of these assets between 2001 and early 2003, a period of heightened economic and financial uncertainty) unwound, with investors shifting to more liquid instruments.

Demand for debt securities with a maturity of up to two years increased markedly in 2006, accounting for most of the rising contribution to annual M3 growth from marketable instruments. The elevated growth rates of these short-term debt securities were related, in part, to the rises in short-term interest rates over the course of the year. Short-term debt securities are predominantly issued at floating rates, a feature which permits investors to benefit from interest rate increases before the maturity of the security.<sup>1</sup> The annual growth rate of repurchase agreements also strengthened somewhat between the first and the second half of 2006, amid considerable short-term volatility.

A sectoral breakdown of short-term deposits and repurchase agreements (i.e. the broadest aggregation of M3 components for which reliable information is available by holding sector) reveals that households remained the main contributors to the strong monetary growth in 2006. This reflects the household sector's large share of the total stock of these short-term deposits. The annual growth rate of households' money holdings has been on a steady uptrend since early 2004 (see Chart 7), despite strong returns on competing assets (such as equities

**Chart 7 MFI short-term deposits and repurchase agreements of the private sector**

(annual percentage changes; not adjusted for seasonal or calendar effects)



Source: ECB.

Notes: The reporting sector comprises MFIs excluding the Eurosystem. In addition, monetary liabilities of central government (post office, Treasury) are not included.

and housing) over the recent years, but has remained markedly lower than the growth rates of the other money-holding private sectors.

In 2006 the annual growth of non-financial corporations' money holdings was close to 10%, accounting for around one-quarter of the vigorous growth in short-term deposits and repurchase agreements. Strong profitability, robust business investment and high merger and acquisition (M&A) activity were the main factors behind the strong corporate demand for liquid assets.<sup>2</sup>

The relatively high degree of volatility in overall M3 growth in 2006 was mostly attributable to developments in the deposit holdings of non-monetary financial intermediaries other than insurance corporations and pension funds (i.e. the "other financial intermediary" or OFI sector). OFIs have become significantly more important

1 For more details, see the box entitled "Developments in short-term debt securities within M3" in the January 2007 issue of the ECB's Monthly Bulletin.

2 See also the article entitled "Sectoral money holding: determinants and recent developments" in the August 2006 issue of the ECB's Monthly Bulletin.

holders of monetary assets over the past decade. This development is related to financial deregulation and liberalisation and the associated development of deeper and more liquid securities markets. The growing importance of OFIs has been particularly visible since mid-2004 (see Box 1 for a discussion of the increased role of OFIs in shaping monetary dynamics).

## Box 1

### THE ROLE OF OTHER FINANCIAL INTERMEDIARIES IN MONETARY DYNAMICS

Money held by non-monetary financial intermediaries has become significantly more important in the analysis of monetary developments over the past decade.<sup>1</sup> This is particularly true for the “other financial intermediary” (OFI) sector, i.e. non-monetary financial intermediaries other than insurance corporations and pension funds. In part, the increased importance of this sector for monetary analysis reflects financial liberalisation and innovation and the associated development of deeper and more liquid securities markets. The growing significance of the OFI sector has been particularly visible since mid-2004, as reflected in its contributions to the annual growth rate of short-term deposits including repurchase agreements (referred to here as M3 deposits) – the broadest aggregation of M3 components for which a breakdown by sector is available. In 2006 the OFI sector’s contribution to the 8.1% average annual growth rate amounted to 1.8 percentage points. Against this background, this box considers the role of OFIs in monetary dynamics in the past few years.

#### The nature of the OFI sector and its demand for money

OFIs typically provide financial services to households and non-financial corporations and/or trade in financial markets on their own behalf. The OFI sector also includes institutions created by MFIs to facilitate the securitisation of loans on the MFI balance sheet. The OFI sector is thus heterogeneous, consisting of a range of very different entities, such as investment funds; corporations engaged in lending, leasing and factoring; financial vehicle corporations (FVCs); and securities and derivatives dealers. This heterogeneity has implications for the financial relationship between OFIs and MFIs, and thus for the pattern of money holdings across OFIs. While leasing companies are more likely to be net borrowers from the MFI sector, investment funds and factoring firms will typically be net depositors. For other institutions belonging to the OFI sector, such as FVCs, the net position with MFIs is less clear-cut.

OFI demand for money appears to reflect portfolio motives and is thus determined by the relative rates of return available on money, bonds, equities and real assets (such as physical capital, commodities and land). Moreover, OFI transaction demand for money is likely to be closely related to the need to settle financial transactions, rather than to the purchase of goods and services.

<sup>1</sup> See the article entitled “Sectoral money holding: determinants and recent developments” in the August 2006 issue of the ECB’s Monthly Bulletin.

## OFI holdings of MFI deposits and loans

In order to assess how the nature of OFIs and their motives for holding money are reflected in monetary developments, it is instructive to look at their contributions to developments in the components of M3 (short-term deposits and repurchase agreements) and in the counterparts of M3 (longer-term deposits and MFI loans).

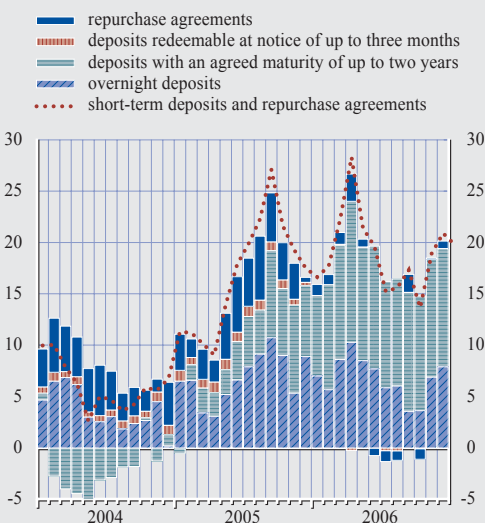
Looking first at the components of M3, the close link between OFI deposit holdings and capital market developments is reflected in the sizeable share of repurchase agreements (repos) in OFIs' overall M3 deposit holdings. Repos account for around one-quarter of the OFI sector's total M3 deposit holdings, a much larger share than observed for the non-financial private sector. Repurchase operations are undertaken in order to borrow securities and/or to procure liquidity. Many strategies in the modern financial engineering employed by institutional investors would be difficult to implement without their use.

However, the significant contribution of repos to the annual growth rate of OFI M3 deposits in 2005 (see Chart A) also reflects, in part, the migration of credit institutions' money market activities from direct interbank trading to electronic trading platforms. Several of these trading platforms are operated by securities clearing houses and thus form part of the OFI sector.<sup>2</sup> From an economic perspective, transactions previously undertaken over the counter between MFIs but now conducted via an OFI-owned platform remain interbank business. From a statistical perspective, however, they now give rise to asset and liability positions with OFIs

<sup>2</sup> See the November 2005 issue of the Deutsche Bundesbank's Monthly Report.

### Chart A MFI short-term deposits and repurchase agreements of other non-monetary financial intermediaries

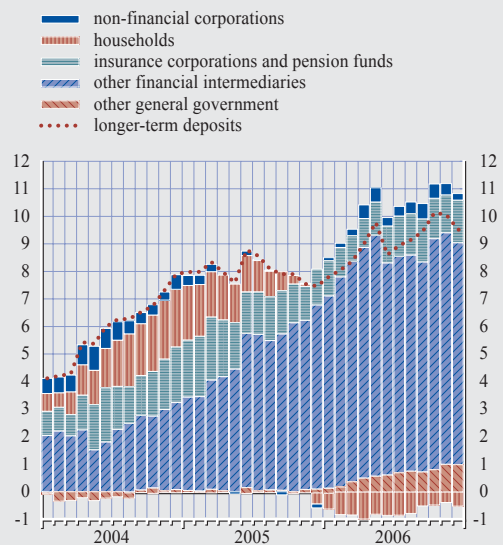
(annual percentage changes; contributions in percentage points; not adjusted for seasonal or calendar effects)



Notes: The reporting sector comprises MFIs excluding the Eurosystem. Contributions may not add up due to rounding.

### Chart B Sectoral breakdown of longer-term MFI deposits

(annual percentage changes; contributions in percentage points; not adjusted for seasonal or calendar effects)



Notes: The reporting sector comprises MFIs excluding the Eurosystem. Contributions may not add up due to rounding.

on the consolidated MFI balance sheet, including items which add to the expansion of M3. When it comes to assessing the implications of monetary growth for macroeconomic developments, a correction should clearly be made for such distortions.

More recently, OFI holdings of M3 deposits have been driven to a greater extent by their holdings of short-term time deposits (deposits with an agreed maturity of up to and including two years). This development is also visible for the deposit holdings of the non-financial private sector and is likely to reflect a shift of funds from overnight deposits with a low yield into increasingly well-remunerated short-term time deposits with only a slightly longer maturity. In the case of OFIs, there is some evidence that the increase in these deposit holdings may be linked to MFIs' anticipation of the "Basel II" framework, in the sense that MFIs have been conducting additional synthetic securitisations using FVCs which parked funds as time deposits during the transaction.

Looking at the counterparts of M3, the growth of OFI holdings accounts for most of the annual growth of MFI longer-term deposits (around 90% in 2006; see Chart B) and thus explains an important share of the developments in MFI longer-term financial liabilities (excluding capital and reserves), which consist of MFI debt securities issued with a maturity of over two years and deposits with an agreed maturity of over two years or redeemable at notice of over three months. The strong growth in longer-term deposits reflects factors related to changes in the nature of financial intermediation.

The growing use of securitisation – a process in which FVCs are crucially involved – is an example of such factors. When a securitised loan is removed from an MFI balance sheet and transferred to an FVC balance sheet (i.e. a "true sale" securitisation takes place), there is typically no immediate impact on developments in MFI longer-term financial liabilities. However, when the securitised loan remains on the MFI balance sheet (i.e. synthetic securitisation), the risk is transferred to the FVC, which issues asset-backed securities and typically invests the proceeds in safe assets most likely including MFI longer-term deposits or MFI longer-term debt securities (for which no sectoral holding information is available).<sup>3</sup> Regulatory changes, for example related to the introduction of the International Accounting Standards, and tax changes in euro area countries have encouraged MFIs to undertake more synthetic securitisation in recent years and have hence triggered more OFI-held MFI longer-term financial liabilities.

On the counterparts side, OFIs also influence monetary developments through their demand for loans. The contribution of OFIs to the annual growth of loans to the private sector increased from ½ percentage point in mid-2004 to 1¼ percentage points in the second half of 2006. OFIs' demand for loans has been mainly centred on maturities below one year and to a lesser extent on maturities above five years (see Chart C). The short-term nature of OFIs' borrowing suggests that, in part, the loans have been taken out in order to bridge a financing gap. In the process of synthetic securitisation, for example, such short-term loans may be used to balance cash flows between the acquisition of the assets and the finalisation of the longer-term financing. A second

3 Whether this implies a net impact on monetary aggregates depends on who the acquirer of the asset-backed security is and how the purchase is financed. For instance, if the asset-backed security is purchased by a non-resident, this will in the first instance result in an increase of deposits of the OFI sector and an improvement in the MFI net external asset position. However, if for instance the asset-backed security is purchased by an insurance corporation which finances the acquisition with short-term deposits, and the FVC keeps the funds in safe and highly liquid assets, then the impact would be neutral on aggregate monetary developments.

source of strong demand for short-term loans by OFIs has resulted from the migration of direct interbank trading to electronic trading platforms. The interposition of an electronic trading platform results in the separation of a repo operation into two independent transactions: the original repurchase agreement and an offsetting transaction (a “reverse repurchase agreement”), which in effect represents a short-term loan by an MFI to the trading platform.

OFI demand for longer-dated loans probably reflects the activities of financial corporations engaged in lending to the non-financial sector, although in some cases FVCs involved in securitisation may also have borrowed funds with maturities of over five years.

### Implications of OFI money holdings for risks to price stability

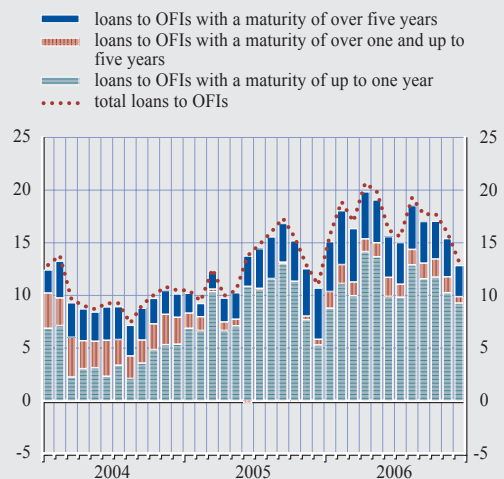
OFI money holdings tend to be of a somewhat different nature to those of households or non-financial corporations. Hence, the impact of OFI money holdings on economic activity and prices may be less obvious. However, the OFI sector cannot be disregarded altogether in the analysis of inflationary risks stemming from monetary developments, as OFIs affect developments in the economy through their financial linkages with other sectors, to the extent that they enable firms or households to modify their spending and saving patterns. In that respect, OFI money holdings are very likely to contain information relevant in the medium to longer term that would be overlooked if the money-holding sector were analysed without this group.

The information content of monetary aggregates rests on the fact that they subsume the complex substitution processes which occur among a large variety of assets and have an impact on unobservable liquidity and risk premia. These premia affect the ability of households and firms to borrow or lend, i.e. to bring forward or delay expenditure. Owing to their professional risk management, OFIs may undertake transactions, for instance providing liquidity by buying mortgage and corporate loan portfolios or through factoring, which are deemed too risky by non-specialised investors. To a certain extent, the recent growth in deposits and loans of OFIs may reflect a one-off structural adjustment in the working of the financial system. However, cyclical effects related to the low level of interest rates – inducing a search for yield – may be reinforcing the attractiveness of certain liquidity-providing investments by OFIs.

Empirical evidence suggests that the developments in deposit holdings of OFIs increase the short-term volatility in monetary growth and may thus complicate the assessment of underlying monetary dynamics. Moreover, the broader sectoral coverage of the monetary aggregate reduces the closeness of the co-movement between trend money growth and inflation. However, the

**Chart C MFI loans to other non-monetary financial intermediaries**

(annual percentage changes; contributions in percentage points; not adjusted for seasonal or calendar effects)



Source: ECB.  
Note: Contributions may not add up due to rounding.

evidence also indicates that the underlying developments in a broader monetary aggregate including OFI deposit holdings allow turning-points in inflation to be identified earlier.<sup>4</sup> This finding suggests that OFI deposit holdings may contain information not provided by other sectors and which may be relevant for the assessment of the risks to price stability.

To conclude, over the past decade, OFIs have become significantly more important for monetary developments. The deepening of global financial markets in conjunction with the ongoing processes of financial integration and innovation in the euro area suggest that their importance will rise further. OFI money demand therefore needs to be analysed and assessed carefully, in order to extract in real time the signal from monetary developments that is relevant for assessing risks to price stability. On the basis of the data provided by MFIs, this analysis and assessment is not fully possible. More comprehensive data are in the process of being compiled.

4 See also the box entitled "Sectoral money holdings and the information content of money with respect to inflation" in the September 2006 issue of the ECB's Monthly Bulletin.

### GROWTH OF MFI CREDIT TO THE PRIVATE SECTOR STRENGTHENED FURTHER

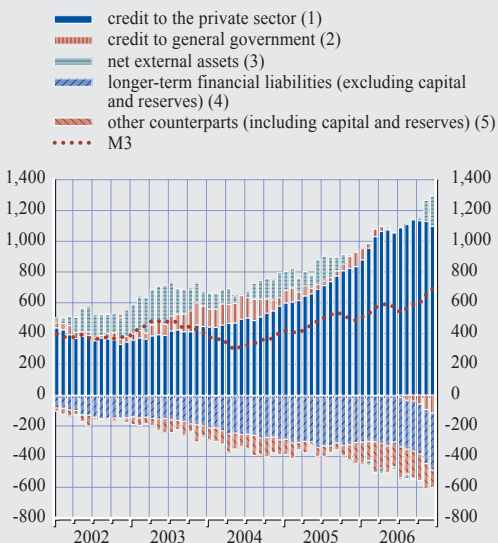
On the counterparts side, monetary dynamics in 2006 mainly reflected the strong growth in MFI credit to the private sector (see Chart 8). In particular, the annual growth rate of MFI loans to the private sector increased significantly at the start of 2006 and then hovered around a rate of somewhat more than 11% for most of 2006. Towards the end of the year, private sector loan growth started to show some signs of moderation, albeit at still vigorous rates. The continued strong demand for loans was supported by the low level of interest rates, favourable credit supply conditions as reported in the Eurosystem's bank lending survey, stronger economic activity and robust property market developments in many parts of the euro area. The slight deceleration of loan growth at the end of the year suggests that the rises in key ECB interest rates may have started to gradually influence borrowing dynamics.

The strong dynamism of MFI loans to the private sector was broadly based across the main money-holding sectors, although the sectoral developments exhibited somewhat different patterns during the year. In the first half of 2006 the largest contribution to private sector loan growth reflected demand from the

household sector. However, the growth of loans for house purchase moderated from May 2006 onwards as mortgage rates rose and housing markets cooled in some parts of the euro area,

**Chart 8 Counterparts of M3**

(annual flows; EUR billions; adjusted for seasonal and calendar effects)



Source: ECB.  
Notes: M3 is shown for reference only ( $M3 = 1+2+3-4+5$ ). Longer-term financial liabilities (excluding capital and reserves) are shown with an inverted sign, since they are liabilities of the MFI sector.



while loans to non-financial corporations accelerated further, possibly associated with the continued strength of business investment and M&A activity (for more details, see the sub-section below regarding the demand for external financing of non-financial corporations). As a result, in the second half of the year, the largest contribution to loan growth came from the non-financial corporate sector.

Among the other counterparts of M3, the annual growth of MFI longer-term financial liabilities (excluding capital and reserves) remained strong in 2006 and even strengthened towards the end of the year.

The annual flow in the net external asset position of MFIs fluctuated in a relatively narrow band around zero during the first three quarters of 2006, implying that the dampening effect from the pronounced declines in the net external asset position of MFIs on annual M3 dynamics observed in the second half of 2005 faded away. Balance of payments data suggest that the broadly neutral developments in the net external asset position of MFIs in the first three quarters of 2006 concealed a gradual strengthening in both net portfolio investment and foreign direct investment in the euro area. This was mostly linked to an improved economic outlook for the euro area since the beginning of the year, the appreciation of the euro exchange rate relative to the US dollar, and the narrowing of the interest rate differential between the United States and the euro area at the short end of the yield curve over the course of the year.

Towards the end of 2006 the annual flow in the net external asset position of MFIs turned strongly positive and appeared to have exerted an upward impact on annual M3 growth in the last two months of the year. The strong rise in capital inflows into the euro area towards the end of 2006 may have partly reflected the prevailing expectations of a strengthening of the euro exchange rate.

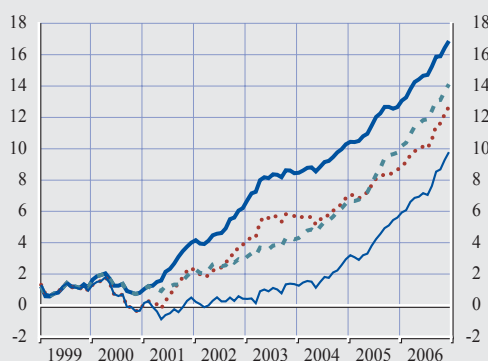
## LIQUIDITY REMAINED AMPLE

The continued strong growth of M3 over the course of 2006 added to the already ample stock of liquidity in the euro area. Available indicators of the liquidity situation continued to rise (see Chart 9). Both the nominal money gap, which is defined as the difference between the actual level of M3 and the level of M3 that would have resulted from constant M3 growth at its reference value of 4½% since December 1998, and the real money gap, which corrects the nominal money gap for the excess liquidity that has been absorbed by past price developments (i.e. the cumulated deviation of inflation rates from the ECB's definition of price stability), rose markedly further in 2006. At the end of the year both measures stood at their highest levels

**Chart 9 Estimates of the money gap<sup>1)</sup>**

(as a percentage of the relevant measure of the stock of M3; adjusted for seasonal and calendar effects; December 1998 = 0)

- nominal money gap based on official M3
- real money gap based on official M3
- - - nominal money gap based on M3 corrected for the estimated impact of portfolio shifts<sup>2)</sup>
- real money gap based on M3 corrected for the estimated impact of portfolio shifts<sup>2)</sup>



Source: ECB.

1) The nominal money gap is defined as the difference between the actual level of M3 and the level of M3 that would have resulted from constant M3 growth at its reference value of 4½% since December 1998. The real money gap is defined as the difference between the actual level of M3 deflated by the HICP and the deflated level of M3 that would have resulted from constant nominal M3 growth at its reference value of 4½% and HICP inflation in line with the ECB's definition of price stability, taking December 1998 as the base period. It should be noted that the levels of the money gap measures are very sensitive to the choice of the base period, which always remains to some extent arbitrary.

2) Estimates of the magnitude of portfolio shifts into M3 are constructed using the approach described in the article entitled "Monetary analysis in real time" in the October 2004 issue of the ECB's Monthly Bulletin.

observed since the start of Stage Three of EMU and did not show any clear signs of levelling off.

The ECB has also regularly published money gaps constructed on the basis of an adjusted M3 series, which attempts to correct for the estimated impact of portfolio shifts into monetary assets triggered by the heightened economic and financial uncertainty seen between 2001 and 2003.<sup>3</sup> As there was no sign of a further unwinding of past portfolio shifts following the temporary resumption in the fourth quarter of 2005, these adjusted measures continued to move in parallel with the corresponding money gaps based on the official M3 series also in 2006. Nevertheless, the money gap measures derived from the corrected series remained significantly lower than those based on the official M3 series. When assessing these indicators of the liquidity situation, it should be kept in mind that they are only estimates and thus inevitably imperfect and should, therefore, be treated with caution.

Notwithstanding the uncertainty surrounding individual estimates, the overall picture painted by these indicators points to further accumulation of liquidity in 2006, tending to confirm the view that liquidity is ample.

#### **MONEY MARKET RATES INCREASED, FOLLOWING THE RISES IN KEY ECB INTEREST RATES**

During 2006 money market rates rose across the entire maturity spectrum, in line with the increases in key ECB interest rates which took place during the year. The smooth evolution of money market interest rates, together with their generally low level of volatility, suggests that monetary policy actions were well anticipated by market participants, reflecting the transparency and predictability of the ECB's policy decisions.

After two and a half years of maintaining key ECB interest rates at historically low levels, in December 2005 the Governing Council raised key interest rates by 25 basis points. During 2006 the Governing Council increased the key

ECB interest rates in steps of 25 basis points on five further occasions. In line with these increases in key ECB interest rates, money market interest rates across the entire maturity spectrum rose steadily over the course of the year. On 2 March 2007 the one and twelve-month interest rates stood at 3.79% and 4.05% respectively, i.e. 139 and 119 basis points higher than in early January 2006.

Looking more closely at developments during the course of 2006, money market rates at longer maturities rose until the beginning of November (see Chart 10). In November longer-term money market interest rates declined slightly, reflecting expectations of some deceleration in the Governing Council's withdrawal of monetary policy accommodation. However, money market interest rates increased again in December, in particular after the last Governing Council meeting of 2006, and broadly stabilised after the turn of the year. In contrast with these developments, shorter-term interest rates increased continually throughout the year, not showing any temporary reversal of this upward trend.

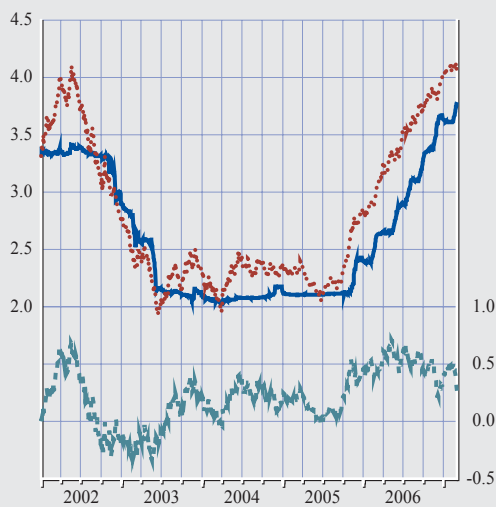
Between January and mid-May 2006 the slope of the money market yield curve, as measured by the difference between the twelve-month and one-month EURIBOR, steepened, to reach 71 basis points on 12 May. The slope then flattened, stabilising at around 50 basis points over the period from July to October 2006. A marked further flattening of the curve was also observed from the first week of November 2006 until the days preceding the Governing Council meeting on 7 December 2006, as the twelve-month rate temporarily declined. Following the 7 December Governing Council meeting, the slope of the money market yield curve steepened progressively and stabilised at around 45 basis points after the turn of the year, before declining to around 30 basis points at the beginning of March 2007.

<sup>3</sup> For more details, see the article entitled "Monetary analysis in real time" in the October 2004 issue of the ECB's Monthly Bulletin.

**Chart 10 Money market interest rates in the euro area and the slope of the money market yield curve**

(percentages per annum; percentage points; daily data)

- one-month EURIBOR (left-hand scale)
- ..... twelve-month EURIBOR (left-hand scale)
- - - spread between twelve-month and one-month EURIBOR (right-hand scale)

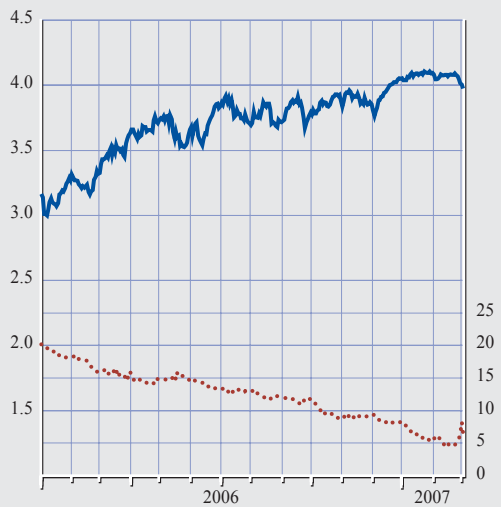


Source: Reuters.

**Chart 11 Three-month EURIBOR futures rates and implied volatility derived from options on three-month EURIBOR futures**

(percentages per annum; basis points; daily data)

- three-month EURIBOR futures maturing in June 2007 (left-hand scale)
- ..... implied volatility derived from options on three-month EURIBOR futures maturing in June 2007 (right-hand scale)



Sources: Reuters and Bloomberg.

The interest rates implied by three-month EURIBOR futures give a broadly similar picture. These rates increased steadily between January and November 2006, with the only exception being the period between mid-May and the end of June 2006 (see Chart 11). In November 2006 these rates declined, but then rose again markedly in December. On 2 March 2007 the three-month futures interest rate for the June 2007 contract stood at 3.97%, i.e. 81 basis points higher than at the beginning of January 2006.

During 2006 the implied volatility derived from options on three-month EURIBOR futures was generally subdued. Implied volatility declined progressively between January and December, suggesting a high degree of predictability of the ECB's monetary policy decisions to money market participants. The only two exceptions were the slight rise in volatility seen in May and a broad stabilisation observed between the end of October and the beginning of December associated with the above-mentioned uncertainty

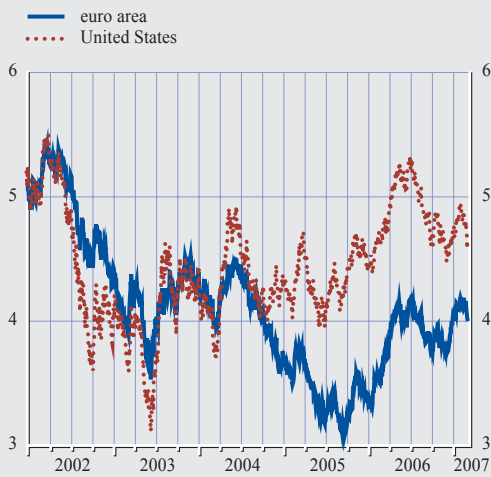
surrounding future moves of key interest rates ahead of the December meeting of the ECB's Governing Council. After this meeting, implied volatility declined steadily following a negative trend which was reversed only a few days prior to the March 2007 meeting of the Governing Council.

### EURO AREA LONG-TERM BOND YIELDS REBOUNDED IN 2006

In 2006 long-term bond yields in the euro area continued to rebound from the historically low levels seen in late 2005. Overall, euro area ten-year government bond yields increased by 70 basis points in 2006 towards 4.0% at the end of the year (see Chart 12). This rebound in long-term interest rates seemed to mainly reflect increasing optimism by investors as regards the growth outlook for the euro area economy. Supporting this view, the yield on index-linked government bonds maturing in 2015 – a measure of long-term real interest rates – picked up by 60 basis points between the end of 2005 and end-December 2006. By

**Chart 12 Long-term government bond yields<sup>1)</sup>**

(percentages per annum; daily data)



Sources: Reuters, Bloomberg and Thomson Financial Datastream.

1) Ten-year bonds or the closest available bond maturity.

contrast, ten-year break-even inflation rates, which measure market participants' inflation expectations and related risk premia, changed little overall in that period.

In the first half of 2006 long-term bond yields rose sharply on both sides of the Atlantic. In both the euro area and the United States, bond yields with ten years' maturity increased by about 80 basis points between end-December 2005 and end-June 2006. Apart from the usually strong international interest rate linkages, the upturn in euro area long-term interest rates also reflected market reactions to data releases on economic activity and business sentiment, which investors generally interpreted as pointing to improving euro area growth prospects. Consistent with such an interpretation, the relatively strong rebound in nominal bond yields in the first half of 2006 was mainly driven by an increase in the real interest rate component. Towards the end of June, however, the general upward trend in US and euro area bond yields came to an end.

The subsequent drop in long-term bond yields in the third quarter, which again proceeded in a

highly synchronised fashion on both sides of the Atlantic, was partly related to the international stock market turmoil that started in May and led global investors to turn temporarily to the relative safety of liquid fixed income products. In addition, the strong increase in oil prices in the light of geopolitical tensions in the Middle East might have affected the global outlook for growth. At the same time, it is likely that emerging signs of a slowdown in the US economy, which were pushing US interest rates markedly down across the entire maturity spectrum, also affected euro area long-term bond yields to some extent through the usually strong international transmission of bond market shocks. Towards the end of 2006 euro area long-term bond yields rebounded amid favourable data releases on economic activity in the euro area.

Despite the overall increase in euro area long-term bond yields, the euro area yield curve flattened in 2006. This is reflected in a corresponding decline of the "term spread", measured by the difference between the yield on a ten-year government bond and the three-month EURIBOR. The euro area term spread declined by some 50 basis points in the course of 2006 and reached the relatively low level of about 30 basis points by the end of the year. The flattening of the euro area yield curve in 2006 proceeded in a gradual fashion along with the five consecutive increases in key ECB interest rates. Historically, a low – and particularly a negative – term spread (an "inverted yield curve") has often heralded a subsequent slowdown in economic activity or even a recession. However, the flattening of the euro area yield curve in 2006 has to be interpreted in the light of risk premia included in long-term bond yields. Bond market risk premia seem to have reached extraordinarily low levels over the last two years. When taking into account the low levels of bond market risk premia, the term spread at end-2006 no longer appears to be very low.<sup>4</sup>

<sup>4</sup> See the box entitled "The recent flattening of the euro area yield curve: what role was played by risk premia?" in the December 2006 issue of the ECB's Monthly Bulletin.

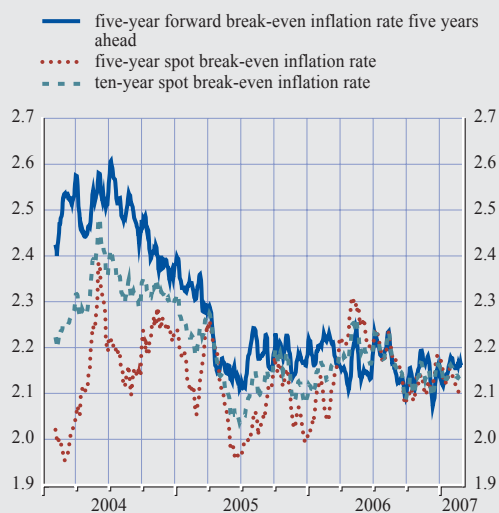
In 2006 market participants' long-term inflation expectations and related risk premia, as reflected in break-even inflation rates, seemed to remain broadly unchanged overall and stable across horizons at levels slightly above 2% per annum. Information about inflation expectations and related risk premia at specific horizons can be obtained from the decomposition of ten-year break-even inflation rates into five-year break-even rates and five-year implied forward rates five years ahead extracted from estimated term structures of break-even inflation rates (see Chart 13).<sup>5</sup> The decomposition shows that relatively stable medium to long-term inflation expectations, reflected by the sideward movement of five-year implied forward break-even rates five years ahead, were associated with more volatile developments in short to medium-term inflation expectations. In fact, in the first half of 2006 short to medium-term inflation expectations measured by the five-year break-even inflation rate increased by some 30 basis points. This increase in short to medium-term inflation expectations in the context of a rise in oil prices was almost compensated for by a corresponding decline in the second half of 2006. Consequently, in the second half of 2006 the euro area break-even inflation curve flattened considerably (see Chart 13).

Euro area implied bond market volatility increased somewhat in May and June 2006 and then declined steadily in the second half of the year. The temporary increase in implied bond market volatility in May and June seemed to reflect an increase in market participants' uncertainty about future interest rate movements in view of the stock market turbulence at this time. In the last quarter of 2006 euro area implied bond market volatility declined to historically low values, indicating a rather low level of market participants' uncertainty regarding near-term developments in long-term bond yields.

In the first two months of 2007 euro area long-term bond yields remained broadly unchanged overall and stood at 4% on 2 March. During

**Chart 13 Spot and forward break-even inflation rates in the euro area**

(percentages per annum; five-day moving averages of daily data)



Sources: Reuters, Thomson Financial Datastream and ECB calculations.

that period, euro area long-term bond yields at first increased further to about 4.2% by mid-February and experienced a decline thereafter. US long-term bond yields also declined in the second half of February. These developments seemed to result, to a large extent, from "flight to safety" portfolio shifts towards long-term government bonds in the light of the turmoil on the global stock market at the end of February.

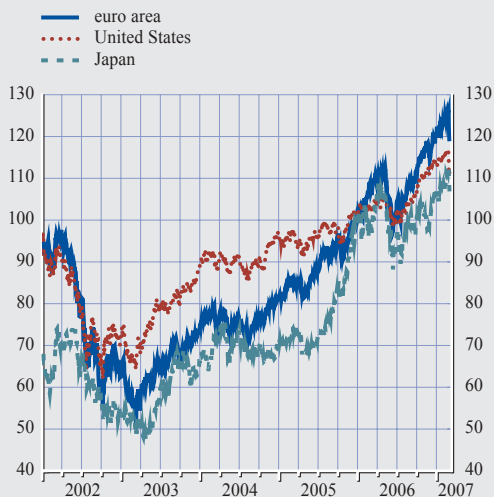
### EURO AREA STOCK PRICES INCREASED STRONGLY IN 2006

Euro area stock prices, despite some fluctuations, increased strongly in 2006, thereby continuing the upward trend that began in early 2003 (see Chart 14). The Dow Jones EURO STOXX index ended the year with a gain of 20% with respect to the end of 2005, and thereby outperformed both the Standard & Poor's 500 index and the Nikkei 225 index. The strong performance of the euro area stock market relative to the US and Japanese stock markets has to be seen in

<sup>5</sup> For details of the estimation, see the box entitled "Estimation of constant-maturity index-linked bond yields and break-even inflation rates for the euro area" in the July 2006 issue of the ECB's Monthly Bulletin.

**Chart 14 Major stock market indices<sup>1)</sup>**

(index: 30 December 2005 = 100; daily data)

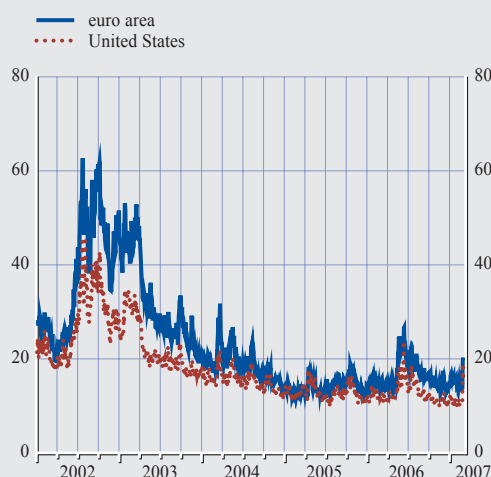


Sources: Reuters, Thomson Financial Datastream and ECB calculations.

1) The Dow Jones EURO STOXX broad index for the euro area, the Standard and Poor's 500 index for the United States and the Nikkei 225 index for Japan.

**Chart 15 Implied stock market volatility<sup>1)</sup>**

(percentages per annum; daily data)



Source: Thomson Financial Datastream.

1) The implied volatility for the euro area is measured by the VSTOXX index, which refers to the Dow Jones EURO STOXX 50 index, and the implied volatility for the United States is measured by the VIX index, which refers to the Standard & Poor's 500 index. Both indices reflect the expected standard deviation of percentage changes in the corresponding stock market indices over a period of 30 days.

the light of a relatively strong appreciation of the euro against the US dollar and Japanese yen in 2006. The dampening effect of the euro appreciation on the profit outlook for euro area firms in export-sensitive sectors appears to have been more than offset by the robustness of actual and expected earnings growth of euro area companies against the background of a strongly improving economic outlook for the euro area economy. The recent period of fast-growing stock prices differs from the second half of the 1990s as price-earnings ratios have remained closer to their long-run average values.

The strong overall performance of the euro area stock market in 2006 masks a temporary but marked decline in stock prices in the second quarter of the year. Following the double-digit increase in stock prices in the first four months of the year, euro area stock prices started to decline at the beginning of May and depreciated

by about 13% over the next month in the wake of global stock market turmoil. Indicating turbulent market conditions, implied stock market volatility in the United States and the euro area increased significantly in May and June to levels not seen since 2003 and 2004 respectively (see Chart 15). In addition to the increase in perceived stock market uncertainty as indicated by implied volatility, market participants also appeared to have reduced their risk appetite during the period of market turbulence. In the absence of significant deteriorations in fundamentals, changes in investors' risk appetite and risk perceptions therefore seem to be the most likely explanation for the temporary drop in stock prices seen in the second quarter of 2006. This view is consistent with the fact that the sharp corrections in euro area stock prices occurred despite upward revisions of analysts' earnings expectations in the second quarter of 2006. In the second half of the year, implied stock market



volatility fell back to historically low levels and investors' appetite for risk seemed to recover. The resulting decline in equity premia, together with a persistent outlook for solid growth in corporate earnings, seemed to support the strong rebound in euro area stock prices over the second half of 2006.

Turning to a sectoral breakdown, the utilities sector was the best-performing sector in 2006, with a stock price increase of more than 30%. This strong performance was probably due to intensive M&A activity in the light of consolidation in the euro area utilities sector. Supported by the improved business sentiment in the euro area, the industrial sector also outperformed the overall index significantly. Contrary to the developments in 2005, the oil and gas sector underperformed the overall index in 2006. The developments in oil prices might have contributed to the comparatively weak performance of this sector. The health sector, where earnings are usually less dependent on the position in the business cycle, also underperformed in 2006.

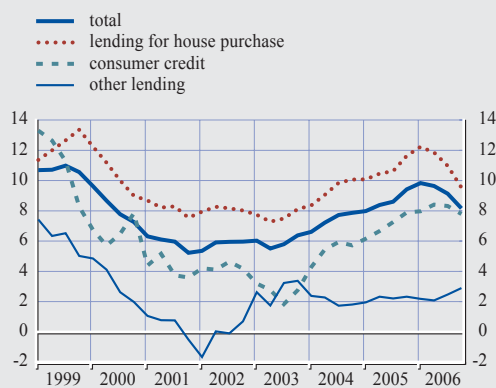
In early 2007 global stock prices initially continued to increase at a pace comparable to that recorded over the second half of 2006. The upward trend in stock prices halted on 27 February 2007 when stock prices, triggered by a sharp fall in Chinese equity prices, declined significantly across the globe. The Dow Jones EURO STOXX and the Standard and Poor's 500 indices both fell by about 5% in a few days. The sharp declines in stock prices wiped out the increases in the first eight weeks of the year and, by 2 March 2007, both stock market indices stood at slightly lower levels than at the end of 2006. Moreover, by early March, implied volatility surged on all major stock markets, probably signalling a significant reassessment of stock market risks.

#### CONTINUED STRONG HOUSEHOLD FINANCING

Household borrowing remained strong in 2006, underpinned by favourable financing conditions, strong housing market dynamics and improved consumer confidence. Households' demand for

**Chart 16 MFI loans to households**

(annual percentage changes)



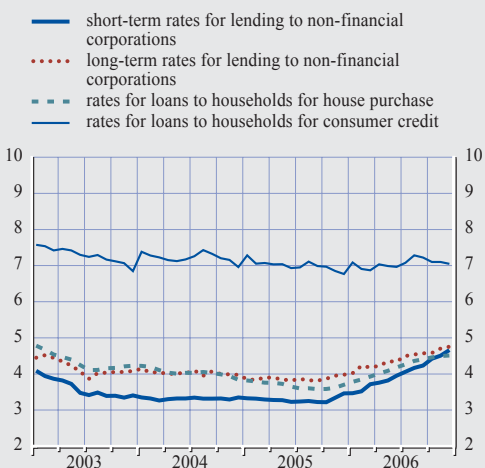
Source: ECB.

MFI loans accelerated in the first months of the year, peaking at an annual rate of 9.8% in the spring, and then gradually moderated to stand at an annual rate of 8.2% in December. The latest available data from the euro area quarterly financial accounts, which are available until the third quarter of 2006, indicate that the annual growth rate of the debt of the household sector owed to non-monetary financial institutions (non-MFIs), comprising OFIs and insurance corporations and pension funds, remained fairly stable in 2006, hovering around 8% during the year.

Looking at the breakdown of MFI loans to households by purpose, the strength of household borrowing continued to be explained mainly by the robust demand for loans for house purchase (see Chart 16). The ongoing strength of mortgage borrowing was facilitated by the low level of interest rates across the euro area and buoyant housing market developments in many regions which created high financing requirements (see Section 2.3 of this chapter). Furthermore, the results of the Eurosystem's bank lending survey indicate that the continued strong growth in loans for house purchase was also related to an easing of credit standards that banks applied in the approval of loans. Banks reported competition from other banks and non-

### Chart 17 Interest rates for lending to households and non-financial corporations

(percentages per annum; excluding charges; rates on new business; weight-adjusted)



Source: ECB.

Notes: For the period from December 2003 onwards, the weight-adjusted MFI interest rates are calculated using country weights constructed from a 12-month moving average of new business volumes. For the preceding period, from January to November 2003, the weight-adjusted MFI interest rates are calculated using country weights constructed from the average of new business volumes in 2003. For more information, see Box 3 in the August 2004 issue of the ECB's Monthly Bulletin.

banks and a perception of lower risks in terms of expectations regarding general economic activity as the main factors behind the easing of credit standards. The changes in credit standards were mostly implemented by reducing margins on average loans and by lengthening maturities.

In the spring of 2006 the annual growth rate of MFI loans to households for house purchase started to moderate slightly from rates of more than 12%, to stand at 9.5% in December. This development was in line with the increase in mortgage lending rates over the course of the year from the very low levels seen in previous years (see Chart 17), in the context of rises in key ECB interest rates and market rates. The lending rates on new housing loans were between 50 and 120 basis points higher in December 2006 than at the end of November 2005 before the ECB started to raise key interest rates in December 2005. Rates on loans with a

shorter period of initial rate fixation rose more strongly than those on loans with a longer period of initial rate fixation. The results of the Eurosystem's bank lending survey suggest that demand for housing loans was also dampened by less optimistic housing market prospects in the second half of 2006, as also reflected in some weakening of house price growth and housing market activity in some parts of the euro area which had previously shown strength.

Similar to loans for house purchase, although at a somewhat lower level, the annual growth rate of consumer credit strengthened further until around mid-year, before decelerating slightly in the second half of the year and standing at 7.8% in December. According to the results of the Eurosystem's bank lending survey, the demand for consumer credit was mostly driven by an improvement in consumer confidence and an increase in spending on durable consumer goods, although the importance of the latter factor declined towards the end of the year. In addition, credit standards applied to the approval of consumer credit were eased significantly in 2006, implying that loan supply conditions improved during the year.

#### HOUSEHOLD INDEBTEDNESS ROSE FURTHER

Reflecting the continued strong borrowing dynamics, the ratio of household debt to disposable income increased further in 2006 (see Chart 18). However, the level of household indebtedness in the euro area remained below that seen in the other main industrialised countries, notably the United States, the United Kingdom and Japan. The household sector debt servicing burden (the ratio of interest payments plus principal repayments to disposable income) increased somewhat in 2006, owing to the still vigorous loan growth and the modest rise in bank lending rates.

The continued rise in households' indebtedness has increased their exposure to changes in interest rates, income and asset prices. When assessing these aggregate figures, it should be noted that they represent averages for the

consolidated household sector and vary markedly across euro area countries as well as across households. In this respect, the debt level and debt servicing burden are, for instance, higher if analysis is restricted to those households that actually have a mortgage outstanding. In addition, debt levels and the debt servicing burdens vary with different levels of income: while in absolute terms the bulk of debt is held by households with high income levels which may be more resilient to a deterioration in macroeconomic conditions and/or higher interest rates, the debt servicing burden is clearly higher for low-income households. Finally, some uncertainty relates to the fact that the share of existing mortgage debt exposed to changes in prevailing interest rate conditions depends on the specific features of the underlying mortgage contracts, which differ significantly across the euro area.

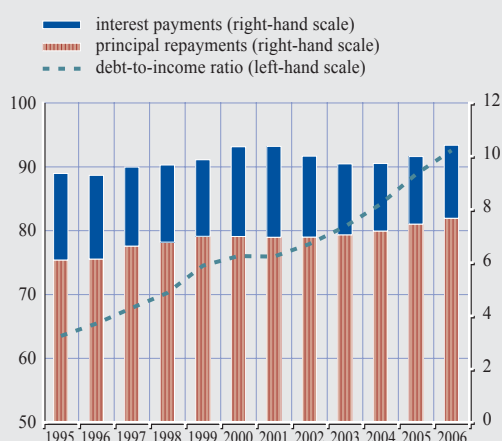
### CONTINUED LOW REAL COST OF EXTERNAL FINANCING FOR NON-FINANCIAL CORPORATIONS

Financing conditions for non-financial corporations in the euro area remained favourable in 2006 and were thus supportive of economic growth. This was reflected in both a low cost of financing and ready access to sources of financing. Non-financial corporations increased in particular bank borrowing, whereas their issuance of market-based instruments was more subdued. Despite the recent pick-up of debt ratios and net interest payments, the financial situation of non-financial corporations remained favourable in 2006, mainly on account of strong profitability in combination with a still low cost of financing.

Following the rise in key ECB interest rates, the overall real cost of external financing of non-financial corporations increased but

**Chart 18 Household debt and debt servicing burden**

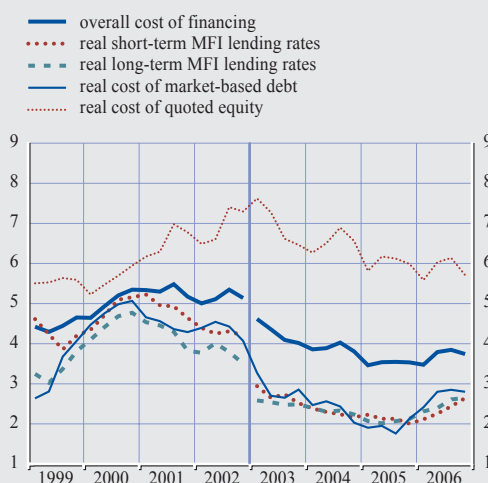
(as a percentage of disposable income)



Source: ECB.  
Note: Data for 2006 are estimates.

**Chart 19 Real cost of the external financing of euro area non-financial corporations**

(percentages per annum)



Sources: ECB, Thomson Financial Datastream, Merrill Lynch and Consensus Economics forecasts.  
Notes: The real cost of the external financing of non-financial corporations is calculated as a weighted average of the cost of bank lending, the cost of debt securities and the cost of equity, based on their respective amounts outstanding and deflated by inflation expectations (see Box 4 in the March 2005 issue of the ECB's Monthly Bulletin). The introduction of harmonised MFI lending rates at the beginning of 2003 led to a break in the statistical series.

remained low by historical standards throughout 2006 (see Chart 19).<sup>6</sup>

Regarding the components of the cost of financing, interest rates on MFI loans to non-financial corporations increased in the course of 2006 in both real and nominal terms (see Chart 17). The rise in money market interest rates – amounting to 155 basis points between September 2005 and December 2006 in the case of the three-month EURIBOR – has been broadly passed on to MFI loans. MFI interest rates on loans with a floating rate and an initial rate fixation of up to one year increased by around 125 to 155 basis points over the same period, although it should be kept in mind that some cross-country dispersion remains (see Box 2). The majority of long-term MFI interest rates have also followed the upward movements observed in market interest rates of a comparable maturity. These increases – ranging from around 60 to 135 basis points – have broadly followed the movements in long-term market interest rates, thereby maintaining the bank spreads at low levels.

The real cost of market-based debt for non-financial corporations, although increasing more than the cost of bank-based debt in 2006, has also remained relatively low. BBB-rated corporate bond spreads fluctuated around an average of approximately 75 basis points in 2006. The low level of spreads is likely to reflect

low credit risk, supported by low asset price volatility and the strength of corporate profits.<sup>7</sup> Despite the relatively benign performance in 2006, looking forward, caution may be warranted given some signs of deterioration in the general corporate environment and the credit market. In fact, there are indications that the increasing number of debt-financed mergers and acquisitions and of leveraged buyouts, share buybacks and special dividend payouts may have an adverse impact on the sustainability of corporate debt levels.<sup>8</sup>

The real cost of quoted equity of non-financial corporations underwent some fluctuations in the course of 2006, but overall stood at levels comparable to those in 2005, in spite of the rebound in stock prices. The cost of equity financing remains significantly higher than that of other forms of financing, although – also owing to the increase in the cost of debt financing in 2006 – the cost differential has narrowed somewhat.

- 6 The real cost of external financing of non-financial corporations is calculated by weighting the different external financing sources on the basis of their amounts outstanding (corrected for valuation effects). For a detailed description of this measure, see the box entitled “A measure of the real cost of the external financing of euro area non-financial corporations” in the March 2005 issue of the ECB’s Monthly Bulletin.
- 7 See the box entitled “The outlook for corporate credit spreads in the euro area” in the November 2006 issue of the ECB’s Monthly Bulletin.
- 8 See the box entitled “Recent trends in leveraged buyout transactions in the euro area” in the December 2006 issue of the ECB’s Monthly Bulletin.

## Box 2

### INTEREST RATE DISPERSION IN RETAIL BANKING MARKETS ACROSS EURO AREA COUNTRIES

Despite the remarkable convergence of interest rates that took place in the run-up to the completion of EMU, MFI interest rates on deposits from and loans to households and non-financial corporations still differ across euro area countries. Retail banking markets are among the most fragmented within the euro area financial system.<sup>1</sup> The purpose of this box is to illustrate the cross-country differences and outline a few of their causes. Understanding these differences provides additional background for interpreting euro area developments and assessing the potential impact of monetary policy decisions on the various euro area economies. Banks play a key role in the financial system and therefore influence the savings, financing and spending decisions of households and non-financial corporations.

1 See, for example, “Indicators of financial integration in the euro area”, ECB, 29 September 2006.

## Cross-country variation in MFI interest rates on new business <sup>1), 2)</sup>

(coefficient of cross-country variation; average from January 2003 to December 2006)

<b>Deposits from households</b>			
Overnight deposits			0.51
Deposits with an agreed maturity of up to one year			0.08
<b>Deposits from non-financial corporations</b>			
Overnight deposits			0.43
Deposits with an agreed maturity of up to one year			0.03
<b>Loans to households</b>			
Bank overdrafts			0.17
Loans for consumption	with a floating rate and an initial rate fixation of up to one year		0.26
	with an initial rate fixation of over one and up to five years		0.15
	with an initial rate fixation of over five years		0.12
Loans for house purchase	with a floating rate and an initial rate fixation of up to one year		0.10
	with an initial rate fixation of over one and up to five years		0.09
	with an initial rate fixation of over five and up to ten years		0.07
	with an initial rate fixation of over ten years		0.07
<b>Loans to non-financial corporations</b>			
Bank overdrafts			0.20
Loans of up to €1 million	with a floating rate and an initial rate fixation of up to one year		0.11
	with an initial rate fixation of over one and up to five years		0.07
	with an initial rate fixation of over five years		0.07
Loans of over €1 million	with a floating rate and an initial rate fixation of up to one year		0.08
	with an initial rate fixation of over one and up to five years		0.11
	with an initial rate fixation of over five years		0.09

Source: ECB.

1) The coefficient of variation is computed as the standard deviation divided by the euro area interest rate. The standard deviation is computed as the square root of the weighted variance of the national MFI interest rates with respect to the euro area interest rate. The weighted variance is the squared deviations between the national and euro area MFI interest rates, calculated according to the national share in the total euro area business volume for a given instrument category.

2) This table displays a sub-set of the coefficients of variation for euro area MFI interest rates on new business available from the ECB's website.

Much of this analysis is based on a report that was prepared by the Monetary Policy Committee and the Statistics Committee of the Eurosystem and published in September 2006.<sup>2</sup> Since then, country-by-country interest rates for a group of selected MFI interest rates have also been released jointly on the websites of the ECB and the euro area NCBs. On the basis of this selection, the comparison in this box is made mainly for the ten MFI interest rates that relate to new business, as they are compiled for the same reference period across countries.

The table above provides an overview of the relative dispersion in the level of MFI interest rates across countries, as measured by the coefficient of variation. The level of dispersion is highest for interest rates on overnight deposits and considerably lower for deposits with an agreed maturity of up to one year. As regards loans, bank overdrafts and loans to households for consumption show the greatest cross-country differences, while the dispersion of interest rates on loans to non-financial corporations and on housing loans is lower. Moreover, in most categories, the dispersion for new loans with a floating rate and an initial rate fixation of up to one year tends to be somewhat higher than that for new loans with longer periods of initial rate fixation.

There are many possible explanations for the differences in MFI interest rates across countries, including market competition, various risk premia (e.g. for credit risk or prepayment risk),

2 "Differences in MFI interest rates across euro area countries", ECB, 20 September 2006.

bank characteristics and cyclical determinants, such as the economic cycle, the evolution of deposit supply and credit demand, or house price dynamics. Recent analysis suggests that interest rates differ because national banking products are different or because they are differentiated by national factors.<sup>3</sup> Differences in average periods of initial rate fixation is one possible explanation for dispersion of MFI interest rates that cuts across several loan categories. Moreover, when comparing individual national MFI interest rates, it should be kept in mind that business volumes vary greatly across countries and that in some countries certain markets are very small or virtually non-existent.<sup>4</sup> In such cases, underlying new business volumes may be very volatile and interest rates may reflect occasional transactions granted under atypical conditions.

The rest of this box looks in more detail at the various market segments, focusing in particular on the influence of product heterogeneity, institutional differences arising from the regulatory and fiscal frameworks, and measurement issues.

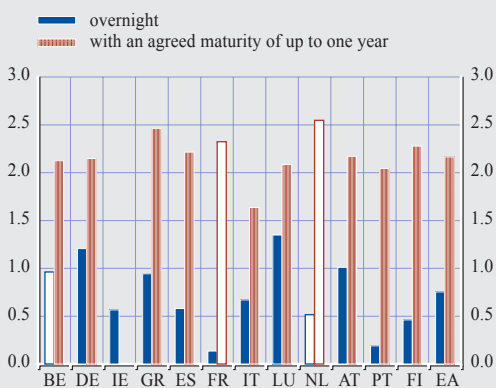
### MFI interest rates on deposits from households

Cross-country differences in MFI interest rates on deposits from households may often be associated with differences in product characteristics, such as the degree of liquidity and the return structure of deposits, market regulation and business practices. Further important factors arise from differences in the fiscal framework (such as tax-preferred accounts in some countries), although it is difficult to establish a direct causal link.

The differences in interest rates on overnight deposits are particularly pronounced. In some countries MFIs essentially do not remunerate these deposits, while in other countries depositors may receive, on average, more than 1.30% on their current account balances (see Chart A). This substantial dispersion may be caused by the fact that banks use different strategies for pricing current accounts and related services. For example, some banks may pay higher overnight interest rates but charge high fees for current account services or, conversely, some may pay lower rates and charge lower fees. Data collected by the European Commission in its sector inquiry on retail

**Chart A MFI interest rates on deposits from households** <sup>1), 2)</sup>

(percentages per annum; average from January 2003 to December 2006)



Source: ECB.

1) The abbreviation "EA" denotes the weighted average interest rate for the euro area.

2) Unfilled bars indicate those countries in which the interest rate category is of low relevance in a euro area context. For the criteria determining this relevance, see the ECB's publication quoted in footnote 2 of this box.

3 National differences can be partially explained by variables reflecting the characteristics of domestic depositors and borrowers and by the characteristics of the banking systems (see M. Affinito and F. Farabullini, "An empirical analysis of national differences in the retail bank interest rates of the euro area", Temi di Discussione No 589, Banca d'Italia, May 2006). A detailed cross-country comparison of MFI interest rates is also made in Appendix II of the Interim Report II on "Current accounts and related services", European Commission, 17 July 2006.

4 For instance, the ECB report cited in footnote 2 above documents the cross-country differences in the prevalence of floating rate loans or loans with different periods of initial rate fixation.



banking show that this could be the case in some euro area countries, although in some countries low deposit rates are associated with high fees.<sup>5</sup>

Furthermore, the increasing popularity in some countries of both internet accounts and other high-yield deposits, which enable funds to be withdrawn within one day but cannot be used for payment purposes, may result in a tendency to raise interest rates on overnight deposits.<sup>6</sup>

The notable exception to the pronounced cross-country differences in household deposit rates relates to deposits with an agreed maturity of up to one year, which are more homogeneous across countries.

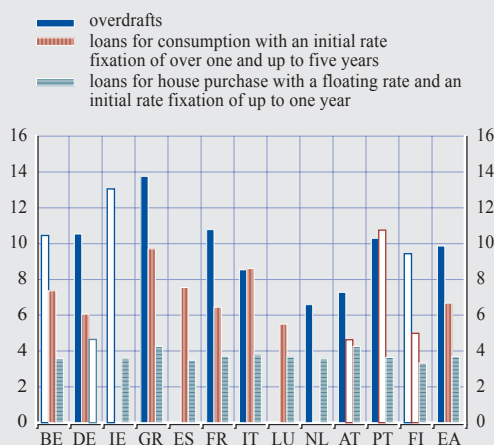
### MFI interest rates on loans to households for consumption purposes

As regards interest rates on loans, rates on loans to households for consumption show the highest level of dispersion. In particular, interest rates on bank overdrafts vary considerably, ranging from less than 7.00% to 13.50% or more (see Chart B). The cross-country differences for other types of loans for consumption are less pronounced but remain sizeable.

Large differences exist not only in the size of the consumer credit market but also in the range of products on offer (including collateral practices), in the use of credit card credit, in the market environment, particularly in terms of the influence of specialised lenders, as well as in the periods of initial rate fixation.<sup>7</sup> In general, such factors may also be reflected, at least in part, in the cross-country differences in MFI interest rates. For example, differences in the statistical treatment of credit card credit in the current data may have an effect because the interest rates on such credit are typically significantly higher than those on other consumer loans. Furthermore, characteristics of bank overdrafts and loans granted through credit lines differ across countries.

**Chart B MFI interest rates on loans to households<sup>1)</sup>**

(percentages per annum; average from January 2003 to December 2006)



Source: ECB.  
1) See notes to Chart A.

### MFI interest rates on loans to households for house purchase

Although some of the lowest levels of country dispersion can be observed in MFI interest rates on loans to households for house purchase (see Chart B), a comparison with the United States

5 See the “Report on the retail banking sector inquiry”, European Commission Staff Working Document, SEC(2007) 106, 31 January 2007.  
6 See, for example, the box entitled “Factors explaining the robust growth of M1” in the April 2006 issue of the ECB’s Monthly Bulletin.  
7 See, for example, K. Lannoo, R. Ayadi and C. Selosse, “Consumer credit in Europe: riding the wave”, Mercer Oliver Wyman and the European Credit Research Institute, November 2005.

suggests that the dispersion of mortgage rates across US regions is lower than that between euro area countries.<sup>8</sup> Recent reviews of the European mortgage markets emphasise the large differences in the product ranges and in the fiscal and regulatory frameworks, factors that are likely to explain much of the observed differences in MFI interest rates on loans to households for house purchase.<sup>9</sup>

One important factor is linked to the differences in the period of initial rate fixation, which renders observed loan rates sensitive to the slope of the yield curve. The prevalence of dedicated housing finance schemes in some countries may also play a role. The fiscal and regulatory frameworks in a country are likely to have more of an impact on mortgage loans (than on other types of loan) owing to the importance usually attached to home ownership.<sup>10</sup>

Moreover, as most loans to households for house purchase are secured by real estate, interest rate differences may partly be related to differences in the expected development of the real estate market. The differences in the evolution of residential property prices may have affected the value of the collateral for loans.

Finally, the funding practices in the euro area also remain rather fragmented, varying from deposit funding to covered bonds and mortgage-backed securities, in comparison with the US mortgage market, which revolves around the mortgage agencies.

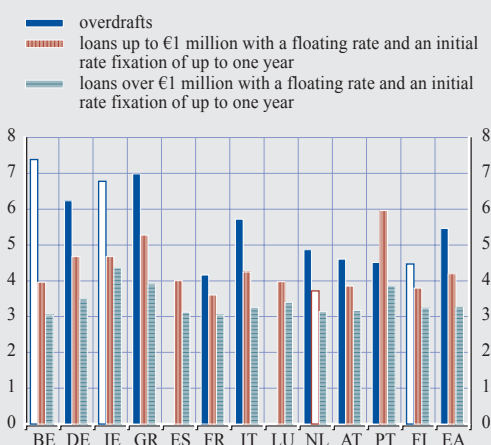
### MFI interest rates on loans to non-financial corporations

The level of dispersion in interest rates on bank overdrafts to non-financial corporations is one of the highest (and higher than in those on bank overdrafts to households), as illustrated in Chart C. The dispersion in interest rates on other corporate loans is considerably lower and is indeed among the lowest of all types of loan, although in some cases it is somewhat higher than for housing loans. The main reasons for these cross-country differences include various facets of product heterogeneity and the specific business environments in which the non-financial corporations operate (e.g. depending on the firm size).

Differences remain in collateral practices, not only for loans, but also for bank overdrafts. In some countries bank overdrafts are usually unsecured, while in others they are often

**Chart C MFI interest rates on loans to non-financial corporations<sup>1)</sup>**

(percentages per annum; average from January 2003 to December 2006)



Source: ECB.  
1) See notes to Chart A.

<sup>8</sup> See the box entitled “Inter-regional comparison of mortgage rates in the euro area and in the United States” in the ECB’s Annual Report 2005.

<sup>9</sup> For example, “The costs and benefits of integration of EU mortgage markets”, London Economics report for the European Commission, August 2005.

<sup>10</sup> Retail banking markets are among the European Commission’s financial services policy priorities up to 2010, as set out in its White Paper on Financial Services Policy 2005-2010.

secured (e.g. with invoices or part of the firm's portfolio). Moreover, a high interest rate on bank overdrafts may reflect their being unauthorised and the inclusion of a penalty in the interest rate. Banks may also perceive recourse to this type of credit to be a sign of weak cash management on the part of the firm, and thus charge a higher rate to compensate for the perceived higher risk.

Furthermore, for loans (other than bank overdrafts) there are differences in the average period of initial rate fixation within an instrument category. Given that the yield curve is normally upward sloping, interest rates are likely to be higher in those countries in which the average period of initial rate fixation is closer to the upper band of a given instrument category. A related issue is the potential impact of the aggregation method on interest rates on new business, as loans with shorter maturities tend to be granted more frequently than those with longer maturities.

Finally, other important factors are likely to include some specific features of the market environment for loans to non-financial corporations, in particular firm size, access to non-bank financing, types of lender and relationship banking.

#### **FURTHER RISE IN THE DEMAND FOR EXTERNAL FINANCING BY NON-FINANCIAL CORPORATIONS**

Non-financial corporations increased their demand for external financing further in the course of 2006.

The demand for external financing increased despite abundant internal funds. The profitability of listed non-financial corporations in the euro area remained strong in 2006 as indicated, for example, by the ratio of net income to sales (see Chart 20).<sup>9</sup> Profit ratios increased particularly in the transportation and communications sector, while the rise in profits in the wholesale and retail trade sectors remained below the average increase for all listed non-financial corporations. The latter development may reflect the relatively moderate growth of private consumption in the euro area.

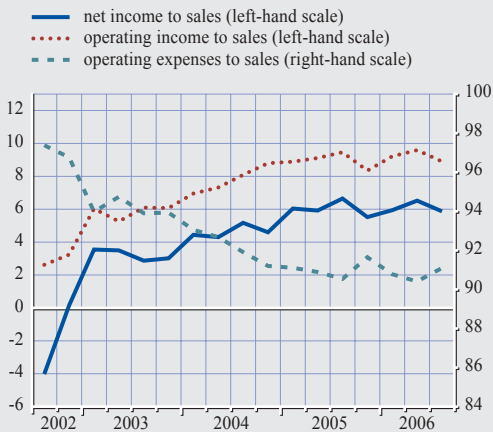
At the end of 2006 the real annual growth rate of financing of non-financial corporations rose to 4.5%, from 1.2% at the end of 2004. This development was mainly driven by a strong increase in the contribution of loans granted by MFIs, whereas the rise in the contributions of debt securities and quoted shares was more modest (see Chart 21).

The robust growth in MFI loans across the maturity spectrum continued in 2006, and in December 2006 MFI loans to non-financial corporations grew at an annual rate of 13.0% in nominal terms. While such levels of the annual growth rate have not been seen since the introduction of the euro in 1999, it should be kept in mind that the dynamics of bank loans to non-financial corporations have also been robust in other main economies, notably in the United States which has experienced even stronger bank lending growth over the past few years. According to the assessment of banks, as explained in the Eurosystem's bank lending survey, financing needs related to real economic activity – namely for inventories, working capital and fixed capital investments – have gradually increased in importance in explaining the continued strengthening of loan demand in the euro area in 2006. However, other factors of a more financial nature, such as financing needs for M&A activity, have also continued to contribute to net loan demand. A relaxation of bank loan supply conditions over the past few

<sup>9</sup> See also the box entitled "Profitability and leverage developments of listed non-financial corporations in the euro area" in the June 2006 issue of the ECB's Monthly Bulletin.

**Chart 20 Profit ratios of listed euro area non-financial corporations**

(percentages)

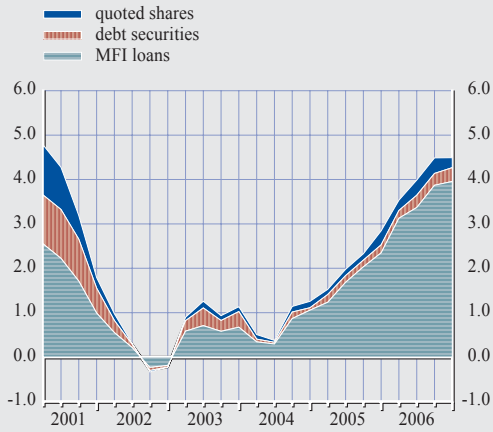


Sources: Thomson Financial Datastream and ECB calculations.

Notes: The calculation is based on aggregated quarterly financial statements of listed non-financial corporations in the euro area. Outliers have been removed from the sample. Compared with the operating income, which is defined as sales minus operating expenses, the net income refers to operating and non-operating income after taxation and extraordinary items.

**Chart 21 Breakdown of the real annual growth rate of external financing to non-financial corporations<sup>1)</sup>**

(annual percentage changes)



Source: ECB.

1) The real annual growth rate is defined as the difference between the actual annual growth rate and the growth rate of the GDP deflator.

years may have acted as an additional driver of current corporate credit developments.

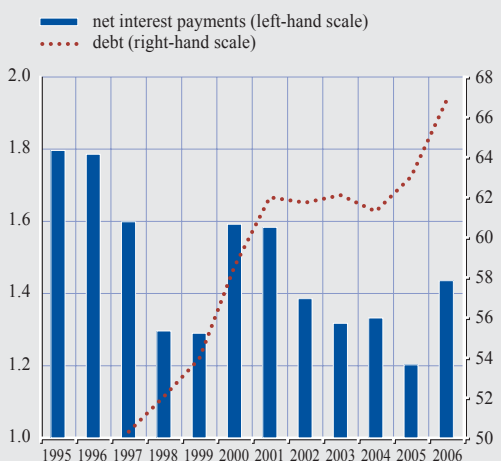
In contrast to the strength of bank-based corporate financing, market-based financing – through both debt and equity – remained relatively low. The annual growth rate of debt securities issued by non-financial corporations, standing at around 4.0% on average in 2006, remained relatively modest, as was the case in preceding years. Likely explanations for the moderate growth are the stronger increase in the cost of market-based debt in comparison with bank-based debt in 2006 and the substitution of debt securities by loans to finance mergers and acquisitions. There is indeed some evidence that the increased M&A activity is predominantly being financed by syndicated bank loans rather than debt securities, which were employed more extensively for such transactions in earlier episodes.

The annual growth rate of quoted shares issued by non-financial corporations showed some tendency to increase throughout 2006, but remained subdued overall. The overall modest contribution of the net issuance of quoted shares to the net financing of the euro area corporate sector is probably related to the significantly higher real cost of equity than the real cost of debt financing. This low growth may also be explained by the continuing popularity of share buyback programmes. At the same time, gross issuance has been rising somewhat over the recent past, supported by the development of both initial and secondary public offerings. Generally, the recovery of gross equity issuance by non-financial corporations is likely to be related to the pick-up in economic growth in the euro area.<sup>10</sup>

10 See the article entitled “Equity issuance in the euro area” in the May 2006 issue of the ECB’s Monthly Bulletin.

**Chart 22 Debt and net interest payments of the non-financial corporate sector**

(as a percentage of GDP)



Sources: ECB and Eurostat.

Note: Data for 2006 are estimates.

### RISING CORPORATE DEBT

As regards the development of the balance sheet position of non-financial corporations in the euro area, the significant rise in the sector's debt financing led to a continuation of the increase in the debt-to-GDP ratio in 2006. After a period of consolidation, the debt ratio of non-financial corporations is currently higher than that recorded at the previous peak in 2003, which had followed a sharp increase in debt in the second half of the 1990s.

Net interest payments of non-financial corporations on their MFI loans and deposits as a percentage of GDP declined significantly in the first half of the 1990s and reached a relatively low level in 2005. The recent debt developments, together with interest rate developments, have led to a significant increase in the interest burden of non-financial corporations in the course of 2006.

### 2.3 PRICE AND COST DEVELOPMENTS

Overall HICP inflation was 2.2% on average in 2006, unchanged from 2005. Despite this broad

stability, annual inflation rates showed considerable volatility over the year, related, to a large extent, to developments in energy prices. There remained some additional pipeline pressures associated, in particular, with the sharp increase observed in global non-energy commodity prices. In line with this, intermediate goods price inflation rose significantly in 2006. Further down the production chain, some upward movement in the producer prices of consumer goods may signal the emergence of potential indirect effects of past commodity price increases. So far, these effects have remained contained. Finally, moderate developments in labour costs in 2006 continued to contribute to overall subdued inflationary pressures, while the appreciation of the euro had a similar effect.

### HEADLINE INFLATION WAS SIGNIFICANTLY INFLUENCED BY ENERGY PRICE DEVELOPMENTS

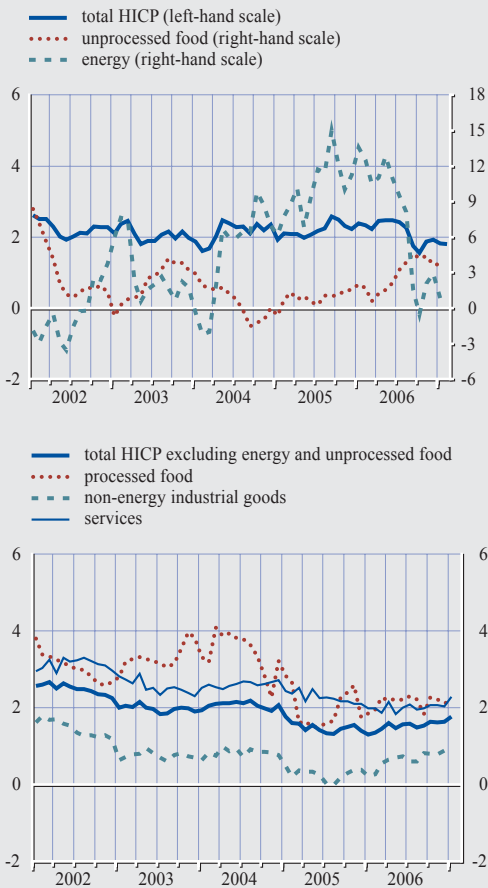
Short-term fluctuations in oil prices and base effects from past energy price developments contributed strongly to the profile of overall HICP inflation in 2006 (see Chart 23).

The average price (in euro) of a barrel of Brent crude oil increased by around 20% in 2006, compared with an increase of around 45% in 2005 (see Table 1). Oil prices also showed considerable volatility in 2006, rising in the first half of the year to reach historically high levels in August, before decreasing sharply. This decline in crude oil prices was accompanied by a rapid fall in oil-related energy prices at the consumer level. Moreover, the impact on prices appeared to have been reinforced by a significant decline in the refining margin of petrol.<sup>11</sup> The contribution of energy price increases to the overall HICP inflation rate, which was particularly strong in the first half of 2006, declined substantially in the second half of the year (see Chart 24). The strong energy price increases which occurred in 2005 resulted in

<sup>11</sup> See the box entitled "Recent developments in oil and petrol prices" in the November 2006 issue of the ECB's Monthly Bulletin.

**Chart 23 Breakdown of HICP inflation: main components**

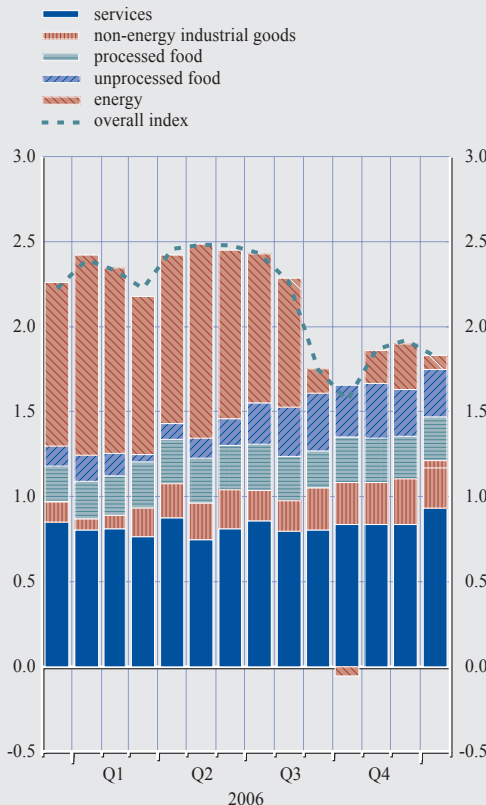
(annual percentage changes; monthly data)



Source: Eurostat.

**Chart 24 Contributions to HICP inflation from main components**

(annual percentage point contributions; monthly data)



Sources: Eurostat and ECB calculations.

Note: Due to rounding, the contributions may not add up exactly to the overall index.

favourable base effects throughout most of 2006.<sup>12</sup>

The contribution of unprocessed food prices to the overall inflation rate was considerably stronger in 2006 than in previous years, owing to particularly strong developments in the third and fourth quarters. This was notably due to the weather conditions experienced over the summer in most parts of Europe, which affected the supply of fruit and vegetables. Moreover, the contribution of meat prices also increased over the course of the year.

The annual growth rate of the HICP excluding energy and unprocessed food stood at 1.5% on average in 2006, broadly unchanged from 2005. However, a slight increase in inflation was observed over the course of the year for the HICP excluding energy and unprocessed food, which rose from 1.4% in the first quarter to 1.6% in the fourth quarter. This upward pattern was due mainly to the increase observed in the

<sup>12</sup> See the box entitled “The role of base effects in driving recent and prospective developments in HICP inflation” in the January 2007 issue of the ECB’s Monthly Bulletin.



**Table 1 Price developments**

(annual percentage changes, unless otherwise indicated)

	2004	2005	2006	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Jan.	2007 Feb.
<b>HICP and its components</b>										
Overall index <sup>1)</sup>	2.1	2.2	2.2	2.3	2.3	2.5	2.1	1.8	1.8	1.8
Energy	4.5	10.1	7.7	11.1	12.2	11.6	6.3	1.5	0.9	.
Processed food	3.4	2.0	2.1	2.2	2.0	2.2	2.1	2.2	2.2	.
Unprocessed food	0.6	0.8	2.8	1.4	1.4	1.6	3.9	4.1	3.7	.
Non-energy industrial goods	0.8	0.3	0.6	0.4	0.3	0.7	0.7	0.8	0.9	.
Services	2.6	2.3	2.0	2.1	1.9	2.0	2.0	2.1	2.3	.
<b>Other price and cost indicators</b>										
Industrial producer prices <sup>2)</sup>	2.3	4.1	5.1	4.4	5.2	5.8	5.4	4.1	2.9	.
Oil prices (EUR per barrel) <sup>3)</sup>	30.5	44.6	52.9	48.6	52.3	56.2	55.7	47.3	42.2	44.9
Commodity prices <sup>4)</sup>	10.8	9.4	24.8	23.2	23.6	26.2	26.6	23.0	15.6	.

Sources: Eurostat, Thomson Financial Datastream, Hamburg Institute of International Economics and ECB calculations.

1) HICP inflation in February 2007 refers to Eurostat's flash estimate.

2) Excluding construction.

3) Brent Blend (for one-month forward delivery).

4) Excluding energy; in euro.

annual growth rate of non-energy industrial goods prices, which rose from 0.3% in the first quarter to 0.8% in the fourth quarter. This most likely reflected a gradual pass-through to consumers of previous increases in energy and non-energy raw material costs. Service price inflation remained broadly stable at around 2.0% during 2006, despite some short-term volatility on account of some sub-components, such as the price of package holidays, which were affected by the shift in the timing of the 2006 spring holidays. Overall, in 2006 domestic

price pressures appeared contained, and the pass-through of past increases in oil and non-oil commodity prices remained limited at the consumer price level.

Despite significant inflationary shocks in 2006, particularly as a result of energy price developments, and headline inflation being constantly above 2% in the first three quarters, longer-term inflation expectations remained anchored at levels consistent with price stability (see Box 3).

**Box 3****LONGER-TERM INFLATION EXPECTATIONS IN THE EURO AREA**

The primary objective of the ECB's monetary policy is to maintain price stability. To this end, the Governing Council of the ECB aims to keep the annual rate of increase in the euro area HICP below, but close to, 2% over the medium term. The stabilisation of the longer-term inflation expectations of economic agents in the euro area at levels consistent with price stability is a prerequisite in order for monetary policy to be efficient. While shocks outside the control of monetary policy, such as oil price hikes, may have an impact on headline inflation in the short term and may therefore affect short-term inflation expectations, longer-term inflation expectations should reflect the extent to which agents believe that the ECB will achieve its price stability objective. A credible monetary policy helps to anchor longer-term inflation expectations to the objective. This box reviews the various measures of longer-term inflation expectations which can be used to gauge the credibility of monetary policy in the euro area and looks at developments in those measures since 2001.

## Various measures of longer-term inflation expectations

Information on the longer-term inflation expectations of euro area economic agents is available from two types of measure: survey-based and financial market-based. These differ as regards the type of measure (direct versus indirect), the category of agent involved and the time horizon used.<sup>1</sup> Survey-based information on long-term inflation expectations is currently available at the euro area level from three sources. First, the ECB Survey of Professional Forecasters (SPF) has reported on a quarterly basis since 2001 the five-year-ahead inflation forecasts of a panel of experts from both financial and non-financial institutions based in the EU.<sup>2</sup> Second, twice a year Consensus Economics publishes long-term forecasts (six to ten years ahead) provided by experts from banks and other financial institutions for euro area consumer prices. Finally, the Euro Zone Barometer provides forecasts for inflation up to four years ahead on a quarterly basis.

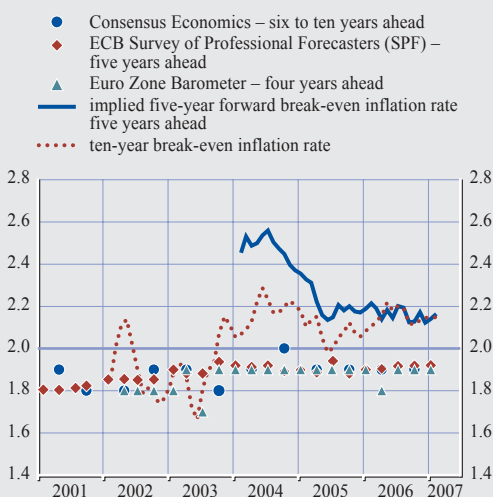
Longer-term inflation expectations can also be derived from financial market instruments. Information on financial market participants' average inflation expectations over the remaining maturity of a bond can be calculated as the spread between the yield on a standard bond and that on an inflation-linked bond of the same maturity. This measure is commonly referred to as the break-even inflation rate. Another financial market-based measure of long-term inflation expectations can be extracted from inflation-linked swaps with corresponding maturities. All of these financial market measures have the advantage of being available in real time for a wide range of possible horizons. However, they are generally not direct measures of inflation expectations, as they are likely to incorporate unobservable risk premia (in particular an inflation risk premium and a liquidity premium) and may at times also be distorted by technical market factors. This notwithstanding, market-based indicators are, compared with surveys, more closely linked to actual economic behaviour. Overall, as there are only imperfect indicators of longer-term inflation expectations available, it is preferable to base analysis on a combination of these measures, cross-checking the information from various sources.

### Developments in longer-term inflation expectations since 2001

Chart A presents the above-mentioned measures of longer-term inflation expectations. Despite their different time horizons, the measures convey relatively similar messages.

**Chart A Measures of longer-term inflation expectations for the euro area**

(average annual percentage changes)



Sources: Consensus Economics, Euro Zone Barometer, ECB, Reuters and ECB calculations.

Notes: The ten-year break-even inflation rate is derived from 2012-maturity bonds until March 2005 and from 2015-maturity bonds thereafter. The latest Consensus Economics survey refers to the period 2012-16; the latest SPF and Euro Zone Barometer surveys refer to 2011.

1 For more details, see the article entitled “Measures of inflation expectations in the euro area” in the July 2006 issue of the ECB’s Monthly Bulletin.

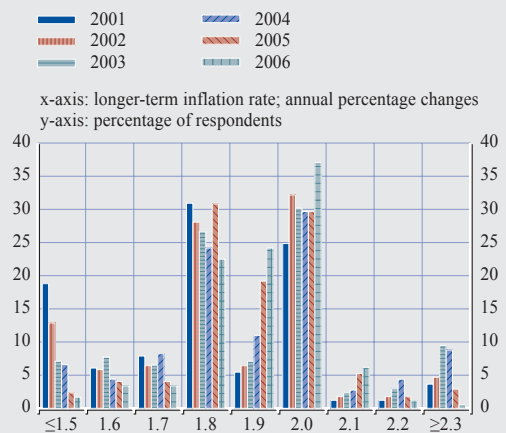
2 In 1999 and 2000 longer-term inflation expectations were available only on an annual basis.

In particular, survey measures of longer-term average inflation expectations generally show remarkable stability, standing at levels below, but close to, 2%. Break-even inflation rates have been more volatile, reaching levels above 2%, but this could be linked to the fact that they not only reflect inflation expectations, but also include a positive, but time-varying, premium for inflation risks.

The stability of average survey measures of inflation expectations is striking. However, it masks regular revisions to individual forecasts, which have offset each other. For example, as illustrated in Chart B, the results of the SPF have been showing a gradual shift in the frequency distribution of expectations since 2001, leading to a lower standard deviation across individual responses and a higher proportion of respondents quoting 1.9% and 2.0% as their longer-term inflation expectations. At the same time, the percentage of respondents expecting inflation to be 1.6% or below has decreased since 2001.

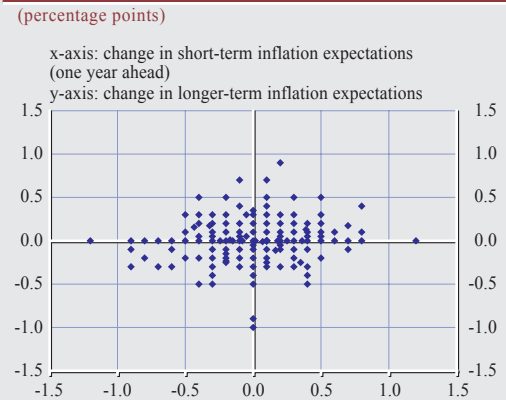
A central bank's ability to anchor inflation expectations can be assessed on the basis of the extent to which long-term inflation expectations respond to changes in very short-term inflation expectations. Chart C plots the individual revisions in short-term inflation expectations (i.e. one year ahead) and longer-term expectations (i.e. five years ahead) between two survey rounds, as provided by SPF participants. It suggests that there is indeed little correlation between movements in short-term inflation forecasts and movements in long-term expectations. Despite a number of short-term price shocks on the upside (for example, surges in oil prices, weather and food-related shocks, and unforeseen increases in administered prices and indirect taxes), combined with a persistent downward bias in the short-term inflation expectations of professional forecasters, no impact is visible on longer-term inflation expectations. The resilience of longer-term inflation expectations suggests that economic agents believe that the ECB will ensure that such short-term shocks will not affect medium to long-term price developments.

**Chart B Frequency distribution of five-year-ahead inflation expectations among SPF respondents (2001-06)**



Source: ECB.

**Chart C Relationship between revisions to short-term and longer-term inflation expectations in the SPF (2001-06)**



Source: ECB.

### Movements in probability distribution as an indication of perceived risks to price stability

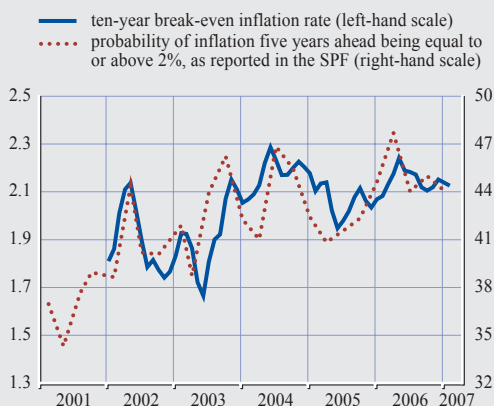
In the SPF, participants are also asked to assign a probability distribution to their forecast. This distribution, expressed as a percentage, provides information on the probability of the future outcome being within a specific range. On an aggregated level, it helps to assess how, on average, survey respondents gauge the risk of the actual outcome being above or below the most likely range. Given the quantitative definition of the ECB's price stability objective, the probability, as reported in the SPF, of longer-term inflation standing at 2% or above might be used as a further indicator to assess the risks to price stability perceived by survey respondents. The probability, as reported by SPF participants, that in the longer term (i.e. five years ahead) inflation will stand at or above 2% increased gradually from around 35% in 2001 to around 40% in 2003. Over recent years it has stabilised somewhat, fluctuating within the 40-45% range. As the mean of SPF longer-term inflation expectations has remained unchanged at 1.9% since early 2002, these shifts in probability seem to reflect changes in survey respondents' risk assessment. This view is confirmed by Chart D, which suggests some co-movement between the probability that inflation five years ahead will stand at or above 2% and a measure of the ten-year break-even inflation rate, which incorporates an inflation risk premium.

### Conclusion

Overall, an analysis based on cross-checking the various measures of longer-term inflation expectations suggests that, despite increases in actual inflation and in short-term inflation expectations owing to recent shocks, longer-term inflation expectations have shown considerable resilience and have generally remained well anchored at levels consistent with the ECB's aim of keeping inflation below, but close to, 2%. At the same time, there is no reason for complacency, as the perceived risk of inflation standing at or above 2% in the longer term has increased over time. While this calls for ongoing vigilance, overall the evidence on long-term inflation expectations nevertheless supports the view that the ECB's monetary policy is considered credible by economic agents in the euro area.

**Chart D Break-even inflation rate and the probability of HICP inflation five years ahead being equal to or above 2%**

(annual percentage changes; percentages)



Sources: ECB, Reuters and ECB calculations.

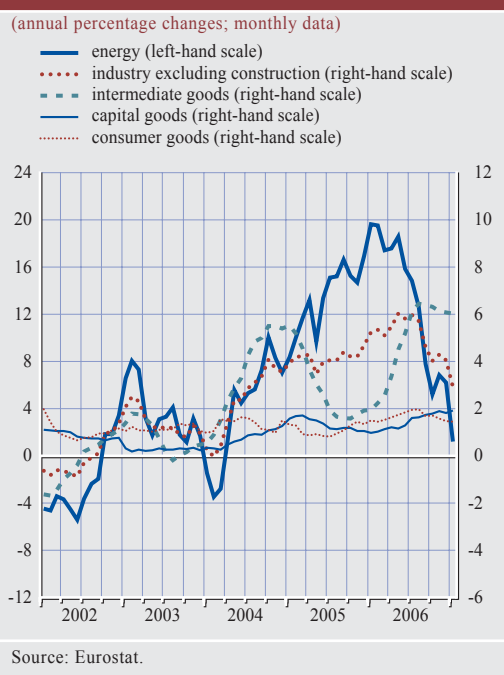
1) The ten-year break-even inflation rate is derived from 2012-maturity bonds until March 2005 and from 2015-maturity bonds thereafter.

### INDIRECT EFFECTS REMAINED LIMITED AT LATER STAGES OF THE PRODUCTION CHAIN

The overall annual growth rate of industrial producer prices (excluding construction) in the euro area rose, on average, from 4.1% in 2005 to 5.1% in 2006 (see Chart 25). Although this increase was driven mainly by energy prices,

the annual growth rate of industrial producer prices excluding construction and energy also followed an upward trend in 2006, reflecting strong pressure from non-energy commodity prices and the indirect effects of higher oil prices.

**Chart 25 Breakdown of industrial producer prices**



The annual rate of growth of intermediate goods prices accelerated significantly in the first half of 2006, rising from 1.9% in December 2005 to 6.4% in August 2006. This was the highest rate of increase observed in over a decade and was due largely to an upsurge in the prices of industrial raw materials, in particular metal prices. In addition, the indirect effect of the increase in oil prices also contributed, albeit to a lesser extent, to upward pressure on intermediate goods prices. In the second half of 2006 intermediate goods price inflation remained high. However, its short-term dynamics slowed towards the end of the year, probably as a result of some easing in the growth of non-energy commodity prices, as well as the decline observed in oil prices and the appreciation of the euro vis-à-vis the US dollar.

Further down the production chain, producer price inflation was more muted, although annual growth in capital and consumer goods prices continued the upward trend observed since mid-2005. These developments largely reflected

the upward impact associated with the indirect effects of past commodity price increases. In the case of consumer goods, some deceleration could be observed after August owing to the combined impact of two special factors (related to the prices of tobacco and health-related items). Excluding the effect of these factors, the underlying pattern indicated that firms were partly able to pass on higher input costs to consumers.

Overall, by the end of 2006 the pass-through of previous commodity price increases appeared limited at the producer level, possibly being mitigated by declines in oil prices after August and the appreciation of the euro over the fourth quarter. Low labour cost pressures may have also played a role in dampening the effect of external price pressures. Nevertheless, there is an upside risk to inflation going forward in that higher non-wage input costs in some sectors could be passed on to consumers, should the pricing power of companies strengthen in line with the improving economic outlook.

#### **DEVELOPMENTS IN LABOUR COSTS REMAINED MODERATE**

The annual growth rate of compensation per employee increased moderately in 2005 and 2006. It rose to 2.1% on average over the first three quarters of 2006, recovering from a substantially lower average level (1.6%) in 2005 (see Table 2).

Since growth in total hourly labour costs was relatively stable over the same period, the upward profile of the growth rate of compensation per employee is likely to have reflected an upward adjustment in hours worked per employee in line with the gradual recovery in economic activity.<sup>13</sup> The same developments were observed at the sectoral level in 2006, with growth in compensation per employee being somewhat more dynamic and volatile in the industrial sectors than in the services sector (see Chart 26). Such variations in the number

<sup>13</sup> See the box entitled "Recent developments in total hours worked in the euro area" in the September 2006 issue of the ECB's Monthly Bulletin.

**Table 2 Labour cost indicators**

(annual percentage changes)

	2004	2005	2006	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4
Negotiated wages	2.1	2.1	2.2	2.0	2.1	2.4	2.0	2.4
Total hourly labour costs	2.4	2.4	.	2.4	2.3	2.4	2.0	.
Compensation per employee	2.1	1.6	.	1.9	2.1	2.3	2.0	.
<i>Memo items</i>								
Labour productivity	1.0	0.7	.	1.0	1.2	1.5	1.2	.
Unit labour costs	1.1	0.9	.	0.9	0.8	0.8	0.8	.

Sources: Eurostat, national data and ECB calculations.  
Note: Data on negotiated wages do not include Slovenia.

of hours worked per employee also have an upward impact on labour productivity per employee, implying that they are neutral as regards developments in unit labour costs.

Overall, available labour cost indicators confirmed a picture of continued moderate wage developments in 2006, although the situation varied greatly from country to country. The increase in the growth rate of those indicators observed in the second quarter appears to have been of a temporary nature, owing to the impact of one-off payments in

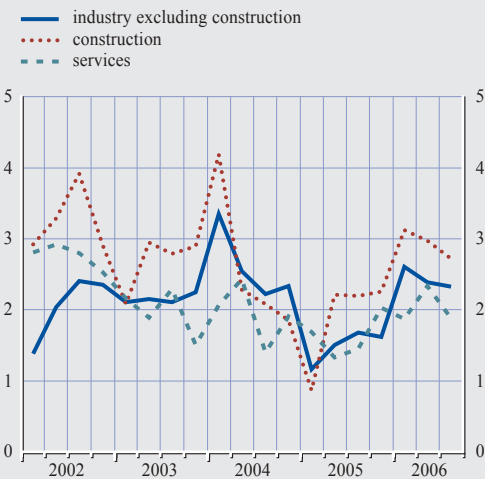
specific countries. Negotiated wage growth continued to be moderate in 2006 (standing at 2.2% on average, compared with 2.1% in 2005), despite volatility in the course of the year.

The annual growth rate of unit labour costs remained stable at 0.8% in the first three quarters of 2006, at levels below those observed in 2005 and previous years. Overall, labour costs have continued to contribute to subdued domestic inflationary pressures in the euro area. Hence, the strengthening of economic activity and improvements in labour market conditions in 2006 do not appear to have resulted in a significant accumulation of wage pressures over the course of the year. This probably reflected the impact on wage negotiations of certain factors, such as the threat of relocation in a context of strong global competitive pressures, especially in the manufacturing sector, and an enhanced awareness of the need to preserve cost competitiveness. Other elements might also have played a role, such as the favourable effects on inflation expectations of a credible monetary policy, the reduced membership of labour unions and the larger share of part-time and short-term labour contracts. Related to this, labour market reforms might have played a role in the continuation of labour cost moderation.

Moderate wage growth and increased economic activity supported profit developments in the euro area in 2006. The indicator of overall profit mark-up, measured by the difference between the GDP deflator and unit labour costs,

**Chart 26 Sectoral compensation per employee**

(annual percentage changes; quarterly data)



Sources: Eurostat and ECB calculations.



pointed to ongoing robust growth in profits up to the third quarter of 2006.

### RESIDENTIAL PROPERTY PRICES SHOWED SOME SIGNS OF MODERATION

Euro area residential property prices, which are not included in the measurement of the HICP, showed signs of a further gradual deceleration in 2006 (see Chart 27). Based on the information available, their annual growth rate is estimated to have declined to 6.8% in the first half of 2006, from 7.3% in the second half of 2005 and 8.0% in the first half of 2005. At the country level, some moderation in residential property price developments, compared with the second half of 2005, could be observed in Belgium, Spain, France and Italy. In the other euro area countries, growth rates remained broadly stable, with the exception of Ireland, where they increased significantly. The information available suggests that residential property

price developments continued to show considerable diversity across the euro area in 2006. In particular, the protracted weakness of the German housing market stands in contrast with developments in most other euro area economies.

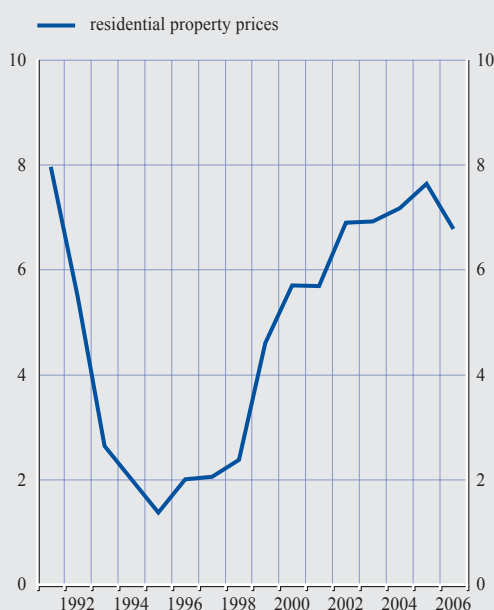
### 2.4 OUTPUT, DEMAND AND LABOUR MARKET DEVELOPMENTS

#### ECONOMIC GROWTH REBOUNDED IN 2006

Having stood at 1.5% in 2005, real GDP growth in the euro area increased strongly in 2006, to 2.8% (after adjusting for the number of working days), a level which exceeded available estimates of potential output growth and which constituted the strongest growth witnessed since 2000. Economic activity, which had started to improve in the second half of 2005, gained further momentum in the first half

**Chart 27 Residential property price developments in the euro area**

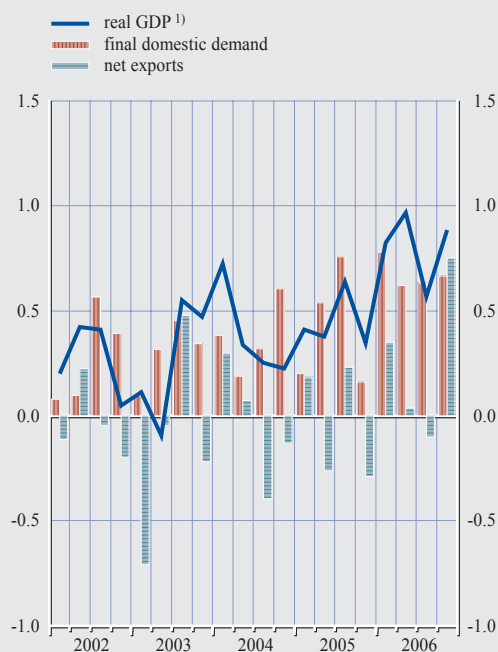
(annual percentage changes; annual data)



Source: ECB calculations, based on non-harmonised national data.  
Note: Data for 2006 refer to the first half of the year.

**Chart 28 Contributions to quarterly real GDP growth**

(quarterly percentage point contributions; seasonally adjusted)



Sources: Eurostat and ECB calculations.  
1) Percentage change compared with the previous quarter.

of 2006, slowing down only marginally thereafter. This strong performance was partly unexpected, and reflected, in particular, a significant strengthening of business and consumer confidence, together with substantial improvements in labour market conditions, while the second half of the year saw the effect of past adverse shocks (in particular oil price increases) diminish significantly.

Indeed, the euro area economy rebounded in 2006 after a prolonged period of subdued growth, which had begun in 2001. Despite the strong expansion of the global economy, the disappointing pace of activity before 2006 was related to a number of factors, in particular the lack of resilience to various shocks such as very strong oil price increases. The sluggishness of domestic demand during that period may also have reflected private agents' uncertainty about their future income. The cyclical downturn which began in 2001 was also associated with a

sharp downward adjustment in financial asset prices and a pressing need for corporations to restructure their balance sheets, which limited investment and job creation. As the process of balance sheet restructuring made significant progress at the firm level and business confidence improved, in a context of continued favourable financing conditions, investment and, to a lesser extent, labour demand picked up, leading to robust domestic demand in 2006. Meanwhile, solid world growth supported exports. However, the external sector made a broadly neutral contribution to economic growth (see Chart 28), which was attributable, in particular, to stronger domestic economic momentum boosting imports from the rest of the world.

As regards the domestic components of growth, total investment growth rebounded vigorously in 2006, to reach 4.3%, its highest level since 2000, as compared with 2.7% in 2005 (see Table 3). This acceleration was particularly noticeable in

**Table 3 Composition of real GDP growth**

(percentage changes, unless otherwise indicated; seasonally adjusted)

	Annual rates <sup>1)</sup>									Quarterly rates <sup>2)</sup>				
	2004	2005	2006	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4	
Real gross domestic product	1.8	1.5	2.8	1.8	2.2	2.8	2.7	3.3	0.3	0.8	1.0	0.6	0.9	
<i>of which:</i>														
Domestic demand <sup>3)</sup>	1.6	1.8	2.5	2.0	2.2	2.5	2.8	2.3	0.6	0.5	0.9	0.7	0.1	
Private consumption	1.4	1.5	1.8	1.2	1.8	1.7	1.7	2.1	0.1	0.6	0.3	0.7	0.5	
Government consumption	1.4	1.4	2.3	1.6	2.5	2.0	2.1	2.5	0.1	1.4	0.0	0.6	0.5	
Gross fixed capital formation	1.7	2.7	4.3	3.2	3.6	4.7	4.0	4.8	0.4	0.8	2.1	0.6	1.2	
Changes in inventories <sup>4)</sup>	0.2	0.0	0.0	0.3	-0.1	0.2	0.5	-0.5	0.5	-0.3	0.3	0.0	-0.5	
Net exports <sup>3)</sup>	0.2	-0.2	0.3	-0.1	0.0	0.3	0.0	1.1	-0.3	0.3	0.0	-0.1	0.8	
Exports <sup>5)</sup>	6.4	4.5	8.1	4.8	8.4	7.5	6.7	9.8	0.7	3.1	0.9	1.8	3.7	
Imports <sup>5)</sup>	6.3	5.4	7.5	5.4	8.8	6.9	7.0	7.3	1.5	2.3	0.8	2.2	1.9	
Real gross value added														
<i>of which:</i>														
Industry excluding construction	1.5	1.7	4.0	2.9	3.5	4.1	4.3	4.2	0.5	1.3	1.4	1.0	0.4	
Construction	1.5	1.1	3.7	2.1	2.4	3.5	4.1	4.8	0.9	-0.3	2.4	1.1	1.5	
Purely market-related services <sup>6)</sup>	1.9	2.0	2.9	2.0	2.2	3.0	2.9	3.4	0.3	1.0	1.2	0.5	0.8	

Sources: Eurostat and ECB calculations.

Note: The figures reported are seasonally and partly working day-adjusted, as not all euro area countries report quarterly national account series adjusted for the number of working days.

1) Percentage change compared with the same period a year earlier.

2) Percentage change compared with the previous quarter.

3) As a contribution to real GDP growth; in percentage points.

4) Including acquisitions less disposals of valuables.

5) Exports and imports cover goods and services and include internal cross-border trade in the euro area. Since intra-euro area trade is not cancelled out in import and export figures used in national accounts, these data are not fully comparable with balance of payments data.

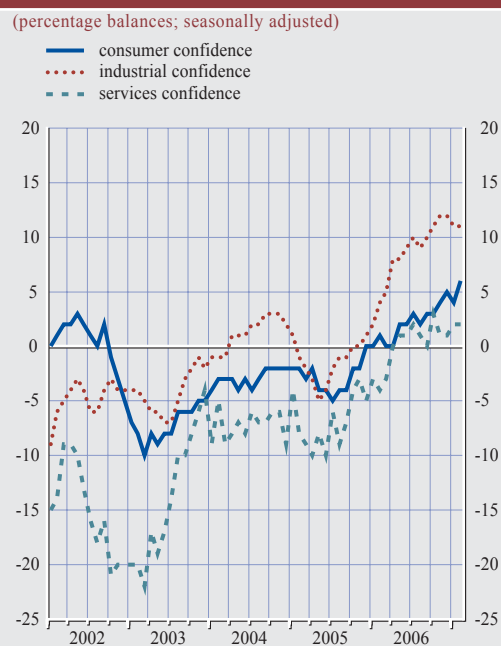
6) Includes trade, transport, repairs, hotels and restaurants, communication, finance, business services, real estate and renting services.

the construction sector, but was also seen in the non-construction sector. Benefiting from a favourable external environment, investment growth was further supported by high and increasing profit rates, a positive demand outlook and low costs of external financing. In addition, construction investment was strong, both in housing and, in particular, in other construction.

Private consumption growth increased from 1.5% in 2005 to 1.8% in 2006. In the context of a sharp improvement in consumer confidence, the modest acceleration of household expenditure in 2006 is likely to have been positively affected by higher real disposable income growth. Real income gains in 2006 were achieved mainly through strong employment growth and non-labour income growth, and occurred in spite of the negative impact that elevated energy costs had on household purchasing power. Real compensation per employee, by comparison, increased only marginally. These effects were not offset by higher household savings. The positive impact on the saving ratio stemming from some consumption-smoothing behaviour – in a context of increasing income growth, as well as higher interest rates over the entire maturity spectrum – was more than compensated for by a reduction in precautionary savings stemming from labour market developments and, possibly, the strong dynamics in households' net wealth.

From a sectoral perspective, the acceleration of activity in 2006 was most pronounced in the industrial (excluding construction) sector, while value added growth in the market services sector increased more moderately. Such developments are consistent with the significant improvements in industrial confidence recorded

**Chart 29 Confidence indicators**



Source: European Commission Business and Consumer Surveys.  
Note: Data shown are mean-adjusted.

since the second half of 2005, while the improvements in services confidence have been less pronounced (see Chart 29).

Various dispersion measures indicate that the degree of divergence of real GDP growth rates among euro area countries declined slightly in 2006 (see Box 4). Compared with the year before, average annual real GDP growth increased in most euro area countries in 2006 and remained stable in the remaining countries.

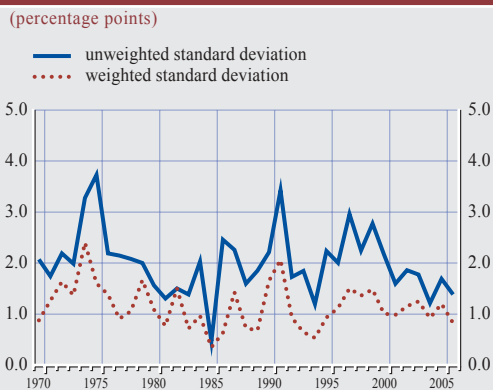
**Box 4**

**OUTPUT GROWTH DIFFERENTIALS ACROSS THE EURO AREA COUNTRIES**

In any monetary union, there are differences in the economic developments experienced by its members. This box presents a brief overview of the size of output growth differentials between the euro area countries and how they have evolved over time. In addition, some factors behind these differences are mentioned, and policy implications are discussed.

The dispersion of real GDP growth rates across the euro area countries, as measured by the unweighted standard deviation, has been fluctuating around a level of 2 percentage points and, overall, shown no apparent upward or downward trend over the past 35 years (see the chart). The same pattern also applies to the weighted dispersion of output growth, although the standard deviation in this case has been fluctuating around 1 percentage point. However, since the start of Stage Three of EMU in 1999, the unweighted dispersion has declined among the euro area countries, while the weighted dispersion has been broadly stable. The difference between these two measures reflects the fact that in some smaller euro area economies real GDP growth has moved closer to the euro area average since 1999.

### Dispersion of real GDP growth across the euro area countries



Source: European Commission.  
Notes: Data for Germany refer to West Germany up to 1991. The figures for 2006 are European Commission estimates. The euro area does not include Slovenia.

In some euro area countries, real GDP has consistently grown above or below the euro area average in recent years. In particular, output growth in Greece, Spain, Ireland, Luxembourg and Finland has exceeded the euro area average every year since the mid-1990s. By contrast, in Germany and Italy real GDP grew by less than the euro area average every year from the mid-1990s to 2005. These persistent differentials appear to indicate that the dispersion of real GDP growth rates across the euro area countries largely reflects structural growth differences and, to a lesser extent, cyclical differences.<sup>1</sup>

Some differences in the output growth performances of the euro area countries are natural and desirable. This is the case, for example, where such differences reflect catching-up effects of lower-income countries or differing demographic trends. Furthermore, there may be temporary differences between countries' output growth rates, for instance on account of an equilibrating adjustment process in the monetary union following a shock. However, persistent differences in output growth rates may also reflect: inappropriate national economic policies; structural inefficiencies and rigidities; or a malfunctioning adjustment mechanism in or between some countries, reflected in increasing internal imbalances and diverging developments in competitiveness.

The single monetary policy cannot influence output growth differentials across the euro area countries. Weak trend output growth performances must be tackled by means of properly designed national policies addressing fiscal and structural matters. Such policies need to focus, in particular, on enhancing the capacity of national economies to adjust to shocks and, in the countries experiencing slower growth, on fostering high levels of productivity and labour utilisation, as well as on further enhancing the Single Market, while maintaining stable macroeconomic conditions.

<sup>1</sup> For further details, see the box entitled "Output growth differentials within the euro area: are they cyclical or trend-driven?" in the October 2005 issue of the ECB's Monthly Bulletin.

## ONGOING IMPROVEMENTS IN THE LABOUR MARKET

Labour market conditions in the euro area improved significantly in 2006, with employment growing at a rate of 0.3% to 0.5% quarter on quarter (see Table 4) and the level of employment increasing by more than two million. This performance seems to be in line with the pattern of economic growth, contained real labour costs and the likely impact of recent labour market policy measures which have facilitated the expansion of part-time work and self-employment. In addition, since part of the cyclical adjustment of labour input during the last downturn took place via a decline in hours worked per employee (both part-time and full-time employees), labour has also been supported by a rebound in hours worked over the recent past. From a sectoral perspective, employment rose strongly in the services and construction sectors, while the protracted decline in industry (excluding construction) came to an end.

The unemployment rate, which began to decline in mid-2004, decreased further in 2006, reaching a level of 7.5% in the fourth quarter of the year (see Chart 30). It should be noted that this is the first time that such levels have been achieved since the beginning of the series in 1993.

Although this clearly indicates a cyclical rebound in labour market conditions in 2006, part of the decrease in the unemployment rate can be assessed as being of a structural nature, reflecting the impact of labour market reforms in some euro area countries. While several countries have made significant progress towards making their labour markets more flexible, more ambitious reforms are still needed in many countries.

Labour productivity growth for the whole economy accelerated further in the course of 2006. The acceleration in labour productivity was mainly driven by the industrial (excluding construction) sector, whereas productivity growth in the services sector remained stable at a level significantly below productivity growth for the industrial sector (see Chart 31).

The pick-up in labour productivity was partly attributable to the cyclical rebound in the euro area economy recorded in 2006. However, euro area productivity growth remains disappointing, and structural factors also explain this weak performance. The slowdown in productivity growth witnessed since the mid-1990s may, in part, have been driven by the transitory effects of a structural increase in the utilisation of

**Table 4 Labour market developments**

(percentage changes compared with the previous period; percentages)

	2004	2005	2006	2004 Q3	2004 Q4	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4
Labour force	1.0	0.5	.	0.3	0.2	0.1	-0.0	-0.1	0.2	0.3	0.1	0.1	.
Employment	0.8	0.8	.	0.3	0.3	0.1	0.1	0.2	0.3	0.5	0.5	0.3	.
Agriculture <sup>1)</sup>	-1.2	-1.4	.	1.5	-1.1	-1.3	0.0	0.1	0.1	0.2	0.7	-1.8	.
Industry <sup>2)</sup>	-0.5	-0.1	.	-0.0	0.1	-0.2	0.0	-0.2	0.3	0.1	0.3	0.2	.
– excluding construction	-1.3	-1.3	.	-0.4	0.1	-0.7	-0.4	-0.1	-0.0	-0.1	0.1	-0.0	.
– construction	1.5	2.7	.	1.1	0.2	1.0	0.9	-0.3	0.9	0.6	0.7	0.9	.
Services <sup>3)</sup>	1.4	1.2	.	0.4	0.5	0.3	0.1	0.3	0.3	0.7	0.5	0.4	.
<b>Rates of unemployment <sup>4)</sup></b>													
Total	8.8	8.6	7.8	8.8	8.8	8.8	8.7	8.4	8.4	8.2	7.8	7.7	7.5
Under 25	18.2	17.7	16.5	18.2	18.1	18.2	17.7	17.3	17.4	17.2	16.4	16.5	16.1
25 and over	7.5	7.4	6.7	7.5	7.5	7.5	7.4	7.2	7.2	7.0	6.7	6.6	6.4

Sources: Eurostat and ECB calculations.

1) Includes fishing, hunting and forestry.

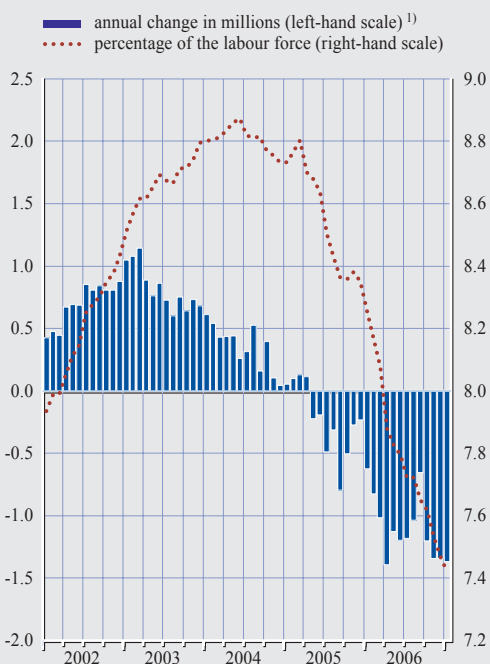
2) Includes manufacturing, construction, mining and quarrying, electricity, gas and water supply.

3) Excludes extra-territorial bodies and organisations.

4) Percentage of the labour force according to ILO recommendations.

**Chart 30 Unemployment**

(monthly data; seasonally adjusted)

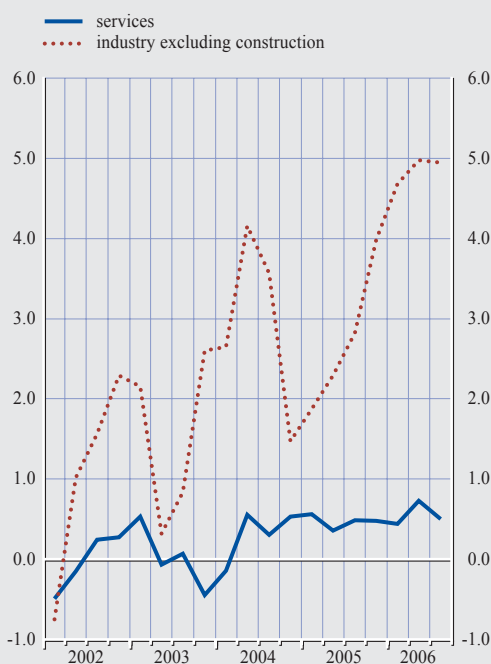


Source: Eurostat.

1) Annual changes are not seasonally adjusted.

**Chart 31 Labour productivity**

(annual percentage changes)



Source: Eurostat.

relatively low-skilled labour within the context of the implementation of labour market reforms. However, lower productivity growth in the euro area also reflects insufficient use of new

productivity-enhancing technologies, together with a lack of competition and the stringent regulatory environment in product markets (see Box 5).

**Box 5**

**DEVELOPMENTS IN EURO AREA PRODUCTIVITY AND THE NEED FOR STRUCTURAL REFORMS**

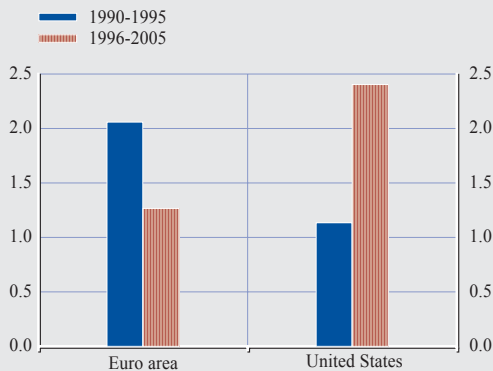
Productivity improvements are a key determinant of economic growth and increases in real income per capita in the medium to long run. Against this background, this box reviews the main developments in euro area labour productivity over the past fifteen years and discusses the need for policies that contribute to increasing productivity growth in the future. Productivity is measured in terms of labour productivity, which is defined as real output per unit of labour input. Labour input, in turn, is measured in two ways, namely in terms of either the total hours worked or the number of persons employed.<sup>1</sup>

<sup>1</sup> It is worth mentioning that, while the use of total hours worked is the preferred option from an economic point of view, estimates of hours worked are subject to measurement errors. While the data convey relevant information in terms of comparing trends over time, they are unsuitable for cross-country comparisons of the level of hours worked in any given year.



**Chart A Labour productivity growth per hour worked**

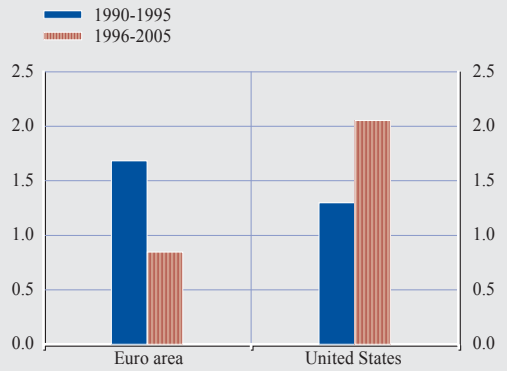
(average annual percentage changes)



Sources: Groningen Growth and Development Centre and ECB calculations.

**Chart B Labour productivity growth per person employed**

(average annual percentage changes)



Sources: Groningen Growth and Development Centre and ECB calculations.

Over the past ten years the development of euro area productivity has been disappointing. A decline in euro area labour productivity growth vis-à-vis the United States can be observed, irrespective of whether labour input is measured per hour worked or per person employed.<sup>2</sup> Average annual labour productivity growth per hour worked declined from 2.1% in the period 1990-1995 to 1.3% in the period 1996-2005.<sup>3</sup> This contrasts with an increase, from 1.1% to 2.4%, in US labour productivity growth per hour worked over the same period (see Chart A). Measured in terms of persons employed, euro area labour productivity growth declined from 1.7% in the period 1990-1995 to 0.8% in the period 1996-2005, while the corresponding US indicator rose from 1.3% to 2.1% (see Chart B).<sup>4</sup> There has thus been a turnaround in labour productivity growth (both per hour worked and per person employed), with the euro area having been overtaken by the United States over the past ten years. While these developments may, in part, have been influenced by cyclical factors, the role played by structural factors cannot be ignored.

The slowdown observed in the growth of euro area labour productivity is partly attributable to higher labour utilisation. One factor behind the latter development may have been the specific labour market reforms implemented in some euro area countries, such as a reduction of tax wedges and the implicit tax on early retirement<sup>5</sup>, as well as a relaxation of employment protection legislation (especially in the 1990s) and support for the development of part-time work. These measures, which were all aimed at increasing employment opportunities, in particular for low-skilled, female, young and older workers, have had a clear positive effect on employment rates (see Table A).

2 Owing to the trend decline in average hours worked, euro area labour productivity growth tends to be lower when measured per person employed.

3 See also the article entitled "Labour productivity developments in the euro area: aggregate trends and sectoral patterns" in the July 2004 issue of the ECB's Monthly Bulletin, and the box entitled "Developments in euro area labour quality and their implications for labour productivity growth" in the October 2005 issue of the ECB's Monthly Bulletin.

4 Data from the Groningen Growth and Development Centre (GGDC) Total Economy Database are used in this analysis, and the source data are available from [www.ggdc.net](http://www.ggdc.net). The GGDC data are based on OECD sources, but also include additional calculations (which, importantly, take account of differences in quality adjustment).

5 The implicit tax rate is defined as the amount of pension "lost" on account of later retirement (in present value terms) relative to labour income.

Nevertheless, taxes and benefits, as well as the level of employment protection legislation, remain significantly lower in the United States. As a result, the overall employment rate in the euro area is clearly below that recorded in the United States (see Table A). The need to raise employment levels in the euro area will, to some extent, continue to put pressure on euro area labour productivity growth. However, this apparent trade-off between employment and productivity is likely to be temporary. It does, however, add emphasis to the crucial importance of implementing the appropriate institutional setting for the euro area to enhance innovation and its diffusion in order to boost labour productivity growth.

Another important factor behind the diverging developments in labour productivity growth

in the euro area and the United States is the higher increase in capital intensity (capital services per hour worked) in the latter country, reflecting stronger investment in information and communications technology (ICT) equipment, in particular in the services sector (see Table A). When looking at sectoral developments, it appears that euro area productivity has lagged behind that of the United States primarily in the field of ICT-using services, including the retail and wholesale trade sectors and the financial intermediation sector (see Table B). In addition, the role of the ICT-producing sector in the euro area has been limited on account of its relatively small share in real GDP. Only in traditional non-ICT sectors has productivity growth in the euro area been higher than in the United States, but this lead has clearly been eroded over the past ten years. The structural characteristics of the US economy – a more flexible labour market, a higher degree of competition in product markets and lower barriers to entry for new firms, as well as a more efficient capital market – have apparently been more conducive to exploiting the opportunities provided by new technologies.<sup>6</sup>

Over the past fifteen years, the euro area has made significant and steady progress in easing product market regulation and creating a more business-friendly economic environment. Moreover, the adoption of the Services Directive by the European Parliament in December 2006 will undoubtedly contribute to improving the situation in this field. Nevertheless, the extension and deepening of the internal market remain a priority, since the existing regulatory environment in the euro area is still overly complex, in particular by comparison with the United States, thus posing an obstacle to innovation and labour productivity gains. This may, in part, explain why the levels of R&D and venture capital investment – two important driving forces behind innovation – are still significantly below those observed in the United States.

**Table A Selected structural indicators**

	Euro area <sup>1)</sup>		United States	
	1995	2005	1995	2005
<b>Labour market (percentages)</b>				
Overall employment rate	58	64	73	72
Female employment rate	47	55	66	66
Older workers' employment rate	33	40	55	61
Share of part-time work	12.7	17.0	14.2	12.8
<b>Innovation</b>				
ICT investment (percentage of GDP) <sup>2)</sup>	1.9	2.2	3.4	3.7
R&D investment (percentage of GDP) <sup>3)</sup>	1.8	1.9	2.5	2.7

Sources: Eurostat and OECD.

1) Euro area figures are weighted averages.

2) Data refer to 2003.

3) Data refer to 2004.

<sup>6</sup> Task Force of the Monetary Policy Committee of the ESCB, "Competition, productivity and prices in the euro area services sector", ECB Occasional Paper No 44, April 2006; and R. Gómez-Salvador, A. Musso, M. Stocker and J. Turunen, "Labour productivity developments in the euro area", ECB Occasional Paper No 53, October 2006.

In order to take full advantage of a more efficient regulatory environment, however, these measures need to be accompanied by efforts to improve the labour force's level of education and expertise. Technological advancement results in jobs shifting from low to high-skilled workers through a process of "creative destruction". Thus, measures to promote improvements in skills and lifelong learning contribute to innovation and facilitate the use of advanced technologies. Thus far, investment in human capital in Europe has been inadequate for a "knowledge-intensive" economy. In 2004, for instance, only 23% of 25-64 year-olds in the euro area attained a tertiary level of education, as compared with 39% in the United States.

To sum up, the regulatory environment plays a major role in explaining labour productivity developments. All in all, despite significant progress in some areas, structural reforms in the euro area have not been far-reaching enough, and their implementation has been too slow to foster the emergence of a "knowledge-based economy" aimed at boosting labour productivity growth and enhancing job creation. Both the challenges and the solutions have been clearly identified, in particular in the context of the renewed Lisbon strategy. The challenge now is to step up the overall pace of reform.

**Table B Sectoral labour productivity growth per hour worked<sup>1)</sup>**

(annual average percentage point contributions)

	Euro area		United States	
	1990-95	1996-2003	1990-95	1996-2003
<b>Total industries</b>	<b>2.3</b>	<b>1.5</b>	<b>1.0</b>	<b>2.5</b>
<b>ICT-producing</b>	<b>0.3</b>	<b>0.4</b>	<b>0.7</b>	<b>0.9</b>
Manufacturing	0.2	0.2	0.5	0.6
Services	0.1	0.2	0.2	0.3
<b>ICT-using</b>	<b>0.5</b>	<b>0.4</b>	<b>0.3</b>	<b>1.3</b>
Manufacturing	0.2	0.1	0.0	0.1
Services	0.3	0.3	0.3	1.1
<b>Non-ICT</b>	<b>1.5</b>	<b>0.7</b>	<b>0.1</b>	<b>0.3</b>
Manufacturing	0.5	0.3	0.2	0.2
Services	0.6	0.2	-0.2	0.1
Other	0.5	0.3	0.0	0.0

Sources: Groningen Growth and Development Centre and ECB calculations.

1) Figures may not add up due to rounding.

## 2.5 FISCAL DEVELOPMENTS

### BUDGETARY IMPROVEMENTS IN 2006

Fiscal developments in the euro area were relatively favourable in 2006, against a background of strong output growth and revenue windfalls. According to the euro area member countries' updated stability programmes, the average general government deficit ratio stood at about 2.0% of GDP, down from 2.4% in 2005 (see Table 5). With regard to the five countries with an excessive deficit procedure in 2006, it is estimated that Germany, Greece and France have brought down or maintained their fiscal deficits below the reference value of 3% of GDP, albeit thanks to significant deficit-reducing temporary measures in the latter two countries. Two countries, Italy and Portugal,

continued to report deficits of well above 3% of GDP. In the case of Italy, according to more recent estimates, the deficit reached 4.4% of GDP (well below the figure reported in the updated stability programme); excluding deficit-increasing temporary effects it would have amounted to 2.4%. Significant budgetary imbalances, albeit below the deficit ceiling of 3% of GDP, have also remained in Luxembourg and Austria, while balanced or surplus budgetary positions are estimated for Belgium, Ireland, Spain, the Netherlands and Finland.

When comparing the budgetary targets for 2006 in the latest stability programme updates with those released at the end of 2005 and in the first half of 2006, the euro area deficit was lower by an average of about 0.2 percentage point of

**Table 5 Fiscal positions in the euro area**

(as a percentage of GDP)

<b>General government surplus (+)/deficit (-)</b>			
	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Euro area</b>	<b>-2.8</b>	<b>-2.4</b>	<b>-2.1</b>
Belgium	0.0	-2.3	0.0
Germany	-3.7	-3.2	-2.1
Ireland	1.5	1.1	2.3
Greece	-7.8	-5.2	-2.6
Spain	-0.2	1.1	1.4
France	-3.7	-2.9	-2.7
Italy	-3.4	-4.1	-5.7
Luxembourg	-1.1	-1.0	-1.5
Netherlands	-1.8	-0.3	0.1
Austria	-1.2	-1.5	.
Portugal	-3.2	-6.0	-4.6
Finland	2.3	2.7	2.9

<b>General government gross debt</b>			
	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Euro area</b>	<b>69.8</b>	<b>70.8</b>	<b>69.6</b>
Belgium	94.3	93.2	87.7
Germany	65.7	67.9	68.0
Ireland	29.7	27.4	25.1
Greece	108.5	107.5	104.1
Spain	46.2	43.1	39.7
France	64.4	66.6	64.6
Italy	103.9	106.6	107.6
Luxembourg	6.6	6.0	7.5
Netherlands	52.6	52.7	50.2
Austria	63.8	63.4	.
Portugal	58.6	64.0	67.4
Finland	44.3	41.3	39.1

Sources: European Commission (for 2004-05), 2006 updated stability programmes (for 2006) and ECB calculations.

Note: Data are based on the excessive deficit procedure definition. Budget balances exclude proceeds from the sale of UMTS licences.

GDP. This reflects significantly better than expected outcomes for Germany (where the deficit is estimated to have been brought below the reference value of 3% of GDP a year earlier than planned) and for a number of euro area countries already in a sound budgetary position.

Against this background, the euro area public debt ratio declined in 2006, for the first time since 2002, to slightly below 70% of GDP. This in turn reflects declines in debt ratios in the majority of countries, with the more notable exceptions of Italy – which has become the country with the highest debt ratio – and Portugal.

These budgetary developments were mainly the result of strong output growth and revenue windfalls and, only to a small extent, effective fiscal consolidation. The improvement in the structural budget balance (cyclically adjusted balance excluding one-off and other temporary measures), estimated to have been about 0.4% for 2006, may partly reflect the above-mentioned windfall revenues and could therefore overstate the underlying effective pace of consolidation. The buoyancy of public revenues may stem from a number of factors, including higher corporate profits, the strong performance of equity markets and, in some countries, rising house prices or an increased effectiveness of tax administration. These factors have pushed up tax revenues on income and wealth, but the exact contribution of each of these factors is

difficult to disentangle. Euro area aggregate developments mask substantial differences across euro area countries, notably among those with excessive deficits or significant budgetary imbalances. Greece and Portugal reported sizeable structural balance improvements, while progress is also expected to have been

made in Germany and, to a lesser extent, in France. By contrast, the structural balance of Luxembourg worsened considerably. Budgetary developments were also reflected in the volume of issuance of general government debt securities (see Box 6).

## Box 6

### DEVELOPMENTS IN GOVERNMENT DEBT SECURITIES ISSUANCE AND BOND YIELD SPREADS IN THE EURO AREA

Issuance of general government debt securities declined, as did deficit and debt-to-GDP ratios, for most countries in the euro area in 2006, in an environment of strengthening economic activity. Indeed, the 2006 updates of the stability programmes indicated, for that year, the first decline in the public debt ratio in the euro area since 2002, to slightly below 70% of GDP. In net terms, euro area general government borrowing grew by 2.1% in 2006, against 4.1% in 2005 (see Table A)<sup>1</sup>.

**Table A Debt securities issued by euro area governments**

(annual percentage changes; end of period)

	1999	2000	2001	2002	2003	2004	2005	2006
Total general government	3.5	2.6	2.6	4.1	4.7	5.3	4.1	2.1
<i>Long-term</i>	5.7	3.3	2.2	2.9	3.9	5.7	4.9	3.1
Fixed rate		5.1	5.2	3.9	5.1	6.0	4.6	3.1
Floating rate		-4.0	-16.1	-9.4	-6.2	5.0	9.6	2.8
<i>Short-term</i>	-17.2	-6.5	8.1	19.3	13.8	2.1	4.9	-8.3

Source: ECB.

An analysis of the structure of outstanding general government debt securities reveals that government debt issuance is predominantly undertaken by central government, which accounted for 93.5% of outstanding debt securities in 2006. The other general government sector was responsible for the remaining 6.5%. However, this sector has become more active. Between 1999 and 2006 the share of debt securities issued by central government declined steadily, while the share of debt securities issued by other general government roughly doubled.

An important factor making the issuance of long-term debt securities by governments more attractive than that of short-term debt in 2006 was the narrowing of the spread between long-term and short-term interest rates. Accordingly, although the annual growth rate of long-term debt securities fell from 4.9% in 2005 to 3.1% in 2006, the annual growth rate of short-term

<sup>1</sup> Growth rates are calculated on the basis of financial transactions and therefore exclude reclassifications, revaluations, exchange rate variations and other changes that do not arise from transactions. For details, see the technical notes relating to Tables 4.3 and 4.4 of the "Euro area statistics" section of the ECB's Monthly Bulletin.

**Table B Structure of amounts outstanding of debt securities issued by euro area governments**

(percentages of total debt securities issued by general government; end of period)

	1999	2000	2001	2002	2003	2004	2005	2006
Central government	96.9	96.7	96.3	95.4	94.7	94.3	93.9	93.5
Long-term securities	89.3	89.8	89.0	87.2	85.8	85.7	86.0	86.5
Short-term securities	7.6	6.9	7.2	8.2	8.9	8.6	7.9	7.0
Other general government	3.1	3.3	3.7	4.6	5.3	5.7	6.1	6.5
Long-term securities	3.0	3.2	3.6	4.5	5.2	5.6	6.0	6.4
Short-term securities	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total general government								
Long-term	92.3	93.0	92.6	91.7	91.0	91.3	92.0	92.9
Fixed rate	79.2	81.1	82.4	82.0	82.1	82.6	83.1	84.9
Floating rate	10.6	10.0	8.8	8.1	7.6	7.6	7.9	8.0
Short-term	7.7	7.0	7.4	8.3	9.0	8.7	8.0	7.1
Total general government in EUR billions	3,451.5	3,549.4	3,771.3	3,946.2	4,149.0	4,388.0	4,602.0	4,705.3

Source: ECB.

debt securities declined more strongly and actually turned negative in 2006, reflecting net redemptions of short-term debt securities.

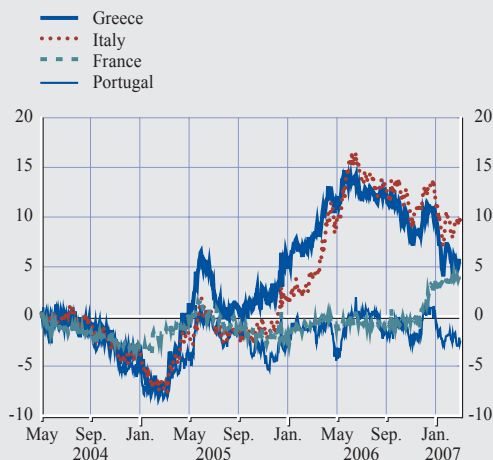
Hence, euro area countries continued to have a long-term orientation in their debt management. In fact, long-term debt accounted for around 92.9% of outstanding debt securities in 2006, i.e. slightly above 2005, while the share of short-term debt securities was only 7.1% (see Table B). Table B indicates that the largest proportion of long-term general government debt securities was issued at a fixed rate. Despite the small increase in 2006, the share of floating rate issues decreased over time, from 10.6% in 1999 to 8.0% in 2006. Overall, recent trends in the structure of government financing reflect the significant benefits that have arisen in conjunction with the move to more stability-oriented economic policies over the last decade, which have in turn contributed to the low level of long-term interest rates reached in recent years. The most visible benefit is the significantly lower proportion of the government budget spent on interest payments.

In terms of cross-country differences, German ten-year government bond yields have thus far been the lowest among euro area countries on average, primarily on account of these bonds' higher liquidity and corresponding benchmark status. The chart shows the cumulative changes in government bond yield spreads for the countries that were under the excessive deficit procedure at the end of 2006, against German bonds.

The differences between government bond yields across euro area countries reflect differences in liquidity and credit risk. For the countries that were not under the excessive

**Cumulative changes in selected government bond yield spreads against Germany**

(in basis points; daily data)



Sources: Reuters and ECB calculations.

Note: These are cumulative changes in spreads excluding the days on which changes in the underlying benchmark bond occurred, since benchmark changes usually lead to jumps in the measured spreads. Data available from May 2004.



**Table C Sovereign credit ratings for the euro area countries**

(end-2006)

Characterisation of debt and issuer	Ratings					
	S&P	Countries	Moody's	Countries	Fitch	Countries
Highest quality	AAA	DE, FR, IE, ES, LU, NL, AT, FI	Aaa	DE, FR, IE, ES, LU, NL, AT, FI	AAA	DE, FR, IE, ES, LU, NL, AT, FI
High quality	AA+	BE	Aa1	BE	AA+	BE
	AA		Aa2	IT, PT	AA	PT
Strong payment capacity	AA-	PT	Aa3		AA-	IT
	A+	IT	A1	GR	A+	
	A	GR	A2		A	GR
	A-		A3		A-	

Sources: Standard and Poor's (S&P), Moody's and Fitch.

deficit procedure, government bond spreads remained low and no significant movements were recorded in the course of 2006. By contrast, during the first half of 2006 the spreads for Italy and Greece increased. Moreover, Italian spreads increased markedly in the aftermath of the elections in the spring amid uncertainty surrounding the outcome. In the second half of 2006, the Italian and Greek spreads declined, albeit not returning to the levels seen at the beginning of the year.

Sovereign debt ratings in the euro area were unchanged in 2006, with the exception of the rating for Italy. Indeed, in October Standard & Poor's lowered its rating notation on Italian sovereign debt from AA- to A+, while Fitch decreased its own rating assessment from AA to AA- (see Table C).<sup>2</sup> The announcement of the rating downgrade for Italy had little effect on the yield differential against Germany. The spreads for both Portugal and France vis-à-vis Germany remained more or less stable during the entire period.

<sup>2</sup> The evidence available points to the relevance of fiscal variables as determinants of sovereign credit ratings. See A. Afonso, P. Gomes and P. Rother, "What 'hides' behind sovereign debt ratings?", ECB Working Paper No 711, January 2007.

### PROSPECTS FOR PUBLIC FINANCES IN 2007

The updated stability programmes of end-2006 point to a further decline in the average euro area deficit for 2007, to 1.4% of GDP, reflecting a structural improvement of about 0.4 percentage point. For the euro area as a whole, planned budgetary consolidation is based on both revenue measures and expenditure restraint. However, both revenue and expenditure projections are higher than in the previous round of stability programmes, suggesting that revenue windfalls are at least partly anticipated to be of a permanent nature and are earmarked for additional spending. The euro area average public debt ratio is expected to decline further to 68% of GDP, mainly driven by the primary surplus.

Budgetary consolidation in the euro area in 2007 is expected to be, to a large extent, a result of the adjustment efforts in Germany and Italy. In Germany, continued expenditure restraint and indirect tax increases are contributing to fiscal adjustment. Italy's deficit is projected to fall back to just below 3% of GDP, in line with the deadline imposed by the corresponding Council recommendation; this can be largely explained by the mainly tax-based consolidation package in the 2007 budget and by the dissipation of deficit-increasing temporary factors. Portugal, the other country with a deficit above 3% in 2006 but whose deadline for the correction of its excessive deficit is 2008, plans to continue its adjustment efforts, although it is nevertheless targeting a deficit

significantly above the reference value of 3% of GDP in 2007. In most countries with fiscal imbalances, planned consolidation towards medium-term budgetary objectives is modest.

### **FISCAL STRATEGIES NEED TO FOCUS ON STRENGTHENING CONSOLIDATION EFFORTS**

While the 2006 updates of the stability programmes generally indicate that governments plan to proceed towards sound budgetary positions, there are also indications that budget targets do not always imply sufficient consolidation or that concrete and credible measures have not yet been specified in detail. This entails risks for the future. With a favourable impetus from economic growth and buoyant revenues for the fiscal outlook in most countries, fiscal strategies need to guard against complacency and focus on strengthening consolidation efforts. The prospect of continued “good times” in the near future must be fully exploited to attain sound fiscal positions and a rapidly declining debt ratio as soon as possible, also in view of demographic challenges to fiscal sustainability. It is important that commitments under the revised Stability and Growth Pact are fully met in all countries, so that the credibility of the EU’s fiscal framework is enhanced.

Past experience confirms that complacency is the main risk to fiscal policies in an upswing. As was the case in the early years of EMU, revenue windfalls during upturns can tempt governments to introduce unfinanced tax cuts and/or relax expenditure restraint. In order to avoid a repetition of past mistakes and to prevent the emergence of macroeconomic imbalances, it is essential that all countries refrain from engaging in pro-cyclical fiscal loosening and aim to achieve sound budgetary positions in the current upswing. Otherwise, there would be limited scope to let automatic stabilisers work in the next downturn, once again resulting in the need to tighten fiscal policies in a pro-cyclical manner. Insufficient progress with consolidation could also put renewed strains on the implementation of the Stability and Growth Pact in the next downturn.

Member countries with fiscal imbalances which are not in an excessive deficit situation should step up fiscal consolidation efforts with the help of credible measures and attain their medium-term objectives sooner than planned in the updates of stability programmes. In fact, as postulated in the revised Stability and Growth Pact, the current economic environment calls for the 0.5% adjustment benchmark to be exceeded.

Countries with deficits above the reference value of 3% of GDP must take all necessary measures to correct the situation as soon as possible, supported by a rigorous implementation of the Council recommendations. The improving fiscal outlook raises the prospect of the abrogation of excessive deficit decisions in several countries in the near future. In this regard, it is essential that excessive deficits are corrected in a sustainable manner through permanent and credible consolidation measures. Thereafter, rapid further progress towards countries’ medium-term objectives needs to be made so that there is room for manoeuvre to prevent renewed breaches of the deficit ceiling. In countries where forecasts point to risks of a breach of commitments, greater efforts are needed to attain targets and to prevent further steps being taken in the countries’ excessive deficit procedures.

Member countries that have already achieved sound fiscal positions should maintain these or seek to consolidate them further. In a few cases, where fiscal positions are already in surplus while economic demand is buoyant, a tighter fiscal stance could help to reduce the risks of overheating.

High-quality statistical data and sound statistical reporting remain essential in order to correctly assess the budgetary situation and the need for adjustment measures.

Finally, it is worth recalling that fiscal consolidation should be undertaken as part of comprehensive expenditure-based structural reform programmes in line with the Lisbon

strategy. This will not only help to mitigate adverse demand effects of consolidation through growing confidence, but also contribute to fiscal sustainability, output growth and employment in the euro area.

## 2.6 EXCHANGE RATES AND BALANCE OF PAYMENTS DEVELOPMENTS

### THE EURO APPRECIATED IN 2006 IN EFFECTIVE TERMS

The upward trend of the euro nominal effective exchange rate started in the fourth quarter of 2005 and intensified throughout 2006. The euro appreciation was fairly broad-based in the first half of 2006, reflecting primarily its appreciation vis-à-vis the US dollar, the Japanese yen, the Chinese renminbi and several Asian currencies formally or de facto linked to the US currency. In the second half of the year, the euro initially underwent a spell of broad stabilisation to subsequently resume its ascent at the end of October. By the end of the year it was – in nominal effective terms – nearly 5% stronger than its level at the beginning of January and 2.5% above its average level in 2005.

The strength of the euro throughout most of 2006 seemed to stem from, among other factors, the markets' perception that overall economic developments were becoming more favourable in the euro area. While further evidence of a widening US current account deficit presumably supported the euro against the US dollar at the beginning of the year, the markets' attention gradually turned towards the differences in the business cycle and the future evolution of the monetary policy stance in the two economic areas. This shift stemmed primarily from an improving economic outlook in the euro area, contrasting with market concerns that US economic activity could experience a significant slowdown. Towards the end of the year, fresh evidence of a decelerating US business cycle, amid more moderate increases in US consumer prices and a weaker housing market, led to

a further narrowing of the interest rate differentials vis-à-vis euro-denominated assets and to a renewed appreciation of the euro against the dollar.

The Japanese yen depreciated progressively against the euro throughout 2006 in spite of continued economic growth in Japan over the same period. One factor accounting for the weakness of the Japanese currency seems to have been related to the wide interest rate differential of Japanese assets vis-à-vis the assets of other main economies, which reportedly encouraged substantial volumes of “carry trade” transactions against a background of low implied exchange rate volatility.<sup>14</sup>

On 29 December 2006 the euro stood at USD 1.32 and JPY 156.93, respectively 11.4% and 12.4% higher than at the beginning of the year. The euro also appreciated considerably against the Canadian dollar (11.2%), the Hong Kong dollar (11.7%) and the Chinese renminbi (about 8%), and more moderately, by around 3% on average, against the Australian dollar, the Swiss franc, the Norwegian krone and most other Asian currencies. Such gains were partly counterbalanced by the euro's depreciation against the pound sterling (2.2%) and a number of EU Member States' currencies, especially the Slovak koruna (nearly 9%) and the Czech koruna (5.3%).

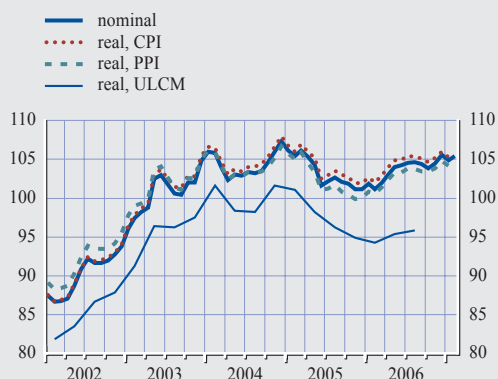
In the first two months of 2007 the exchange rate of the euro remained broadly unchanged in nominal effective terms.

The real effective exchange rates of the euro – based on different cost and price measures – also appreciated during 2006 by approximately the same amount as the nominal

<sup>14</sup> The term “carry trade” refers to a trading strategy that aims to take advantage of the interest rate differential between two currency areas by borrowing in a currency with a lower interest rate and investing in a currency with a higher interest rate, thereby earning “carry”. Such strategies are profitable, as long as the higher-yielding currency does not depreciate against the lower-yielding one to such an extent that it offsets the interest rate advantage.

**Chart 32 Euro nominal and real effective exchange rates <sup>1)</sup>**

(index: Q1 1999 = 100; monthly/quarterly data)



Source: ECB.

1) An upward movement of the EER-24 indices represents an appreciation of the euro. The latest observations for monthly data are February 2007 for nominal effective exchange rates and January 2007 for real effective exchange rates. In the case of the ULCM-based real EER-24, the latest observation is for the third quarter of 2006 and is partly based on ECB estimates.

effective exchange rate (see Chart 32). In the last quarter of 2006 the real effective exchange rate of the euro based on consumer prices was about 3% above the level observed one year before.

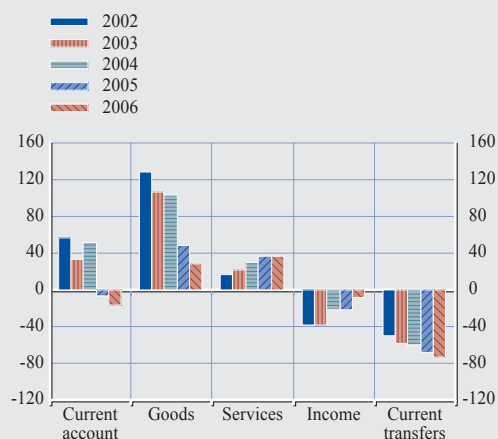
**SLIGHTLY HIGHER CURRENT ACCOUNT DEFICIT IN 2006**

In 2006 the current account of the euro area recorded a deficit of €16.2 billion (or 0.2% of GDP), compared with a deficit of €6.8 billion in 2005 (or 0.1% of GDP). The slightly higher deficit resulted primarily from a lower goods surplus (by €20.3 billion), as goods imports grew faster than goods exports in value terms (16.1% and 13.8% respectively in 2006). The decline in the goods surplus, as well as a slightly higher deficit for current transfers, was only partly offset by a smaller deficit for income, while the surplus for services remained broadly unchanged (see Chart 33).

Extra-euro area trade in goods expanded robustly in 2006. On the imports side, import volumes accelerated during the course of 2006, reflecting the pick-up in euro area economic activity and the appreciation of the euro. However, higher oil and non-oil commodity import prices were the major factors behind the increase in import values and, therefore, the decline in the goods surplus (see Chart 34).

**Chart 33 Current account balance and its components**

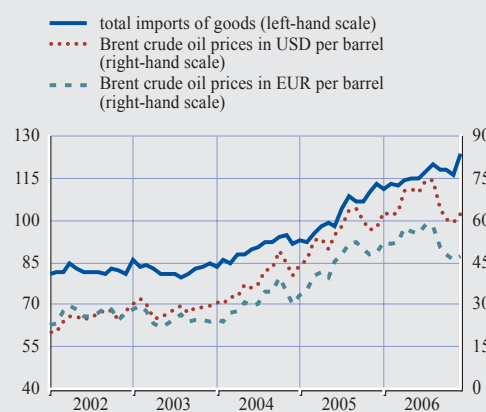
(EUR billions; annual data; seasonally adjusted)



Source: ECB.

**Chart 34 Euro area imports of goods and Brent crude oil prices**

(monthly data)



Sources: Eurostat and Bloomberg.

Although the effect of rising oil prices on the euro area's trade balance was partly offset by the appreciation of the euro vis-à-vis the US dollar, the oil trade deficit continued to rise and stood at €181 billion (over 2% of GDP) in the 12-month cumulated period up to October 2006, €39 billion higher than a year earlier. On a more positive note, the euro area appears to have benefited from oil revenue recycling – via increased demand from oil-exporting countries – compensating for some of the wealth transfer resulting from higher import prices.

On the exports side, increases in both export prices and export volumes contributed to the growth in export values in 2006. Euro area export volumes rose robustly during the year, mostly owing to the strength of foreign demand. Exports to Asia (especially China) and the new

EU Member States were particularly dynamic, amid strong economic activity in these regions. Export prices rose less than in the previous year, mainly owing to smaller price increases for capital goods. Meanwhile, the appreciation of the euro in 2006 represented a decline in price and cost competitiveness and may have contributed to a further loss in euro area export market shares.

The declining trend in euro area export market shares was also related to structural factors of the global economy, such as the growing importance of new global players in the world export markets. Box 7 describes in more detail how the euro area is adjusting to an increasingly global and competitive economic environment.

## Box 7

### GLOBALISATION AND THE COMPETITIVENESS OF THE EURO AREA<sup>1</sup>

While globalisation is not a new phenomenon, there is growing consensus that its impact is fundamentally changing world patterns of production and trade.

This box evaluates the recent changes in the export structure of the euro area and other major economies against the backdrop of globalisation.<sup>2</sup> Using the Balassa index of revealed comparative advantages (see table), which shows a value greater than 1 if a country's exports in a given sector are higher than the world average, it appears that over the period 1993-2004 the euro area had a relatively diversified export structure, specialising in exports of predominantly capital and research-intensive, as well as labour-intensive, goods. The euro area's partial specialisation in labour-intensive production is, at first sight, surprising, as the capital-labour ratio of the euro area is high in relation to many developing economies. Consequently, the results in the following table may be subject to some caveats. First, the Balassa index, which is not adjusted for imported intermediate goods, is somewhat misleading, as comparative advantages are likely to be related to processes and activities carried out within each domestic industry. Second, the classification into the four groups of goods in the table relies on relatively broad categories of exports.<sup>3</sup>

- 1 This box is based on U. Baumann and F. di Mauro, "Globalisation and euro area trade: interactions and challenges", ECB Occasional Paper No 55.
- 2 The aggregate picture for the euro area masks significant differences in the trade structure and performance of individual euro area countries.
- 3 For an alternative measure of relative export specialisation, see "Relative export structures and vertical specialisation: a simple cross-country index", Banco de Portugal Working Papers, January 2007.

## Revealed comparative advantage by factor intensity <sup>1)</sup>

(index <sup>2)</sup>; average 1993-2004)

Exports are predominantly:	Euro area <sup>3)</sup>	United States	United Kingdom	Japan	China	Dynamic Asian economies	CEECs
Raw materials intensive	0.5	0.7	0.6	0.1	0.6	0.7	1.6
Labour intensive	1.1	0.7	0.9	0.5	2.2	1.2	1.2
Capital intensive	1.2	0.9	1.0	1.5	0.4	0.5	1.2
Research intensive	1.1	1.4	1.2	1.4	0.9	1.3	0.5

Sources: CHELEM database of the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) and ECB calculations.

1) See Annex A (Table A3) of ECB Occasional Paper No 55 for a list of sectors that fall into each of the categories of factor intensity.

2) Balassa index of revealed comparative advantage, which computes the relative export specialisation of individual countries across four product groups (i.e. raw material-intensive sectors, labour-intensive sectors, capital-intensive sectors and research-intensive sectors) with respect to world averages as follows:  $RCAk,j = (Xk,j / \sum Xk,j) / (Xw,j / \sum Xw,j)$ . The numerator represents the share of sector  $j$  in country  $k$ 's total exports and the denominator corresponds to the percentage share of sector  $j$  in total world exports.

3) Only extra-euro area exports are considered.

By contrast, the three main developed competitor economies – Japan, the United Kingdom and the United States – have no revealed comparative advantages in labour-intensive exports; instead they are more heavily specialised in research-intensive products. Moreover, Japan is also specialised in predominantly capital-intensive goods, reflecting its high capital stock. Unsurprisingly, China, other Asian economies (referred to here as dynamic Asian economies (DAEs)<sup>4)</sup> and central and eastern European countries (CEECs)<sup>5)</sup> specialise in labour-intensive goods, reflecting their relative factor intensities. The DAEs, despite their comparative advantage in labour-intensive activities, also specialise in research-intensive products to a greater extent than the euro area. The CEECs, whose lack of revealed comparative advantage in research-intensive goods clearly reflects low levels of R&D investment<sup>6)</sup>, have a relatively high level of specialisation in raw material-intensive goods.

The euro area and other developed countries' export specialisations in research-intensive sectors show little change over time as compared with some major emerging economies, such as China, which are rapidly moving into these sectors (see Chart A1).<sup>7)</sup> Similarly, there have not been major changes in the specialisation of developed economies in labour-intensive goods, which, in the case of the euro area, remains relatively high (see Chart A2).

While its main focus is on medium-tech products, such as machinery and equipment, motor vehicles, chemicals and electrical goods, the euro area, on average, also specialises in some of the fast-growing sectors of world demand, such as pharmaceuticals, medical, precision and optical instruments, as well as aircraft and spacecraft. However, its specialisation in some slower-growing sectors, such as non-metallic mineral products, is also quite strong. Overall, the euro area does not specialise heavily in one particular sector but is relatively diversified in its export structure compared with other industrialised economies. This possibly shelters euro

4 DAEs are India, Indonesia, Hong Kong SAR, Singapore, South Korea, Taiwan, Malaysia, the Philippines and Thailand.

5 CEECs are the Commonwealth of Independent States (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan), Estonia, Lithuania, Latvia, former Yugoslavia, (subsequently Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Serbia, Montenegro and Slovenia), Albania, Bulgaria, former Czechoslovakia (subsequently the Czech Republic and Slovakia), Hungary, Poland, Romania and Turkey.

6 Average gross domestic expenditure in R&D in CEECs is, on average, below 1% of GDP. This compares with 1.9% in the euro area, 2.6% in the United States and 3.2% in Japan (source: OECD Science, Technology and Industry: Scoreboard 2005 and Eurostat, Structural Indicators Database).

7 While these developments could be influenced by the large relative weight in overall production of advanced versus emerging economies, they might also reflect technological catching-up in emerging countries.

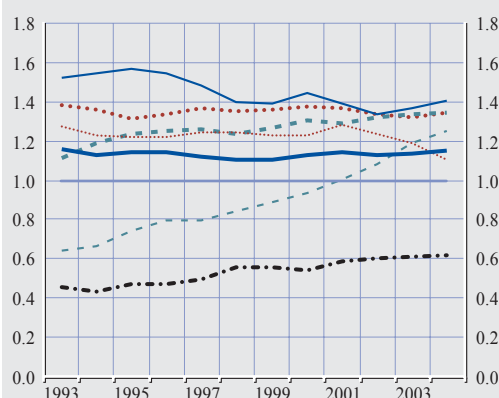


## Chart A Developments in revealed comparative advantage

(index<sup>1</sup>); annual data)

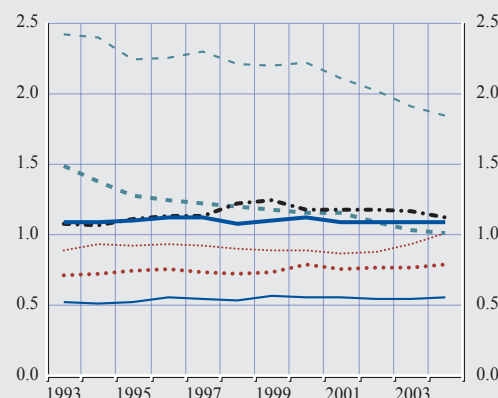
### 1 Predominantly research-intensive exports

— euro area      ⋯ United Kingdom  
⋯ United States      - - - China  
- - - DAEs      - - - CEECs  
— Japan



### 2 Predominantly labour-intensive exports

— euro area      ⋯ United Kingdom  
⋯ United States      - - - China  
- - - DAEs      - - - CEECs  
— Japan



Sources: CHELEM and ECB calculations.

1) Balassa index of revealed comparative advantage (see footnote 2 in the previous table for details).

area aggregate production from periods of weak world demand in any single sector. Despite the fact that, overall, the euro area's export specialisation in research-intensive sectors shows little change over time, more disaggregated data show that euro area exporters have nevertheless increased their specialisation in some of the high-tech sectors (such as pharmaceuticals and medical, precision and optical instruments as well as the information and communications technology (ICT) sectors), where world demand is growing robustly. By contrast, other developed countries, such as Japan or the United States, have been decreasing their specialisation in this field, possibly owing to intense competition from emerging Asia and the bursting of the ICT bubble in 2000.

A positive impact on the development of euro area export competitiveness might also come from other factors. Recent surveys, empirical studies and theoretical models suggest that firms benefit from investing abroad. Therefore, the strong foreign direct investment activity of euro area firms might contribute to raising euro area overall productivity.<sup>8</sup>

Looking ahead, while the emerging economies have thus far specialised in low and medium-low-tech sectors and selected high-tech sectors, it appears likely that they will increase their specialisation in medium-high-tech sectors in the future, which would expose some of the euro area's traditional stronghold sectors, such as motor vehicles, machinery and equipment, to more competition and potentially large adjustments. Indeed, there are signs that this is already

<sup>8</sup> See, for instance, the article entitled "Germany in the globalisation process" in the December 2006 issue of the Deutsche Bundesbank's Monthly Report; A. Bernard, J. Jensen and P. Schott (2005), "Importers, exporters, and multinationals: a portrait of firms in the US that trade goods", NBER Working Paper 11404; and E. Helpman, M. Melitz and S. Yeaple (2004), "Exports versus FDI", *American Economic Review*, 94, pp. 300-316.

happening, with the export specialisation of the CEECs, China and the DAEs having started to increase over the past decade in the medium-high-tech sectors, including motor vehicles and transport equipment as well as other machinery and equipment.

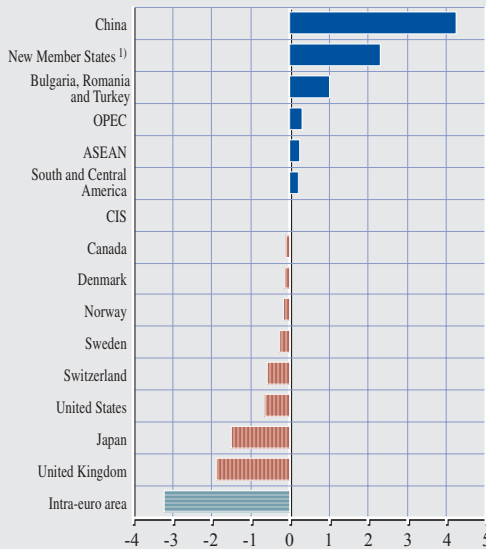
This initial assessment of the export performance of the euro area should be complemented by an explicit consideration of the import side, since globalisation has also had a large impact on import penetration and the composition of imports across countries. Trade liberalisation and the expansion of international production networks have contributed to a sharp increase in import penetration for the largest industrialised economies over the past decade. Between 1991 and 2005, the ratio of imports of goods and services to GDP in real terms more than tripled in the United States and almost doubled in Japan, while developments in the euro area and the United Kingdom were somewhere in-between. Moreover, the general increase in import penetration has been accompanied by a large increase in imports from developing countries. For the euro area, this has implied a relative shift from intra-euro area trade partners and other industrial economies to emerging, lower-cost countries as providers of manufacturing goods (see Chart B). Such a shift has been particularly noticeable for intermediate and capital goods. This clearly signals that emerging economies are gaining importance as providers of inputs for production processes. This trend is associated with the more general tendency towards a higher import content of euro area exports.

In sum, while the euro area is already facing increased competition from emerging countries, further adjustments are still to come. In comparison with the United States, which appears to be moving more decisively towards research-intensive products, the euro area remains partly specialised in labour-intensive goods. Moreover, emerging countries are gaining importance as export competitors not only in low-tech and labour-intensive industries – as their relative factor endowments would suggest – but also increasingly in technology and capital-intensive goods. At the same time, the euro area is losing ground in some traditional stronghold sectors, including machinery and equipment. This is corroborated by evidence of a strong rise in imports of capital goods from the new EU Member States, which appear in part to be displacing intra-euro area imports.

Successful further adjustment to structural change will not be achieved by increased protectionism since this would lead only to more drawn-out periods of adjustment. Successful adjustment is more likely to be achieved by ensuring that the necessary structural change takes

**Chart B Change in euro area manufacturing import shares by country of origin**

(percentage point changes, 1995-2005)



Sources: Eurostat and ECB calculations.

Note: Import shares are based on trade in values and are calculated as the share of euro area imports of a given country/region divided by total euro area imports (including both intra- and extra-euro area imports).

1) Countries that joined the EU in 2004.

place in an environment that allows transitional welfare losses (such as temporary increases in unemployment) to be kept to a minimum and promotes a flexible transfer of resources to new and expanding areas. This is the best way an economy can respond to the challenges of globalisation. This again requires structural reforms in the euro area, as well as increased spending on R&D, to facilitate the necessary innovation to develop new, promising areas of specialisation.

### NET INFLOWS IN COMBINED DIRECT AND PORTFOLIO INVESTMENT IN 2006

In the financial account, the euro area experienced net inflows of €109.2 billion in combined direct and portfolio investment in 2006, compared with net outflows of €45.4 billion in 2005. This was mainly the result of substantially lower net outflows in direct investment and larger net inflows in portfolio investment in both equity securities and debt instruments (see Chart 35).

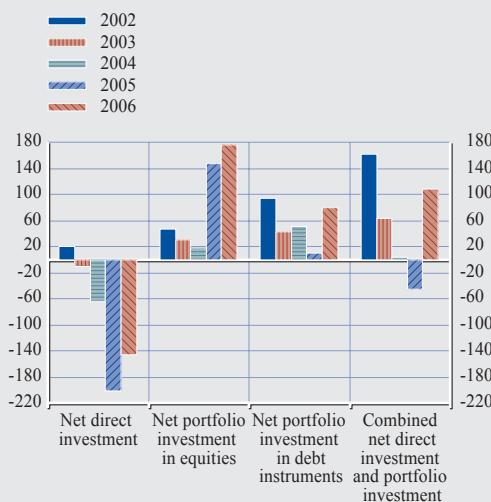
Excluding the effects of a single large transaction associated with the restructuring of a large euro area firm in 2005, the rising deficit in direct investment in 2006 was due to an increase in direct investment abroad by euro

area residents, mostly in the form of equity capital investment in the new EU Member States as well as in the United Kingdom and the United States. At the same time, direct investment inflows into the euro area more than doubled compared with the low levels recorded in 2004 and 2005, possibly reflecting, in part, market expectations of an improved economic outlook for the euro area.

Again excluding the effects of the above-mentioned restructuring, the rise in net inflows in portfolio investment in 2006 emanated from an increase in net purchases of euro area equity securities by non-residents, backed by the favourable earnings growth performance of euro area companies and higher equity returns

**Chart 35 Euro area direct and portfolio investment**

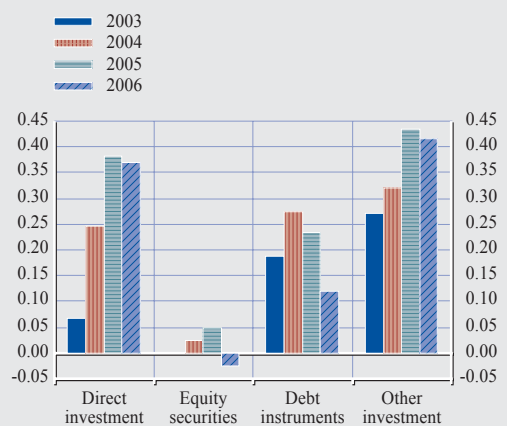
(EUR billions; annual data)



Source: ECB.

**Chart 36 Euro area financial outflows to the new EU Member States**

(as a percentage of the new EU Member States' GDP)



Source: ECB.

Note: Data for 2006 are based on the first three quarters.

in the euro area than in the United States. Growing evidence of an improving economic outlook in the euro area in the course of the year may have been a key underlying factor accounting for these developments.

As for fixed income activity, net inflows in debt instruments amounted to €79.2 billion (as opposed to €8.7 billion in 2005), owing to a marked increase in purchases of euro area bonds and notes by non-residents.

Turning to the geographical breakdown of portfolio flows, based on cumulated flows over the first three quarters of 2006, the United States, offshore financial centres and non-Japan Asia were the main recipients of euro area equity portfolio investment. Euro area investors were also large net purchasers of debt instruments issued by these regions, as well as by the United Kingdom. Euro area manufacturing firms may have continued to relocate part of their production in the new EU Member States in particular, as foreign direct investment flows towards these countries (when measured as a share of these countries' GDP) have been increasing in the last four years (see Chart 36).

### INTERNATIONAL INVESTMENT POSITION DETERIORATED FURTHER IN 2006

Data on the international investment position (i.i.p.) of the euro area vis-à-vis the rest of the world, available up to the third quarter of 2006, indicate that the euro area recorded net liabilities of €965 billion (representing 11.5% of euro area GDP), compared with €811 billion (10.1% of GDP) at the end of 2005 (see Chart 37). The higher net liabilities in 2006 largely resulted from an increase in the net liability positions in portfolio investment (by €145 billion) and other investment (by €83 billion), which were only partly offset by an increase in the net asset position in direct investment (by €70 billion) and reserve assets (by €5 billion).

Given that the current account deficit of the euro area amounted to only €20 billion in 2006, the increase in the euro area's net international

**Chart 37 Net international investment position**



Source: ECB.

Notes: Data refer to outstanding amounts at period-end. For 2006, data refer to the end of the third quarter.

liability position was largely driven by revaluation effects resulting from asset price changes and movements in exchange rates.

### 3 ECONOMIC AND MONETARY DEVELOPMENTS IN NON-EURO AREA EU MEMBER STATES

#### ECONOMIC ACTIVITY

Real GDP growth in the non-euro area EU Member States accelerated notably in 2006 (see Table 6).<sup>15</sup> While this pattern of stronger economic activity was widely observed across countries, annual growth rates differed considerably. Among the countries that joined the European Union in May 2004, output growth was highest in Estonia and Latvia, where it stood at or above 11.4%. In the Czech Republic, Lithuania and Slovakia, real GDP growth was also very strong at between 6.1% and 8.3%. Real GDP growth was lowest in Malta. In the other countries, namely Denmark, Sweden and the United Kingdom, growth accelerated compared with 2005 and was close to or above the euro area level in 2006.

In most non-euro area EU Member States, economic activity was driven by domestic demand. Private consumption was spurred by increasing gains in real disposable income, associated with robust wage growth and declining unemployment, and by buoyant house prices. Growth in gross fixed capital formation accelerated, benefiting inter alia from an extended period of favourable financing conditions, improvements in the business environment and, in some countries, significant

foreign direct investment (FDI) inflows. In the majority of countries, rapid credit growth, partly resulting from favourable financial conditions, also contributed to robust growth in domestic demand.

Export growth accelerated in many countries, supported by strong demand in key trading partners and sizeable FDI inflows in recent years. However, in most countries import growth kept apace due to robust domestic demand and the relatively high import content of exports in many of them. As a result, the contribution of net exports to real GDP growth in 2006 was broadly neutral for the non-euro area EU Member States as a whole, and significantly positive only in Hungary, Malta, Slovakia and Sweden. The high growth rates of imports and exports in many countries suggest that, although well advanced, the process of trade integration in the countries that joined the EU in May 2004 is still ongoing.

Along with the stronger economic activity, the labour market situation continued to improve in

<sup>15</sup> The non-euro area EU Member States referred to in this section comprise the 13 EU Member States outside the euro area in the period to end-December 2006 (i.e. the Czech Republic, Denmark, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, Slovakia, Sweden and the United Kingdom).

**Table 6 Real GDP growth**

(annual percentage changes)

	2003	2004	2005	2006	2006 Q1	2006 Q2	2006 Q3	2006 Q4
Czech Republic	3.6	4.2	6.1	6.1	6.4	6.2	5.9	5.8
Denmark	0.4	2.1	3.1	3.2	3.5	3.0	3.0	3.1
Estonia	7.1	8.1	10.5	11.4	11.6	11.8	11.0	11.2
Cyprus	1.8	4.2	3.9	3.8	3.5	4.2	3.8	3.6
Latvia	7.2	8.7	10.6	11.9	13.1	11.1	11.9	11.7
Lithuania	10.3	7.3	7.6	7.5	7.9	8.3	6.9	7.0
Hungary	4.1	4.9	4.2	3.9	4.4	4.0	3.9	3.4
Malta	-2.3	1.1	3.0	2.9	3.0	2.6	2.7	3.1
Poland	3.8	5.3	3.5	5.8	4.8	5.6	5.9	6.6
Slovenia	2.7	4.4	4.0	5.2	4.9	5.2	5.9	5.8
Slovakia	4.2	5.4	6.0	8.3	6.7	6.7	9.8	9.6
Sweden	1.8	3.6	2.9	4.7	4.4	5.0	4.5	4.9
United Kingdom	2.7	3.3	1.9	2.7	2.4	2.7	2.9	3.0
EU10 <sup>1)</sup>	4.1	5.2	4.8	5.9	5.5	5.8	6.1	6.2
EU13 <sup>2)</sup>	2.7	3.6	2.7	3.6	3.3	3.6	3.7	3.8
Euro area	0.8	1.8	1.5	2.8	2.2	2.8	2.7	3.3

Source: Eurostat.

1) The EU10 aggregate comprises the data for the ten countries that joined the European Union on 1 May 2004.

2) The EU13 aggregate comprises the data for the 13 EU Member States outside the euro area in the period to end-December 2006.

2006 in many non-euro area EU Member States. Significant differences exist, however, across countries. While unemployment remained very high in Poland and Slovakia, in other countries, such as Denmark, the Baltic States and the United Kingdom, labour market conditions became rather tight. In most of the countries that have been EU Member States since May 2004, employment growth remained more subdued than rapid output growth would suggest. This was because real GDP growth was mainly driven by the adoption of new technologies and strong productivity growth stemming, inter alia, from the sizeable FDI inflows received in recent years. Structural bottlenecks, such as skill and geographical mismatches between labour supply and demand, continue to exist in many of the countries that joined the European Union in May 2004. Together with migration flows, which contributed to a tightening of labour markets, these bottlenecks threaten to become a drag on growth in countries where labour shortages have emerged.

### PRICE DEVELOPMENTS

HICP inflation increased significantly in almost all non-euro area EU Member States in 2006 (see Table 7). Inflation remained highest in the

fast-growing Baltic States, Hungary and Slovakia, and stood close to or moderately above the euro area average in the other non-euro area EU Member States. Average inflation was below 2% in Denmark, Poland and Sweden, while in the Czech Republic it did not exceed 2.1% in 2006.

The upward trend in inflation in the non-euro area EU Member States in 2006 was partly attributable to changes in administered prices and indirect taxes in a number of countries such as the Czech Republic, Latvia, Lithuania, Hungary, Malta and Slovakia. Moreover, the significant rebound in energy prices was largely responsible for the rise in inflation in the summer of 2006. In a number of countries, inflation trends were also influenced by increases in food prices, which began growing at a faster rate in 2006, following the very subdued rises or declines of 2005. In the majority of countries, however, rapid growth in domestic demand contributed to underlying inflationary pressures.

In countries that allow for a significant degree of exchange rate flexibility, currency appreciation had a broadly dampening impact on import prices

**Table 7 HICP inflation**

(annual percentage changes)

	2003	2004	2005	2006	2006 Q1	2006 Q2	2006 Q3	2006 Q4
Czech Republic	-0.1	2.6	1.6	2.1	2.4	2.5	2.4	1.1
Denmark	2.0	0.9	1.7	1.9	2.0	2.0	1.8	1.6
Estonia	1.4	3.0	4.1	4.4	4.4	4.5	4.4	4.5
Cyprus	4.0	1.9	2.0	2.2	2.3	2.6	2.6	1.5
Latvia	2.9	6.2	6.9	6.6	7.0	6.5	6.6	6.2
Lithuania	-1.1	1.2	2.7	3.8	3.3	3.6	4.0	4.2
Hungary	4.7	6.8	3.5	4.0	2.4	2.7	4.6	6.4
Malta	1.9	2.7	2.5	2.6	2.6	3.4	3.2	1.1
Poland	0.7	3.6	2.2	1.3	0.9	1.4	1.5	1.3
Slovenia	5.7	3.7	2.5	2.5	2.3	3.1	2.5	2.3
Slovakia	8.4	7.5	2.8	4.3	4.2	4.6	4.8	3.5
Sweden	2.3	1.0	0.8	1.5	1.2	1.9	1.5	1.4
United Kingdom	1.4	1.3	2.0	2.3	2.0	2.2	2.4	2.7
EU10 <sup>1)</sup>	1.9	4.1	2.5	2.4	2.0	2.4	2.7	2.5
EU13 <sup>2)</sup>	1.6	2.2	2.1	2.3	1.9	2.2	2.4	2.5
Euro area	2.1	2.1	2.2	2.2	2.3	2.5	2.2	1.8

Source: Eurostat.

1) The EU10 aggregate comprises the data for the ten countries that joined the European Union on 1 May 2004.

2) The EU13 aggregate comprises the data for the 13 EU Member States outside the euro area in the period to end-December 2006.



and, ultimately – given these countries’ relatively high degree of openness – headline inflation. In view of buoyant economic activity in most non-euro area EU Member States, wage developments in 2006 were, on average, strong. Nominal wage growth was particularly pronounced in the countries with the highest output growth rates (i.e. the Baltic States), where it exceeded productivity gains and contributed to fuelling inflationary pressures.

## FISCAL POLICIES

Fiscal policies in the non-euro area EU Member States continued to be heterogeneous in 2006. Three countries (Denmark, Estonia and Sweden) recorded a fiscal surplus, whereas the remaining ten registered fiscal deficits (see Table 8). With the exception of Hungary, budgetary outcomes for 2006 were broadly in line with, or better than, the budget balance targets of the updated convergence programmes submitted at the end

**Table 8 Fiscal positions**

(as a percentage of GDP)

**General government surplus (+)/deficit (-)**

	2003	2004	2005	Convergence programme data 2006
Czech Republic	-6.6	-2.9	-3.7	-3.5
Denmark	1.1	2.7	4.9	4.1
Estonia	1.9	2.3	2.3	2.6
Cyprus	-6.3	-4.4	-2.3	-1.9
Latvia	-1.2	-1.0	0.0	-0.4
Lithuania	-1.3	-1.5	-0.5	-1.2
Hungary	-7.2	-6.7	-7.8	-10.1
Malta	-10.0	-5.0	-3.4	-2.6
Poland	-4.7	-3.9	-2.5	-1.9
Slovenia	-2.8	-2.3	-1.4	-1.6
Slovakia	-3.7	-3.0	-3.1	-3.7
Sweden	0.1	1.8	3.0	3.0
United Kingdom	-3.3	-3.2	-3.3	-2.8
EU10 <sup>1)</sup>	-5.1	-3.8	-3.4	-3.4
EU13 <sup>2)</sup>	-3.0	-2.3	-2.0	-1.9
Euro area	-3.1	-2.8	-2.4	-1.9

**General government gross debt**

	2003	2004	2005	Convergence programme data 2006
Czech Republic	30.1	30.7	30.4	30.6
Denmark	44.4	42.6	35.9	28.6
Estonia	5.7	5.2	4.5	3.7
Cyprus	69.1	70.3	69.2	64.7
Latvia	14.4	14.5	12.1	10.7
Lithuania	21.2	19.4	18.7	18.4
Hungary	58.0	59.4	61.7	67.5
Malta	70.2	74.9	74.2	68.3
Poland	43.9	41.8	42.0	42.0
Slovenia	28.5	28.7	28.0	28.5
Slovakia	42.7	41.6	34.5	33.1
Sweden	51.8	50.5	50.4	46.5
United Kingdom	38.9	40.4	42.4	43.7
EU10 <sup>1)</sup>	41.6	41.0	40.7	41.2
EU13 <sup>2)</sup>	41.1	41.8	42.4	42.7
Euro area	69.3	69.8	70.8	69.6

Sources: European Commission (for 2004-05), 2006-07 updates of convergence programmes (for 2006) and ECB calculations.

Notes: Data are based on the excessive deficit procedure definition. Budget balances (Commission data) exclude proceeds from the sale of UMTS licences. In the case of Denmark, Poland and Sweden, data include second pillar pension funds. The estimated balance-improving effect of these funds in 2006 is as follows: Denmark 1.0% of GDP, Poland 2.0% of GDP and Sweden 1.1% of GDP. As in the latest convergence programme update and the Commission autumn 2006 forecasts, figures for Hungary no longer include second pillar pension funds.

1) The EU10 aggregate comprises the data for the ten countries that joined the European Union on 1 May 2004.

2) The EU13 aggregate comprises the data for the 13 EU Member States outside the euro area in the period to end-December 2006.

of 2005. However, in many cases, this was due to the better starting position at the end of 2005 and buoyant tax revenues, which in turn can be partly explained by faster GDP growth than initially expected. Progress in structural fiscal consolidation seems to have stalled in most countries. Only Malta is estimated to have achieved a positive change in the cyclically adjusted budget balance of at least 0.5% of GDP (net of one-off and other temporary measures). By contrast, in a number of countries the fiscal stance was even loosened in a procyclical way, despite strong output growth.

At the end of 2006 the Czech Republic, Hungary, Malta, Poland, Slovakia and the United Kingdom were subject to excessive deficit procedures. According to the 2006-07 updates of their respective convergence programmes, the deficit ratio decreased in all of these countries – except in Hungary and Slovakia – in 2006, falling below 3% of GDP in Malta and the United Kingdom. In Poland, as was the case in 2005, a deficit ratio below the reference value was recorded. However, excluding the statistical derogation on the taking into account of mandatory funded public pension schemes within the general government sector (which expires in 2007), the deficit ratio would have exceeded the 3% threshold.

With respect to the main decisions of the ECOFIN Council concerning the excessive deficit procedure in 2006, Cyprus received an abrogation in July after reporting a deficit ratio below the reference value of 3% of GDP in 2005. By contrast, the Council initiated a procedure in the case of the United Kingdom in January 2006 and called for the excessive deficit to be corrected by the financial year 2006/07 at the latest. In September 2006 Hungary presented an adjusted convergence programme – requested by the Council in January – projecting a deficit of 10.1% of GDP in 2006, substantially above the initial target. In the Council's recommendation of October 2006, the deadline for the correction of Hungary's excessive deficit was extended by one year to 2009. In relation to Poland, the Council adopted

a decision in November 2006 stating that the action taken by the Polish authorities was proving inadequate to correct the country's excessive deficit by the 2007 deadline.

The government debt ratio remained substantially below 60% of GDP in 2006 in most non-euro area EU Member States. In Cyprus and Malta, the debt ratio remained above the 60% reference value, despite falling in 2006, while in Hungary it rose steeply to above 67% of GDP. In most of the other non-euro area EU Member States the debt ratio declined or remained broadly unchanged.

#### **BALANCE OF PAYMENTS DEVELOPMENTS**

The combined current and capital account of the non-euro area EU Member States continued to vary considerably across countries in 2006 (see Table 9), although the overall picture showed a deterioration in comparison with 2005. While Denmark and Sweden reported sizeable surpluses, the United Kingdom and the countries that joined the European Union in May 2004 all recorded deficits. Compared with 2005, these deficits increased in most of the countries and particularly in Latvia, where the deficit level in 2006 stood at around 20% of GDP. Estonia and Lithuania registered deficits of more than 10% of GDP. In the Czech Republic, Cyprus, Hungary, Malta and Slovakia the deficit stood between 4% and 8% of GDP, and in the remaining countries more moderate deficits were recorded.

In many of the countries that joined the European Union in May 2004, these deficits can be partly explained as a corollary of the catching-up process, to the extent that they reflect investments in productive capacity that would not have been possible solely on the basis of domestic savings. However, large current and capital account deficits in some non-euro area EU Member States could signal risks to the sustainability of external positions, particularly if driven by buoyant public or private consumption, high credit growth or residential investments.

**Table 9 Balance of payments – selected items**

(as a percentage of GDP)

	Current and capital account balance				Net FDI flows				Net portfolio investment flows			
	2003	2004	2005	2006 <sup>1)</sup>	2003	2004	2005	2006 <sup>1)</sup>	2003	2004	2005	2006 <sup>1)</sup>
Czech Republic	-6.2	-6.5	-1.9	-4.5	2.1	3.7	8.2	3.8	-1.4	2.1	-2.4	-2.2
Denmark	3.3	2.4	3.9	2.4	0.1	0.4	-0.7	-0.6	-7.0	-6.0	-4.3	-5.9
Estonia	-11.1	-11.7	-9.5	-10.2	8.1	6.0	16.8	1.5	1.8	6.2	-15.8	-7.8
Cyprus	-2.0	-4.1	-5.1	-5.1	2.4	2.5	4.3	3.8	1.9	7.2	-0.8	-3.2
Latvia	-7.5	-11.9	-11.2	-19.7	2.3	3.9	3.7	5.8	-2.0	1.7	-0.7	0.0
Lithuania	-6.4	-6.4	-5.9	-10.4	0.8	2.3	2.7	4.8	1.5	0.9	-1.0	-0.9
Hungary	-8.0	-8.1	-5.9	-5.6	0.6	3.3	4.7	6.2	3.5	6.7	4.0	2.9
Malta <sup>2)</sup>	-3.7	-6.4	-6.3	-7.6	8.3	7.6	11.4	25.9	-32.3	-38.2	-46.0	-62.9
Poland	-2.1	-3.8	-1.4	-1.4	2.0	4.7	2.1	3.1	1.1	3.7	4.1	-0.8
Slovenia	-1.4	-3.1	-2.4	-3.4	-0.6	0.9	-0.2	-0.2	-0.9	-2.4	-5.9	-4.6
Slovakia	-0.5	-3.3	-8.6	-7.9	2.2	3.3	3.7	6.7	-1.7	2.1	-2.1	2.9
Sweden	7.3	6.9	6.3	6.1	-5.3	-2.6	-3.0	0.5	-2.2	-6.5	1.1	-11.8
United Kingdom	-1.2	-1.5	-2.2	-3.0	-2.2	-1.0	4.7	2.3	5.3	-4.6	-3.4	0.6
EU10 <sup>3)</sup>	-4.6	-5.6	-4.3	-5.3	2.2	4.6	4.8	4.7	0.5	2.8	0.9	-1.0
EU13 <sup>4)</sup>	-0.6	-1.2	-1.4	-1.8	-1.5	0.0	3.6	1.8	2.7	-3.4	-2.1	-2.7
Euro area	0.6	0.9	0.0	-0.3	-0.2	-0.8	-2.5	-1.5	1.0	0.9	2.0	1.2

Source: ECB.

1) The data for 2006 for Estonia, Malta, Sweden and the United Kingdom refer to the four-quarter cumulative sum up to Q3 2006, since more recent data are not yet available.

2) The sizeable net portfolio investment outflows for Malta reflect the financial activities of international banks operating from this country. Such net portfolio outflows are almost totally offset by other investment inflows.

3) The EU10 aggregate comprises the data for the ten countries that joined the European Union on 1 May 2004; four-quarter cumulative sum up to Q3 2006.

4) The EU13 aggregate comprises the data for the 13 EU Member States outside the euro area in the period to end-December 2006; four-quarter cumulative sum up to Q3 2006.

In comparison with 2005, net FDI inflows in 2006 rose in most of the non-euro area EU Member States. Overall, while net FDI inflows continued to constitute an important source of financing in a number of non-euro area EU Member States, these inflows were often – particularly in the Baltic States – not sufficient to cover the combined current and capital account deficit. At the same time, net portfolio inflows remained negative or broadly neutral in all non-euro area EU Member States, with the exceptions of Hungary and Slovakia. In these two countries, net portfolio investment inflows were driven by higher net debt inflows – in some cases partly related to yield differentials – although net equity inflows also played a role. Other investment flows were largely positive in most of the countries that joined the European Union in May 2004, reflecting mainly loans from parent banks to their subsidiaries in the region.

#### EXCHANGE RATE DEVELOPMENTS

Exchange rate developments in the non-euro area EU Member States in 2006 tended largely

to reflect the exchange rate regimes of the individual countries. The currencies of Denmark, Estonia, Cyprus, Latvia, Lithuania, Malta, Slovenia and Slovakia all participated in ERM II with a standard fluctuation band of  $\pm 15\%$  around their central rates against the euro, except for the Danish krone where a narrower band of  $\pm 2.25\%$  applied. The agreements on participation for the countries whose currencies joined ERM II in 2004 and 2005 (i.e. all the countries listed above except Denmark) were based on a number of policy commitments by the respective authorities, relating, inter alia, to the pursuit of sound fiscal policies, the promotion of wage moderation and wage developments in line with productivity growth, the containment of credit growth and the implementation of further structural reforms. ERM II entry was also linked, in some cases, to unilateral commitments on the part of the countries concerned to maintain narrower fluctuation bands. These unilateral commitments placed no additional obligations on the ECB. In particular, it was agreed that the Estonian kroon

**Table 10 Developments in ERM II**

Currency	Entry date	Upper rate	Central rate	Lower rate	Maximum deviation (%)	
					Upwards	Downwards
DKK	1 January 1999	7.62824	7.46038	7.29252	0.09	0.15
EEK	28 June 2004	17.9936	15.6466	13.2996	0.00	0.00
CYP	2 May 2005	0.673065	0.585274	0.497483	0.00	2.01
LVL	2 May 2005	0.808225	0.702804	0.597383	0.74	0.98
LTL	28 June 2004	3.97072	3.45280	2.93488	0.00	0.00
MTL	2 May 2005	0.493695	0.429300	0.364905	0.00	0.00
SIT	28 June 2004	275.586	239.640	203.694	0.02	0.08
SKK	28 November 2005	44.2233	38.4550	32.6868	0.68	10.93

Source: ECB.

Notes: A downward (upward) deviation corresponds to a movement towards the lower (upper) rate and constitutes a strengthening (weakening) of the currency against the euro. The reference period for reported maximum deviations from respective ERM II central rates is from 2 January 2006 to 2 March 2007.

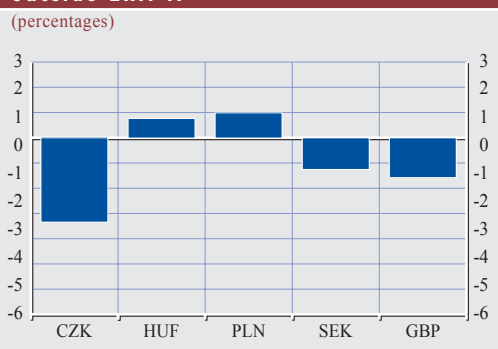
and the Lithuanian litas could join ERM II with their existing currency board arrangements in place. The Maltese authorities stated their intention to maintain the exchange rate of the Maltese lira at its central rate against the euro and the Latvian authorities that they would maintain the exchange rate of the lats at the central rate against the euro with a fluctuation band of  $\pm 1\%$ .

Participation in ERM II has been relatively smooth in the case of most of the participating currencies. The Danish krone, the Estonian kroon, the Cyprus pound, the Latvian lats, the Lithuanian litas, the Maltese lira and the Slovenian tolar were very stable against the euro in 2006. In early 2007 and until 2 March 2007 these currencies – excluding the Slovenian tolar that converted irrevocably to the euro following euro area enlargement on 1 January 2007 – traded continuously at, or very close to, their central rates. Only the Slovak koruna experienced a relatively high degree of volatility (see Table 10). Following parliamentary elections in Slovakia and a period of turbulence on international capital markets, the koruna came under downward pressure in the course of July and temporarily traded, for the first time, at a level lower than its ERM II central rate. However, supported by interventions by Národná banka Slovenska, renewed market confidence in the new government's economic policy, sound macroeconomic developments and an improvement in global risk appetite,

the currency appreciated from mid-July onwards. On 28 December 2006 Národná banka Slovenska intervened in the foreign exchange market to alleviate appreciation pressures. However, at the beginning of 2007, the Slovak koruna continued to appreciate and, on 2 March 2007, traded 10.7% above its ERM II central rate.

Turning to the currencies of the non-euro area EU Member States that were not participating in ERM II, developments varied across countries (see Chart 38). In 2006 the Czech koruna and the Swedish krona gradually appreciated against the euro but lost some ground at the beginning of 2007, respectively standing 3.0% and 1.1% stronger against the euro on 2 March 2007 than at the beginning of 2006. Despite some fluctuation in the second half of 2006, the pound sterling strengthened from the beginning of July 2006 onwards, supported by positive economic developments in the United Kingdom and the expectation of higher interest rates. On 2 March 2007 the pound stood 1.4% above its January 2006 level. During the same period, the Hungarian forint and the Polish zloty depreciated slightly and experienced some exchange rate volatility. In the first half of 2006, both currencies depreciated strongly against the euro in reaction to rising global risk aversion towards emerging markets. In Hungary, downward pressure on the national currency may have also reflected the fiscal situation and market concerns about the

**Chart 38 Changes in the exchange rate of the euro against EU currencies outside ERM II**



Source: ECB.

Notes: A positive (negative) value represents a depreciation (appreciation) of the currency against the euro. Changes refer to the period from 2 January 2006 to 2 March 2007.

country's external imbalances. From the beginning of July 2006, however, the forint and the zloty started to strengthen against the euro, supported by improvements in global risk appetite and, in the case of Hungary, by increased policy rates and the implementation of a fiscal consolidation plan. By 2 March 2007, the Hungarian forint and the Polish zloty had become broadly stable against the euro compared with the beginning of 2006.

#### FINANCIAL DEVELOPMENTS

Between January 2006 and February 2007, the evolution of long-term government bond yields in most of the non-euro area EU Member States was similar to the euro area, with an increase in the first part of the year followed by a slight decrease from June 2006 onwards. In February 2007 long-term interest rates in the non-euro area EU Member States were, on average, around 60 basis points higher than at the beginning of 2006. The largest increase took place in Latvia (around 150 basis points), largely reflecting the deterioration in the inflation outlook. In the other non-euro area EU Member States, long-term interest rates rose less than in the euro area. Compared with euro area rates, government bond yield spreads in the non-euro area EU Member States in February 2007 were, on average, lower than at the beginning of 2006. The long-term interest rate

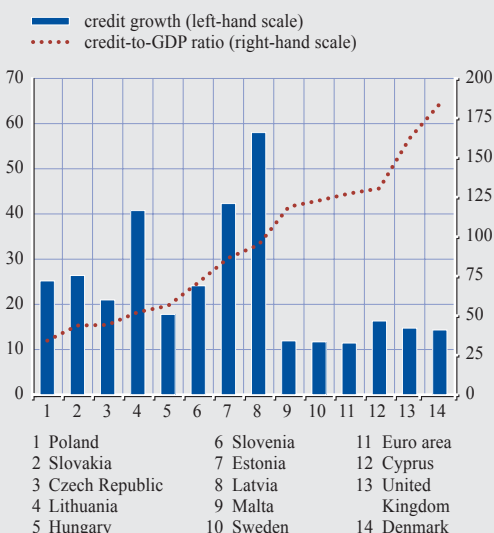
differential remained comparatively large in Hungary where, in February 2007, it stood at around 285 basis points. In this country, fiscal developments and external imbalances tended to keep long-term bond differentials high.

Stock markets in most non-euro area EU Member States performed favourably between January 2006 and February 2007. Stock markets rose most in Estonia, Cyprus and Poland, where they clearly outperformed the average stock price developments in the euro area as measured by the Dow Jones EURO STOXX index. However, the stock markets in all of the non-euro area EU Member States reacted negatively to the turbulence on the global market at the end of February.

In 2006 growth in credit to the private sector remained high in all non-euro area EU Member States (at an annual average of 24% year on year for the non-euro area EU Member States as a whole). Towards the end of 2006, annual credit growth appeared to decelerate or stabilise in many countries, although often at relatively high levels. A possible explanation for this development may be the interest rate increases implemented by the ECB and the majority of the non-euro area national central banks in 2006 (see below), and the resulting tightening of the monetary policy stance. Credit expansion was the most dynamic in the fast-growing Baltic States (in Latvia close to 60% at the end of 2006) (see Chart 39). In the Czech Republic, Hungary, Poland, Slovenia and Slovakia, the annual growth of credit to the private sector increased to a level of 20% or above at the end of 2006. Rapid credit expansion in these catching-up economies needs to be seen in the context of financial deepening. Indeed, the ratios of credit to the private sector to GDP in all the countries that joined the European Union in May 2004, with the exceptions of Cyprus and Malta, remain well below the euro area average. Nevertheless, rapid credit expansion also poses a risk in terms of overheating and excessive external and internal imbalances. The large, rising share of foreign currency-denominated borrowing is of particular concern. In Denmark,

**Chart 39 Credit to the private sector in 2006**

(annual percentage changes; as a percentage of GDP)



Sources: ECB, Eurostat, Central Bank of Cyprus, Bank of England.

Notes: The data for Cyprus and the United Kingdom are based on a national definition. Data refer to the annual growth rate of credit in December 2006.

Sweden and the United Kingdom, the annual rate of credit growth to the private sector accelerated in 2006, compared with 2005, to stand between 12% and 15% at the end of 2006.

### MONETARY POLICY

The primary objective for monetary policy in all non-euro area EU Member States is price stability. Monetary policy strategies, however, differ considerably from country to country (see Table 11).

In 2006 the monetary policy and exchange rate regimes of the non-euro area EU Member States remained largely unchanged, although some refinements were made to monetary policy frameworks in a few countries with a view to future monetary integration.

With regard to monetary policy decisions between January 2006 and February 2007, most central banks participating in ERM II adopted

measures to tighten monetary policy conditions. These often mirrored moves by the ECB, which in 2006 raised the minimum bid rate on the main refinancing operations of the Eurosystem by a total of 125 basis points to 3.5%. In mid-February 2006 Danmarks Nationalbank increased its key policy rate by 10 basis points to 2.5% on account of capital outflows earlier in the month stemming, inter alia, from purchases of foreign shares and other securities by Danish institutional investors. Subsequently, the national central bank followed the movements in the key ECB interest rates and increased its own main policy rate from 2.5% to 3.75%. Eesti Pank and Lietuvos bankas, which have no official policy rates given their currency board arrangements, automatically adopted the changes in the ECB's monetary policy stance. In addition, Eesti Pank adopted a number of precautionary financial sector policy measures, including increasing its reserve requirement ratio from 13% to 15% to address potential financial stability risks related to continuing strong credit growth, particularly in the form of mortgages. The Central Bank of Cyprus increased its key policy rate by 25 basis points to 4.5%, against the background of a tightening of monetary policy by the ECB and rising inflationary pressures. In a further attempt to tighten the liquidity conditions of the economy, Latvijas Banka increased its key interest rate in two steps, from 4% to 5%, and expanded the minimum reserve base to include banks' liabilities with a set term of over two years. The Central Bank of Malta increased its central intervention rate three times – by a total of 75 basis points – to 4.0%, against the background of the narrowing of the short-term interest rate differential vis-à-vis the euro in favour of the Maltese lira. Národná banka Slovenska increased its main policy rate in four different steps, from 3.0% to 4.75%, reflecting mainly upward revisions in its inflation forecasts due to higher energy prices. Finally, Banka Slovenije, which had to align its key policy rate (the 60-day tolar bill interest rate) with the euro area level prior to the adoption of the euro on 1 January 2007, gradually lowered its main policy rate in the first half of 2006, keeping



**Table 11 Official monetary policy strategies of non-euro area EU Member States during 2006**

	Monetary policy strategy	Currency	Features
Czech Republic	Inflation target	Czech koruna	Target: 3%, ensuring that inflation outcomes do not differ from this target by more than one percentage point in either direction. Managed floating exchange rate.
Denmark	Exchange rate target	Danish krone	Participates in ERM II with a $\pm 2.25\%$ fluctuation band around a central rate of DKK 7.46038 per euro.
Estonia	Exchange rate target	Estonian kroon	Participates in ERM II with a $\pm 15\%$ fluctuation band around a central rate of EEK 15.6466 per euro. Estonia continues with its currency board arrangement as a unilateral commitment.
Cyprus	Exchange rate target	Cyprus pound	Participates in ERM II with a $\pm 15\%$ fluctuation band around a central rate of CYP 0.585274 per euro.
Latvia	Exchange rate target	Latvian lats	Participates in ERM II with a $\pm 15\%$ fluctuation band around a central rate of LVL 0.702804 per euro. Latvia continues with a fluctuation band of $\pm 1\%$ as a unilateral commitment.
Lithuania	Exchange rate target	Lithuanian litas	Participates in ERM II with a $\pm 15\%$ fluctuation band around a central rate of LTL 3.45280 per euro. Lithuania continues with its currency board arrangement as a unilateral commitment.
Hungary	Combined exchange rate and inflation target	Hungarian forint	Exchange rate target: peg to the euro at HUF 282.36 per euro, with a $\pm 15\%$ fluctuation band. Inflation target: 3.5% ( $\pm 1$ percentage point) by end-2006 and 3% ( $\pm 1$ percentage point) medium-term target from 2007.
Malta	Exchange rate target	Maltese lira	Participates in ERM II with a $\pm 15\%$ fluctuation band around a central rate of MTL 0.429300 per euro. Malta maintains the exchange rate against the euro unchanged from the central rate as a unilateral commitment.
Poland	Inflation target	Polish zloty	Inflation target: 2.5% $\pm 1$ percentage point (12-month increase in the CPI) as from 2004. Free-floating exchange rate.
Slovenia	Two-pillar strategy monitoring monetary, real, external and financial indicators of macroeconomic conditions	Slovenian tolar	Participated in ERM II with a $\pm 15\%$ fluctuation band around a central rate of SIT 239.640 per euro. On 1 January 2007, Slovenia joined the euro area.
Slovakia	Inflation targeting under the conditions of ERM II	Slovak koruna	Participates in ERM II with a $\pm 15\%$ fluctuation band around a central rate of SKK 38.4550 per euro. The inflation target for the period 2006-08 is set below 2.5% for end-2006 and below 2% at end-2007 and end-2008.
Sweden	Inflation target	Swedish krona	Inflation target: 2% increase in the CPI with a tolerance margin of $\pm 1$ percentage point. Free-floating exchange rate.
United Kingdom	Inflation target	Pound sterling	Inflation target: 2% as measured by the 12-month increase in the CPI <sup>1)</sup> . In the case of a deviation of more than 1 percentage point, the MPC is expected to write an open letter to the Chancellor of the Exchequer. Free-floating exchange rate.

Source: ESCB.

1) The CPI is identical to the HICP.

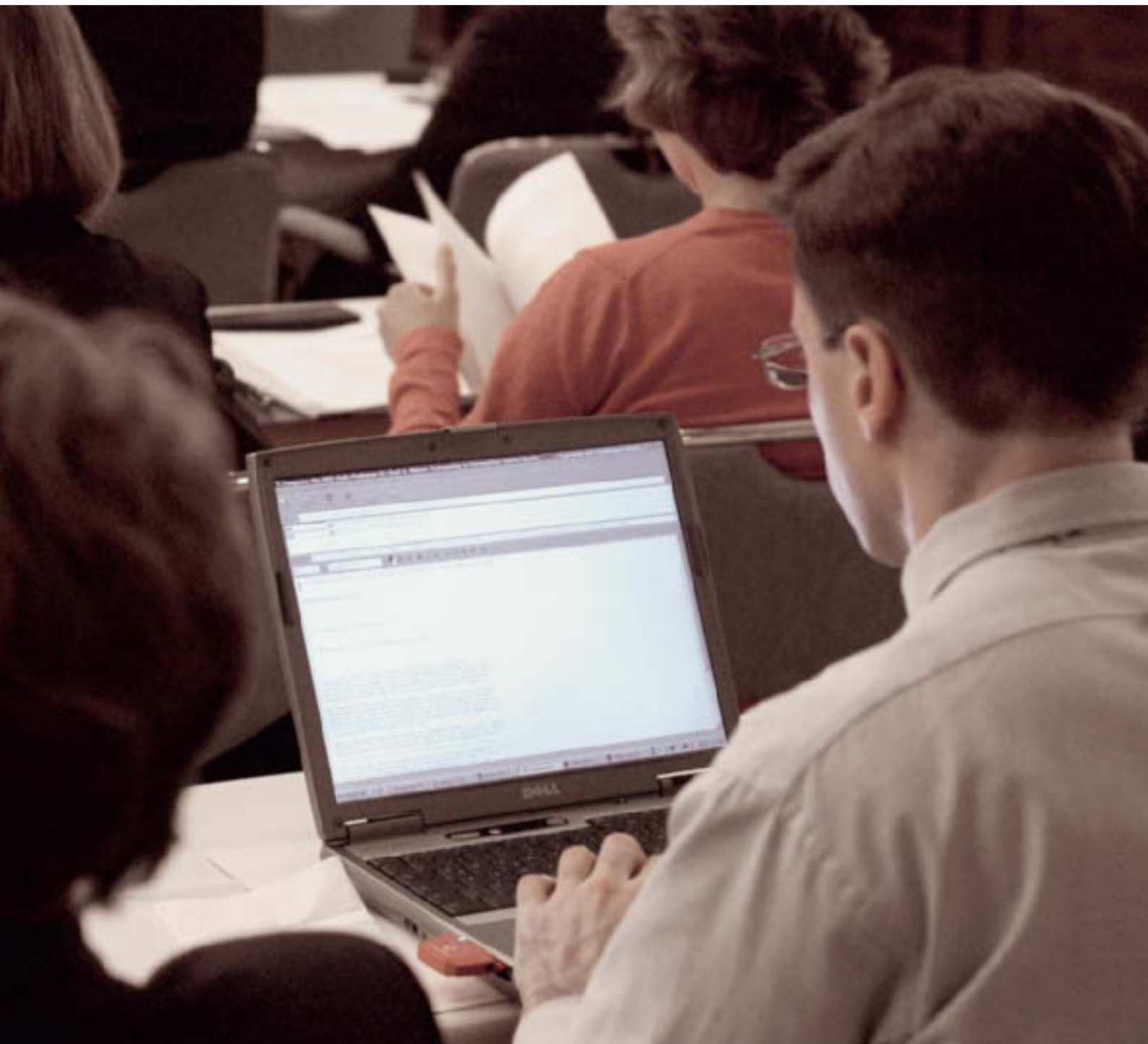
it stable at 3.5% from August onwards (see also Chapter 3).

Outside ERM II, most of the non-euro area EU central banks increased their key policy rates

owing mainly to inflation concerns. Česká národní banka raised its main refinancing rate by 50 basis points to 2.5%, largely on account of the inflation outlook. The Magyar Nemzeti Bank increased its policy rate in five different

steps – by a total of 200 basis points – to 8.0%, mainly because of a deteriorating inflation outlook. The Bank of England also increased its main policy rate – by a total of 75 basis points – to 5.25%, mainly due to steady growth rates and a high level of inflation, which was likely to remain above the central bank’s target for some time. Sveriges Riksbank increased its main policy rate from 1.5% to 3.25% in order to ensure an inflation rate close to its target.

Narodowy Bank Polski was the only non-euro area EU central bank outside ERM II to lower its key policy rate – in two steps, from 4.5% to 4% – on the back of a stronger than expected decline in inflation and a more favourable inflation outlook.



## CHAPTER 2

# CENTRAL BANK OPERATIONS AND ACTIVITIES

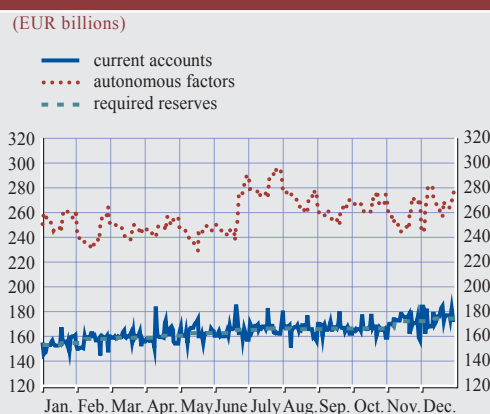
# I MONETARY POLICY OPERATIONS, FOREIGN EXCHANGE OPERATIONS AND INVESTMENT ACTIVITIES

## I.1 MONETARY POLICY OPERATIONS

The operational framework for the implementation of the single monetary policy<sup>1</sup> continued to work efficiently in 2006, confirming the overall positive experience with the new features introduced into the framework in March 2004. The EONIA continued to register very low levels of volatility in 2006: the standard deviation of the spread between the EONIA and the minimum bid rate stood at 5 basis points in 2006, the same level as in 2005 and 4 basis points lower than in 2004. This low volatility in short-term money market interest rates contributed to a clear signalling of the monetary policy stance. Notwithstanding the generally stable money market conditions, the spread between the EONIA and the minimum bid rate continued to widen in 2006. In order to contain this widening spread, the ECB allotted more than the benchmark amount<sup>2</sup> in the relevant main refinancing operations (MROs).

Developments in 2006 provided the opportunity to further test the capability of the operational framework to neutralise within a maintenance period the impact of changes in expectations regarding the key ECB interest rates<sup>3</sup>. In all maintenance periods that preceded an increase in interest rates in 2006, the average spread between the EONIA and the minimum bid rate was between 7 and 8 basis points, with the exception of the maintenance period ending on 8 August, when it stood at 5 basis points. These spreads were comparable with those observed in maintenance periods which were not followed by an increase in key ECB interest rates, where the average spread stood at 8 basis points. Compared with the situation before the framework was changed in March 2004, when the average spread in maintenance periods with a rate increase amounted to 17 basis points – much larger than the spread typically observed – the experience in 2006 suggests that the amended framework has significantly helped to shield short-term money market interest rates from the impact of changes in interest rate expectations.

**Chart 40 Liquidity factors in the euro area in 2006**



Source: ECB.

## ASSESSMENT AND MANAGEMENT OF LIQUIDITY CONDITIONS

The Eurosystem's liquidity management relies on the daily assessment of the liquidity conditions in the euro area banking system in order to determine the liquidity needs of the system and thus the volume of liquidity to be allotted in the weekly MROs, and potentially through other open market operations such as fine-tuning operations. The liquidity needs of the banking system are defined by the sum of reserve requirements imposed on banks, by funds held in excess of these requirements on credit institutions' current accounts with their NCBs (excess reserves) and by autonomous factors. The latter are a set of items on the Eurosystem's balance sheet which have an impact on banks' liquidity needs but are not normally under the direct control of the Eurosystem's liquidity management

- 1 A detailed description of the operational framework can be found in "The implementation of monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures", September 2006.
- 2 The benchmark amount is the allotment amount normally required to establish balanced conditions in the short-term money market, given the ECB's complete liquidity forecast. The published benchmark allotment is rounded to the nearest €500 million.
- 3 Changes in the key ECB interest rates are, under the amended framework of March 2004, implemented only at the start of the new maintenance period.

(e.g. banknotes in circulation, government deposits and net foreign assets).

In 2006 the daily liquidity needs of the euro area banking system amounted to €422.4 billion on average, representing an increase of 12% compared with 2005. On average, reserve requirements stood at €163.7 billion, excess reserves at €0.7 billion and autonomous factors at €257.9 billion. Among the autonomous factors, banknotes in circulation rose by 12% in 2006, as compared with an annual growth rate of around 15% in 2005. Banknotes reached an all-time high of €629.2 billion on 28 December 2006.

#### **MAIN REFINANCING OPERATIONS**

MROs are weekly liquidity-providing operations with a maturity of one week, conducted as variable rate tenders with a minimum bid rate following the multiple rate auction procedure. They are the most important open market operations conducted by the Eurosystem as they play a pivotal role in steering interest rates, managing the liquidity situation in the market and signalling the stance of monetary policy through the level of the minimum bid rate.

To help credit institutions to prepare their bids in the MROs, the ECB continued in 2006 to publish a forecast each week of the average daily autonomous factors and the benchmark amount. The purpose of this communication policy is to avoid misperceptions in the market as to whether or not the allotment decisions in MROs aim to balance liquidity conditions.

In 2006 the amounts allotted in MROs ranged from €280 billion to €338 billion. The average number of bidders was 377, showing a slight increase in the participation level since the implementation of the new framework in March 2004. The liquidity provided through MROs represented, on average, 73% of the overall net liquidity supplied by the Eurosystem through monetary policy operations. The average spread between the marginal rate and the minimum bid rate amounted to 5.5 basis points, compared

with 5.3 basis points in 2005 and 1.6 basis points in 2004.

Having observed an upward drift in the spread between the marginal rate and the minimum bid rate, in October 2005 the ECB initiated a policy of allotting €1 billion more than the benchmark amount in all except the last MRO of a maintenance period. Subsequently, between October 2005 and March 2006, the spread stabilised at 5 basis points on average. However, it started to rise again in April 2006, reaching 9 basis points at the end of the month. In response, the ECB again communicated its uneasiness with regard to such a drift, as it had done in October 2005, and increased the allotment in excess of the benchmark amount from €1 to €2 billion. The measure was extended to the last MRO of a maintenance period, with the ECB still aiming for balanced liquidity conditions at the end of the reserve maintenance period. This policy reduced the spread and the ECB therefore gradually returned to the benchmark allotment in September 2006. When the spread rose again in October, the ECB allotted €1 billion more than the benchmark amount and continued this policy until December 2006, when it gradually increased the allotment further above the benchmark in order to foster smooth conditions in the short-term money market during the holiday season and around the turn of the year.

#### **FINE-TUNING OPERATIONS**

As a consequence of the changes to the operational framework implemented in March 2004, the number of days between the last MRO allotment and the last day of a maintenance period increased, leading to a greater risk of errors in the Eurosystem's forecast of autonomous liquidity factors and thus to potentially larger liquidity imbalances. The absolute difference between the forecast and the actual outcome over eight days reached, on average, €7.21 billion in 2006. In order to prevent these errors from triggering significant recourse to standing facilities, and to avoid large spreads between the overnight rate and the minimum bid rate, the Eurosystem carried



out fine-tuning operations on the last day of the reserve maintenance period whenever it expected a notable liquidity imbalance. In total, eleven fine-tuning operations were carried out in 2006, five of them liquidity-providing (17 January, 7 February, 11 April, 10 October and 12 December) and six liquidity-absorbing (7 March, 9 May, 14 June, 11 July, 8 August and 5 September).

#### **LONGER-TERM REFINANCING OPERATIONS**

Longer-term refinancing operations (LTROs) are liquidity-providing operations conducted on a monthly basis. They are usually allotted on the last Wednesday of the month and have a three-month maturity, thereby giving banks the opportunity to cover their liquidity needs for a longer period of time. In contrast to MROs, LTROs are not used to signal the Eurosystem's monetary policy stance. They are conducted as pure variable rate tenders with a pre-announced allotment volume, and the Eurosystem therefore acts as a rate-taker.

On average, LTROs represented 27% of the total net liquidity provided through open market operations in 2006. The ECB allotted the intended volume in all LTROs of 2006. The allotment volume in each operation was increased from €30 billion to €40 billion in January 2006 and to €50 billion in January 2007.

#### **STANDING FACILITIES**

The two standing facilities offered by the Eurosystem, i.e. the marginal lending facility and the deposit facility, provide and absorb overnight liquidity at interest rates which form a corridor for the interbank overnight rate. In 2006 the width of the corridor remained unchanged at 200 basis points, centred around the minimum bid rate of the MROs. In the course of the year the marginal lending and deposit facility rates were both raised by a total of 125 basis points, ending the year at 4.50% and 2.50% respectively.

In 2006 the average daily recourse to the marginal lending facility amounted to €126

million, while the average daily recourse to the deposit facility amounted to €171 million. The low recourse to the standing facilities in 2006 was in line with previous years and reflects the high efficiency of the interbank market, as well as the lower liquidity imbalances observed on the last day of the reserve maintenance periods. This reduction in liquidity imbalances is consistent with the recourse to fine-tuning operations in the event of notable liquidity forecast errors.

#### **MINIMUM RESERVE SYSTEM**

Credit institutions in the euro area must hold minimum reserves on accounts with the NCBs. The minimum reserves amount to 2% of a credit institution's reserve base, which is determined in relation to elements of the institution's balance sheet. The minimum reserve obligation must be fulfilled on average over a reserve maintenance period. The system has two functions: first, to stabilise short-term money market rates through the averaging provision, and second, to enlarge the liquidity deficit, i.e. banks' overall need for refinancing from the Eurosystem. The amount of required reserves gradually increased in 2006, reaching €174.3 billion during the last maintenance period of the year, compared with €153.3 billion in the corresponding period one year earlier.

#### **ELIGIBLE ASSETS FOR MONETARY POLICY OPERATIONS**

The Eurosystem is required to conduct its credit operations based on adequate collateral. This requirement aims to protect the Eurosystem from losses and to ensure that sufficient collateral is available for potential counterparty use. Credit operations must also be conducted in an efficient and transparent manner and allow equal access by Eurosystem counterparties. For these reasons, the Eurosystem accepts a broad range of assets as collateral.

In 2006 the average amount of eligible marketable collateral increased by 6% compared with 2005, to a total of €8.8 trillion (see Chart 41). General government debt, at €4.5 trillion, accounted for 52% of the total, with the

remainder taking the form of credit institution covered (i.e. Pfandbrief-style) or credit institution uncovered bonds (€2.6 trillion, or 29%), corporate bonds (€0.8 trillion, or 9%), asset-backed securities (€0.5 trillion, or 6%), and other bonds, such as those issued by supranational organisations, (€0.3 trillion, or 4%). The average value of marketable assets deposited by counterparties as collateral against Eurosystem credit operations stood at €930 billion in 2006, compared with €866 billion in 2005 (see Chart 42).

Chart 43 illustrates the difference between the assets eligible to be used as collateral (but not necessarily their weight on counterparties' balance sheets) and those actually put forward as collateral in Eurosystem credit operations, broken down by asset type. Government debt accounted for 52% of the available marketable collateral, but only 28% of collateral put forward. However, credit institution uncovered bonds accounted for 16% of available marketable collateral, but for 32% of the amount of collateral put forward. Asset-backed securities accounted for 6% of available collateral, but for 12% of the collateral used.

The Eurosystem continued to enhance its collateral framework in 2006. In particular, the preparatory work for the gradual introduction of a single framework for eligible collateral (also referred to as the "single list"), common to all Eurosystem credit operations, was finalised in line with the timetable announced by the Governing Council in February 2005.

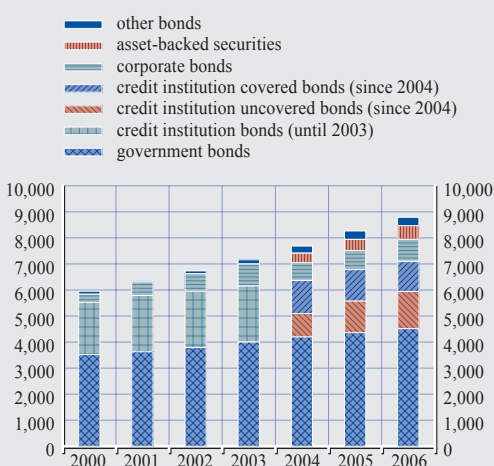
The first step of this gradual introduction, involving marketable assets, was completed in 2005. The preparatory work for the second step was completed in 2006, and on 1 January 2007 a distinct asset class, namely non-marketable assets, including in particular credit claims (also referred to as bank loans), was introduced.<sup>4</sup> The two-tier collateral system that has been in place since the start of Monetary Union will be completely replaced by the single list as of 31 May 2007.

The single collateral framework has been introduced in response to the drawbacks of the

4 Detailed information can be found in "The implementation of monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures", September 2006.

**Chart 41 Eligible marketable assets**

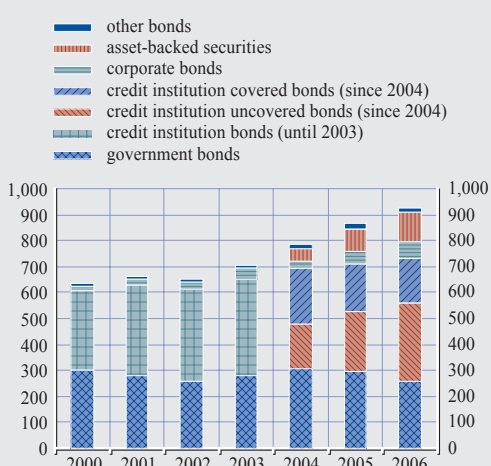
(EUR billions)



Source: ECB.

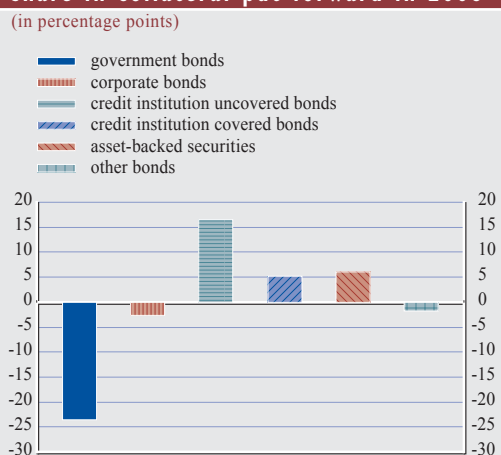
**Chart 42 Eligible marketable assets put forward as collateral**

(EUR billions)



Source: ECB.

**Chart 43 Difference between the share in eligible marketable assets and the share in collateral put forward in 2006**



Source: ECB.

two-tier collateral framework against the background of an increasing degree of financial market integration in the euro area. It is intended to promote a level playing-field in the euro area, further ensuring equal treatment for counterparties and issuers, and increasing the overall transparency of the collateral framework. The single collateral framework also takes into account the rising demand for collateralisation in private wholesale markets and the increased use of collateral by the Eurosystem. More generally, by increasing the liquidity of an entire asset class, such as credit claims, the single collateral framework promotes the smooth functioning of the euro area financial system and more closely reflects the assets side of counterparties' balance sheets.

The Eurosystem has defined specific eligibility criteria and a credit assessment framework which are applicable to non-marketable assets across the euro area. They ensure that these assets comply with collateral standards similar to those for marketable assets. For credit claims, an interim period until 31 December 2011 is foreseen, in which a limited number of eligibility and operational criteria will continue to differ across the euro area. In particular, during this interim period, the NCBs may set the minimum size threshold for credit claims eligible for

domestic use and may decide whether a handling fee should be applied for their use. Tier two assets that do not qualify under the eligibility criteria for the single framework will be phased out by 31 May 2007.

New eligibility criteria for asset-backed securities have been applied since May 2006. The new criteria restrict eligibility to "true sale" types of instrument and thereby mainly aim to exclude both funded and unfunded asset-backed securities for which the credit risk has been transferred synthetically using credit derivatives. In addition, only non-subordinated tranches<sup>5</sup> are eligible. Asset-backed securities which had previously been eligible but did not fulfil the new criteria remained eligible until 15 October 2006. Units of French fonds communs de créances will remain eligible for a transitional period until the end of 2008.

In September 2006 the Eurosystem decided that the Short-Term European Paper (STEP) market would be accepted as a non-regulated market for collateral purposes in Eurosystem credit operations, as soon as the STEP statistics on yields were published on the ECB's website. Notes issued under STEP-compliant programmes will have to comply with the general eligibility criteria for marketable assets.

Furthermore, in order to qualify as eligible collateral, international debt securities in global bearer form must, since 1 January 2007, be issued in the form of New Global Notes and must be deposited with a common safekeeper. International debt securities in global bearer form that were issued in the form of classical global notes prior to 1 January 2007 will remain eligible until maturity.

<sup>5</sup> A tranche (or sub-tranche) is considered to be non-subordinated vis-à-vis other tranches (or sub-tranches) of the same issue if that tranche (or sub-tranche) is given priority (post-enforcement) over other tranches or sub-tranches in respect of receiving payment (principal and interest), or is last to incur losses in relation to underlying assets.

## RISK MANAGEMENT ISSUES

The Eurosystem's collateral framework aims, among other things, to translate the statutory requirement of adequate collateralisation into concrete tools and procedures that guarantee sufficient mitigation of the financial risks in reverse transactions. For this goal to be achieved, the collateral accepted in each transaction must be of a quality and quantity such that, in the event of a counterparty default and a subsequent realisation of the collateral in the market, the Eurosystem is very likely to be able to recover the full amount of its claim.

Risk mitigation in the framework of the Eurosystem's liquidity-providing reverse operations is based on three elements:

- The Eurosystem uses assets of a high credit quality to collateralise its operations. The Eurosystem credit assessment framework (ECAAF) defines the procedures, rules and techniques which ensure that all eligible assets in the single list of collateral meet the Eurosystem's high credit standards. For the collateral eligible for Eurosystem credit operations, the credit quality threshold is defined in terms of a "single A" credit assessment.<sup>6</sup> The ECAAF ensures the consistency, accuracy and comparability of the four credit assessment sources<sup>7</sup> on which it relies. In preparation for the launch of the single list of collateral on 1 January 2007, the Eurosystem finalised the ECAAF during 2006 so that it would encompass both marketable and non-marketable assets.
- Collateral needs to be valued accurately and on a daily basis. In the absence of a valid market price for a particular asset on the business day preceding the valuation date, the Eurosystem defines a theoretical price. In April 2006 two Eurosystem valuation hubs started operations to provide theoretical valuations: one operated by the Deutsche Bundesbank for the valuation of complex fixed income debt instruments and one operated by the Banque de France for the valuation of asset-backed securities.



- To address market and liquidity risks, risk control measures are applied to the collateral after it has been valued. While protecting the Eurosystem from financial risks in its operations, these measures aim to avoid penalising counterparties and to allow them to use eligible assets efficiently. In 2006 the Eurosystem therefore defined a unified methodological framework for deriving haircut schedules for both marketable and non-marketable eligible assets, again in view of the launch of the single list on 1 January 2007.

## 1.2 FOREIGN EXCHANGE OPERATIONS

In 2006 the ECB did not undertake any interventions in the foreign exchange market for policy reasons. Its foreign exchange transactions were exclusively related to investment activity. Furthermore, the ECB did not undertake any foreign exchange operations

<sup>6</sup> "Single A" means a minimum long-term rating of "A-" by Fitch or Standard & Poor's, or "A3" by Moody's.

<sup>7</sup> The four sources are: external credit assessment institutions (or rating agencies), NCBs' in-house credit assessment systems, counterparties' internal ratings-based systems and third-party providers' rating tools. Each credit quality assessment source comprises several different credit quality assessment systems.

in the non-euro area currencies that participate in ERM II.

The standing agreement between the ECB and the IMF to facilitate the initiation of special drawing right (SDR) transactions by the IMF on behalf of the ECB with other SDR holders was activated on three occasions in 2006.

### 1.3 INVESTMENT ACTIVITIES

The ECB's investment activities are organised in such a way as to ensure that no insider information about central bank policy actions may be used when making investment decisions. A set of rules and procedures, known as the Chinese wall, separates the business units involved in operational investment activities from other business units.

#### FOREIGN RESERVE MANAGEMENT

The ECB's foreign reserve portfolio reflects transfers of foreign reserves from the euro area NCBs to the ECB, as well as past foreign exchange and gold operations of the ECB. The main purpose of the ECB's foreign reserves is to ensure that, whenever needed, the Eurosystem has a sufficient amount of liquid resources for its foreign exchange policy operations involving non-EU currencies. The objectives for the management of the ECB's foreign reserves are, in order of importance, liquidity, security and return.

The ECB's portfolio consists of US dollars, Japanese yen, gold and SDRs. Gold and SDR holdings were not actively invested in 2006. The ECB carried out gold sales amounting to around 80 tonnes of gold in total in the course of the year. These sales were in full conformity with the Central Bank Gold Agreement published on 8 March 2004, to which the ECB is a signatory. The total proceeds of the gold sales were added to the Japanese yen portfolio.

The value of the ECB's net foreign reserve assets<sup>8</sup> at current exchange rates and market

prices decreased from €43.5 billion<sup>9</sup> at end-2005 to €42.3 billion at end-2006, of which €32.0 billion was in foreign currencies – the Japanese yen and the US dollar – and €10.3 billion was in gold and SDRs. Applying the exchange rates of end-2006, US dollar-denominated assets represented 83% of the foreign currency reserves, while those denominated in Japanese yen accounted for 17%. The change in the value of the portfolio during 2006 mainly reflected the depreciation of the US dollar and the Japanese yen vis-à-vis the euro, which was only partially compensated for by the appreciation of gold and by the positive net returns (comprising capital gains and interest income) generated by portfolio management activities.

The new operational framework for the ECB's foreign reserve management was implemented smoothly in January 2006. Each NCB may now as a rule manage only one portfolio (i.e. either a US dollar or a Japanese yen portfolio), with two NCBs currently managing two.<sup>10</sup> This change was aimed at increasing the efficiency of the decentralised execution of investment operations within the Eurosystem.

In 2006 work continued on extending the list of eligible instruments in which foreign reserves can be invested. Foreign exchange swaps for investment purposes and US STRIPs<sup>11</sup> were added to this list. Progress was also made in the work on the introduction of interest rate swaps, with the internal testing of systems almost complete. A pilot project has been set up to

8 Net foreign reserve assets are calculated as official reserve assets, plus deposits in foreign currency with residents, minus future predetermined net drains on foreign currency holdings owing to repos and forward transactions. For detailed information, see [www.ecb.int/stats/external/reserves/templates/html/index.en.html](http://www.ecb.int/stats/external/reserves/templates/html/index.en.html)

9 The amount quoted in the Annual Report 2005 (€41.0 billion) was based only on official reserve asset figures. This publication applies a refinement of the definition of net reserve assets, which is explained in footnote 8.

10 For more details, see the article entitled "Portfolio management at the ECB" in the April 2006 issue of the ECB's Monthly Bulletin.

11 STRIP stands for Separate Trading of Registered Interest and Principal, which is a security created by separating the bond principal from the interest payments in a US government bond.



establish an automatic securities lending programme (ASLP), and the ECB will appoint a contractor to supply an ASLP for the US dollar portfolio.

### OWN FUNDS MANAGEMENT

The ECB's own funds portfolio consists of the invested counterpart of the ECB's paid-up capital, as well as amounts held from time to time in its general reserve fund and its provision against foreign exchange rate, interest rate and gold price risks. The purpose of this portfolio is to provide the ECB with income to help to cover its operating expenses. The objective of its management is to generate returns over the long term in excess of the average main refinancing rate of the ECB. The portfolio is invested in euro-denominated assets.

The value of the portfolio at current market prices grew from €6.4 billion at end-2005 to €7.5 billion at end-2006. Most of the increase in market value was due to the investment in the own funds portfolio of the provision against foreign exchange rate, interest rate and gold price risks established by the ECB in 2005. Investment returns also contributed positively to the increase in market value.

In the course of the year, zero coupon bonds and high-quality commercial paper issued by entities already eligible for the investment of own funds were added to the investment options available for the management of this portfolio. Furthermore, the list of eligible issuers of covered bonds and senior unsecured bonds was expanded.

### RISK MANAGEMENT ISSUES

Through its investment activities, the ECB is exposed to financial risks, such as market, credit and liquidity risks. These risks are managed through strict policies and procedures, a comprehensive limit structure and the daily monitoring of compliance with the limits.<sup>12</sup> The ECB's risk management framework for investment operations was further enhanced during 2006. As regards the management of interest rate risk, binding relative Value-at-Risk

(VaR)<sup>13</sup> limits for portfolios vis-à-vis benchmarks were introduced, replacing duration limits.

The dominant risk to which the ECB is exposed is market risk. A breakdown of the VaR of the ECB's investment portfolios reveals that, at any conventional confidence level, more than nine-tenths of the market risk is due to currency and gold price risk, with the rest stemming from interest rate risk. VaR estimates of the ECB's credit risk are even lower than those of the interest rate risk, as credit risk is mitigated through strict eligibility criteria and limits on countries, issuers and counterparties.

Financial risks are largely determined by the size and currency composition of the ECB's foreign reserves and, to a lesser extent, by the asset allocation within the different currency portfolios. However, the low interest rate risk also reflects the relatively low modified duration of the ECB's investment portfolios.

<sup>12</sup> See footnote 10.

<sup>13</sup> VaR at confidence level  $\alpha$  and horizon T is defined as the loss that will be exceeded at the end of horizon T with probability  $1-\alpha$ . The calculation of VaR figures for credit risk is more difficult and subject to more assumptions than the calculation of market risk VaR figures.



## 2 PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

The Eurosystem has the statutory task of promoting the smooth operation of payment systems. Its main instrument for carrying out this task – besides the oversight function (see Section 4 of Chapter 4) – is the provision of facilities to ensure efficient and sound clearing and payment systems. To this end, the Eurosystem created the Trans-European Automated Real-time Gross settlement Express Transfer system, known as TARGET, for large-value payments in euro. Work is already well advanced on the development of a second-generation system, TARGET2. It is envisaged that the first group of countries will migrate to TARGET2 on 19 November 2007.

With regard to securities settlement, the Eurosystem and the market offer a number of channels to facilitate the use of collateral across national borders. In addition, the Eurosystem is evaluating opportunities to provide securities settlement services in central bank money to CSDs on the Single Shared Platform with harmonised procedures that will be used for TARGET2 payment services (TARGET2-Securities).

### 2.1 THE TARGET SYSTEM

The present TARGET system is a “system of systems” made up of the national real-time gross settlement (RTGS) systems of 17 EU Member States, the ECB payment mechanism (EPM) and an interlinking mechanism that enables the processing of payments between the linked systems.

In 2006 TARGET continued to contribute to the smooth functioning of the euro money market and, because the Eurosystem’s credit operations are processed via this system, continued to play an important role in the implementation of the single monetary policy. Since TARGET offers a real-time settlement service in central bank money and broad market coverage, it also attracted a variety of other payments. TARGET functioned smoothly and successfully in 2006 and continued its trend of settling an increasing

number of large-value euro payments. This is in line with the Eurosystem’s policy objective of promoting settlement in central bank money as a uniquely safe means of payment. In 2006, 89% of the total turnover of large-value payments in euro was executed via TARGET. TARGET is available for all credit transfers in euro between connected banks, without any upper or lower value limit. Such transfers may be made both between banks in the same Member State (intra-Member State traffic) and between those in different Member States (inter-Member State traffic).

A survey conducted in 2006 revealed that as at 31 December 2005 there were 10,564 participants in TARGET. Overall, around 53,000 institutions, in particular branches of participants, can be addressed through TARGET using a Bank Identifier Code (BIC).

Following its decision not to join TARGET2, in 2006 Sveriges Riksbank prepared for the disconnection of its TARGET component, E-RIX, effective as of 2 January 2007.

### TARGET OPERATIONS

In 2006 the daily average of payments processed by TARGET increased by 10% both in volume and in value. Table 12 provides an overview of the payment traffic in TARGET in 2006, comparing it with the traffic in the previous year. In 2006 the overall availability of TARGET, i.e. the extent to which participants were able to use TARGET during its business hours without incident, reached 99.87%. 96.75% of inter-Member State payments were processed within five minutes.

**Table 12 Payment traffic in TARGET <sup>1)</sup>**

Volume (number of transactions)	2005	2006	Change (%)
<b>Overall</b>			
Total	76,150,602	83,179,996	9
Daily average	296,306	326,196	10
<b>Intra-Member State<sup>2)</sup></b>			
Total	58,467,492	64,162,211	10
Daily average	227,500	251,617	11
<b>Inter-Member State</b>			
Total	17,683,110	19,017,785	8
Daily average	68,806	74,580	8
<b>Value (EUR billions)</b>			
<b>Overall</b>			
Total	488,900	533,541	9
Daily average	1,902	2,092	10
<b>Intra-Member State<sup>2)</sup></b>			
Total	324,089	348,764	8
Daily average	1,261	1,368	8
<b>Inter-Member State</b>			
Total	164,812	184,777	12
Daily average	641	725	13

Source: ECB.

1) There were 257 operating days in 2005 and 255 in 2006.

2) Includes the traffic of remote participants.

**CONTINGENCY MEASURES FOR SYSTEMICALLY IMPORTANT PAYMENTS IN TARGET**

Owing to the TARGET system's pivotal role in the market and its broad market coverage, suitable protection against a wide range of threats is essential for the reliable and smooth functioning of the system. It is of the utmost importance that systemically important payments – i.e. those that could cause a systemic risk if not processed when due – be carried out without delay, even in abnormal circumstances. The Eurosystem has established contingency measures to ensure that such payments are processed in an orderly manner, even in the event of TARGET malfunctioning. In 2006 a number of further trials were carried out by central banks (often involving commercial banks), and these proved the effectiveness of the TARGET contingency measures. They confirmed that the Eurosystem is in a good position to ensure that payment systems and financial markets can continue to function smoothly in a crisis situation.

**TARGET CONNECTION FOR THE NCBs OF THE MEMBER STATES THAT JOINED THE EU IN 2004**

In October 2002 the Governing Council decided that, following EU enlargement in 2004, the NCBs of the new Member States would be allowed – but not obliged – to connect to the current TARGET system. Given the limited remaining lifetime of the current TARGET system, and in order to save costs, the Eurosystem developed alternatives to full integration which allow the NCBs of the Member States which joined the EU in 2004 to connect their systems to the current TARGET system.

Following Narodowy Bank Polski's connection to TARGET via the Banca d'Italia's RTGS system in 2005, on 20 November 2006 Eesti Pank's euro RTGS system was also connected to TARGET via the Banca d'Italia's system. Slovenian banks have been able to use TARGET since July 2005 by means of remote access to the German TARGET component. With regard to Slovenia's entry into the euro area in January 2007, Banka Slovenije decided, for efficiency reasons, not to develop its own euro RTGS system, but to use the RTGS system of the Deutsche Bundesbank to connect to TARGET. Banka Slovenije commenced operations as a member of the Eurosystem on 2 January 2007.

**RELATIONS WITH TARGET USERS AND RTGS SYSTEM OPERATORS OF OTHER CURRENCY AREAS**

The ESCB maintains close relations with TARGET users in order to ensure that their needs are given due consideration and receive an appropriate response. In 2006, as in previous years, regular meetings were held between the NCBs linked to TARGET and the national TARGET user groups. In addition, joint meetings of the ESCB's Working Group on TARGET2 and the TARGET Working Group of the European banking industry were held to discuss TARGET operational issues. Strategic issues were addressed in the Contact Group on Euro Payments Strategy, a forum in which the senior management of commercial and central banks is represented. The Eurosystem, as

operator of the largest RTGS system in the world in terms of the value of transactions processed, maintained close contacts with the RTGS system operators of other key currency areas in 2006. Increasing interrelations, such as those stemming from Continuous Linked Settlement (CLS) operations, have created the need for joint discussions on operational issues.

## 2.2 TARGET2

On 21 July 2006 the Governing Council released a “Communication on TARGET2” which explained the slight amendments to the TARGET2 core pricing scheme, described the basic elements of the pricing for ancillary system services, and provided information on the different ways of participating in TARGET2. The communication also specified the new pricing scheme for the optional liquidity pooling service and some other new pricing elements. These specifications ensure that the pricing of TARGET2 covers all types of access to the system.

In addition, on 22 November 2006 the Governing Council released its third progress report on TARGET2. This report updated market participants on the Eurosystem’s decisions on the outstanding pricing and legal issues, as well as on contingency procedures and the forthcoming testing and migration activities. It also reported that the preparatory work was proceeding as envisaged and confirmed 19 November 2007 as the starting date for TARGET2. The dates of the two subsequent migration waves, after which all central banks and TARGET users will have migrated to TARGET2, were also confirmed (18 February and 19 May 2008).

With respect to the core pricing scheme, the Governing Council decided to add an additional volume band to the degressive fee structure of 12.5 euro cent for every payment in excess of 100,000 payments per month. This change to the core pricing scheme was made possible by

an upward revision of volume expectations after an analysis of past volume trends in the current TARGET system suggested higher sustainable growth than initially foreseen.

The Governing Council also decided on the three elements of the ancillary system pricing scheme. First, a fixed fee of €12,000 per year will be charged to each ancillary system that settles in central bank money, irrespective of whether it settles in the RTGS system or in the central bank’s local home accounts. A second fixed fee of between €5,000 and €50,000 per year will be charged to ancillary systems on the basis of their underlying gross value. Third, ancillary systems will be charged a transaction fee for which they can choose between a flat fee and a degressive fee (both of which will also have a fixed-fee element).

It was also decided to lower the price of liquidity pooling in order to make it more attractive for banks.<sup>14</sup> Liquidity pooling is considered to be a useful function since it makes it possible to overcome the liquidity fragmentation inherent to the decentralised holding of accounts with the Eurosystem. Furthermore, group pricing will apply within a group of accounts, which means that the degressive transaction fee will be applied to all payments of the group as if they were sent from one account.

In terms of participation, TARGET2 provides for the “classic” options of direct and indirect participation. Participation can also be organised through “multi-addressee access”, meaning that a direct participant can authorise its branches and/or subsidiaries, if they are located in the EEA and belong to the group, to channel payments through its RTGS account without its involvement. Moreover, any client of a direct participant which has a BIC can send payment orders or receive payments through its direct participant in TARGET2 (“addressable BIC access”). From a technical and operational point of view, addressable BIC access is similar

<sup>14</sup> For further information, see the ECB’s “Communication on TARGET2”, published on 21 July 2006 (<http://www.ecb.int/pub/pub/paym/html/index.en.html>).

to indirect participation, with the difference that, in the latter case, the indirect participant is recognised by the system and therefore benefits from the protective provisions set out in the relevant national law implementing the Settlement Finality Directive, provided that the scope of that law extends to indirect participants.

In addition to the technical development of the Single Shared Platform (SSP), work in 2006 focused on the legal framework for TARGET2, the development of internal operational procedures and the definition of user testing activities. It is envisaged that the user testing activities will start in May 2007, while the first group of countries will migrate to TARGET2 on 19 November 2007. A user-focused project plan was provided to the banking community on 11 July 2006 to give an indication of the major milestones in the TARGET2 project.

Relevant and updated information is regularly published on the ECB and NCB websites dedicated to TARGET2, for example:

- On 17 February 2006 the Eurosystem provided information on the overlap between the TARGET2 migration and the SWIFTNet Phase 2 migration. It was recommended that the SWIFTNet Phase 2 migration be completed prior to the TARGET2 migration, although there is no technical dependency between the two migrations.
- The national migration profiles were regularly updated between April and November 2006. These profiles show, for each central bank, which SSP modules will be used and how ancillary systems will settle from the first day after migration to TARGET2. As a complement to these profiles, an overview of the use of proprietary home accounts by central banks was published on 30 October 2006.
- A final version of the user handbook for the Information and Control Module of the SSP was published on 7 December 2006, while

intermediate updates of User Detailed Functional Specifications book 4 on XML messages and their corresponding XML scheme files were published throughout the year.

- A preliminary version of the TARGET2 user testing guide, outlining test procedures and certification scenarios for participants, was published on 7 November 2006. In addition, a web-based application was made available online on 31 January 2007 to provide future TARGET2 participants with test-related information.

### 2.3 TARGET2-SECURITIES

On 7 July 2006 the ECB announced that the Eurosystem was evaluating opportunities to provide settlement services for securities transactions in euro which are settled in central bank money.

Under the current arrangements, euro area central securities depositories (CSDs) settle the central bank money leg of securities transactions in euro through the local RTGS component of the TARGET system. For this settlement procedure to be possible, CSD participants must also participate in the national RTGS system of the country where the CSD is located, i.e. institutions participating as a settlement member in more than one CSD need to maintain a settlement account in each TARGET component concerned.

With the introduction of TARGET2, it will become technically possible for each TARGET2 participant to settle, through a single TARGET2 account, transactions effected via any CSD that provides settlement in central bank money in euro. The possibility provided by TARGET2 to centralise the cash settlement in a single account is likely to increase the market demand for also centralising the securities settlement through a single securities account. This would enable TARGET2 participants to optimise their liquidity management for collateralised and

uncollateralised money market transactions and, therefore, to fully exploit the benefits of TARGET2. The option for TARGET2 participants to manage their securities portfolio in an integrated way with the TARGET2 cash account will be provided if a common Eurosystem service for the settlement of securities transactions is implemented. This platform would only provide settlement services to CSDs, while the other CSD functions (such as corporate actions, custody functions, safekeeping and administration) would continue to be offered by the CSDs. Synergies for the market with other facilities operated by the Eurosystem will be sought, in particular in connection with the TARGET2 system.

A potential new service, called TARGET2-Securities, was announced by the Eurosystem, and subsequent discussions were held at the national and the European level with CSDs and other market participants. On 28 September the preliminary market feedback on TARGET2-Securities was published on the ECB's website. While the whole industry requested further details from the Eurosystem on this initiative, banks generally saw more potential opportunities than CSDs. The project received firm backing from the European Commission.

On 20 October 2006 the ECB announced that the Governing Council had invited its Payment and Settlement Systems Committee to prepare a detailed feasibility study to examine the operational, economic, legal and technical viability of TARGET2-Securities. As part of the preparations for the Governing Council's decision on whether to launch the TARGET2-Securities project, the ECB established contacts with market participants and infrastructures to present the main technical options envisaged for TARGET2-Securities. From mid-December 2006 a number of meetings were held with various stakeholders to discuss a wide range of issues related to the initiative.

The implementation of the TARGET2-Securities facility, which would be fully owned and operated by the Eurosystem, would potentially

lead to large cost savings as a result of the high level of efficiency and technical harmonisation that it would provide for market participants, particularly in the field of cross-border business. TARGET2-Securities would represent a major step towards a single Eurosystem interface with the market. In addition, it could also become the interface with the Eurosystem collateral management system and thereby facilitate pan-European liquidity management. Synergies with other facilities operated by the Eurosystem – in particular TARGET2 and solutions for the cross-border use of collateral – could be expected.

#### **2.4 SETTLEMENT PROCEDURES FOR COLLATERAL**

Eligible assets may be used across national borders to collateralise all types of Eurosystem credit operation by means of the correspondent central banking model (CCBM) or through eligible links between euro area securities settlement systems (SSSs). The CCBM is provided by the Eurosystem, while eligible links are a market-led solution.

The amount of cross-border collateral held by the Eurosystem increased from €444 billion in December 2005 to €514 billion in December 2006. Overall, at the end of 2006 cross-border collateral represented 52.3% of the total collateral provided to the Eurosystem. In 2006, for the first time, cross-border use of collateral exceeded the domestic use of collateral. These figures confirm the trend observed in previous years of increasing integration of financial markets in the euro area and the growing willingness of counterparties to hold in their portfolios assets located in another euro area country.

#### **THE CORRESPONDENT CENTRAL BANKING MODEL**

The CCBM has remained the main channel for transferring collateral across borders in Eurosystem monetary policy and intraday credit operations. It accounted for 39.7% of the total collateral provided to the Eurosystem in 2006. Assets held in custody through the CCBM

increased from €353 billion at the end of 2005 to €414 billion at the end of 2006.

Work on the review of the CCBM's technical and operational setting, which took into account the implementation of the new Eurosystem collateral framework approved by the Governing Council in July 2005, was finalised in 2006. The CCBM framework has also been revised in order to allow for the integration of new euro area countries. In this context, the CCBM Agreement with Banka Slovenije was signed on 21 December 2006.

As there is no comprehensive market alternative to the CCBM service, which was originally designed as an interim arrangement in the absence of a market solution throughout the euro area, the Governing Council decided on 3 August 2006 to continue its service beyond 2007. The ECB is also analysing possible ways to harmonise the operational framework for collateral management in the Eurosystem.

#### **ELIGIBLE LINKS BETWEEN NATIONAL SECURITIES SETTLEMENT SYSTEMS**

National SSSs can be linked by means of contractual and operational arrangements to allow the cross-border transfer of eligible securities between systems. Once eligible securities have been transferred via such links to another SSS, they can be used through local procedures in the same way as any domestic collateral. 59 links are currently available to counterparties, of which only a limited number are actively used. Furthermore, these links only cover part of the euro area. Links become eligible for Eurosystem credit operations if they fulfil the Eurosystem's nine user standards.<sup>15</sup> The Eurosystem assesses any new links or updates of eligible links against these standards. In 2006 three existing eligible links were updated and positively assessed. In addition, the potential use of some relayed links, i.e. where more than two CSDs are involved, is under assessment.

Collateral held through links increased from €91 billion in December 2005 to €99 billion in

December 2006, but represented only 10.5% of the total collateral (cross-border and domestic) held by the Eurosystem in 2006.

<sup>15</sup> "Standards for the use of EU securities settlement systems in ESCB credit operations", January 1998.



## 3 BANKNOTES AND COINS

### 3.1 THE CIRCULATION OF BANKNOTES AND COINS AND THE HANDLING OF CURRENCY

#### DEMAND FOR EURO BANKNOTES AND COINS

At the end of 2006 the number of euro banknotes in circulation stood at 11.3 billion, with a value of €628.2 billion, which represented an increase of 9.5% in terms of volume and 11.2% in terms of value compared with the levels at the end of 2005 (10.4 billion banknotes with a value of €565.2 billion). The value of banknotes in circulation has continued to rise since the euro cash changeover in 2002, albeit at a diminishing annual growth rate (see Charts 44 and 45). It is estimated that, in value terms, between 10% and 20% of the euro banknotes in circulation are held by non-euro area residents, who continue to generate demand for euro banknotes, mainly as a store of value or as a parallel currency.

The dynamic growth of the number of €50, €100 and €500 banknotes in circulation continued in 2006, with rates of 12.5%, 9.6% and 13.2% respectively. The number of the other denominations in circulation rose at rates of between 2.7% and 8.2% (see Chart 46).

In 2006 the total number of euro coins in circulation (i.e. the net circulation excluding stocks held by NCBs) grew by 10.4% to 69.5 billion, while the value of coins in circulation rose by 7.4% to €17.9 billion. The comparatively strong increase in the number of coins was

mainly due to the continuing strong demand for low-value coins resulting from relatively high loss rates and hoarding.

#### BANKNOTE HANDLING BY THE EUROSISTEM

Euro banknote issues and withdrawals continued to follow the slight upward trend observed in previous years. In 2006 the euro area NCBs issued 32.5 billion banknotes, while 31.5 billion banknotes were returned to them. The return frequency<sup>16</sup> of banknotes in circulation fell slightly from 3.17 in 2005 to 3.03 in 2006. All euro banknotes returned from circulation to the euro area NCBs are authenticated and checked for circulation fitness using fully automated banknote-processing machines in order to maintain the quality of the banknotes in circulation. In this process, some 5.2 billion banknotes (an increase of 26.2% compared with the previous year) considered to be unfit for circulation were replaced by the NCBs.

### 3.2 BANKNOTE COUNTERFEITING AND COUNTERFEIT DETERRENCE

#### COUNTERFEIT EURO BANKNOTES

Following two years in which the number of counterfeit euro banknotes removed from circulation remained stable, a slight decline

<sup>16</sup> Defined as the total number of banknotes returned to NCBs in a given period divided by the average number of banknotes in circulation during that period.

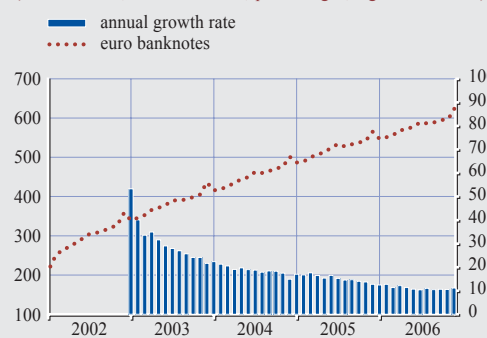
**Chart 44 Total number of euro banknotes in circulation between 2002 and 2006**



Source: ECB.

**Chart 45 Total value of euro banknotes in circulation between 2002 and 2006**

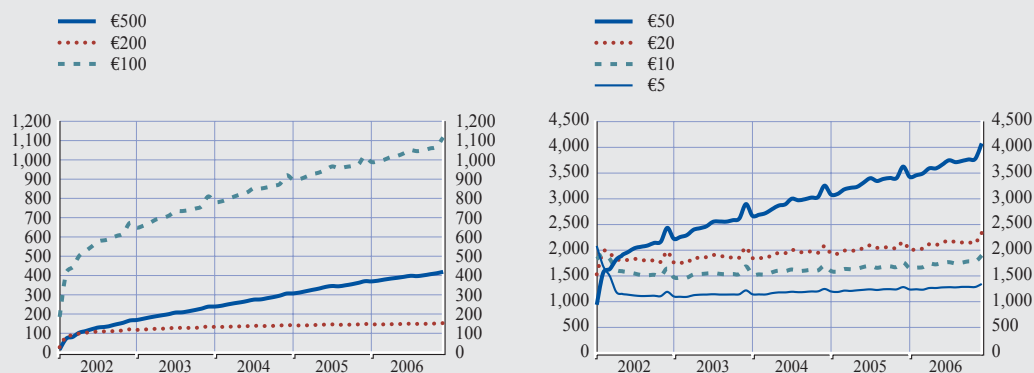
(EUR billions, left-hand scale; percentages, right-hand scale)



Source: ECB.

**Chart 46 Number of euro banknotes in circulation between 2002 and 2006 by denomination**

(millions)



Source: ECB.

occurred in 2006. Chart 47 shows the trend in counterfeits removed from circulation, with figures taken at half-yearly intervals since the euro banknotes were launched. The total number of counterfeits received by National Analysis Centres<sup>17</sup> in 2006 was around 565,000<sup>18</sup>. A significant development in 2006 was the change in the denominational split of counterfeits detected. Before 2006 the €50 banknote was the counterfeiters' biggest target. However, the proportion of counterfeit €50 banknotes detected has fallen sharply, with a corresponding rise in both the number of counterfeit €20 banknotes and, to a much lesser extent, the number of counterfeit €100 banknotes (see Table 13). As a result, the total face value of counterfeits removed from circulation, and therefore the potential financial damage caused by counterfeiting, diminished in 2006.

The public can be confident in the security of the euro: it is a well-protected currency, in

**Table 13 Distribution of counterfeits by denomination**

	€5	€10	€20	€50
Percentage	1	4	40	34
	€100	€200	€500	Total
Percentage	18	2	1	100

Source: Eurosystem.

terms of both the sophistication of its security features and the effectiveness of European and national law enforcement authorities. However, this confidence should never give rise to complacency, and the ECB's advice to the public is to be alert and to remember the "feel-look-tilt" test.<sup>19</sup>

#### COUNTERFEIT DETERRENCE

The Eurosystem continued in 2006 to work closely with Europol and the European Commission (in particular the European Anti-Fraud Office, OLAF) in the fight against counterfeiting of the euro. The Eurosystem is active, both in the EU and beyond, in training professional cash handlers in the recognition and handling of counterfeit banknotes.

The International Counterfeit Deterrence Centre continues to support the Central Bank Counterfeit Deterrence Group (a group of 27 central banks cooperating under the auspices of the G10) and acts as the technical centre for all members. Its main role is to provide technical support and to operate a centralised communication system serving all parties

17 Centres established in each EU Member State for the initial analysis of counterfeit euro banknotes at the national level.

18 This figure is subject to a very slight correction on account of late reports, particularly from outside the EU.

19 For details, see <http://www.ecb.int/bc/banknotes/security/html/index.en.html>

**Chart 47 Number of counterfeit euro banknotes recovered from circulation between 2002 and 2006**



Source: Eurosystem.

involved in the field of counterfeit deterrence systems.

### 3.3 BANKNOTE ISSUANCE AND PRODUCTION

#### FRAMEWORK FOR THE DETECTION OF COUNTERFEITS AND FITNESS SORTING

The Banknote Recycling Framework (BRF) covers the detection of counterfeits and fitness sorting by credit institutions and other professional cash handlers. It establishes a common policy for the recirculation of euro banknotes within the credit sector and defines uniform rules and minimum standards for banknote processing which are to be followed by credit institutions and other professional cash handlers. Following a decision taken by the Governing Council in December 2004, all except two of the euro area NCBS have now transposed the BRF into national arrangements.

Credit institutions and other professional cash handlers will have a transitional period until the end of 2007 to adapt their banknote handling machines to the new requirements. In view of the significant differences in national cash-handling infrastructures, the Governing Council decided in December 2006 to extend the one-year transitional period in some euro area countries. The transitional period will be

extended by two years for France, where it will expire at the end of 2009, and by three years for Greece, Spain, Ireland, Italy and Portugal, where it will finish at the end of 2010.

A central element of the BRF is the requirement to check banknotes to be dispensed by automated teller machines for authenticity and circulation fitness using staff-operated machines which comply with Eurosystem standards. Customer-operated cash deposit and cash recycling machines must also comply with certain technical standards regarding the verification and subsequent handling of banknotes. Most of the euro area NCBS have provided machine manufacturers with tests for their equipment. In addition, the ECB has established a webpage listing all machines which have passed the Eurosystem's common test procedure and are thus suitable for recycling purposes.

In July 2006 the Governing Council decided on a transitional regime for the future implementation of the BRF in new euro area countries. It requires the NCBS of those Member States adopting the euro before 2010 to implement the BRF at the latest within 12 months of joining the euro area. There will then be a one-year transitional period for credit institutions and other professional cash handlers. The NCBS of Member States entering the euro area from 2010 will have to implement the BRF before joining, but credit institutions and other professional cash handlers will still have a one-year transitional period to adapt their equipment.

By adapting their operations in accordance with the BRF, credit institutions and other professional cash handlers will strengthen their ability to detect potential counterfeit euro banknotes. This will effectively contribute to their compliance with the legal obligation to remove potential counterfeits from circulation immediately and to make them available to law enforcement authorities for further investigation. Furthermore, it will ensure that credit institutions supply customers with banknotes that are in good physical condition, thus helping

them to distinguish between genuine and counterfeit banknotes.

#### **THE ESTABLISHMENT OF AN EXTENDED CUSTODIAL INVENTORY PILOT PROGRAMME**

The Governing Council decided in 2006 to launch an Extended Custodial Inventory (ECI) pilot programme in Asia. An ECI is a cash depot maintained by a private bank (ECI bank) that holds currency on a custodial basis. The Eurosystem expects the ECI programme to facilitate the international distribution of euro banknotes and to improve the monitoring of their circulation outside the euro area. Since between 10% and 20% of the total value of euro banknotes in circulation is estimated to be held outside the euro area, the Eurosystem deems it useful to obtain better information on these banknotes. Following an open tender procedure, two large commercial banks active in the wholesale banknote market have been selected to operate one ECI each; one ECI will be established in Hong Kong and the other one in Singapore. The Deutsche Bundesbank will be the logistical and administrative counterpart for the ECI banks. Both ECIs will become operational in the first half of 2007. The ECI pilot programme will be used to assess the functioning of ECIs, their contribution to the information on euro banknotes in circulation outside the euro area, and their impact on the wholesale banknote market. On the basis of this pilot programme, the Governing Council will decide in 2008 whether to continue with the ECI programme.

#### **DIALOGUE WITH THE EUROPEAN PAYMENTS COUNCIL AND OTHER STAKEHOLDERS IN THE CASH CYCLE**

Information about the user requirements of different stakeholders – the banking industry being the main counterpart of the NCBs – is important for the smooth functioning of the euro cash cycle and the delivery of appropriate cash services by the Eurosystem. Topical cash issues, such as overall cost reductions, are discussed with European stakeholders in various fora, such as the Euro Cash User Group and the

European Payments Council's Cash Working Group.

The organisation of the cash supply chain differs from one country to another, in view of the different national environments (e.g. the structure of the central bank and commercial banking systems, the legal regime, the payment behaviour of the general public, the cash-in-transit infrastructure and geographical considerations). As a consequence, a "one-size-fits-all" model for cash supply in the euro area is not desirable. However, the Governing Council decided in September 2006 that a timetable and roadmap should be established with the aim of achieving greater convergence in NCB cash services in the medium term.

#### **PRODUCTION ARRANGEMENTS**

A total of 7.0 billion euro banknotes were produced in 2006, compared with 3.63 billion in 2005. The lower production volume in 2005 was caused to a considerable extent by the use of the banknote surpluses accumulated since 2002, as the uncertainties surrounding the introduction of the euro warranted high production volumes for the initial supply.

The rise in production growth in 2006 reflected the following factors: i) an increase in circulation, ii) a rise in the number of unfit banknotes, iii) the depletion of the NCBs' stock levels and iv) the decision to produce in 2006 a part of the future banknote requirements.

The allocation of euro banknote production continued to be based on the decentralised production scenario with pooling adopted in 2002. Under this arrangement, each euro area NCB is responsible for the procurement of an allocated share of the total requirement for certain denominations (see Table 14).

**Table 14 Allocation of euro banknote production in 2006**

Denomination	Quantity (millions of banknotes)	NCB commissioning production
€5	1,080.0	ES, FR, IE, AT, FI
€10	1,780.0	DE, GR, FR, NL
€20	1,940.0	DE, ES, FR, IT, PT
€50	1,920.0	BE, DE, ES, IT, NL
€100	280.0	IT, LU, AT
€200	-	-
€500	-	-
Total	7,000.00	

Source: ECB.

### THE SECOND SERIES OF EURO BANKNOTES

Following a preparatory phase in which the requirements for the new series of banknotes were established and an inventory was made of possible technical improvements, the Governing Council in 2006 approved the overall project plan for the development of the new series and the start of the industrial validation phase. This phase involves testing different security features to assess their performance and to identify potential problems in a large-scale production environment. The majority of the industrial validation activities are carried out by paper mills and printing works accredited by the ECB for the production of the current series. On the basis of the results of the industrial validation phase, the general specifications for the new series of banknotes will be defined and work on the design will start.

The design of the new banknotes will be based on the “ages and styles” theme of the first series, and a number of design elements from that series will be used in the new design. A designer has been chosen to redesign the present series.

The first banknote in the new series is expected to be issued in a few years’ time. The exact timing and sequence of issuance will, however, depend on the progress made in the development of new security features and on the counterfeiting situation. The different denominations of the new series will be launched over a period of several years.

## 4 STATISTICS

The ECB, assisted by the NCBs, develops, collects, compiles and disseminates a wide range of statistics which support the monetary policy of the euro area and various tasks of the ESCB, as well as being used by the financial markets and the general public. As in previous years, in 2006 the provision of statistics – including those related to the preparations for the enlargement of the euro area and the EU in 2007 – proceeded smoothly. An important milestone in the ECB’s medium-term strategy for statistics was reached at the end of May, with the first joint ECB/Eurostat publication of a set of annual integrated non-financial and financial accounts for the institutional sectors of the euro area. The dissemination of euro area statistics was also substantially improved, following the launch of the ECB’s new online data delivery service for statistics, the Statistical Data Warehouse. In addition, the ECB, in close collaboration with the ESCB Statistics Committee, continued to contribute to the further harmonisation of statistical concepts in Europe and to the review of core global statistical standards.

### 4.1 NEW OR ENHANCED EURO AREA STATISTICS

At the end of May 2006 the ECB and Eurostat jointly published, for the first time, a set of annual integrated euro area non-financial and financial sector accounts for the years 1999-2004. These euro area accounts can be considered as “national accounts” for the euro area. Among other things, they allow comprehensive analysis of the links between financial and non-financial developments in the economy and of the interrelations among the different sectors of the economy (households, non-financial corporations, financial corporations and government) and between these sectors and the rest of the world. These annual accounts have paved the way for the publication of a full system of quarterly integrated euro area sector accounts by mid-2007. The Eurosystem is preparing these statistics together with Eurostat and the national statistical institutes (NSIs).

In September 2006 the first monthly statistics on outstanding amounts of Short-Term European Paper (STEP) were released on the ECB’s website. In the course of 2007, these should be supplemented by daily statistics on volumes and yields (see Section 3 of Chapter 4).

The legal framework for the collection of monetary statistics was enhanced with a new Regulation addressed to post office giro institutions that receive deposits and are part of the non-financial corporations sector. The Governing Council also made refining amendments to the ECB Guidelines on quarterly financial accounts and on government finance statistics. Following its established practice of supplementing ECB legal acts with practical compilation guides, the ECB also published a “Government Finance Statistics Guide”.

Work is under way in several areas to further improve the euro area statistics in the coming years. In particular, the Eurosystem continued in 2006 to develop a framework for the collection of harmonised statistics on non-MFIs which are important players in financial markets, such as investment funds and financial vehicle corporations. Substantial progress has been made in this respect, and an ECB regulation on the statistical reporting requirements for investment funds is now under preparation. In addition, the Eurosystem is exploring the need for and the feasibility of enhancing statistical data on insurance corporations and pension funds. The regulatory framework for MFI balance sheet statistics and MFI interest rate statistics is also under review, with the aim of accommodating new user demands as well as financial and economic developments. Euro area balance of payments and international investment position statistics have been integrated into one framework, whereby developments in end-period positions are described not only by transactions, but also by valuation changes resulting from price and exchange rate changes and other adjustments.

When compiling the euro area statistics required by internal and external users, the ESCB pays



utmost attention to keeping the reporting burden to a minimum. In this context, the ESCB continued to work in 2006 on the development of a Centralised Securities Database (CSDB), the effects of which should become visible in the coming years. The CSDB, an ESCB-wide statistical project with stakeholders at both the ECB and the NCBs, is a single database with benchmark information on all individual euro area securities that are relevant for the statistical purposes of the ESCB. It is intended to be used as a tool to compile and enhance the quality of a wide range of ESCB financial statistics.

In January 2007 the ECB published for the first time harmonised competitiveness indicators for the euro area countries, based on consumer price indices. These indicators were constructed using the same methodology and data sources as for the real effective exchange rate of the euro.

Finally, estimates of the euro area capital stock and euro area households' housing wealth have been included in the ECB's Monthly Bulletin.

## 4.2 OTHER STATISTICAL DEVELOPMENTS

In September 2006 the ECB launched on its website a more user-friendly and comprehensive online data delivery service for ESCB statistics, the Statistical Data Warehouse.<sup>20</sup> It features easy-to-use interfaces that allow users to quickly find, display and download euro area data, including national breakdowns in some cases. Moreover, additional tables of euro area statistics, together with the corresponding national data, are now available on the websites of both the ECB and the NCBs. One such example are the tables of harmonised MFI interest rates on deposits from, and loans to, households and non-financial corporations.

Since November 2006 users of euro area statistics have also had access to a comprehensive description of data and metadata on the IMF's Dissemination Standards Bulletin Board.<sup>21</sup> The descriptions of euro area statistics were prepared

by the ECB and Eurostat, with the assistance of the IMF. The euro area page of the Dissemination Standards Bulletin Board also provides access to an advance release calendar and to euro area statistics for various data categories.

As in previous years, the ECB released a number of publications on statistics, such as "ECB statistics: an overview"; the proceedings of the third ECB conference on statistics ("Financial statistics for a global economy", 4-5 May 2006); and "Differences in MFI interest rates across euro area countries". An ECB Occasional Paper entitled "Revision analysis for general economic statistics" provided a detailed assessment of the reliability of key euro area macroeconomic statistics.

Other ECB publications have been enhanced with more comprehensive statistical information, such as the statistical addendum to "Payment and securities settlement systems in the European Union and in the acceding countries" (known as the Blue Book). Following a comprehensive review of the data collected, enhancements were made to the definition and collection of data on payments and securities, which also led to an improvement in the timeliness of the publication of several months. The range of financial integration indicators included in the semi-annual ECB report entitled "Indicators of financial integration in the euro area" has also been extended (see Section 3 of Chapter 4).

In February 2007 the ECB published its third annual quality report on the euro area balance of payments and international investment position statistics. The report includes qualitative assessments and quantitative indicators which may help users in the analysis of these statistics.<sup>22</sup>

The ECB continued to cooperate closely with Eurostat and other international organisations

20 <http://sdw.ecb.int/>

21 <http://dsbb.imf.org/Applications/web/euronote/>

22 [http://www.ecb.int/pub/pdf/other/bop\\_intinvpos-2007en.pdf](http://www.ecb.int/pub/pdf/other/bop_intinvpos-2007en.pdf)

and was actively involved in the ongoing update of global statistical standards (the System of National Accounts (SNA 93) and the IMF Balance of Payments Manual), as well as the reviews of the OECD Benchmark Definition of Foreign Direct Investment and the ISIC nomenclature<sup>23</sup>. It also supports and implements a number of global technical standards for data exchange<sup>24</sup>.

### 4.3 PREPARING FOR EURO AREA ENLARGEMENT

Statistics also play an important role in monitoring the convergence of EU Member States that do not yet belong to the euro area and, hence, in the preparation of the convergence reports (see Section 1.2 of Chapter 5).

The statistical data needed to assess the progress made by Member States in fulfilling the convergence criteria on price stability, fiscal positions, exchange rates and long-term interest rates are provided by Eurostat. The ECB, together with the NCBs of the Member States concerned, assists Eurostat with the provision of long-term interest rate statistics and collects and compiles additional statistical data which supplement the four primary convergence indicators.

Since the assessment of the convergence process is highly dependent on the quality and integrity of the underlying statistics, the ECB closely monitors developments in the compilation and reporting of these statistics, particularly government finance statistics. The ECB welcomes the initiatives of the European Commission regarding the implementation of a Code of Practice for Eurostat and the NSIs. Adherence to this code is expected to reinforce the independence, integrity and accountability of these institutions, which are crucial for the production of high quality and reliable statistics in the EU.

<sup>23</sup> International standard industrial classification of all economic activities.

<sup>24</sup> For example, the Statistical Data and Metadata Exchange (SDMX), an initiative supported by the BIS, the ECB, Eurostat, the IMF, the OECD, the United Nations and the World Bank in order to foster global standards for the exchange of statistical information.

## 5 ECONOMIC RESEARCH

The objective of economic research at the ECB, as well as in the Eurosystem as a whole, is to provide a strong conceptual and empirical basis for policy-making. Economic research in the Eurosystem thus focuses on increasing knowledge of the functioning of the euro area economy and providing analyses, models and other tools relevant to the conduct of the euro area's monetary policy and the fulfilment of other tasks of the Eurosystem.

### 5.1 RESEARCH PRIORITIES

At the ECB economic research is mainly conducted by the Directorate General Research, but also by other business areas, in particular the Directorate General Economics. A Research Coordination Committee (RCC) coordinates the research, setting priorities and bringing together the business areas which are involved in economic research either on the demand or on the supply side. Following a new mandate agreed upon in 2006, the RCC adopts an annual forward-looking research Priorities Report and a backward-looking Annual Review of ECB-wide research activities, both of which are approved by the Executive Board. The Priorities Report highlights the current knowledge gap for each priority area, defines deliverables and lays down the division of labour between different business areas. The Annual Review monitors research outcomes in terms of both academic quality and policy relevance, measuring the results against the deliverables defined in the previous Priorities Report.

The 2006 research agenda consisted of the following six main areas: forecasting and model development; monetary policy analysis; the transmission mechanism of monetary policy; financial stability; the efficiency of the European financial system; and international issues. A selection of these priority areas are briefly discussed below.

With respect to forecasting and model development, two noteworthy lines of research were pursued in 2006. First, the new area-wide

model, a state-of-the-art dynamic stochastic general equilibrium model for the euro area, was further developed and will soon face its first tests with regard to forecast performance. Second, dynamic factor models were successfully implemented to produce short-term (current and next quarter) forecasts for GDP. A quasi-real-time evaluation of their forecast performance demonstrated that these models perform very well by comparison with more traditional approaches.

Given the prominent role of monetary analysis in the ECB's monetary policy strategy, the development of models and tools used to extract information content from monetary aggregates was thoroughly analysed. The results of this and other related research were discussed in November 2006 at the Fourth ECB Central Banking Conference, which was devoted to "The role of money: money and monetary policy in the twenty-first century". A publication containing the papers presented and a summary of the conference discussions will be released in summer 2007.

Following a request by the heads of research of the Eurosystem central banks, the Governing Council in February 2006 approved the creation of a research network on wage dynamics. Researchers from 20 EU NCBs and the ECB participate in this network, which has a horizon of two years. The network's work is organised along four lines of research. The first line explores the empirical characterisation of aggregate, country and sectoral dynamics in wage and other (non-wage) labour costs in the euro area, as well as the structural analysis of their determinants and their interaction with inflation dynamics. The second line of research involves the use of micro-data on wages and aims to determine the nature and magnitude of possible wage and other labour market rigidities across countries and sectors in the euro area, as well as the link between wage and price-setting at the company level. The third line of research explores the launch of an ad hoc survey on wages, other labour costs and price-setting behaviour at the company level. The fourth area

of study focuses on an overarching analysis which combines the results of the network's other areas of work, with the intention of drawing policy implications for the euro area. The results of all lines of research are expected to be communicated to the decision-making bodies of the ECB by mid-2008.

At the request of the Finnish EU Presidency, the ECB contributed a paper to a discussion at the informal ECOFIN meeting in Helsinki on 28-29 September 2006. The paper, entitled "The role of financial markets and innovation for productivity and growth in Europe", recognised the significant progress made with European financial integration and its beneficial effects for productivity and economic growth. It also suggested, however, that policies pursuing financial integration could usefully be complemented by policies fostering the modernisation of the financial system, i.e. by improving the general framework conditions for financial markets. Such modernisation would involve promoting financial innovations as well as institutional and organisational improvements to enhance the efficiency of the financial system, for instance by reallocating capital to industries with the best growth prospects. The paper found that the framework conditions in Europe could be improved, for example with respect to specific aspects of corporate governance, the efficiency of some legal systems in resolving financial conflicts, and structural features of some European banking sectors, including concentration tendencies in local retail markets and the extent of public bank ownership. The ECB's paper also lent support to follow-up work on venture capital financing and trends towards securitisation.

As part of the second stage of the Research Network on Capital Markets and Financial Integration in Europe run by the ECB and the Center for Financial Studies (CFS), two conferences were held in 2006. The seventh conference on financial system modernisation and economic growth in Europe, hosted by the Deutsche Bundesbank, took place in Berlin in



September. One of the findings of the conference was that economies with larger capital markets were more reactive and adapted more quickly to technological innovations. This effect related to the size of capital markets continued to be relevant even after the share of public bank ownership and the efficiency of the legal system were taken into account. Furthermore, inadequate securities laws affected the development and liquidity of stock markets. The network's eighth conference dealt with financial integration and stability in Europe and was hosted by the Banco de España in Madrid in late November. A noteworthy conclusion of this conference was that the correlation between individual banks' risks in Europe appeared to have increased recently, in particular with regard to large banks. In addition, for industrial countries, some evidence was found that cross-border bank mergers, as opposed to domestic mergers, may increase the acquiring banks' level of risk. At the same time, however, available estimates suggested that greater bank competition may actually increase financial stability.

In February 2006 the Governing Council, following a proposal from the heads of research of the Eurosystem central banks, authorised the creation of a task force to explore the need for and feasibility of collecting survey data on household finance and consumption. In December the task force submitted a report to the Governing Council explaining the usefulness of such survey data for analysis and policy formulation for major Eurosystem policy functions, notably monetary policy, financial stability and payment systems. The survey would provide new insights, inter alia, into the vulnerability of the household sector to asset prices; the propensity to consume out of wealth; the effects of financial integration and innovation; and the impact of ageing and pension reforms on household savings and

consumption patterns. Surveys on household finance and consumption are already conducted in some euro area countries, but comparable data for the whole euro area do not exist at present. The Governing Council decided to establish a network that would prepare a fully-fledged proposal concerning the survey, including a complete specification of the questionnaire to be used as well as the modalities for its implementation. This proposal will form the basis of a final cost-benefit analysis which will allow the Governing Council to determine whether the survey will be conducted.

## 5.2 PUBLICATIONS AND CONFERENCES

Most of the results of the research activities carried out at the ECB, or in cooperation with ECB staff, are presented in the ECB's Working Paper series and – to a lesser extent – the ECB's Occasional Paper series, as well as at various conferences and workshops. 137 ECB Working Papers were published in 2006. Of these, 87 were written with the involvement of ECB staff, while 50 were written by non-ECB staff in the context of research visitor programmes, Eurosystem research networks or conferences organised by the ECB. Hard copies of each Working Paper are produced and distributed mainly to libraries and institutions, but the main channel of dissemination for the series is the ECB's website, with nearly 280,000 downloads of Working Papers per month in 2006.

In addition to such measures of the demand for Working Papers, the quality of the series can also be assessed in other ways. Working Papers are intended to stimulate discussion on research output prior to final publication in journals or books. The final publication outlet of a paper is, however, an important indicator of its academic quality. Of the Working Papers that were released in the period 1999-2002, about 50% were published in an academic, refereed journal and 13% in edited volumes. The impact of the Working Paper series can also be gauged from the number of references to these papers in

other work. According to statistics based on the Research Papers in Economics database, each ECB Working Paper is cited on average 3.4 times in academic publications.

Since November 2004 the ECB's Directorate General Research has produced a Research Bulletin which has been made publicly available since the fifth issue in December 2006. The purpose of this 12-page Bulletin is to inform a wide audience of experts and non-specialists about research carried out by ECB staff, or in cooperation with ECB staff, addressing topics of relevance to central banks. While the Working Paper series mainly addresses specialists, the articles in the Research Bulletin, which reflect the views of individual authors, aim to communicate the results of state-of-the-art research in a concise and accessible form.

In addition to the publications and events mentioned above, the ECB interacted with the academic community throughout the year by hosting a number of research conferences and workshops, such as a colloquium held in March in honour of the then member of the Executive Board Otmar Issing on "Monetary policy: a journey from theory to practice"; a conference on "Issues related to central counterparty clearing" in April; a workshop on "Corporate finance and monetary policy" in May; a conference on "Financial globalisation and integration" in July; the seventh workshop of the Euro Area Business Cycle Network on "Estimation and empirical validation of structural models for business cycle analysis" in August; a conference on "Monetary policy, asset markets and learning" in November; the fourth conference of the international research forum on monetary policy in December; and the joint labour market workshop with the Centre for Economic Policy Research on "Wage and labour cost dynamics", also in December.



## 6 OTHER TASKS AND ACTIVITIES

### 6.1 COMPLIANCE WITH THE PROHIBITIONS OF MONETARY FINANCING AND PRIVILEGED ACCESS

Pursuant to Article 237(d) of the Treaty, the ECB is entrusted with the task of monitoring the compliance of all EU NCBs and the ECB with the prohibitions implied by Articles 101 and 102 of the Treaty and Council Regulations (EC) Nos 3603/93 and 3604/93. Article 101 prohibits the ECB and the NCBs from providing overdraft facilities or any other type of credit facility to governments and Community institutions or bodies, as well as from purchasing debt instruments directly from them. Article 102 prohibits any measure, not based on prudential considerations, which establishes privileged access by governments and Community institutions or bodies to financial institutions. In parallel with the Governing Council, the European Commission monitors Member States' compliance with the above provisions.

The ECB also monitors the EU central banks' secondary market purchases of debt instruments issued by both the domestic public sector and the public sector of other Member States. According to the recitals of Council Regulation (EC) No 3603/93, the acquisition of public sector debt instruments in the secondary market must not be used to circumvent the objective of Article 101 of the Treaty. Such purchases should not become a form of indirect monetary financing of the public sector.

In 2006 the Governing Council identified two cases of non-compliance with the above Treaty requirements and the associated Council regulations. The Banca d'Italia and the Deutsche Bundesbank reported primary market purchases of debt instruments issued by the European Investment Bank (EIB). On 10 January 2006 the Banca d'Italia bought USD-denominated EIB bonds amounting to USD 50 million for the purpose of foreign exchange reserve management. As part of test operations conducted with the aim of gaining operational experience with debt instruments issued by

supranational institutions, the Deutsche Bundesbank carried out three transactions in the primary market (on 9 January 2006 for USD 50 million, on 20 April 2006 for USD 15 million and on 16 May 2006 for USD 10 million), acquiring USD-denominated EIB bonds amounting to a total of USD 75 million. Since the EIB is a Community body, such purchases constitute a breach of the monetary financing prohibition according to Article 101 of the Treaty and Council Regulation (EC) No 3603/93. In the case of the Banca d'Italia, the EIB debt instruments purchased in the primary market were sold on 8 March 2006. The Deutsche Bundesbank sold the EIB debt instruments purchased in the primary market on 6 September 2006. Moreover, both NCBs took immediate measures to avoid the occurrence of such events in the future.

### 6.2 ADVISORY FUNCTIONS

Article 105(4) of the Treaty requires that the ECB be consulted on any proposed Community or national legislation falling within its fields of competence.<sup>25</sup> All ECB opinions are published on the ECB's website.

The ECB adopted 62 opinions in 2006: 10 in response to consultations by the EU Council and 52 in response to consultations by national authorities. This compares with 61 consultations in 2005. A list of the opinions adopted in 2006 is annexed to this Annual Report.

Following a decision by the ECB's decision-making bodies in 2005, the format and structure of ECB opinions on proposed Community legislation has been streamlined to make the opinions more user-friendly and enhance their effectiveness.

<sup>25</sup> The United Kingdom is exempt from the consultation obligation, pursuant to the Protocol on certain provisions relating to the United Kingdom of Great Britain and Northern Ireland, annexed to the Treaty (OJ C 191, 29.7.1992, p. 18).



The following five ECB opinions on proposed Community legislation are particularly noteworthy.

Following the abrogation of Slovenia's derogation in accordance with the procedure set out in Article 122(2) of the Treaty, the ECB was consulted on a proposal for a Council regulation amending Regulation (EC) No 974/98 on the introduction of the euro and on a proposal for a Council regulation amending Regulation (EC) No 2866/98 on the conversion rates between the euro and the currencies of the Member States adopting the euro.<sup>26</sup>

In its opinion on a proposal for a directive of the European Parliament and of the Council on payment services in the internal market and amending Directives 97/7/EC, 2000/12/EC and 2002/65/EC,<sup>27</sup> the ECB welcomed this initiative to establish a comprehensive legal framework for payment services in the EU, facilitate implementation of the Single Euro Payments Area, and lead to harmonisation of access rules for the market for payment services. At the same time, the ECB noted certain points requiring further consideration, such as the receipt and holding by payment institutions of funds having similar economic and legal characteristics to deposits or e-money, certain shortcomings in the envisaged regulatory and supervisory regime, the need for better protection of payment services users' funds, the absence of capital requirements and certain ambiguities in the list of permitted activities.

The ECB was also consulted and provided an opinion<sup>28</sup> on a proposal for a directive of the European Parliament and of the Council amending Council Directive 92/49/EEC<sup>29</sup> and Directives 2002/83/EC<sup>30</sup>, 2004/39/EC<sup>31</sup>, 2005/68/EC<sup>32</sup> and 2006/48/EC<sup>33</sup> as regards procedural rules and evaluation criteria for the prudential assessment of acquisitions and increase of shareholdings in the financial sector<sup>34</sup> (see Section 2.2 of Chapter 4).

The ECB issued an own-initiative opinion<sup>35</sup> on a draft Commission directive implementing

Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)<sup>36</sup> as regards the clarification of certain definitions<sup>37</sup>. This was the first opinion issued by the ECB on draft implementing measures adopted under the comitology procedure. The ECB advised on the provisions on the eligibility of money market instruments for UCITS investment purposes, suggesting in particular that the same disclosure and information requirements be applied to regulated financial institutions and to corporate issuers of money market instruments in order

26 CON/2006/36. The ECB was also consulted by the Slovenian, Estonian, Cypriot and Maltese authorities on national legislation facilitating the future introduction of the euro in those Member States (see CON/2006/4, CON/2006/10, CON/2006/17, CON/2006/23, CON/2006/28, CON/2006/29, CON/2006/33 and CON/2006/43).

27 CON/2006/21.

28 CON/2006/60 of 18 December 2006 (OJ C 27, 7.2.2007, p. 1).

29 Council Directive 92/49/EEC of 18 June 1992 on the coordination of laws, regulations and administrative provisions relating to direct insurance other than life assurance and amending Directives 73/239/EEC and 88/357/EEC (Third Non-life Insurance Directive) (OJ L 228, 11.8.1992, p. 1). Directive as last amended by Directive 2005/68/EC (OJ L 323, 9.12.2005, p. 1).

30 Directive 2002/83/EC of the European Parliament and of the Council of 5 November 2002 concerning life assurance (OJ L 345, 19.12.2002, p. 1). Directive as last amended by Directive 2005/68/EC (OJ L 323, 9.12.2005, p. 1).

31 Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC (OJ L 145, 30.4.2004, p. 1). Directive as last amended by Directive 2006/31/EC (OJ L 114, 27.4.2006, p. 60).

32 Directive 2005/68/EC of the European Parliament and of the Council of 16 November 2005 on reinsurance and amending Council Directives 73/239/EEC and 92/49/EEC as well as Directives 98/78/EC and 2002/83/EC (OJ L 323, 9.12.2005, p. 1).

33 Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast) (OJ L 177, 30.6.2006, p. 1).

34 COM(2006) 507 final.

35 CON/2006/57 of 12 December 2006 (OJ C 31, 13.2.2007, p. 1).

36 Council Directive 85/611/EEC of 20 December 1985 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) (OJ L 375, 31.12.1985, p. 3). Directive as last amended by Directive 2005/11/EC of the European Parliament and of the Council (OJ L 79, 24.3.2005, p. 3).

37 Commission Working Document ESC/43/2006.

to foster transparency and harmonisation in the European market for money market instruments.

Finally, on 15 February 2007 the ECB adopted an opinion<sup>38</sup> on proposals to amend eight directives in the financial sector in order to introduce a new “regulatory procedure with scrutiny” into the comitology procedures of these directives and repeal the provisions that provide for a time limit on the delegation of implementing powers to the Commission. In its opinion, the ECB underlined the fact that Lamfalussy Level 2 implementing acts constitute “proposed Community acts” within the meaning of Article 105(4) of the Treaty on which the ECB should be consulted.<sup>39</sup>

The ECB continued to be consulted by national authorities on issues pertaining to the NCBs, in particular on amendments to the statutes of the Belgian, Czech, French, Italian, Cypriot, Latvian, Luxembourg, Hungarian, Maltese, Dutch, Polish and Slovenian NCBs,<sup>40</sup> as well as on national legislation facilitating the future introduction of the euro<sup>41</sup>. The ECB was consulted by Latvia on a draft law amending the Latvian Constitution to confirm Latvijas Banka’s status in the Constitution. While welcoming the draft law, the ECB emphasised the importance of ensuring that the proposed amendments did not entail any changes to Latvijas Banka’s status and functions, but only restated its position in the hierarchy of different institutions at the constitutional level. The ECB was also consulted by Finland on a reform of the Law on emergency powers.<sup>42</sup> As in its previous opinion on matters relating to emergency powers<sup>43</sup>, the ECB recommended amending the draft law so that the powers that fall within the ESCB’s exclusive competence may not be exercised by national authorities in the absence of one of the emergency situations provided for in Article 297 of the Treaty.

In the area of monetary policy, the ECB was consulted on the minimum reserve regime by Estonia, Latvia and Slovenia.<sup>44</sup> In its opinions, the ECB emphasised the benefits of gradually

achieving consistency with the ECB’s minimum reserve system. In this context, the ECB noted that, following the introduction of the euro, credit unions in Latvia would be subject to the ECB’s reserve requirements. The ECB was also consulted by national authorities on issues pertaining to the introduction of a single list of collateral, in particular on amendments to the statutes of the Nationale Bank van België/Banque Nationale de Belgique.<sup>45</sup>

Concerning financial supervision, the ECB issued its first own-initiative opinion on draft national legislation in relation to the failure of the Dutch Finance Minister to consult the ECB on the second part of a draft law introducing a functional supervision model.<sup>46</sup> The ECB also issued an opinion on a Polish draft law establishing a new institutional framework for the supervision of banking, capital markets, insurance and pension funds in Poland.<sup>47</sup> In line with past ECB opinions on banking and financial supervisory reforms, the opinion favoured the involvement of central banks in prudential supervision, positively assessed the existing supervisory model and stressed the need to maintain banking and financial expertise under the new supervisory framework. In a later opinion, the ECB recommended that Narodowy Bank Polski be expressly allocated the task of overseeing securities settlement and clearing systems, on the grounds that such oversight function is inherent in central banks’ task of promoting sound market infrastructure, in order to safeguard the effectiveness of monetary

38 CON/2007/4, OJ C 39, 23.2.2007, p. 1.

39 CON/2007/4, OJ C 39, 23.2.2007, p. 1.

40 CON/2006/4, CON/2006/17, CON/2006/19, CON/2006/23, CON/2006/32, CON/2006/33, CON/2006/39, CON/2006/40, CON/2006/44, CON/2006/47, CON/2006/50, CON/2006/54, CON/2006/55, CON/2006/56 and CON/2006/58.

41 In particular, the ECB was consulted by the Slovenian, Estonian, Cypriot and Maltese authorities on national legislation facilitating the future introduction of the euro in those Member States (see CON/2006/4, CON/2006/10, CON/2006/17, CON/2006/28, CON/2006/29, CON/2006/33 and CON/2006/43).

42 CON/2006/6.

43 CON/2002/27.

44 CON/2006/3, CON/2006/11 and CON/2006/41.

45 CON/2006/40.

46 CON/2006/20.

47 CON/2006/15.

policy and the overall stability of the financial system.<sup>48</sup>

### **6.3 ADMINISTRATION OF THE BORROWING AND LENDING OPERATIONS OF THE EUROPEAN COMMUNITY**

In accordance with Article 123(2) of the Treaty and Article 9 of Council Regulation (EC) No 332/2002 of 18 February 2002, the ECB continues to have responsibility for the administration of the borrowing and lending operations of the European Community under the Medium-Term Financial Assistance mechanism. In 2006 the ECB did not perform any administration tasks. There was no outstanding balance at the end of 2005 and no new operations were initiated during 2006.

### **6.4 EUROSISTEM RESERVE MANAGEMENT SERVICES**

In 2006 a comprehensive set of services continued to be offered under the framework established in January 2005 for the management of Eurosystem customers' euro-denominated reserve assets. The complete set of services – which is available to central banks, monetary authorities and government agencies located outside the euro area, as well as to international organisations – is offered under harmonised terms and conditions in line with general market standards by individual Eurosystem central banks (the Eurosystem service providers) acting as dedicated service providers. The ECB performs an overall coordination role, ensuring the smooth functioning of the framework. The number of customers maintaining a business relationship with the Eurosystem in 2006 remained stable by comparison with 2005. With respect to the services themselves, there was a small increase in customers' total cash balances and/or securities holdings.

<sup>48</sup> CON/2006/53.





## **CHAPTER 3**

# **ENTRY OF SLOVENIA INTO THE EURO AREA**



## I ECONOMIC AND MONETARY DEVELOPMENTS IN SLOVENIA

On 11 July 2006 the ECOFIN Council adopted a decision allowing Slovenia to join the euro area and to adopt the euro as its currency as from 1 January 2007. The Council's decision was based on the convergence reports published by the ECB and the European Commission in May 2006, an opinion of the European Parliament and a proposal from the European Commission. On the same day, the ECOFIN Council adopted a regulation fixing the irrevocable conversion rate between the Slovenian tolar and the euro. The conversion rate was set at SIT 239.640 to the euro, the central rate agreed on 28 June 2004 when the tolar entered ERM II. The tolar had stayed close to its central rate against the euro during the whole period of its participation in ERM II and was trading at that rate on the day when the conversion rate was set.

Looking back over the past ten years, Slovenia has made remarkable progress in achieving low inflation rates. Starting from a high of 8.3% in 1997, consumer price inflation decreased gradually to stand at 6.1% in 1999. After a temporary interruption owing to, among other things, the introduction of a value added tax, a surge in domestic demand, strong wage increases and a jump in import prices, inflation started to fall again after 2000, reaching 2.5% in 2005. In 2006 average HICP inflation remained at 2.5%, despite the relatively high volatility stemming from oil prices. On balance, the non-energy industrial goods component has dampened recent inflationary developments, while the energy and services components have had the strongest upward impact.

The decline in inflation should be seen against the backdrop of robust economic growth. Over the last decade real GDP growth has averaged 4.1%, above the euro area average. While real GDP growth was somewhat subdued between 2001 and 2003, it has picked up again since 2004. In 2006 the rate of real GDP growth was 5.2%, compared with 4.0% in 2005 (see Table 15). This has led to significant progress in real convergence, with Slovenia's GDP per capita (in purchasing power parity terms) rising

from 65% of the euro area average in 1997, which was the highest level among the central and eastern European countries which joined the EU in May 2004, to 78% in 2006. As regards external developments, Slovenia has on average reported a current and capital account deficit of 1.6% of GDP over the past ten years. In 2006 the current and capital account deficit increased to 3.4%, from 2.4% in 2005.

Labour market conditions have remained fairly stable over the last decade, with the unemployment rate fluctuating around 6-7%. In line with the strengthening of economic activity during 2006, employment growth also increased, to 0.6% (from 0.3% in 2005). At the same time, the unemployment rate decreased to 6.0% (from 6.5% in 2005). As a result of structural adjustments in the labour market during the past few years, employment has increased in the services sector, while it has declined in manufacturing. There is an increased mismatch in the labour market between the demand for high-skilled workers and the supply of low-skilled workers.

The convergence process was supported by fiscal policy. From 2000 (the first year for which comparable government deficit data are available) to 2005, the deficit-to-GDP ratio fell from 3.8% to 1.4%. In 2006 the general government deficit ratio of 1.6% was broadly in line with the deficit contained in the 2005 update of the convergence programme, despite higher than expected growth and a more favourable deficit outcome in 2005. The government debt ratio is estimated to have increased slightly to 28.5% in 2006, from 28.0% in 2005. According to the updated stability programme, the total expenditure ratio continued to decline in 2006 by more than 0.5% of GDP. Pension expenditure, at 10.9% of GDP in 2005, is quite high compared with other EU countries and is expected to increase sizeably until 2050, with the long-term budgetary impact projected to be among the largest in the EU.

Convergence was also fostered by monetary policy. In 2001 Slovenia adopted a new

monetary policy framework, and the primary objective of price stability was enshrined in the new Banka Slovenije Law. The previous intermediate target for monetary growth was abandoned and a two-pillar monetary policy framework introduced, covering both monetary and real economic developments. At the same time, monetary policy was complemented by an exchange rate policy guided by uncovered interest rate parity considerations. This led to a gradual decline of the tolar vis-à-vis the euro, which enabled Banka Slovenije to maintain sufficiently high interest rates to support disinflation. After 28 June 2004, when Slovenia joined ERM II, monetary policy was aimed at maintaining exchange rate stability vis-à-vis the euro.

During 2006 the monetary policy of Banka Slovenije continued to be geared towards the achievement of price stability within the framework of ERM II while maintaining exchange rate stability vis-à-vis the euro. At the same time, Banka Slovenije gradually reduced interest rates to ensure a smooth transition

towards euro adoption. In January 2006 the 60-day tolar bill interest rate stood at 4.0%. By July, when the ECOFIN Council confirmed that Slovenia had fulfilled the necessary conditions to adopt the single currency, Banka Slovenije had lowered the 60-day tolar bill interest rate to 3.25%. In August Banka Slovenije increased its interest rates by 25 basis points, mirroring the rise in key ECB interest rates in that month. The 60-day tolar bill interest rate was left unchanged for the rest of the year. Following the increases in key ECB interest rates in October and December, the 60-day tolar bill interest rate was aligned by the end of the year with the minimum bid rate on the main refinancing operations of the Eurosystem.

During 2006 the Slovenian three-month money market interest rate moved in line with the official central bank interest rates. The gradual convergence of short-term interest rates in Slovenia to the euro area level was essentially completed by October. Long-term interest rates, by contrast, had already been close to euro area levels since mid-2004. This reflected market

**Table 15 Main economic indicators for Slovenia**

(annual percentage changes, unless otherwise indicated)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Real GDP growth	4.8	3.9	5.4	4.1	2.7	3.5	2.7	4.4	4.0	5.2
<i>Contribution to real GDP growth:</i>										
Domestic demand including stocks	5.0	5.2	9.0	1.4	0.8	2.4	4.9	5.3	1.9	5.5
Net exports	-0.2	-1.3	-3.6	2.7	1.8	1.1	-2.2	-0.9	2.1	-0.3
HICP inflation	8.3	7.9	6.1	8.9	8.6	7.5	5.7	3.7	2.5	2.5
Compensation per employee	12.6	8.9	7.7	12.4	11.6	8.5	6.6	7.6	5.4	..
Nominal unit labour costs (whole economy)	5.3	4.6	3.6	8.9	9.2	6.5	3.5	3.6	1.6	..
Import deflator (goods and services)	5.0	1.9	1.9	13.9	6.3	2.5	2.0	4.1	5.0	4.7
Current and capital account balance (% of GDP)	0.3	-0.6	-3.3	-2.7	0.2	0.4	-1.4	-3.1	-2.4	-3.4
Total employment	-1.9	-0.2	1.4	0.8	0.5	1.5	-0.4	0.5	0.3	0.6
Unemployment rate (% of labour force) <sup>1)</sup>	6.9	7.4	7.3	6.7	6.2	6.3	6.7	6.3	6.5	6.0
General government surplus (+)/deficit (-) (% of GDP)	..	..	-3.1	-3.8	-4.1	-2.5	-2.8	-2.3	-1.4	-1.6
General government gross debt (% of GDP)	21.4	22.1	24.6	27.6	27.6	29.1	28.5	28.7	28.0	28.5
Three-month interest rate (% per annum) <sup>2)</sup>	..	..	..	..	..	8.0	6.8	4.7	4.0	3.6
Long-term ten-year government bond yield (% per annum) <sup>2)</sup>	..	..	..	..	..	8.7	6.4	4.7	3.8	3.9
Exchange rate against the euro <sup>2), 3)</sup>	181.0	185.9	194.4	206.6	218.0	226.0	233.8	239.1	239.6	239.6

Sources: ECB and Eurostat.

Note: Owing to changes in the methodology and sources, the government debt before 1999 is not comparable with the debt from 1999 onwards, and the government deficit before 2000 is not comparable with the deficit from 2000 onwards.

1) Seasonally adjusted.

2) Annual average.

3) Up until the end of 1998, figures refer to Slovenian tolar per ECU.

confidence in general economic and fiscal developments in Slovenia and the credibility of Slovenian monetary and exchange rate policy.

Following its adoption of the euro, the main challenge for Slovenia is to ensure the conduct of appropriate national policies in order to sustain robust economic growth and secure a high degree of sustainable convergence. Given that Slovenia can no longer use independent monetary and exchange rate policies to achieve its economic objectives, the appropriate conduct of structural and fiscal policies has now become even more important. In this context, it is crucial to address the remaining structural

rigidities in the labour market and to improve product market flexibility. It is desirable that wages lag behind labour productivity growth in order to safeguard the economy's competitiveness, and the remaining indexation of wages and certain social transfers must be eliminated. Pursuing an ambitious fiscal consolidation path will play a central role in preventing the emergence of possible demand-induced inflationary pressures in the coming years. Furthermore, in view of the ongoing deepening of financial markets in Slovenia, which is associated with fast credit growth, among other things, effective financial supervision will be required.

#### Box 8

##### STATISTICAL IMPLICATIONS OF THE ENLARGEMENT OF THE EURO AREA TO INCLUDE SLOVENIA

The enlargement of the euro area to include Slovenia as of 1 January 2007 is the second occasion on which statistical series for the euro area have had to be amended in order to include an additional member country. The preparation of statistics for the enlarged euro area has been coordinated, where necessary, with the European Commission.

Slovenia's entry means that residents of Slovenia have become residents of the euro area. This affects statistics for which euro area aggregates are not a simple sum of national data, such as monetary, balance of payments and international investment position statistics, as well as financial accounts, because transactions between Slovenian and other euro area residents must now be consolidated.

From January 2007 Slovenia was thus obliged to meet all the statistical requirements of the ECB, i.e. to provide fully harmonised and comparable national data.<sup>1</sup> Since the preparation of new statistics requires a long lead time, Banka Slovenije and the ECB started the statistical preparations well before Slovenia joined the EU. Banka Slovenije intensified its preparations to fulfil the requirements of the ECB after becoming a member of the ESCB and was therefore ready to meet the statistical obligations covering monetary, banking, balance of payments and other financial statistics on joining the euro area. In addition, Banka Slovenije had to carry out the necessary preparations for the integration of Slovenian credit institutions into the ECB's minimum reserve system and to fulfil the relevant statistical requirements.

For the data reporters and NCBs of the existing euro area countries, the enlargement of the euro area meant that from January 2007 they had to report transactions (or flows) and positions with residents of Slovenia as part of the euro area data, rather than as transactions and positions with non-euro area residents.

<sup>1</sup> The statistical requirements of the ECB are summarised in the document "ECB statistics: an overview", April 2006.

In addition, Slovenia and the other euro area countries all had to provide backdata with sufficient geographical and sectoral detail, dating back at least as far as 2004, the year Slovenia joined the EU.

Regarding the publication of euro area statistics, the ECB has granted users online access to two sets of time series, one containing data for the current euro area (i.e. including Slovenia) as far back as available, and one linking the various compositions of the euro area, starting with the 11 countries in 1999.

## 2 LEGAL ASPECTS OF THE INTEGRATION OF BANKA SLOVENIJE INTO THE EUROSISTEM

Pursuant to Article 122(2) of the Treaty, the ECB reviewed Banka Slovenije's statutes and other relevant Slovenian legislation for compliance with Article 109 of the Treaty. The ECB made a favourable assessment of the compatibility of Slovenian legislation with the Treaty and with the Statute of the ESCB, as stated in its Convergence Report on Lithuania and Slovenia published in May 2006.

The ECB and Banka Slovenije put in place a number of legal instruments with a view to ensuring the integration of Banka Slovenije into the Eurosystem on 1 January 2007. The Eurosystem's legal framework was adapted as a consequence of the decision taken by the ECOFIN Council on 11 July 2006 to abrogate Slovenia's derogation<sup>1</sup>. The introduction of the euro in Slovenia and the integration of Banka Slovenije into the Eurosystem also required changes to some Slovenian legal instruments. On 30 March 2006 Banka Slovenije's statutes were brought into line with recommendations in the ECB's Convergence Report 2004. Slovenia had consulted the ECB on the draft amendments to Banka Slovenije's statutes on 13 March 2006. The ECB adopted an opinion proposing further changes, which were reflected in the final version of Banka Slovenije's statutes.<sup>2</sup> In the course of 2006, the ECB was also consulted on amendments to other Slovenian legislation, governing areas such as banking<sup>3</sup>, minimum reserve requirements<sup>4</sup> and collateral<sup>5</sup>.

The ECOFIN Council's decision of 11 July 2006 triggered amendments to Council Regulation (EC) No 974/98 to enable the introduction of the euro as Slovenia's currency<sup>6</sup>, and the adoption of Council Regulation (EC) No 1086/2006 amending Regulation (EC) No 2866/98, which determined the irrevocably fixed exchange rate of the Slovenian tolar vis-à-vis the euro<sup>7</sup>. The Council consulted the ECB on proposals for both these regulations, on which the ECB adopted an opinion<sup>8</sup>.

To facilitate the introduction of the euro as Slovenia's currency, the ECB adopted two guidelines. Guideline ECB/2006/10 ensured that tolar banknotes could be exchanged for euro banknotes and coins in all euro area countries.<sup>9</sup> Guideline ECB/2006/9 enabled the supply of euro banknotes and coins prior to the cash changeover.<sup>10</sup> The ECB was also consulted on the preparations for national legislation on the euro cash changeover.<sup>11</sup>

As regards legal preparations for integrating Banka Slovenije into the Eurosystem, the ECB adopted the necessary legal instruments to provide for the paying-up of the remaining capital and the transfer by Banka Slovenije of foreign reserves to the ECB. Pursuant to Article 27.1 of the Statute of the ESCB, the Governing Council adopted a recommendation on Banka Slovenije's external auditors for the annual accounts starting from the financial year 2007.<sup>12</sup> The ECB also reviewed its legal framework and introduced, where necessary, amendments resulting from Banka Slovenije's

1 Council Decision 2006/495/EC of 11 July 2006 in accordance with Article 122(2) of the Treaty on the adoption by Slovenia of the single currency on 1 January 2007, OJ L 195, 15.7.2006, p. 25.

2 CON/2006/17.

3 CON/2006/48.

4 CON/2006/41.

5 CON/2006/24.

6 Council Regulation (EC) No 1647/2006 of 7 November 2006 amending Regulation (EC) No 974/98 on the introduction of the euro, OJ L 309, 9.11.2006, p. 2.

7 Council Regulation (EC) No 1086/2006 of 11 July 2006 amending Regulation (EC) No 2866/98 on the conversion rates between the euro and the currencies of the Member States adopting the euro, OJ L 195, 15.7.2006, p. 1.

8 CON/2006/36, OJ C 163, 14.7.2006, p. 10.

9 Guideline ECB/2006/10 of 24 July 2006 on the exchange of banknotes after the irrevocable fixing of exchange rates in connection with the introduction of the euro, OJ L 215, 5.8.2006, p. 44.

10 Guideline ECB/2006/9 of 14 July 2006 on certain preparations for the euro cash changeover and on frontloading and sub-frontloading of euro banknotes and coins outside the euro area, OJ L 207, 28.7.2006, p. 39.

11 CON/2006/29.

12 Recommendation ECB/2006/14 of 9 October 2006 to the Council of the European Union on the external auditors of Banka Slovenije, OJ C 257, 25.10.2006, p. 19.



membership of the Eurosystem from 1 January 2007. This included the regime for the allocation of monetary income of the euro area NCBs.<sup>13</sup> In addition, the ECB reviewed Slovenian regulations implementing the Eurosystem's legal framework for monetary policy and TARGET. Slovenian counterparties were consequently able to participate in the Eurosystem's main refinancing operations from 3 January 2007. The ECB also adopted a regulation on transitional provisions for the application of minimum reserves by the ECB following the introduction of the euro in Slovenia.<sup>14</sup> Finally, the ERM II agreement<sup>15</sup> was terminated for Banka Slovenije.

13 Decision ECB/2006/7 of 19 May 2006 amending Decision ECB/2001/16 on the allocation of monetary income of the national central banks of participating Member States from the financial year 2002, OJ L 148, 2.6.2006, p. 56.

14 Regulation ECB/2006/15 of 2 November 2006 concerning transitional provisions for the application of minimum reserves by the ECB following the introduction of the euro in Slovenia, OJ L 306, 7.11.2006, p. 15.

15 Agreement of 21 December 2006 between the ECB and the national central banks of the Member States outside the euro area amending the Agreement of 16 March 2006 between the ECB and the national central banks of the Member States outside the euro area laying down the operating procedures for an exchange rate mechanism in stage three of economic and monetary union, OJ C 14, 20.1.2007, p. 6.



### 3 OPERATIONAL ASPECTS OF THE INTEGRATION OF BANKA SLOVENIJE INTO THE EUROSISTEM

Following the ECOFIN Council's decision of 11 July 2006 on Slovenia's adoption of the euro on 1 January 2007, the ECB conducted technical preparations with a view to fully integrating Banka Slovenije into the Eurosystem. In line with the provisions of the Treaty, Banka Slovenije joined the Eurosystem with exactly the same rights and obligations as the NCBs of the EU Member States that had already adopted the euro.

The technical preparations for the integration of Banka Slovenije into the Eurosystem were conducted in close cooperation with Banka Slovenije and, where appropriate, in a multilateral manner with the 12 NCBs of the euro area. These preparations covered a wide range of areas, notably financial reporting and accounting, monetary policy operations, foreign reserve management and foreign exchange operations, payment systems, statistics and banknote production. In the field of operations, preparations involved extensive testing of the instruments and procedures for the implementation of monetary policy and foreign exchange operations.

#### 3.1 MONETARY POLICY OPERATIONS

Slovenia's adoption of the euro on 1 January 2007 meant that credit institutions located in Slovenia became subject to the Eurosystem's reserve requirements as from that date. However, as 1 January 2007 fell almost in the middle of the regular Eurosystem reserve maintenance period running from 13 December 2006 to 16 January 2007, transitional provisions had to be made for the application of minimum reserves in Slovenia during this maintenance period. Transitional provisions were also needed for the calculation of the reserve base of the Slovenian counterparties. The list of the 27 Slovenian credit institutions subject to the Eurosystem's reserve requirements was published on the ECB's website for the first time on 29 December 2006.

The accession of Slovenia to the euro area increased the aggregate reserve requirements of euro area credit institutions by €0.3 billion. The autonomous liquidity factors in the balance sheet of Banka Slovenije contributed, on average, an overall liquidity provision of €3.5 billion in the period from 1 to 16 January 2007. In order to obtain a full picture of the liquidity effects of the accession of Slovenia, account had to be taken of the fact that some of the monetary policy operations conducted by Banka Slovenije in 2006 would not mature until 2007. These included some fixed-term deposits collected from counterparties and debt certificates issued by Banka Slovenije. The average value of these instruments amounted to €2.3 billion in the period from 1 to 16 January 2007. The net average liquidity surplus contributed by Slovenia to the euro area in this period, therefore, amounted to €0.9 billion.

The ECB took account of the impact on euro area liquidity conditions by adjusting the allotment amounts in its main refinancing operations already at the beginning of 2007.

On 1 January 2007 Banka Slovenije also adopted the single collateral framework of the Eurosystem and reported eligible Slovenian assets of €6.3 billion. These assets had been added to the list of eligible assets published on the ECB's website on 29 December 2006, and became eligible for Eurosystem credit operations as of 1 January 2007.

#### 3.2 CONTRIBUTION TO THE ECB'S CAPITAL, RESERVES AND FOREIGN RESERVE ASSETS

On joining the ESCB on 1 May 2004, Banka Slovenije paid up 7% of its share of the subscribed capital of the ECB as a contribution to the ECB's operational costs. In accordance with Article 49 of the Statute of the ESCB, Banka Slovenije paid up the remaining part of its subscription on 1 January 2007. Banka Slovenije's total subscribed share amounts to €18.4 million, equivalent to 0.3194% of the

ECB's subscribed capital of €5.761 billion as at 1 January 2007.

At the beginning of 2007, in accordance with Articles 30 and 49.1 of the Statute of the ESCB, Banka Slovenije transferred foreign reserve assets (of €191.6 million) to the ECB in proportion, based on its share in the ECB's subscribed capital, to the foreign reserve assets already transferred to the ECB by the other euro area NCBs. Of the total contribution, 15% was made in gold and 85% in US dollar-denominated assets. Banka Slovenije and the Banque centrale du Luxembourg manage this US dollar-denominated portfolio as agents of the ECB, thus forming the ECB's first pooled foreign reserve portfolio. In connection with the transfer of foreign reserve assets to the ECB, Banka Slovenije was credited with a euro-denominated claim on the ECB.

## 4 THE SLOVENIAN CASH CHANGEOVER

On 1 January 2007 euro banknotes and coins were put into circulation in Slovenia. After a dual circulation period of two weeks, they had fully replaced the Slovenian tolar banknotes and coins.

In preparation for this event, the Governing Council on 14 July 2006 adopted a guideline on certain preparations for the euro cash changeover and on frontloading and sub-frontloading of euro banknotes and coins outside the euro area.<sup>16</sup> This guideline, which largely mirrors the legal framework adopted for the cash changeover in 2002, formed the basis for Banka Slovenije's national cash changeover framework.

Banka Slovenije established the legal framework for parties involved in the frontloading and sub-frontloading of euro banknotes and coins in Slovenia. Procedures and methods were also put in place for the exchange of tolar banknotes and coins for euro banknotes and coins, and the conditions for transport, storage, security, the provision of collateral and statistical monitoring were set out.

To prepare for the cash changeover, as well as to cover the estimated national demand for the whole of 2007, the Eurosystem provided Banka Slovenije with a total of 94.5 million euro banknotes, with a face value of €2,175 million, from its stocks. For geographical and logistical reasons, the Oesterreichische Nationalbank performed the physical delivery on behalf of the Eurosystem. Following a public tender, Slovenia's euro coins were produced by Mint of Finland. A total of 296.3 million euro coins were minted, with a face value of €104 million.

Banka Slovenije began frontloading euro coins to credit institutions on 25 September 2006 and euro banknotes on 29 November 2006. Sub-frontloading, i.e. the delivery of euro banknotes and coins to professional third parties (such as retailers and the cash-operated machine industry) by credit institutions, took place in the course of December. In parallel, 150,000 euro coin starter kits for retailers, each worth

€201, and 450,000 euro coin kits for private households, each worth €12.52, were prepared in order to ensure the widespread distribution of coins before the launch. By the end of 2006 Banka Slovenije had frontloaded to banks 100% of the euro banknotes and coins needed for the cash changeover, paving the way for a smooth and rapid changeover.

Another factor contributing to the efficiency of the cash changeover was the quick conversion of automated teller machines (ATMs) and point-of-sale (POS) terminals: all publicly accessible ATMs and all POS terminals were converted on the first day of the changeover. The conversion of vending machines was completed within 15 days.

Article 52 of the Statute of the ESCB requires the Governing Council to take the necessary measures to ensure that banknotes denominated in currencies which are irrevocably fixed to the euro be exchanged by the euro area NCBs at par value. In line with this requirement, and following the adoption on 24 July 2006 of Guideline ECB/2006/10 on the exchange of banknotes after the irrevocable fixing of exchange rates in connection with the introduction of the euro<sup>17</sup>, the euro area NCBs ensured that, for the first two months of 2007, banknotes denominated in tolar, up to a value of €1,000 for any one party/transaction on a given day, could be exchanged for euro at par value in at least one location in their respective countries. Banka Slovenije will redeem tolar banknotes for an unlimited period and tolar coins for ten years.

### THE INFORMATION CAMPAIGN ON THE INTRODUCTION OF THE EURO

In 2006 the ECB, in cooperation with Banka Slovenije, organised an information campaign in preparation for the introduction of the euro in Slovenia on 1 January 2007. The objective of

<sup>16</sup> OJ L 207, 28.7.2006, p. 39.

<sup>17</sup> OJ L 215, 5.8.2006, p. 44.

the information campaign was to familiarise cash handlers and the general public with the visual appearance and security features of the euro banknotes and coins, as well as the cash changeover procedures. As part of the campaign, more than 700,000 information leaflets produced by the ECB on the euro banknotes and coins, together with a calculator provided by Banka Slovenije, were sent to Slovenian households. Posters and a credit card-sized leaflet depicting the security features of the euro banknotes were distributed, as were guides for people who regularly handle cash at work. Furthermore, the Slovenian business community was provided with first-hand information on the visual appearance and security features of the euro banknotes and coins to be used in its own information material. A two-day seminar for representatives of the Slovenian media was held at the ECB and provided in-depth information about the organisation, responsibilities and activities of the ECB and the Eurosystem. Subsequently, a “€ Conference Slovenia 2007” was organised by Banka Slovenije in cooperation with the ECB in order to provide a forum to exchange experiences and foster dialogue on the economic impact of the euro introduction and on the cash changeover. The conference, which was held on 15 January 2007, was attended by representatives from the business community, public authorities and the media.



## CHAPTER 4

# FINANCIAL STABILITY AND INTEGRATION



# I FINANCIAL STABILITY

The Eurosystem contributes to the smooth conduct of policies pursued by the competent national authorities relating to the prudential supervision of credit institutions and the stability of the financial system. It also offers advice to these authorities and the European Commission on the scope and implementation of Community legislation in these fields.

## I.1 FINANCIAL STABILITY MONITORING

The ECB, in collaboration with the ESCB's Banking Supervision Committee (BSC), analyses risks to financial stability in order to assess the financial system's shock-absorbing capacity.<sup>1</sup> Banks are the main focus of monitoring activities, as they are still the primary intermediaries of funds and thus also the main potential conduit for risk in the financial system. At the same time, the increasing importance of other financial institutions and markets and their linkages with banks requires vulnerabilities in these components of the financial system to be monitored by the ESCB.

### CYCLICAL DEVELOPMENTS

In 2006 the financial condition of euro area financial institutions continued to improve, consolidating upon the improvements witnessed since 2003. Financial institutions have benefited from benign macroeconomic and financial conditions, despite the incipient tightening of global liquidity supply, and in the case of insurance companies, from the absence of major natural disasters. The vulnerability of the euro area financial institutions to adverse developments has diminished considerably on account of sustained positive results, and the outlook remains positive; however, some risks remain. Despite some rebalancing of international growth patterns and recent declines in oil prices, large global financial imbalances remain a source of medium-term risk; moreover, the potential for an adverse turn in the credit cycle may have increased, as might the potential for an abrupt unwinding of leveraged speculative positions. At the same

time, euro area banks' exposure to credit risk has grown following the expansion of bank lending, although banks have used credit risk transfer products to shed risk. Some banks have also become increasingly exposed to short-term leveraged financing, especially in relation to private equity deals, where competition for increasingly large deals may have put pressure on banks' credit standards. Finally, the persistently low volatility in the financial markets may also have encouraged banks to expand their positions in various asset classes, thereby increasing their exposure to market risk. In this context, banks' increasing use of new and complex financial instruments in the wholesale market has given rise to new counterparty risks related to legal and reputational issues.

The profitability of large euro area banks strengthened further in 2006. Although the uneven transition to the International Financial Reporting Standards (IFRS) across the euro area affects the current assessment, the comparability of key performance indicators has been broadly preserved, and profitability figures signal a broad-based improvement. The high profitability was mostly driven by strong lending growth both to households and to the non-financial corporate sector, although net interest income growth was subdued by persistently compressed interest rate margins and the flat yield curve. Fees and commission income as well as trading revenues also supported income growth. In addition, profits were supported by continued cost-containment measures and impairment charges which reached new historic lows as a result of improved risk management by banks and a very benign credit environment. Looking ahead, although several banks expect a deterioration in the credit cycle in the short run, most large euro area banks are in a comfortable position to

<sup>1</sup> Since the end of 2004 the ECB has published a biannual report on the stability of the euro area financial system entitled "Financial stability review". In 2006 it also published the fifth editions of the reports on "EU banking sector stability" and "EU banking structures". These publications present the main findings of the regular monitoring by the BSC of banking sector structure and stability, and are available on the ECB's website.

absorb the ensuing gradual increase in impairment charges.

The solvency ratio of euro area banks decreased slightly in 2006, owing to a strong increase in risk-weighted assets; however, their solvency levels remained strong and comfortably exceeded regulatory requirements. This was the result of sustained growth in income over the previous three years, which has supported substantial internal capital generation, and the retention of profits.

According to the latest assessment by European insurance supervisors, profitability in the euro area insurance industry continued to rise in 2006, extending the improvement in the sector's financial conditions since 2004. The recent growth in total real premiums has been stronger for life than for non-life insurance undertakings. The positive performance of life insurance undertakings has been supported by strong sales of unit-linked products against a background of rising equity prices and by increasing sales of other, more traditional products. The substantial structural transformation of the euro area life insurance market, which is being driven mainly by ongoing tax reform and a longer-term rise in the penetration rate of insurance in the economy, has also supported premium growth. In the non-life sector, premium rate hikes, which drove premium growth in previous years, have slowed down recently, largely reflecting intense competition in the sector. The financial position of pension funds improved further from previous years, but continued to be negatively affected by low bond yields in 2006.

The global hedge fund and private equity industries continued to grow in 2006. Following net outflows from the hedge fund industry during the final quarter of 2005, aggregate net inflows recovered in the first half of 2006, rising to levels close to the peak observed during 2004. Some hedge funds, especially those with directional strategies (i.e. based on expectations of the direction of market changes), endured financial losses, mainly as a



consequence of turbulence in financial markets during May and June 2006 and adverse developments in the natural gas market in August and September. Nevertheless, the industry as a whole continued to deliver positive returns.

#### **STRUCTURAL DEVELOPMENTS**

Structural developments occurring in the banking industry may affect the nature and stability of the wider financial system. The long-term trends in consolidation, integration and internationalisation in the EU banking sector continued throughout 2006. These developments can benefit customers through increased competition, better service quality and innovation, but at the same time they carry the risk of facilitating the spread of financial disturbances across borders. Although the observed trends are common to most Member States, there are significant differences among them, in particular regarding consolidation, which is most prevalent in the more mature economies.

Consolidation, as reflected in the decrease in the number of credit institutions, took place in parallel with a pick-up in cross-border mergers and acquisitions (M&As) in the EU banking sector during 2005 and the first half of 2006.

The completion of several large deals and the higher level of M&A activity may indicate an end to the declining trend observed from 2000. Recent cross-border M&A activity has also increasingly involved retail market intermediaries.

The sustained growth in banking assets has been accompanied by disintermediation, as the assets of non-bank financial intermediaries (such as insurance companies and investment and pension funds) have also grown considerably. Banks appear to be adjusting to this trend by expanding their fee-earning activities, including investment banking and asset management. The resulting diversification of income sources may contribute to lowering banks' risks and to stabilising their profits. However, channelling risks away from banks to other, often less regulated, financial intermediaries may also increase the overall level of risk uncertainty.

Important demographic changes are occurring in the EU which may also have an impact on the banking sector. Changes in life expectancy, fertility rates and migration may result in downward pressure on banks' intermediation ratios and on the demand for consumer credit and mortgages, thus reducing net interest income. Banks may respond by offering new products tailored to older customers as well as asset management and advisory services, leading to an increase in non-interest income. They may also diversify internationally, becoming more active in emerging market economies with different demographic structures.

The funding base of EU banks continues to be largely made up of customer deposits, although these have become more diversified, both at the sectoral and the geographical level. The increasing commercialisation of more complex deposit instruments to a wide investor base may expose banks to reputational risks. There has been a slight shift towards (mainly short-term) market funding, while banks have become increasingly reliant on instruments such as

mortgage bonds and securitisation. Such instruments offer scale advantages but are more expensive than funding via deposits. A growing centralisation of intra-group liquidity management has also been observed, which has clear advantages in terms of the efficiency of internal capital flows, but can also result in higher intra-group and cross-border contagion risks.

## **1.2 COOPERATION IN FINANCIAL CRISIS SITUATIONS**

The arrangements for handling financial crises between the authorities responsible for safeguarding financial stability at the EU level were further enhanced in the course of 2006. The Capital Requirements Directive, which was adopted in June 2006, transposes the revised capital requirements for credit institutions and investment firms into EU legislation and sets out a number of provisions that have a direct bearing on emergency situations. In particular, it specifies the information flows between the authorities potentially involved in cross-border crises, including supervisors and central banks.

The BSC and the Committee of European Banking Supervisors (CEBS) made significant progress in identifying central banking and supervisory practices regarding information exchange and cooperation in the event of a financial crisis at the cross-border level. The aim of this work was to enhance the operational effectiveness of the existing arrangements and to identify areas where further progress is needed.

In order to enhance understanding of the practical implementation of the EU arrangements, several financial crisis simulation exercises were organised. In April 2006 an EU-wide simulation exercise took place under the aegis of the Economic and Financial Committee with the aim of testing the Memorandum of Understanding (MoU) that had been concluded

in 2005.<sup>2</sup> The ESCB contributed to the preparation and running of the exercise.

The central banks of the euro area also carried out financial crisis simulation exercises to test the ability of the Eurosystem to address effectively a financial crisis with the potential for cross-border systemic implications. The most recent exercise took place in May 2006 and involved the conduct of monetary policy operations, the oversight and operation of market infrastructures, and the safeguarding of financial stability. Given the high degree of financial integration within the euro area, the exercise placed particular emphasis on the interlinkages between financial institutions, markets and market infrastructures, both on a national and a cross-border basis. The exercise confirmed the preparedness of the Eurosystem for dealing with potentially systemic events that might affect the euro area financial system.

<sup>2</sup> For more details on this MoU, see the ECB's Annual Report 2005, pp. 120-121.

## 2 FINANCIAL REGULATION AND SUPERVISION

### 2.1 GENERAL ISSUES

On 5 December 2005 the European Commission released its White Paper on Financial Services Policy 2005-2010. The document, which will shape the Commission's medium-term policy programme in the field of financial services, aims to support further integration in the EU financial sector by dynamically consolidating the regulatory framework already set in place by the Financial Services Action Plan. The overall objective of the White Paper was broadly supported by the Eurosystem in its contribution to the Commission's public consultation on the document.<sup>3</sup> In view of the fact that the White Paper is now being implemented, the ECB will continue to cooperate with the Commission and monitor its policy agenda, as well as ensuring the timely involvement of the Eurosystem in its fields of competence. The ECB will also provide technical support for the Commission's actions that may have a bearing on financial stability and on the integration of European financial markets.

As regards the Lamfalussy framework<sup>4</sup>, the Commission and the European Parliament agreed on a revision of the comitology procedures (the system of committees through which Community legislation is adopted) which grant the Parliament scrutiny powers over the measures adopted by the Commission to implement Level 1 framework legislation. This will enable the Lamfalussy committees to continue to contribute effectively to the process for EU financial services legislation.<sup>5</sup> The adoption by the ECOFIN Council of recommendations made by the Financial Services Committee<sup>6</sup> will result in the further development of some existing supervisory tools in order to fully exploit the Lamfalussy framework. In this context, CEBS continued its work on the implementation of the Capital Requirements Directive with a view to delivering supervisory convergence in practice. The Committee of European Securities Regulators (CESR) also focused on delivering effective supervisory convergence in the securities sector (Level 3).

On 23 October 2006 the ECB published a report providing an overview of recent changes in the supervisory structures of the then 25 EU Member States and two acceding countries.<sup>7</sup> The report identified the following trends. First, there is a move towards consolidation among supervisory authorities at the national level, with the aim of enhancing efficiency and effectiveness. The reasons for the unification of supervisory responsibilities may include the blurring of demarcation lines between financial sectors or the existence of a relatively small financial market. However, not all Member States use the same supervisory model, as the institutional structure chosen depends on the specific national setting. Second, central banks play a role in nearly all national supervisory systems. In some cases, they have direct supervisory responsibilities or have concluded cooperation arrangements with the national supervisors according to which they undertake certain supervisory tasks. In a number of countries, the search for increased efficiency has led to arrangements under which resources are shared between central banks and supervisors. Finally, nearly all Member States are moving towards formal agreements to ensure cooperation and the sharing of information between central banks and banking supervisors. Arrangements involving main

<sup>3</sup> See the ECB's Annual Report 2005, p. 122.

<sup>4</sup> "Final Report of the Committee of Wise Men on the Regulation of European Securities Markets", 15 February 2001. This report is available on the European Commission's website. See also the ECB's Annual Report 2003, p. 111. The Lamfalussy approach is a four-level process for approving securities, banking and insurance legislation. Level 1 consists of framework principles, in the form of directives or regulations, to be adopted by normal EU legislative procedures. Level 2 arranges for the implementation of detailed measures following the Level 1 framework principles. Level 3 consists of enhanced cooperation and networking among EU supervisors to ensure a consistent and equivalent transposition of Level 1 and Level 2 legislation. Level 4 consists of strengthened enforcement, notably with action by the Commission to enforce Community law, underpinned by enhanced cooperation between Member States, their regulatory bodies and the private sector.

<sup>5</sup> See Council Decision of 17 July 2006 amending Decision 1999/468/EC, OJ L 200, 22.7.2006, p. 11.

<sup>6</sup> "Report on financial supervision", Financial Services Committee, February 2006.

<sup>7</sup> A similar review was conducted in 2003. Both reports are available on the ECB's website.



policy issues or crisis management often include finance ministries.

## 2.2 BANKING

The ECB continued to contribute in 2006 to the work of CEBS and the Basel Committee on Banking Supervision (BCBS) through its participation in the main committees and some of their substructures. Following the definition of the conceptual elements of the revised framework for the “International Convergence of Capital Measurement and Capital Standards” (“Basel II”), the BCBS agreed in May 2006 to keep the quantitative parameters unchanged and thereby finalised the revised framework. This decision was supported by the results of the fifth Quantitative Impact Study (“QIS 5”), a data collection exercise organised by the BCBS to assess the impact of the revised capital rules on banks. CEBS played a prominent role in carrying out the QIS 5 at the EU level. Overall, the QIS 5 results proved to be consistent with the incentive structure built into the framework for credit institutions to move towards the more advanced approaches for calculating their capital requirements.

The Capital Requirements Directive was adopted in June 2006, transposing the revised capital rules into Community law. The legislative process with regard to Basel II is, therefore, complete at the EU level, and the revised capital framework, including the use of the more advanced approaches, will be fully operational in the EU from January 2008. As of January 2007 credit institutions may already adopt the less advanced approaches for calculating the capital requirements for credit and operational risk. The transitional arrangements for the scheduled implementation of the framework in the United States differ from those in the EU, with the United States intending to make only the most advanced methods available to its banks, with a one-year delay. The ECB continues to monitor these developments in order to assess the possible impact for the EU banking sector.

On 18 December 2006 the ECB issued an opinion on the Commission proposal to amend the existing framework for the prudential assessment of acquisitions and increases of qualifying shareholdings in financial institutions.<sup>8</sup> The proposal aims to clarify the applicable procedure and assessment criteria. The ECB welcomed the proposal as an important measure to ensure that such assessments follow strictly prudential criteria, are transparent vis-à-vis market participants and are implemented consistently across countries. At the same time, the ECB raised a number of concerns regarding certain elements of the proposal. In particular, the ECB proposed that the assessment criteria be aligned more closely with the criteria considered during the authorisation process and that it be clarified that the target institution is expected to comply with all applicable prudential requirements. Moreover, the ECB suggested that the Commission reconsider, in close cooperation with supervisory authorities, the proposed time limits to ensure sound and reasoned decisions.

## 2.3 SECURITIES

The new regulatory framework for the securities sector provided for by the Financial Services Action Plan was completed in 2006 with the adoption of the outstanding Level 2 implementing measures concerning the Markets in Financial Instruments Directive and the Transparency Directive. Furthermore, in early 2007 the Commission adopted a Level 2 directive with a view to clarifying certain provisions of Council Directive 85/611/EEC prescribing the assets which are eligible for investment by undertakings for collective investment in transferable securities (UCITS). This will ensure the consistent implementation and interpretation of the UCITS legislation across the EU. Given the importance of these measures for the integration of European financial markets and the enhancement of financial stability, the ECB has closely followed,

<sup>8</sup> CON/2006/60.



and contributed to, the work in this area through its participation in the European Securities Committee.

The Eurosystem regularly assessed whether the Level 2 implementing measures to be adopted by the Commission were within the ECB's advisory competence, thereby potentially triggering a formal ECB opinion. An ECB opinion was adopted on the above-mentioned Directive concerning the eligible assets for UCITS, since the draft directive contained provisions that might affect the functioning of European money markets, which is of importance to the implementation of the euro area's monetary policy.

Finally, following the European Commission's public consultation in 2005 on a Green Paper – to which the Eurosystem contributed – and the work by market expert groups, in which the ECB also participated, the Commission published a White Paper on the enhancement of the EU framework for investment funds in November 2006. It identified a package of measures designed to simplify the operating environment for investment funds. Such measures will include targeted adjustments to the UCITS Directive to simplify the existing rules allowing investment funds to be marketed across borders in the EU, to expand the freedoms available to UCITS funds and their managers, and to enhance supervisory cooperation. The objectives and actions envisaged by the Commission's White Paper are broadly supported by the ECB.

## 2.4 ACCOUNTING

Throughout the year, the ECB continued to contribute to work being carried out in the area of accounting via its participation in the accounting subgroups of the BCBS and in CEBS, as well as in the Standards Advisory Council of the International Accounting Standards Board.

Following its mandate to assess regulatory and supervisory developments from a financial stability perspective, the BSC produced a report on the assessment of accounting standards.<sup>9</sup> The report focuses on the recent introduction in Europe of a new accounting framework, based on the IFRS, analysing its possible consequences for the banking sector and other financial firms and its appropriateness from a system-wide financial stability perspective. The underlying premise is that accounting is relevant for financial stability and should, when possible, effectively contribute to further strengthening it. The report presents ten general benchmark criteria for assessing accounting standards. Based on an analysis of the extent to which the IFRS meet these criteria, the report identifies the positive aspects of certain features of the IFRS, as well as concerns and possible areas for improvement from a financial stability perspective. These proposals focus on three main areas, namely the reliability of "fair" values, the economic basis for hedge accounting and the provisioning regime for credit risk.

<sup>9</sup> The report is available on the ECB's website.

### 3 FINANCIAL INTEGRATION

The Eurosystem has a keen interest in financial integration in Europe, as a well-integrated financial system enhances the smooth and effective transmission of monetary policy impulses in the euro area and has implications for the Eurosystem's task of safeguarding financial stability. Financial integration also supports the efficient operation and smooth functioning of clearing and payment systems. Furthermore, financial integration – a priority Community objective – can help to promote the development of the financial system, raising the potential for economic growth.

The Eurosystem distinguishes between four types of activity through which it contributes to enhancing European financial integration: i) raising awareness of and monitoring financial integration, ii) acting as a catalyst for private sector activities by facilitating collective action, iii) giving advice on the legislative and regulatory framework for the financial system and direct rule-making, and iv) providing central banking services that also foster financial integration. The ECB continued its activities in all four areas throughout 2006.

#### RAISING AWARENESS OF AND MONITORING FINANCIAL INTEGRATION

In September 2006 the ECB published a report on indicators of financial integration for the main segments of the euro area financial system.<sup>10</sup> This report extended the scope of the analysis provided in 2005, in particular by including additional indicators relating to banks and financial infrastructures. The analysis of banking markets has been enhanced by adding indicators on the cross-border presence of euro area banks and on corporate banking. The indicators related to financial infrastructures are allocated to the main financial market served by the respective infrastructure, in recognition of the fact that financial infrastructures play a significant role in the integration of financial markets. Furthermore, quantity-based indicators of financial integration have been systematically computed for the main market segments. As further advances are made in research and economic

analysis and more statistics become available, the range of indicators is expected to be further extended, for example with indicators on the integration of insurance markets. Taking a broader perspective, the ECB will use the quantitative indicators to monitor progress in financial integration, to identify the areas where integration is lacking, and to underpin its analysis of topical, policy-relevant issues in the field of financial integration.

In 2006 the ECB continued its involvement in the Research Network on Capital Markets and Financial Integration in Europe, which it runs with the Center for Financial Studies. The network continued its series of conferences with academics, market participants and policy-makers with the active participation of NCBs. Its seventh conference, hosted by the Deutsche Bundesbank on 28-29 September 2006, focused on “Financial system modernisation and economic growth”. The eighth conference on “Financial integration and stability in Europe”, hosted by the Banco de España, took place on 30 November-1 December 2006.

In the context of the network, the ECB each year awards five “Lamfalussy Fellowships” to young researchers. One of the reasons for the ECB's interest in promoting research in this area is that financial integration is expected to have implications for the development of the financial system and for economic growth. The ECB's work on financial integration is therefore closely linked to its wider analysis of factors supporting the adequate functioning of financial systems. Work in this area continued in 2006, with the aim of setting out a conceptual framework for measuring financial system performance.

On 20 September 2006 the ECB published a report on differences in MFI interest rates across euro area countries, which was prepared by the Monetary Policy Committee and the

<sup>10</sup> “Indicators of financial integration in the euro area”, September 2006. For the biannual update of the indicators, see the ECB's website at <http://www.ecb.int/stats/finint/html/index.en.html>

Statistics Committee. As a follow-up to the report, the Eurosystem now releases tables providing an overview of 15 types of average deposit and lending interest rates in each euro area country. By making available detailed and comprehensive information on average MFI interest rates, the Eurosystem aims to ensure that comparisons across countries are made on a well-informed basis. On 25 October 2006 the ECB published its annual report on EU banking structures (see also Section 1.1 of this chapter).

Finally, in addition to the MFI statistics, the ESCB also develops statistical information on non-MFIs as institutional investors (e.g. investment funds). These statistics are relevant from a monetary policy perspective and also assist in the monitoring of the financial integration process. An ECB regulation on the statistical reporting requirements for investment funds is under preparation. Work is also under way to assess the need for and feasibility of enhancing the available statistical information on insurance corporations and pension funds, focusing on ways to improve the availability of intra-annual (mainly quarterly) financial data.

#### **ACTING AS A CATALYST FOR PRIVATE SECTOR ACTIVITIES**

Progress in European financial integration depends to a large extent on private sector initiatives to make use of the existing opportunities for cross-border business. Public authorities support such private coordination efforts. In 2006 the Eurosystem acted as a catalyst for two such initiatives: the Short-Term European Paper (STEP) initiative and the Single Euro Payments Area (SEPA) initiative.

The ECB has supported the STEP initiative since its inception in 2001. The STEP initiative aims to foster the integration of the European markets for short-term paper through the convergence of market standards and practices. On 11 July 2006 the ECB held a press conference together with ACI – The Financial Markets Association and the European Banking Federation to mark the official launch of the

STEP market. The Eurosystem's contribution to the STEP market focuses on two activities. First, the ECB and nine euro area NCBs will, until June 2008, provide technical assistance to the STEP Secretariat in the STEP labelling process, whereby the ultimate responsibility for granting and withdrawing the STEP label rests with the STEP Secretariat. Second, the ECB will regularly produce statistics on yields and volumes in the STEP market and publish them on its website.

The STEP statistics are expected to play an important role in fostering the integration of this market by creating greater market transparency. Following a gradual approach, the ECB first published STEP statistics on monthly outstanding amounts, with full coverage, from September 2006 and subsequently prepared for the publication of STEP statistics on volumes and yields on a daily basis with selected data providers. It is planned that daily statistics for all data providers will be published from 2008. On 14 September 2006 the Governing Council decided that the STEP market would be accepted as a non-regulated market for collateral purposes in the Eurosystem credit operations as soon as the STEP statistics on yields were published on the ECB's website.

The SEPA project was launched in 2002 by the European Payments Council (EPC) with the aim of achieving a fully integrated market for retail payment services in the euro area, and the Eurosystem has played a catalyst role since the project's inception. In 2006 the ECB provided an updated overview of the progress achieved in completing the SEPA and specified its expectations for the period ahead.<sup>11</sup> On 4 May 2006 the ECB and the European Commission issued a joint statement laying down their vision of the SEPA and stating their intention to collaborate closely on the realisation of the SEPA. In particular, the European banking industry and the other relevant stakeholders

<sup>11</sup> "Towards a Single Euro Payments Area – Objectives and Deadlines (Fourth Progress Report)", February 2006.



were encouraged to create the conditions for the realisation of the SEPA by the beginning of 2008, and to reach a critical mass of SEPA transactions by the end of 2010. The Eurosystem organised a number of meetings in 2006 with different stakeholders, i.e. SEPA high-level meetings with the banking industry as well as meetings with end-users and infrastructure and card providers. The ECB also sponsored the SEPA congress during Euro Finance Week in November 2006. In addition, the ECB participated as an observer in EPC plenary meetings and working groups. Throughout 2006 the Eurosystem continued to provide assistance to the banking industry with regard to the design and preparation of the new SEPA instruments and frameworks, such as the creation of a common set of rules for the SEPA credit transfer and SEPA direct debit instruments, detailed guidance for the banking industry concerning card payments<sup>12</sup> and technical standards and implementation guidelines to ensure the smooth and secure functioning of the different schemes. With regard to infrastructures, the Eurosystem urged the market to proceed with the timely development of retail payment systems which are able to process the SEPA instruments and are fully interoperable. It also recommended that market infrastructures exploit economies of scale and use modern technology to reduce costs. The Eurosystem also contributed to the preparations for the implementation of and migration to the SEPA and continued to support the SEPA project through its communication

tools (such as press releases, reports, speeches and, more recently, the SEPA brochure).

#### **ADVICE ON THE LEGISLATIVE AND REGULATORY FRAMEWORK FOR THE FINANCIAL SYSTEM AND DIRECT RULE-MAKING**

The ECB and the Eurosystem regularly contribute to the development of the EU legislative and regulatory framework by providing advice on the main policy developments and initiatives under way.

Activity with regard to the EU framework for financial supervision focused in 2006 on safeguarding the effective implementation of the revised institutional framework (see also Section 2 of this chapter). The European Commission's White Paper on Financial Services Policy 2005-2010, to which the Eurosystem contributed, and the Financial Services Committee's "Report on financial supervision", to which the ECB contributed, identify adequate policy measures in this regard. As part of its advisory role in accordance with Article 105(4) of the Treaty, the ECB regularly provides advice on Commission proposals for Level 2 legislation (see Section 2).

The ECB continued its work on the integration of European mortgage markets following the

<sup>12</sup> For more details, see "The Eurosystem's view of a 'SEPA for cards'", 20 November 2006.

Eurosystem's contribution at the end of 2005 to the European Commission's Green Paper on this subject.<sup>13</sup> The further integration and development of mortgage (and other retail banking) markets is relevant for monetary policy transmission in the euro area. Furthermore, financial integration can have important financial stability implications. Following its Green Paper consultation, the Commission is expected to publish a White Paper in May 2007. The ECB contributes to integration in this field, among other things, through its participation in the Commission's expert group on mortgage funding and in the context of the European Financial Markets Lawyers Group (EFMLG) regarding legal obstacles to cross-border securitisation in the EU.

Finally, in the field of financial infrastructure, the ECB provided input on issues related to the integration of securities settlement systems and of payment systems. The current fragmentation of the EU securities clearing and settlement infrastructure presents a major obstacle to the further integration of European bond and equity markets. In July 2006 the European Commission highlighted the importance of market-led initiatives in this area and suggested that the clearing and settlement industry should work on a code of conduct for best market practice. This "European Code of Conduct for Clearing and Settlement" was signed on 7 November 2006. It aims to foster competition and improve efficiency, for example by ensuring transparency of prices and services. At the same time, public policy efforts to reduce legal and fiscal barriers continued. The ECB is closely involved in this work through its participation in the Clearing and Settlement Advisory and Monitoring Expert Group and in the Legal Certainty Group. The ECB also monitors the work of the Clearing and Settlement Fiscal Compliance Expert Group, which provides advice to the Commission on possible ways of overcoming the tax-related barriers to cross-border clearing and settlement in the EU. With respect to integration in payment services, the technical and business barriers are being addressed in the context of

the SEPA project (see above), while the ECB issued an opinion on the Commission's proposal for a directive on payment services in the Internal Market which aims to remove the legal barriers.<sup>14</sup> The ECB welcomed the proposed directive to the extent that it would establish a comprehensive legal framework for payment services in the EU. It considered that the harmonisation of regulatory requirements for payment services would provide legal certainty for the extended cross-border provision of such services, and that timely adoption and transposition of the directive would support the efforts of the banking industry to establish the SEPA. The ECB pointed out that non-bank payment service providers should be subject to regulation in proportion to the scope of their activities. The adoption of the proposed directive should not be delayed because the introduction of SEPA-compliant national schemes on 1 January 2008 and full migration to such schemes by 2010 could be put at risk. In this regard, Titles III and IV of the proposed directive are crucial as they introduce a harmonised set of rules regarding information requirements, authorisation, execution time and liability in respect of payment transactions.

#### **PROVIDING CENTRAL BANKING SERVICES WHICH FOSTER FINANCIAL INTEGRATION**

On 21 October 2005 the Eurosystem confirmed that TARGET2 would start operations on 19 November 2007. The Eurosystem continued its work on the new system in 2006 (see Section 2.2 of Chapter 2).

With a view to reaping the full benefits of the establishment of the TARGET2 system, the Eurosystem started to explore the possibility of providing settlement services in central bank money to CSDs for securities transactions in euro. The possibility provided by TARGET2 to centralise the cash settlement in a single account is likely to increase the market demand for also centralising the securities settlement through a

<sup>13</sup> "The European Commission's Green Paper on mortgage credit in the EU – Eurosystem contribution to the public consultation", 1 December 2005.

<sup>14</sup> COM(2005) 603 final.



single securities account. The objective of this new service, called TARGET2-Securities, will be to provide a common technical infrastructure for the euro settlement of securities transactions in central bank money by CSDs and to process both securities and cash settlements on a single technical platform (see Section 2.3 of Chapter 2).

On 20 October 2006 the ECB announced that the Governing Council had discussed market reactions to the informal consultation on the proposal to offer such a service and had asked the Payment and Settlement Systems Committee to prepare a feasibility study on the project.

With regard to the Eurosystem's collateral framework, the Eurosystem specified in 2006 the eligibility criteria for non-marketable assets to be included in the single list of collateral. These criteria were set out in "The implementation of monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures", which was published on 15 September 2006. The inclusion of non-marketable assets in the single list since 1 January 2007 marks the final step in the gradual replacement of the Eurosystem's two-tier collateral system.

Finally, the Governing Council decided on 3 August 2006 to extend beyond 2007 the correspondent central banking model for the cross-border transfer of collateral within the Eurosystem (see also Section 2.4 of Chapter 2).



## 4 OVERSIGHT OF MARKET INFRASTRUCTURES

Payment systems oversight is one of the Eurosystem's main tasks. By overseeing payment systems, in particular those that are systemically important<sup>15</sup>, the Eurosystem contributes to the safety and efficiency of financial infrastructures and, consequently, to the efficiency of payment flows for goods, services and financial assets in the economy. The close relationship between payment systems and securities clearing and settlement systems means that central banks in general and the Eurosystem in particular also take a strong interest in securities clearing and settlement. The overall aim pursued by the Eurosystem is to minimise systemic risk.

### 4.1 OVERSIGHT OF LARGE-VALUE EURO PAYMENT SYSTEMS AND INFRASTRUCTURES

The Eurosystem oversees all payment systems and infrastructures which process and/or settle euro transactions, including those managed by the Eurosystem itself. The Eurosystem applies the same oversight standards to both its own systems and those that are privately operated. These standards are the Core Principles for Systemically Important Payment Systems, defined by the G10 Committee on Payment and Settlement Systems (CPSS) and adopted by the Governing Council in 2001. In 2006 the Governing Council adopted business continuity expectations for systemically important payment systems. These now form an integral part of the Eurosystem's oversight framework and help to ensure a sufficient and consistent level of resilience across all systemically important payment systems which are located in the euro area and operate in euro.

#### TARGET

In accordance with the common TARGET oversight framework and objectives, the ECB and the NCBs perform regular and change-driven oversight activities with regard to the national RTGS systems which participate in or are connected to TARGET, as well as with regard to the ECB payment mechanism (EPM). When substantial changes are made to the

TARGET system, the relevant aspects are subject to an oversight review before becoming operational. In accordance with its common oversight policy, the Eurosystem in 2006 carried out an in-depth oversight assessment of the impact of connecting Eesti Pank's euro real-time gross settlement (RTGS) system to the existing TARGET system via the Banca d'Italia's RTGS system. It concluded that the connection would not have an adverse impact on the smooth functioning of TARGET. With regard to Slovenia's entry into the euro area, Banka Slovenije decided not to develop its own euro RTGS system, but to use the RTGS system of the Deutsche Bundesbank. As a result, an oversight review was not considered necessary as no new infrastructure was being introduced in TARGET.

The future TARGET2 system will have to observe the Eurosystem's oversight standards in the same way as any other systemically important euro payment system in the euro area and is therefore subject to an oversight review. Following the implementation of the general organisational framework for TARGET2 oversight, the ECB has been leading and coordinating TARGET2 oversight activities. The NCBs are primarily responsible for performing the oversight activities relating to the local features of the system, whenever such features are only relevant for the national environment. They also contribute to the oversight activities in relation to the central TARGET2 features. As TARGET2 is still in its design phase, the TARGET overseers made a preliminary oversight assessment in 2006 of the design of the system. The overseers continue to monitor the development of the TARGET2 system and will perform a comprehensive assessment before it goes live.

#### EURO1

EURO1 is the largest privately operated payment system for euro credit transfers

<sup>15</sup> A payment system is considered systemically important if a disruption within it could trigger or transmit further disruptions among participants and, ultimately, in the wider financial system.

operating in the euro area. It is operated by the clearing company of the Euro Banking Association, EBA CLEARING. EURO1 works on a multilateral net basis. The end-of-day positions of EURO1 participants are ultimately settled via the TARGET system. In 2006 the ECB's oversight activities focused on the assessment of a new liquidity management feature, the "liquidity bridge", prior to its implementation. The liquidity bridge aims to allow participating banks to move payment capacity to and from EURO1 on an intraday basis, enabling them to adapt their processing capacity in EURO1 to their individual payment needs. The oversight assessment of the liquidity bridge did not reveal any adverse impact on EURO1's observance of the Core Principles. The ECB will continue to monitor the functioning of this feature and any further developments in EURO1.

#### **CONTINUOUS LINKED SETTLEMENT SYSTEM**

The Continuous Linked Settlement (CLS) system provides settlement services for foreign exchange transactions in 15 major currencies around the world. Run by CLS Bank, it eliminates a significant amount of foreign exchange settlement risk by settling the two currency legs involved in foreign exchange trades simultaneously, i.e. on a payment-versus-payment basis, and only when sufficient funds are available. The continuous safety and efficiency of CLS is of prime importance to the Eurosystem, because the CLS system is, in terms of value, the largest payment system settling euro transactions outside the euro area. Within the CLS cooperative oversight arrangement under the lead of the Federal Reserve System, the ECB is the primary overseer for the settlement of euro transactions.

In December 2006 CLS settled an average of 290,000 foreign exchange transactions per day with an average daily settlement value equivalent to €2.6 trillion.<sup>16</sup> With a share of 19% of all transactions settled in CLS, the euro has continued to be the most important currency for settlement after the US dollar (46%). The

average daily value of CLS transactions settled in euro was €489 billion.

In 2006 the Eurosystem took part in a study conducted by the BIS among major foreign exchange market participants in order to identify the risk mitigation methods they use to reduce foreign exchange settlement risk. The results of this study will be available in 2007 and will form the basis of a central bank assessment of the G10 strategy to reduce foreign exchange settlement risk, as defined in the 1996 BIS report entitled "Settlement risk in foreign exchange transactions".

#### **BUSINESS CONTINUITY**

In May 2006 the Governing Council approved the "Business continuity oversight expectations for systemically important payment systems (SIPS)" report. The report aims to establish a harmonised oversight framework for business continuity in the euro area, thus promoting a level playing-field. It provides oversight guidance to SIPS operators in order to achieve sufficient and consistent levels of resilience by sustaining market efforts to improve recovery and resumption capabilities. It outlines specific expectations with regard to the implementation of a fully operational secondary site and emphasises the need to regularly test and train staff who maintain critical functions. Tests should be based on a variety of plausible scenarios and their results should be shared with other relevant stakeholders. Finally, the report outlines the need for SIPS i) to establish clear crisis management and communication procedures to respond to crisis events, ii) to have alternative means of communication for sharing information after a crisis and iii) to ensure that they have adequate channels of communication with the relevant authorities. Some of the expectations have an impact on critical participants in SIPS and the SIPS' third-party providers of outsourced critical services. The oversight

<sup>16</sup> Each foreign exchange trade consists of two transactions, one in each currency involved. Thus, in December 2006 CLS settled trades with an average daily value equivalent to around €1.3 trillion.

expectations should be implemented and tested by SIPS by June 2009 and by their critical participants and third-party providers of critical services by June 2010. The Eurosystem will perform regular reviews until June 2009 in order to measure the progress made by SIPS in implementing the expectations and to assess the risk of any possible delays.

In September 2006 the ECB organised a conference in order to share information and experience in this area and to discuss business continuity issues in an integrated euro area. It was attended by representatives of EU and non-EU central banks, financial institutions, and payment and securities market infrastructure operators.

#### **SWIFT**

SWIFT is not itself a payment or settlement system and, as such, is not a regulated entity. However, because of its systemic importance for the global financial market, the G10 central banks were of the opinion that SWIFT should be subject to cooperative oversight by central banks, with the Nationale Bank van België/Banque Nationale de Belgique acting as lead overseer. The oversight of SWIFT focuses on the objectives of security, operational reliability, business continuity and resilience of the SWIFT infrastructure. To ascertain whether SWIFT is pursuing these objectives, overseers regularly assess whether SWIFT has put in place appropriate governance arrangements, structures, processes, risk management procedures and controls to enable it to effectively manage the potential risks it may pose to financial stability and to the soundness of financial infrastructures. The oversight of SWIFT is currently based on widely accepted principles and common market practices. They provide the basis for a risk-based oversight methodology which is applied to SWIFT business activities of relevance for financial stability. In the context of its participation in the cooperative oversight of SWIFT, the ECB worked with the G10 central banks in 2006 to establish a set of high-level oversight expectations that would be suitable for the

assessment of SWIFT, taking into consideration SWIFT's existing structure, processes, controls and procedures. The oversight expectations are expected to be finalised and integrated into the oversight group's risk-based oversight methodology during 2007 (see also Section 2 of Chapter 6).

#### **4.2 RETAIL PAYMENT SERVICES**

The Eurosystem's oversight also covers retail payment systems. In 2006 the ECB continued to monitor the smooth functioning of the first pan-European automated clearing house for bulk payments in euro, STEP2, which is managed and operated by EBA CLEARING. Since oversight assessments of retail payment systems falling within the scope of the Eurosystem's oversight were completed in 2005, it was not considered necessary to conduct a new round of coordinated assessments in 2006.

#### **4.3 SECURITIES CLEARING AND SETTLEMENT**

The Eurosystem has a strong interest in the smooth functioning of securities clearing and settlement systems because failures in the clearing, settlement and custody of collateral could jeopardise the implementation of monetary policy, the smooth functioning of payment systems and the maintenance of financial stability.

The Eurosystem assesses the compliance of securities settlement systems (SSSs) in the euro area, as well as links between those SSSs, with the "Standards for the use of EU securities settlement systems in ESCB credit operations" (known as "Eurosystem user standards").

The ECB contributed in 2006 to the work undertaken by the European Commission and the EU Council on the review of the Settlement Finality Directive and the debate on whether the Community should sign the Hague Securities Convention. The ECB also contributed to a

report under preparation by the CPSS on clearing and settlement arrangements for over-the-counter derivatives.<sup>17</sup> In April 2006 the ECB and the Federal Reserve Bank of Chicago co-organised a conference in Frankfurt on central counterparty clearing issues.

### **ASSESSMENT OF SECURITIES SETTLEMENT SYSTEMS AGAINST USER STANDARDS**

In 2006 a new arrangement was implemented for the issuance, safe-keeping and settlement of international debt securities. Such securities, issued jointly in the two international central securities depositories (ICSDs), Euroclear Bank (Belgium) and Clearstream Banking Luxembourg, account for a significant proportion of securities eligible for Eurosystem credit operations. In the new structure, which has been assessed by the Eurosystem, a new form of global bearer certificate – the “New Global Note” (NGN) – represents the securities issue. International debt securities in global bearer form issued through the ICSDs after 31 December 2006 will only be eligible as collateral for Eurosystem operations if the NGN form is used. Securities issued before or on that date will continue to be eligible for use as collateral throughout their lifetime.

The annual assessment of the SSSs in the euro area and an ad hoc assessment of the links between these SSSs confirmed that the overall level of compliance with the standards is high, and that the SSSs have maintained their efforts to enhance compliance further.

In preparation for Slovenia’s entry into the euro area on 1 January 2007, the Governing Council assessed the Slovenian SSS (KDD). The detailed analysis revealed that the Slovenian system was eligible for use in Eurosystem monetary policy and intraday credit operations.

### **DEVELOPMENT OF THE STANDARDS FOR SECURITIES CLEARING AND SETTLEMENT IN THE EUROPEAN UNION**

The Governing Council approved a framework for cooperation on securities clearing and settlement systems between the ESCB and

CESR in 2001. An ESCB-CESR working group drew up a draft report on “Standards for securities clearing and settlement in the European Union” in 2004 with the aim of adapting the CPSS-IOSCO recommendations for SSSs to the EU environment. In the following two years the ESCB-CESR working group continued to work in this field in order to develop an “assessment methodology” which would provide guidance on the effective implementation of the standards. A number of open issues were analysed in close cooperation with market participants and banking supervisors, such as the specific requirements for CSDs with a banking licence and the cooperation between relevant authorities. However, little progress was made in this field in 2006.

On 11 July 2006 the European Commission invited the industry to reduce the cost of clearing and settlement in the EU. To this end, a code of conduct was signed on 7 November 2006 by representatives of the Federation of European Securities Exchanges, the European Association of Central Counterparty Clearing Houses and the European Central Securities Depositories Association, as well as the member institutions of these groups. The code aims to foster competition and improve the efficiency of clearing and settlement in the EU by ensuring price transparency, rights of access, interoperability between infrastructures, service unbundling and accounting separation. However, it does not focus on financial stability and regulatory harmonisation, so the need for the ESCB-CESR standards remains.

<sup>17</sup> <http://www.bis.org/press/p060213b.htm>



## CHAPTER 5

# EUROPEAN AND INTERNATIONAL RELATIONS



## I EUROPEAN ISSUES

In 2006 the ECB continued to have regular contact with European institutions and fora, in particular with the European Parliament, the ECOFIN Council, the Eurogroup and the European Commission (see Chapter 6). The President of the ECB participated in meetings of the ECOFIN Council when matters relating to the objectives and tasks of the ESCB were discussed, as well as in the meetings of the Eurogroup. The President of the Eurogroup and the Commissioner for Economic and Monetary Affairs attended meetings of the Governing Council when they deemed it appropriate.

### I.1 POLICY ISSUES

#### THE STABILITY AND GROWTH PACT

In 2006 five euro area Member States (Germany, Greece, France, Italy and Portugal) and seven non-euro area Member States (Czech Republic, Cyprus, Hungary, Malta, Poland, Slovakia and the United Kingdom) were the subject of ongoing excessive deficit procedures. The existence of an excessive deficit in the United Kingdom was confirmed by the ECOFIN Council in January 2006. By contrast, the procedures for Cyprus and France were brought to an end in June 2006 and January 2007 respectively, following confirmation that these countries had brought their deficits below the 3% of GDP reference value in a credible and sustainable manner.

In March 2006 the ECOFIN Council gave notice to Germany, in accordance with Article 104(9) of the Treaty, to take measures to reduce its deficit. This was only the second time that the ECOFIN Council had taken such a step, and the first time since the revision of the Stability and Growth Pact in March 2005. In this context, the Council decided to extend the deadline for Germany to correct its excessive deficit to 2007. In October 2006 the ECOFIN Council issued a revised recommendation to Hungary, which, in view of a deterioration in the budgetary situation in that country, extended the deadline for Hungary to correct its excessive deficit from 2008 to 2009. In November 2006

the Council adopted a decision in accordance with Article 104(8) of the Treaty, stating that the action taken by Poland was proving to be inadequate to correct its excessive deficit by 2007.

In all other cases, assessments of the action taken by Member States in response to the recommendations and notices they had received did not give rise to further procedural steps. Nonetheless, in some countries (notably Italy and Portugal), shortfalls in terms of compliance with intermediate consolidation targets and/or risks to planned consolidation paths were identified, calling for continued close monitoring. In February 2007 the German statistical office confirmed that Germany's deficit was well below 3% of GDP in 2006, while latest indications suggest that Greece, Malta and the United Kingdom are also likely to report deficits of below 3% of GDP for 2006. However, such outcomes still need to be confirmed and their sustainability assessed before the excessive deficit procedures for these countries can be concluded.

Further progress was made in 2006 in assessing the long-term sustainability of public finances in EU Member States. In February the EU's Economic Policy Committee (EPC) and the European Commission published a report examining the fiscal impact of population ageing.<sup>1</sup> The report, which updated the EPC/Commission ageing reports of 2001 and 2003, presented estimates of the ageing-induced fiscal burden for EU Member States based on commonly agreed assumptions regarding the behaviour of key demographic and macroeconomic variables. For the euro area, and for the EU as a whole, the study indicated that an improvement in the structural budgetary position of around 3½% of GDP compared with the level in 2005 would be required in order to achieve a sustainable position. However, the

<sup>1</sup> "The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education and unemployment transfers (2004-2050)", European Economy Special Report No 1/2006, Economic Policy Committee and European Commission.

updated calculations are strongly dependent on the assumptions used, thus highlighting the importance of further refining existing methodologies. The estimates contained in the report served as input for subsequent analyses of long-term fiscal sustainability in EU Member States, both in the context of the examination of stability and convergence programmes and in the Commission's first "sustainability report", published in November 2006<sup>2</sup>. In this context, work also continues on developing an appropriate methodology to take into account implicit liabilities when calculating Member States' medium-term budgetary objectives.

### THE LISBON STRATEGY

In autumn 2006 Member States submitted progress reports on their 2005-08 national reform programmes in accordance with the European Council's 2005 conclusions on the review of the Lisbon strategy, the EU's wide-ranging programme of economic, social and environmental reform, and its new governance framework.<sup>3</sup> The programmes set out Member States' structural reform strategies and review the progress they have made so far in meeting their commitments. These include ensuring the sustainability of public finances (in particular through the reform of pension and healthcare systems), reforming labour and product markets and social security systems, investing in research and development and innovation, and improving the regulatory environment of businesses (see also Chapter 1).

The progress reports on the national reform programmes were assessed by the ECOFIN Council, with the assistance of the EPC, as well as by the European Commission, which published its second "Annual Progress Report on Growth and Jobs" in December 2006. The ECB attaches great importance to the implementation of structural reforms and welcomes the determination of the Commission and the Member States to implement the Lisbon strategy at the Community and national levels. It is particularly important that the euro area countries apply comprehensive reform measures, as they have a shared

responsibility for ensuring the smooth functioning of EMU.

### THE DIRECTIVE ON SERVICES IN THE INTERNAL MARKET

As part of the objective to complete the Internal Market, the European Commission proposed a directive in January 2004 which would remove the legal and administrative barriers to the cross-border provision of services. Following substantive revisions during the legislative process, the European Parliament and the EU Council reached an agreement on the directive on 15 November 2006. The directive was adopted on 12 December 2006.

If properly implemented, the directive will yield clear benefits for both service providers and users. The directive will prohibit certain restrictions on the provision of cross-border services and establish clear criteria for the requirements which Member States are allowed to impose on service providers from other EU countries. The directive will also facilitate the "freedom of establishment" by making it easier for service providers to set up business in other Member States.

The directive should allow the EU to exploit the untapped potential for economic growth and employment expansion in the services sector, in particular by boosting cross-border competition and reducing the cost of doing business. As a result, the directive is expected to foster labour productivity and output and employment growth in the medium to long run, and to contribute to lower prices in the services sector, thereby benefiting consumers. Other parts of the economy which use services as an input into their production process are also likely to benefit.<sup>4</sup>

2 "The long-term sustainability of public finances in the European Union", European Economy No 4/2006, European Commission.

3 See the ECB's Annual Report 2005, pp. 140-141.

4 For further information, see "Competition, productivity and prices in the euro area services sector", ECB Occasional Paper No 44, April 2006.

## **1.2 INSTITUTIONAL ISSUES**

### **CONVERGENCE REPORTS**

Following requests from Lithuania and Slovenia, the ECB and the European Commission, in line with Article 122 of the Treaty, each prepared a convergence report on the progress made by these two countries in meeting the conditions to join the euro area. On the basis of these convergence reports, which were published on 16 May 2006, and a proposal from the Commission, the ECOFIN Council adopted a decision on 11 July 2006 allowing Slovenia to introduce the euro as its currency from 1 January 2007 (see Chapter 3). On 5 December 2006 the ECB and the European Commission published their regular convergence reports, which are prepared every other year, examining the Czech Republic, Estonia, Cyprus, Latvia, Hungary, Malta, Poland, Slovakia and Sweden. None of these Member States met the conditions for adopting the euro.

Following a discussion in the ECOFIN Council, the European Commission and the ECB clarified the interpretation and application of the price stability criterion in relation to enlargement of the euro area. On 10 October 2006 the ECOFIN Council reaffirmed that the reference value for price stability is to be calculated as the average inflation rate of the three best performing EU Member States plus 1.5 percentage points.

### **THE CONSTITUTIONAL TREATY**

In 2006 the ECB continued to follow the ratification process of the Treaty establishing a Constitution for Europe (Constitutional Treaty), as a number of its provisions are of relevance to the ESCB. The ECB took note that the ratification process continued despite the rejection of the Constitutional Treaty in France and the Netherlands in 2005. The number of Member States which have ratified the Constitutional Treaty or are very close to formal completion of the ratification process has reached 18: Belgium, Bulgaria, Germany, Estonia, Greece, Spain, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Austria, Romania, Slovenia, Slovakia and Finland.

The ECB supports the objectives of the Constitutional Treaty, which aims to clarify the legal and institutional framework of the EU and to increase the Union's ability to act at both the European and the international level, as well as confirming the existing monetary policy framework. The discussion on further progress in the institutional reform of the EU will continue under the German and Portuguese EU presidencies in 2007.

### **EXTERNAL REPRESENTATION**

Since the start of Monetary Union, the ECB has established itself as a key partner at the international level and is represented in relevant international institutions.

In the field of economic affairs, arrangements for the external representation of EMU reflect the fact that economic policies have remained largely the competence of Member States. However, some progress towards a more unified representation has been achieved over recent years.

The Eurogroup and the ECOFIN Council have recently considered proposals to strengthen the representation on EMU issues at the international level and to improve internal coordination in this regard. In particular, they endorsed a more comprehensive involvement of the President of the Eurogroup in G7 meetings and participation of the European Commission in international bodies such as the G20.

### **REFORM OF THE EU'S COMITOLGY PROCEDURES**

In July 2006 the EU Council, the European Parliament and the European Commission agreed on a reform of the committee system through which Community legislation is adopted, known as the comitology procedures. The main element of the reform is the introduction of a "regulatory procedure with scrutiny", which substantially strengthens the European Parliament's powers over implementing measures.

The reform is of particular importance for the Lamfalussy framework for the financial sector,

a key feature of which is the delegation of implementing powers to the Commission. It will allow the Lamfalussy process to continue to play an important role in facilitating and speeding up financial integration in the EU (see also Chapter 4).

### 1.3 DEVELOPMENTS IN AND RELATIONS WITH EU ACCEDING AND CANDIDATE COUNTRIES

The ECB intensified its cooperation with the central banks of the acceding and candidate countries with the aim of ensuring a smooth monetary integration process in the EU. This cooperation developed in parallel with the overall institutional dialogue between the EU and these countries.

Following the signing of the Accession Treaty by Bulgaria and Romania on 25 April 2005, the governors of Banca Națională a României and Българска народна банка (Bulgarian National Bank) took part, as observers, in the meetings of the General Council of the ECB from 16 June 2005, and experts from the two central banks were involved as observers in the meetings of ESCB committees. In addition, high-level meetings with Banca Națională a României and Българска народна банка (Bulgarian National Bank) took place in Frankfurt on 15 November and 6 December 2006 respectively. In October 2006 three euro area NCBS (the Banque de France, the Banca d'Italia and De Nederlandsche Bank) completed their technical cooperation with Banca Națională a României in the form of an EU-financed twinning programme which had started in early 2005. A similar scheme was put in place with Българска народна банка (Bulgarian National Bank) in October 2006.

On 26 September 2006 the European Commission concluded that Bulgaria and Romania had achieved solid progress in their preparations to join the EU. The Commission proposed some additional measures to further monitor the implementation of EU requirements in a limited number of areas, none of which,



however, concerned the monetary sphere. Bulgaria and Romania joined the EU on 1 January 2007 and their central banks became full members of the ESCB.

After opening accession negotiations with Turkey on 3 October 2005, the Commission started negotiations on the individual chapters of the *acquis communautaire* on 12 June 2006. On 29 November 2006 the Commission presented its recommendations on the continuation of Turkey's accession negotiations. It recommended that the chapters for which the technical preparations had been completed should remain open, while the start of negotiations on eight other chapters should be suspended until Turkey fulfilled its commitments. The European Council, at its meeting on 14-15 December 2006, decided to follow the Commission's recommendations. The ECB continued its long-standing high-level policy dialogue with the Central Bank of the Republic of Turkey, which included an Executive Board-level visit to the ECB on 28 June 2006. The discussions focused on recent macroeconomic and financial developments in Turkey, the transition of the Central Bank of the Republic of Turkey's monetary policy to a fully-fledged inflation-targeting regime, and the economic and monetary situation in the euro area.

After the EU Council's decision to open accession negotiations with Croatia on 3 October 2005, the first phase of the negotiations began in June 2006. The ECB strengthened its bilateral relations with the Croatian National Bank, hosting its Governor in Frankfurt for the first high-level pre-accession dialogue in October 2006.

The Former Yugoslav Republic of Macedonia was granted candidate status in December 2005.

However, the European Council decided that negotiations would not be opened until a number of conditions were met, including the effective implementation of the Stabilisation and Association Agreement signed with the EU. In 2006 contacts intensified between the ECB and the National Bank of the Republic of Macedonia, as reflected in, among other things, the provision of technical assistance by the ECB in addition to that provided by a number of NCBS.

## 2 INTERNATIONAL ISSUES

### 2.1 KEY DEVELOPMENTS IN THE INTERNATIONAL MONETARY AND FINANCIAL SYSTEM

#### SURVEILLANCE OF MACROECONOMIC POLICIES IN THE GLOBAL ECONOMY

The Eurosystem plays an important role in the process of international multilateral surveillance of macroeconomic policies, which takes place mainly at the meetings of international organisations such as the IMF, the OECD and the BIS, as well as in fora such as the G7 and G20 finance ministers and central bank governors. In all relevant institutions and fora, the ECB has been granted either member status (for example, at the G20) or observer status (for example, at the IMF). The ECB assesses international economic policy developments with a view to contributing to a stable macroeconomic environment and sound macroeconomic and financial policies.

The international economic environment in 2006 continued to be dominated by the persistence of large global current account imbalances.<sup>5</sup> In the United States, the current account deficit reached almost 6.6% of GDP, compared with 6.4% in the previous year; the United States now absorbs around 75% of global net savings. The main counterparts of the US deficit are to be found in Asia and in oil-exporting countries. In Asia, current account surpluses remained substantial, reaching around 4.3% of GDP on average, which is around the same as in 2005. In particular, current account surpluses reached more than 7.2% in China, around 3.7% in Japan and 2.7% in the group of “other Asian emerging countries”. Oil-exporting countries on average ran a substantially higher current account surplus in 2006 (18.2% of GDP) than in 2005 (15.1%).<sup>6</sup> Certain Asian and oil-exporting economies also continued to accumulate considerable amounts of reserve assets. The accumulation of reserves was particularly large in the case of China, where the level of foreign exchange reserves reached around USD 1 trillion.

The Eurosystem continued to stress, on various occasions, the risks and uncertainties related to

the continuation of such imbalances, and maintained its full support for a cooperative approach on this issue, as outlined in the G7 communiqués of 21 April and 16 September 2006. All key economies should endeavour to contribute to a progressive and orderly adjustment of the imbalances in order to preserve and strengthen the prospects for global growth and stability. The international policy agenda includes policies: i) to increase private and public savings in deficit countries, ii) to implement further structural reforms in mature economies with relatively low potential growth, as well as in emerging market economies with a need to increase domestic absorption and improve the allocation of capital, and iii) to foster exchange rate flexibility in major countries and regions that lack such flexibility. Although several developments and policy measures went in the right direction in 2006, including the fact that the Chinese renminbi was allowed greater intraday volatility from the beginning of the year, further adjustments are needed if global imbalances are to be significantly reduced.

Finally, the euro area itself is subject to international policy surveillance exercises. Both the IMF and the OECD’s Economic and Development Review Committee conducted their regular reviews of the euro area, as a complement to their reviews of the individual euro area countries. The reviews examined the monetary, financial and economic policies of the euro area. The Article IV consultations of the IMF and the review by the OECD’s Economic and Development Review Committee provided an opportunity for useful discussions between these international organisations and the ECB, the Eurogroup presidency and the European Commission. Following these

<sup>5</sup> 2006 estimates in this section are based on the projections contained in the IMF’s September 2006 “World Economic Outlook”.

<sup>6</sup> Expressed as a percentage of world GDP, the corresponding figures for 2006, based on IMF data, were a deficit of around 1.8% for the United States, and surpluses of about 0.4% for China, 0.35% for Japan, 0.2% for the group of “other Asian emerging countries” and 1.2% for the oil-exporting countries.



discussions, both the IMF and the OECD produced a report assessing the euro area policies.<sup>7</sup>

### **INTERNATIONAL FINANCIAL ARCHITECTURE**

The IMF is making progress in its work on a strategic review which aims to set medium-term priorities and improve the efficiency of the Fund's operational instruments. The ESCB is monitoring and contributing to the ongoing discussions which take place not only within the IMF itself, but also in various international fora, such as the G7 and the G20. Important areas covered in the review include IMF surveillance, the IMF's role in emerging market economies, and governance issues such as quotas and voice in the IMF.

The reform of the IMF's surveillance framework is taking shape. There is broad agreement among the Fund's members that surveillance should cover financial and capital market issues in more detail. In addition, placing greater emphasis on multilateral issues and international spillovers from national policy measures has been identified as an important step for the future. In June 2006 the IMF launched a new process, the multilateral consultation, to provide a forum for debate among parties to a common economic issue characterised by linkages among these parties and other economies. Supplementing the IMF's bilateral surveillance, the first multilateral consultation focuses on the implementation of policies to unwind global imbalances in an orderly fashion while sustaining global growth. The five parties to the consultation are the United States, Japan, China, Saudi Arabia and the euro area, with the latter being represented by the Eurogroup presidency, the European Commission and the ECB. In addition, to improve the effectiveness of surveillance, IMF members continue to reflect on whether the legal underpinnings of Fund surveillance should be amended. Finally, discussions are proceeding on how exchange rate issues should be treated in the context of the IMF's surveillance activities.

As concerns the role of the IMF in emerging market countries, the Fund's members are discussing the establishment of a new liquidity instrument, and its design features, for countries that have access to international capital markets and pursue strong economic policies.

Progress has also been made with regard to strengthening IMF governance, a subject that has been widely discussed over the past year. The aim is to ensure a fair and adequate voice for all members of the IMF. More specifically, the distribution of quotas should be commensurate with countries' relative positions in the world economy, and the voice of developing and transition countries should be enhanced. At its Annual Meetings in September 2006, the IMF's members agreed on an ad hoc increase in the quotas of four countries (China, Korea, Mexico and Turkey). Work will continue on the issue of quotas and voice, including on a new quota formula, a second round of ad hoc increases in quotas – to be based on the new formula – for a broader range of countries, and an increase in basic votes so as to enhance the voice and participation of low-income and transition countries in the IMF. This set of reforms is to be completed no later than the 2008 Annual Meetings. With respect to the IMF's finances, in May 2006 the Managing Director appointed a committee to make specific recommendations for the sustainable long-term financing of the IMF's running costs in the face of sharply declining lending-based income and the structural shortcomings of the current financing model. The committee presented its findings in the first quarter of 2007.

Finally, the promotion of crisis prevention and orderly crisis resolution has been on the agenda of the international community for several years. The Principles for stable capital flows

<sup>7</sup> "Euro area policies: staff report for the 2006 Article IV consultation", IMF, June 2006, and "Economic survey of the euro area", OECD, January 2007. Both reports emphasised the need to accelerate the pace of structural reform in the euro area.

and fair debt restructuring in emerging markets, which were endorsed by the G20 in 2004, are gaining international support, with ongoing work now focusing on implementation issues. The aim of these market-based and voluntary principles is to provide guidelines for the behaviour of sovereign issuers and their private creditors regarding information-sharing, dialogue and close cooperation. To date, over 30 issuing countries have voiced support for the principles and expressed particular interest in advancing their implementation. On the investor side, an increasing number of financial institutions have backed the principles. These ongoing efforts were welcomed by the G20 finance ministers and central bank governors at their meeting in Melbourne on 19 November 2006. The process of implementing the principles is based on the work of the Principles Consultative Group, which consists of senior finance and central bank officials from emerging markets and senior representatives of the private financial community. A Group of Trustees, comprising senior leaders in global finance, was established to guide the implementation and evolution of the principles. At its inaugural meeting in Singapore in September 2006, the Group of Trustees focused its discussions on a review of the principles and their implementation within the framework of the international financial architecture.

## 2.2 COOPERATION WITH COUNTRIES OUTSIDE THE EU

As part of its international activities, the Eurosystem continued to develop its contacts within the central banking community outside the EU, mainly through the organisation of seminars and workshops. The objective of such contacts is to gather information and exchange views on economic and monetary developments in different regions of the world with a potential bearing on the global economic environment and the euro area. In this context, technical cooperation has become an important tool in supporting institution-building, strengthening capacity and enhancing effective compliance



with European and international standards. The Eurosystem has deepened cooperation with central banks in its neighbouring regions, and the ECB assigns a small number of staff to the task of coordinating Eurosystem technical assistance.

The Eurosystem held its third bilateral high-level seminar with the Central Bank of the Russian Federation (Bank of Russia) in October 2006 in Dresden, which was jointly organised by the Deutsche Bundesbank and the ECB. The purpose of the seminar was to strengthen dialogue and enhance relations between the Bank of Russia and the Eurosystem, which have intensified over recent years. Seminar participants exchanged views on the current challenges for monetary and exchange rate policy in Russia, as well as on the role of fiscal rules in the euro area and Russia, and discussed long-term growth prospects for the Russian economy. Similar events will continue to be organised on a regular basis, with the next seminar to be held in Moscow in autumn 2007.

The third high-level Eurosystem seminar with governors of central banks of the EU's Euro-Mediterranean partners took place in Nafplion on 25 January 2006, while the fourth will be

held in Valencia on 28 March 2007. Discussions in Nafplion focused on, among other things, the capital account liberalisation process and progress in the modernisation of monetary policy operational frameworks. The third high-level Eurosystem seminar with Latin American central banks took place on 4 December 2006 in Madrid. The main topics discussed were the monetary and financial implications of globalisation, monetary policy management and foreign exchange reserve accumulation. Finally, the third high-level Eurosystem seminar with central banks in the East Asia-Pacific region took place in Sydney on 21 November 2006, focusing, among other things, on global imbalances and financial stability, as well as regional financial integration.

On 1 February 2007 the Eurosystem held a high-level seminar with the central banks of western and central Africa<sup>8</sup> in Paris, which was jointly organised by the Banque de France and the ECB. The seminar provided a fruitful platform for the discussion of experiences with regional economic and monetary integration, the impact of commodity price developments on monetary and fiscal policies in the region and issues of central bank governance.

The ECB, together with four NCBs (the Deutsche Bundesbank, the Bank of Greece, the Banque de France and the Banca d'Italia), continued its cooperation with the Central Bank of Egypt through a technical assistance programme which is funded by the EU through its framework for Mediterranean aid (MEDA). The programme was launched on 1 December 2005 with an horizon of two years and aims to support the Central Bank of Egypt's comprehensive banking supervision reform. The programme has focused on the introduction of new procedures and tools for banking supervision, which are being jointly developed and implemented by the Eurosystem and the Central Bank of Egypt. It also aims to develop the Central Bank of Egypt's capabilities in the area of macro-prudential supervision, regulation and training. In addition, the ECB seconded an expert to the Central Bank of Egypt, who, under

the aegis of the IMF, helped to reform the monetary policy operational framework.

The ECB continued to deepen its relations with countries in the western Balkans. An ECB conference on "Monetary policy and financial stability in south-east Europe" took place in Frankfurt on 10-11 April 2006. The conference was attended by senior central bank experts from all south-eastern European countries, as well as by representatives from the European Commission, international organisations and academia.

On 16 February 2007 the ECB, on its own behalf and on the behalf of eight partner NCBs (the Deutsche Bundesbank, Eesti Pank, the Bank of Greece, the Banco de España, the Banque de France, the Banca d'Italia, the Oesterreichische Nationalbank and Banka Slovenije), signed a tripartite protocol with the Central Bank of Bosnia and Herzegovina and the Delegation of the European Commission to Bosnia and Herzegovina, paving the way for closer cooperation between the parties. Over a period of six months from March 2007, the ECB and its eight partners will carry out a needs assessment to identify areas where the Central Bank of Bosnia and Herzegovina will need to make progress over the coming years in order to advance operational preparations for the implementation of standards in line with those adopted by the ESCB. The needs assessment programme is funded by the European Commission through the Community Assistance for Reconstruction, Development and Stabilisation programme (CARDS) and coordinated by the ECB.

<sup>8</sup> The seminar was attended by representatives from the central banks of Cape Verde, the Democratic Republic of the Congo, the Gambia, Guinea, Liberia, Mauritania, São Tomé and Príncipe, Sierra Leone, the Central Bank of West African States (the central bank of the monetary union comprising Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo) and the Central Bank of Central African States (the central bank of the monetary union comprising Cameroon, the Central African Republic, Chad, Congo, Equatorial Guinea and Gabon).

Albania signed a Stabilisation and Association Agreement with the EU in June 2006, following the completion of negotiations that started in 2003. The ECB participated, together with other international institutions and central banks, in a dialogue with the Bank of Albania on how best to introduce an inflation-targeting strategy for monetary policy.

In February 2006 the Cooperation Council for the Arab States of the Gulf (GCC), whose members are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates, approached the ECB with a request for assistance with regard to the establishment of a monetary union among the GCC Member States, including the creation of an appropriate institutional framework. The ECB agreed to this request and delivered a staff document identifying the main legal and operational features to be considered by the relevant authorities in the GCC when developing an institutional framework for a monetary union.





## CHAPTER 6

# ACCOUNTABILITY



## I ACCOUNTABILITY VIS-À-VIS THE GENERAL PUBLIC AND THE EUROPEAN PARLIAMENT

For an independent central bank, accountability is widely understood as the obligation to explain and justify its decisions to citizens and their elected representatives, thus enabling them to hold the central bank responsible for achieving its objectives. As such, it is an important counterpart to central bank independence.

The ECB has always fully acknowledged the fundamental importance of being accountable for its policy decisions and to this end has maintained a regular dialogue with EU citizens and the European Parliament. The ECB exceeds the statutory reporting requirements which are laid down in the Treaty, for instance by publishing a Monthly Bulletin rather than the required quarterly report. It also holds a press conference following the first Governing Council meeting of the month. The ECB's commitment to the principle of accountability is further illustrated by the numerous ECB publications released and the large number of speeches delivered by the members of the Governing Council during 2006, explaining the ECB's policy decisions.

At the institutional level, the European Parliament – as the body which derives its legitimacy directly from the citizens of the EU – plays a key role in holding the ECB to account. In line with the provisions of Article 113 of the Treaty, the President presented the ECB's Annual Report 2005 to the plenary session of the European Parliament in 2006. In addition, the President continued to report regularly on the ECB's monetary policy and its other tasks during his quarterly hearings before the Committee on Economic and Monetary Affairs. The President was also invited to a hearing at the European Parliament to explain the role of the ECB in the oversight of SWIFT (see Section 2 of this chapter).

Other members of the Executive Board were also invited to appear before the European Parliament on a number of occasions. The Vice-President presented the ECB's Annual Report 2005 to the Committee on Economic and Monetary Affairs. Gertrude Tumpel-Gugerell

appeared twice before the Committee to explain the ECB's views on payment systems issues and on recent developments in the field of securities clearing and settlement.

As in previous years, a delegation of the Committee on Economic and Monetary Affairs visited the ECB to exchange views with the members of the Executive Board on a number of issues. The ECB also continued its voluntary practice of replying to written questions from members of the European Parliament on issues related to the ECB's fields of competence.

Article 112 of the Treaty states that the European Parliament must give its opinion on nominees to the Executive Board prior to their appointment. To this end, the Parliament invited Jürgen Stark to appear before the Committee on Economic and Monetary Affairs to present his views and answer questions from Committee members. Following this hearing, the Parliament endorsed his appointment.

## 2 SELECTED TOPICS RAISED AT MEETINGS WITH THE EUROPEAN PARLIAMENT

During the various exchanges of views between the European Parliament and the ECB, a wide range of issues were addressed. The key issues raised by the European Parliament during these exchanges of views are outlined below.

### THE CONTRIBUTION OF MONETARY POLICY TO THE GENERAL ECONOMIC POLICIES OF THE COMMUNITY

The contribution of monetary policy to the general economic policies of the Community was one of the issues raised during the President's appearances before the European Parliament. The President pointed out that price stability was both a precondition for and a means to enhance sustainable economic growth and welfare. By credibly pursuing price stability and by solidly anchoring inflation expectations, the ECB was making the best possible contribution to creating an environment conducive to economic growth and employment. In its Resolution on the ECB's Annual Report 2005, the European Parliament commended the ECB for concentrating on the maintenance of price stability and urged it to continue its policy of solidly anchoring inflation expectations at levels consistent with price stability.

### INFLATION AND OUTPUT GROWTH DIFFERENTIALS BETWEEN EURO AREA COUNTRIES

The members of the European Parliament addressed the inflation and output growth differentials between euro area countries. In its Resolution on the ECB's Annual Report 2005, the European Parliament considered that these differentials "constitute a major threat to the EMU in the long term".

The President explained that the existing inflation and output growth differentials between euro area countries remained moderate, and were not unusual when compared with those of other large currency areas. The differentials may have been the result of catching-up processes, differences in demographic trends, or ongoing adjustments leading to a more efficient allocation of resources. However, the persistence of inflation and growth differentials over longer periods of

time, if induced by structural rigidities or misaligned policies, may indeed be worrisome. Against this background, the President stressed the need for appropriate structural reforms and expressed his support for governments that were embarking on such reforms (see Box 5).

### FINANCIAL INTEGRATION AND REGULATION

The European Parliament and the ECB also continued their close dialogue on matters concerning financial integration and stability. The Parliament placed particular importance on the strong growth of the hedge fund industry. In its Resolution on the ECB's Annual Report 2005, the Parliament expressed its concerns in this regard and called upon the ECB to deepen its analysis in this area.

The President recalled the beneficial role of hedge funds in enhancing market liquidity and fostering financial innovation. At the same time, he noted the potential risks for financial stability stemming from their very rapidly growing presence in the financial system (see Section 1 of Chapter 4), and the consequent intention of public authorities, including the ECB, to continue monitoring developments closely. He also explained that any improvements to the existing regulatory framework would need to be agreed at the international level.

The ECB also informed the European Parliament about the ongoing activities in the field of payment systems and securities clearing and settlement systems, including the progress made in the development of TARGET2. Gertrude Tumpel-Gugerell appeared before the Committee on Economic and Monetary Affairs to explain the ECB's views on the proposed directive on payment services in the Internal Market, the creation of a Single Euro Payments Area (SEPA), and the standards on securities clearing and settlement jointly developed by the ESCB and the Committee of European Securities Regulators. She also informed the Parliament about the possible establishment of a Eurosystem infrastructure for the provision of securities settlement services in central bank money, called TARGET2-Securities. The



European Parliament expressed its support for the implementation of TARGET2 and the SEPA. The Parliament also took note of the possible creation of a TARGET2-Securities system and called upon the ECB to establish a proper governance framework prior to the introduction of such a system.

#### **THE ROLE OF THE ECB IN THE OVERSIGHT OF SWIFT**

On 6 July 2006 the European Parliament adopted a “Resolution on the interception of bank transfer data from the SWIFT system by the US secret services” in which it called upon the European Commission, the EU Council and the ECB to explain the extent to which they were aware of any agreement between SWIFT and the US government. On 4 October 2006 the President of the ECB was invited to a public hearing organised by the Parliament on this issue. The President explained that SWIFT was neither a credit institution nor a payment system. However, in view of the systemic importance of SWIFT as a global financial messaging system, the G10 central banks and the ECB had decided – with SWIFT’s agreement – to set up an Oversight Group (see Section 4.1 of Chapter 4). The mandate of this Oversight Group is to ensure that SWIFT has an appropriate governance framework in place to avoid systemic risks. It monitors SWIFT’s activities only insofar as they are relevant to the smooth functioning of payment systems and financial stability. The Oversight Group has no authority to supervise SWIFT with regard to compliance with data protection laws, which lies within the competence of data protection authorities. The Oversight Group was made aware of the US Terrorist Finance Tracking

Program relating to SWIFT. It was also informed that SWIFT had obtained proper US and EU legal advice. The Oversight Group considered that SWIFT’s compliance with the US subpoenas would not have financial stability implications, and thus fell outside the remit of its oversight role. Moreover, as the ECB is subject to a strict confidentiality regime, it is not allowed to use the information it receives in the context of the oversight framework for other purposes, or to share such information with data protection or law enforcement authorities.





## CHAPTER 7

# EXTERNAL COMMUNICATION



## I COMMUNICATION POLICY

Communication at the ECB aims to enhance the public's understanding of the ECB's decisions. It is an integral part of the ECB's monetary policy and of its other tasks. Two key elements – openness and transparency – guide the ECB's communication activities. Both contribute to the effectiveness, efficiency and credibility of the ECB's monetary policy. They also support the ECB's efforts to give full account of its actions, as explained in more detail in Chapter 6.

The concept of real-time, regular and comprehensive explanations of the monetary policy assessment and decisions, which was introduced in 1999, represents a uniquely open and transparent approach to central bank communication. Monetary policy decisions are explained at a press conference immediately after the Governing Council has taken them. The President delivers a detailed introductory statement at the press conference, explaining the Governing Council's decisions. The President and the Vice-President are then at the media's disposal to answer questions. Since December 2004 decisions taken by the Governing Council other than those setting interest rates have also been published every month on the websites of the Eurosystem central banks.

The ECB's legal acts are made available in all official languages of the EU, as are the consolidated financial statements of the Eurosystem.<sup>1</sup> The ECB's other statutory publications – the Annual Report, the quarterly issue of the Monthly Bulletin and the Convergence Report<sup>2</sup> – are also made available in the official EU languages.<sup>3</sup> For the purposes of public accountability and transparency, the ECB also publishes other documentation in all official languages, in particular press releases on monetary policy decisions, staff macroeconomic projections and policy positions of relevance to the general public. The preparation, publication and distribution of

the national language versions of the ECB's key publications are undertaken in close collaboration with the NCBs.

- 1 A derogation is in effect for Irish.
- 2 In the case of the Convergence Report, only the introduction and the executive summary are available in all languages.
- 3 The temporary derogation applying to Maltese will be lifted in May 2007.

## 2 COMMUNICATION ACTIVITIES

The ECB needs to address a variety of audiences, such as financial experts, the media, governments, parliaments and the general public, with varying levels of knowledge of finance and economics. Its mandate and decisions are therefore explained through a range of communication tools and activities which are constantly being refined in order to make them as effective as possible.

The ECB publishes a number of studies and reports, such as the Annual Report, which presents a review of the ECB's activities in the previous year and thus helps to hold the ECB accountable for its actions. The Monthly Bulletin provides regular updates of the ECB's assessment of economic and monetary developments and the detailed information underlying its decisions, while the Financial Stability Review assesses the stability of the euro area financial system with regard to its ability to absorb adverse shocks.

In order to strengthen the Eurosystem's identity and its public perception, the Governing Council in 2006 approved the implementation of a common Eurosystem signature in line with the Eurosystem mission statement<sup>4</sup>. By January 2007 the ECB and all the euro area NCBs had incorporated the word "Eurosystem" into their corporate logo.

All members of the Governing Council directly contribute to enhancing public knowledge and understanding of the Eurosystem's tasks and policies by giving testimonies before the European Parliament and national parliaments, delivering public speeches and granting interviews to the media. In 2006 the President of the ECB appeared six times before the European Parliament. The members of the Executive Board delivered around 200 speeches in 2006 and granted numerous interviews, as well as having articles published in journals, magazines and newspapers.

The euro area NCBs play an important role in ensuring the dissemination at the national level of Eurosystem information and messages to the



general public and interested parties. They address a variety of national and regional audiences in their own languages and environments.

The ECB contributes to the dissemination of research findings by publishing Working Papers and Occasional Papers and by organising academic conferences, seminars and workshops. In 2006 the Fourth ECB Central Banking Conference was held. The conference brought together central bankers, academics, market participants and the media from all over the world to debate on "The role of money: money and monetary policy in the twenty-first century" (see Section 5.2 of Chapter 2).

In 2006 the ECB, in cooperation with Banka Slovenije, organised an information campaign in preparation for the introduction of the euro in Slovenia on 1 January 2007. The information campaign, which was similar to that organised for the first euro cash changeover in 2002, aimed to familiarise cash handlers and the general public with the visual appearance and security features of the euro banknotes and coins, as well as with the cash changeover procedures (see Chapter 3).

The ECB welcomed around 10,000 visitors to its premises in Frankfurt in 2006. The visitors received first-hand information in the form of lectures and presentations given by ECB staff. University students and professionals from the financial sector made up the majority of visitors.

All documents published by the ECB and its various activities are presented on the ECB's website. Around 90,000 public enquiries involving requests for information on different

<sup>4</sup> The mission statement was published on 5 January 2005.

aspects of the ECB's activities were handled in 2006.

The ECB holds an annual Cultural Days programme which aims to bring the cultural diversity of the EU Member States closer to the public as well as to the ECB's and Eurosystem's own employees. Each year this initiative highlights the richness of the culture of one EU country, thus fostering a better understanding of the nations in the EU. In 2006 the Cultural Days programme focused on Austria, following on from Hungary in 2005 and Poland in 2004. The programme of events was organised in close cooperation with the Oesterreichische Nationalbank and took place between 18 October and 14 November.





## CHAPTER 8

# INSTITUTIONAL FRAMEWORK, ORGANISATION AND ANNUAL ACCOUNTS





# I DECISION-MAKING BODIES AND CORPORATE GOVERNANCE OF THE ECB

## I.1 THE EUROSISTEM AND THE EUROPEAN SYSTEM OF CENTRAL BANKS



The Eurosystem is the central banking system of the euro area. It comprises the ECB and the NCBs of the EU Member States whose currency is the euro (13 since 1 January 2007). The Governing Council adopted the term “Eurosystem” in order to facilitate understanding of the structure of central banking in the euro area. The term underlines the shared identity, teamwork and cooperation of all of its members.

The ESCB is composed of the ECB and the NCBs of all EU Member States (27 since 1 January 2007), i.e. it includes the NCBs of the Member States which have not yet adopted the euro.

The ECB is the core of the Eurosystem and the ESCB and ensures that their respective tasks are carried out either through its own activities or via the NCBs. It has legal personality under public international law.

Each NCB has legal personality according to the law of its respective country. The euro area NCBs, which form an integral part of the Eurosystem, carry out the tasks conferred upon the Eurosystem in accordance with the rules established by the ECB’s decision-making bodies. The NCBs also contribute to the work of the Eurosystem and the ESCB through their participation in the Eurosystem/ESCB committees (see Section 1.5 of this chapter). They may perform non-Eurosystem functions on their own responsibility, unless the

Governing Council finds that such functions interfere with the objectives and tasks of the Eurosystem.

The Eurosystem and the ESCB are governed by the decision-making bodies of the ECB: the Governing Council and the Executive Board. The General Council is constituted as a third decision-making body of the ECB, for as long as there are EU Member States which have not yet adopted the euro. The functioning of the decision-making bodies is governed by the Treaty, the Statute of the ESCB and the relevant Rules of Procedure<sup>1</sup>. Decision-making within the Eurosystem and the ESCB is centralised. However, the ECB and the euro area NCBs jointly contribute, strategically and operationally, to attaining the common goals of the Eurosystem, with due respect to the principle of decentralisation in accordance with the Statute of the ESCB.

## 1.2 THE GOVERNING COUNCIL

The Governing Council comprises the members of the Executive Board of the ECB and the governors of the NCBs of the Member States which have adopted the euro. Its main responsibilities, as laid down in the Treaty, are:

- to adopt the guidelines and take the decisions necessary to ensure the performance of the tasks entrusted to the Eurosystem;
- to formulate the monetary policy of the euro area, including, as appropriate, decisions relating to intermediate monetary objectives, key interest rates and the supply of reserves in the Eurosystem, and to establish the necessary guidelines for their implementation.

The Governing Council meets, as a rule, twice a month at the ECB's premises in Frankfurt am Main, Germany. It conducts, inter alia, an in-depth assessment of monetary and economic developments and takes related decisions

specifically at its first meeting of the month, while the second meeting usually focuses on issues related to other tasks and responsibilities of the ECB and the Eurosystem. In 2006 two meetings were held outside Frankfurt: one was hosted by the Banco de España in Madrid and the other by the Banque de France in Paris.

When taking decisions on monetary policy and on other tasks of the ECB and the Eurosystem, the members of the Governing Council do not act as national representatives, but in a fully independent personal capacity. This is reflected by the principle of "one member, one vote" applied within the Governing Council.

<sup>1</sup> For the ECB's Rules of Procedure, see Decision ECB/2004/2 of 19 February 2004 adopting the Rules of Procedure of the European Central Bank, OJ L 80, 18.3.2004, p. 33; Decision ECB/2004/12 of 17 June 2004 adopting the Rules of Procedure of the General Council of the ECB, OJ L 230, 30.6.2004, p. 61; and Decision ECB/1999/7 of 12 October 1999 concerning the Rules of Procedure of the Executive Board of the ECB, OJ L 314, 8.12.1999, p. 34. These rules are also available on the ECB's website.

## THE GOVERNING COUNCIL



**Back row (left to right):**  
Erkki Liikanen, Nicholas C. Garganas, Guy Quaden, Mario Draghi, Jürgen Stark

**Middle row (left to right):**  
Axel A. Weber, Christian Noyer, Klaus Liebscher, Vítor Constâncio, John Hurley, Nout Wellink

**Front row (left to right):**  
José Manuel González-Páramo, Miguel Fernández Ordóñez, Lucas D. Papademos, Jean-Claude Trichet, Gertrude Tumpel-Gugerell, Yves Mersch, Lorenzo Bini Smaghi

**Jean-Claude Trichet**

President of the ECB

**Lucas D. Papademos**

Vice-President of the ECB

**Lorenzo Bini Smaghi**

Member of the Executive Board of the ECB

**Jaime Caruana** (until 11 July 2006)

Governor of the Banco de España

**Vítor Constâncio**

Governor of the Banco de Portugal

**Vincenzo Desario** (until 15 January 2006)

Acting Governor of the Banca d'Italia

**Mario Draghi** (from 16 January 2006)

Governor of the Banca d'Italia

**Miguel Fernández Ordóñez**

(from 12 July 2006)

Governor of the Banco de España

**Nicholas C. Garganas**

Governor of the Bank of Greece

**Mitja Gaspari**<sup>2</sup> (from 1 January 2007)

Governor of Banka Slovenije

**José Manuel González-Páramo**

Member of the Executive Board of the ECB

**John Hurley**

Governor of the Central Bank and Financial Services Authority of Ireland

**Otmar Issing** (until 31 May 2006)

Member of the Executive Board of the ECB

**Klaus Liebscher**

Governor of the Oesterreichische Nationalbank

**Erkki Liikanen**

Governor of Suomen Pankki – Finlands Bank

**Yves Mersch**

Governor of the Banque centrale du Luxembourg

**Christian Noyer**

Governor of the Banque de France

**Guy Quaden**

Governor of the Nationale Bank van België/  
Banque Nationale de Belgique

**Jürgen Stark** (from 1 June 2006)

Member of the Executive Board of the ECB

**Gertrude Tumpel-Gugerell**

Member of the Executive Board of the ECB

**Axel A. Weber**

President of the Deutsche Bundesbank

**Nout Wellink**

President of De Nederlandsche Bank

<sup>2</sup> The Governor of Banka Slovenije attended the meetings of the Governing Council in 2006 as a "special invitee" following the decision taken by the ECOFIN Council on 11 July 2006 to abrogate Slovenia's derogation with effect from 1 January 2007.

### 1.3 THE EXECUTIVE BOARD

The Executive Board comprises the President and the Vice-President of the ECB and four other members appointed by common accord by the Heads of State or Government of the Member States which have adopted the euro. The main responsibilities of the Executive Board, which as a rule meets once a week, are:

- to prepare the meetings of the Governing Council;
- to implement the monetary policy of the euro area in accordance with the guidelines and decisions laid down by the Governing

Council and, in doing so, to give the necessary instructions to the euro area NCBs;

- to manage the current business of the ECB;
- to exercise certain powers delegated to it by the Governing Council, including some of a regulatory nature.

The Executive Board is assisted by a Management Committee in matters relating to the ECB's management, business planning and annual budget process. The Management Committee is composed of one Executive Board member, who acts as Chairman, and a number of senior managers.

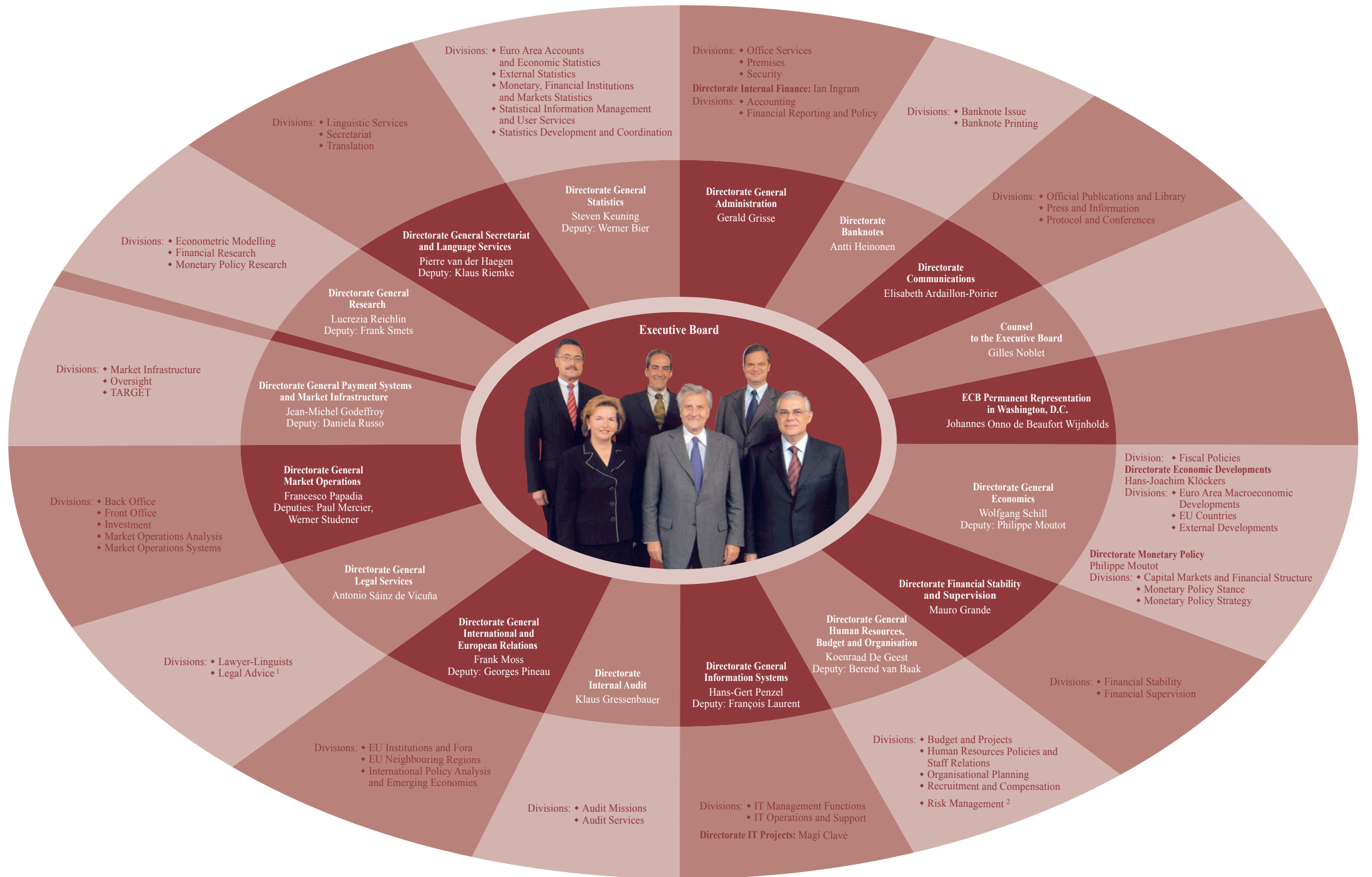
**Back row (left to right):**  
Jürgen Stark,  
José Manuel González-Páramo,  
Lorenzo Bini Smaghi

**Front row (left to right):**  
Gertrude Tumpel-Gugerell,  
Jean-Claude Trichet,  
Lucas D. Papademos



**Jean-Claude Trichet**  
President of the ECB  
**Lucas D. Papademos**  
Vice-President of the ECB  
**Lorenzo Bini Smaghi**  
Member of the Executive Board of the ECB  
**José Manuel González-Páramo**  
Member of the Executive Board of the ECB

**Otmar Issing** (until 31 May 2006)  
Member of the Executive Board of the ECB  
**Jürgen Stark** (from 1 June 2006)  
Member of the Executive Board of the ECB  
**Gertrude Tumpel-Gugerell**  
Member of the Executive Board of the ECB



**Executive Board**

Back row (left to right): Jürgen Stark, José Manuel González-Páramo, Lorenzo Bini Smaghi  
 Front row (left to right): Gertrude Tumpel-Gugereil, Jean-Claude Trichet (President), Lucas D. Papademos (Vice-President)

<sup>1</sup> Includes the data protection function.  
<sup>2</sup> Reports directly to the Executive Board.



## I.4 THE GENERAL COUNCIL

The General Council is composed of the President and the Vice-President of the ECB and the governors of the NCBS of all EU Member States. It mainly carries out those tasks taken over from the EMI which still have to be performed by the ECB on account of the fact that not all the Member States have adopted the

euro. In 2006 the General Council met six times. Since January 2007 the governors of Българска народна банка (Bulgarian National Bank) and Banca Națională a României have been members of the General Council. Following the signing of the Accession Treaty in April 2005, they had attended the meetings of the General Council in an observer capacity.



### Back row (left to right):

Zsigmond Járai, Ivan Šramko, Nils Bernstein, Zdeněk Tůma, Nicholas C. Garganas, Guy Quaden, Stefan Ingves, Mario Draghi, Reinoldijus Šarkinas, Leszek Balcerowicz, Mitja Gaspari

### Middle row (left to right):

Erkki Liikanen, Axel A. Weber, Christian Noyer, Klaus Liebscher, Vítor Constâncio, John Hurley, Nout Wellink

### Front row (left to right):

Ilmārs Rimšēvičs, Michael C. Bonello, Miguel Fernández Ordóñez, Lucas D. Papademos, Jean-Claude Trichet, Christodoulos Christodoulou, Yves Mersch, Andres Lipstok

Note: Mervyn King was not present for the photograph

**Jean-Claude Trichet** President of the ECB  
**Lucas D. Papademos** Vice-President of the ECB  
**Leszek Balcerowicz** (until 10 January 2007) President of Narodowy Bank Polski  
**Nils Bernstein** Governor of Danmarks Nationalbank  
**Michael C. Bonello** Governor of the Central Bank of Malta  
**Jaime Caruana** (until 11 July 2006) Governor of the Banco de España  
**Christodoulos Christodoulou** Governor of the Central Bank of Cyprus  
**Vítor Constâncio** Governor of the Banco de Portugal  
**Vincenzo Desario** (until 15 January 2006) Acting Governor of the Banca d'Italia  
**Mario Draghi** (from 16 January 2006) Governor of the Banca d'Italia  
**Miguel Fernández Ordóñez** (from 12 July 2006) Governor of the Banco de España  
**Nicholas C. Garganas** Governor of the Bank of Greece  
**Mitja Gaspari** Governor of Banka Slovenije  
**John Hurley** Governor of the Central Bank and Financial Services Authority of Ireland  
**Stefan Ingves** Governor of Sveriges Riksbank  
**Mugur Constantin Isărescu** (from 1 January 2007) Governor of Banca Națională a României

**Ivan Iskrov** (from 1 January 2007) Governor of Българска народна банка (Bulgarian National Bank)  
**Zsigmond Járai** (until 2 March 2007) Governor of the Magyar Nemzeti Bank  
**Mervyn King** Governor of the Bank of England  
**Klaus Liebscher** Governor of the Oesterreichische Nationalbank  
**Erkki Liikanen** Governor of Suomen Pankki – Finlands Bank  
**Andres Lipstok** Governor of Eesti Pank  
**Yves Mersch** Governor of the Banque centrale du Luxembourg  
**Christian Noyer** Governor of the Banque de France  
**Guy Quaden** Governor of the Nationale Bank van België/Banque Nationale de Belgique  
**Ilmārs Rimšēvičs** Governor of Latvijas Banka  
**Reinoldijus Šarkinas** Chairman of the Board of Lietuvos bankas  
**Slawomir Skrzypek** (from 11 January 2007) President of Narodowy Bank Polski  
**András Simor** (from 3 March 2007) Governor of the Magyar Nemzeti Bank  
**Ivan Šramko** Governor of Národná banka Slovenska  
**Zdeněk Tůma** Governor of Česká národní banka  
**Axel A. Weber** President of the Deutsche Bundesbank  
**Nout Wellink** President of De Nederlandsche Bank

## I.5 EUROSISTEM/ESCB COMMITTEES, THE BUDGET COMMITTEE AND THE HUMAN RESOURCES CONFERENCE

EUROSISTEM/ESCB COMMITTEES, BUDGET COMMITTEE, HUMAN RESOURCES CONFERENCE AND THEIR CHAIRPERSONS	
Accounting and Monetary Income Committee (AMICO) Ian Ingram	International Relations Committee (IRC) Henk Brouwer
Banking Supervision Committee (BSC) Edgar Meister	Legal Committee (LEGCO) Antonio Sáinz de Vicuña
Banknote Committee (BANCO) Antti Heinonen	Market Operations Committee (MOC) Francesco Papadia
Eurosistem/ESCB Communications Committee (ECCO) Elisabeth Ardaillon-Poirier	Monetary Policy Committee (MPC) Wolfgang Schill
Information Technology Committee (ITC) Hans-Gert Penzel	Payment and Settlement Systems Committee (PSSC) Jean-Michel Godeffroy
Internal Auditors Committee (IAC) Klaus Gressenbauer	Statistics Committee (STC) Steven Keuning
Budget Committee (BUCOM) Liam Barron	Human Resources Conference (HRC) Koenraad De Geest

The Eurosystem/ESCB committees have continued to play an important role in assisting the ECB's decision-making bodies in the performance of their tasks. At the request of both the Governing Council and the Executive Board, the committees have provided expertise in their fields of competence and have facilitated the decision-making process. Membership of the committees is usually restricted to staff of the Eurosystem central banks. However, the NCBs of the Member States which have not yet adopted the euro take part in the meetings of a committee whenever it deals with matters that fall within the field of competence of the General Council. Where appropriate, other competent bodies, such as national supervisory authorities in the case of the Banking Supervision Committee, may also be invited. At present there are 12 Eurosystem/ESCB committees, all of which were established under

Article 9 of the Rules of Procedure of the ECB.

The Budget Committee, which was established under Article 15 of the Rules of Procedure, assists the Governing Council in matters related to the ECB's budget. The Human Resources Conference was established in 2005 under Article 9a of the Rules of Procedure as a forum for the exchange of experience, expertise and information among Eurosystem/ESCB central banks in the field of human resources management.

## I.6 CORPORATE GOVERNANCE

In addition to the decision-making bodies, the corporate governance of the ECB encompasses a number of external and internal control layers,

three codes of conduct and rules concerning public access to ECB documents.

#### **EXTERNAL CONTROL LAYERS**

The Statute of the ESCB provides for two layers, namely the external auditor, which is appointed to audit the annual accounts of the ECB (Article 27.1 of the Statute of the ESCB), and the European Court of Auditors, which examines the operational efficiency of the management of the ECB (Article 27.2). The annual report of the European Court of Auditors, together with the ECB's reply, is published on the ECB's website and in the Official Journal of the European Union. In order to reinforce public assurance as to the independence of the ECB's external auditor, the principle of audit firm rotation is applied.<sup>3</sup>

#### **INTERNAL CONTROL LAYERS**

The internal control structure of the ECB is based on a functional approach. Each organisational unit (section, division, directorate or directorate general) is responsible for its own internal control and efficiency. In this respect, organisational units implement operational control procedures within their area of responsibility and determine the acceptable level of risk. For example, a set of rules and procedures – known as a Chinese wall – is in place to prevent inside information originating in the areas responsible for monetary policy from reaching the areas responsible for the management of the ECB's foreign reserves and own funds portfolio. In addition to the controls implemented by each organisational unit, different divisions within the Directorate General Human Resources, Budget and Organisation monitor the control process and make proposals to improve the effectiveness of risk identification, assessment and mitigation in the ECB as a whole.

Independently from the control structure and risk monitoring of the ECB, audit missions are performed by the Directorate Internal Audit under the responsibility of the Executive Board. In accordance with the mandate defined in the ECB Audit Charter<sup>4</sup>, the ECB's internal auditors

evaluate, on an ad hoc basis, the adequacy and effectiveness of the ECB's system of internal control as well as the ECB's performance in carrying out assigned responsibilities. The ECB's internal auditors are guided by the International Standards for the Professional Practice of Internal Auditing and the Code of Ethics established by the Institute of Internal Auditors.

A Eurosystem/ESCB committee, the Internal Auditors Committee, which is composed of the heads of internal audit at the ECB and the NCBs, is responsible for the coordination of audit coverage for Eurosystem/ESCB joint projects and operational systems.

In order to further strengthen the governance framework of the ECB and the Eurosystem, the Governing Council decided to create an ECB Audit Committee as of April 2007 which will be composed of three of its members.

#### **CODES OF CONDUCT**

There are three codes of conduct in place at the ECB. The first is for the members of the Governing Council and reflects their responsibility to safeguard the integrity and reputation of the Eurosystem and to maintain the effectiveness of its operations.<sup>5</sup> It gives guidance to, and sets ethical standards for, the members of the Governing Council and their alternates when exercising their functions as members of the Governing Council. An adviser has also been appointed by the Governing Council to provide guidance to its members on some aspects of professional conduct. The second code is the Code of Conduct of the ECB, which gives guidance to, and sets benchmarks

<sup>3</sup> Following a tender procedure in 2002, KPMG Deutsche Treuhand-Gesellschaft AG Wirtschaftsprüfungsgesellschaft was appointed as the ECB's external auditor with a five-year mandate covering financial years 2003 to 2007.

<sup>4</sup> This Charter is published on the ECB's website to foster the transparency of audit arrangements in place at the ECB.

<sup>5</sup> See the Code of Conduct for the members of the Governing Council, OJ C 123, 24.5.2002, p. 9, its amendment, OJ C 10, 16.1.2007, p. 6, and the ECB's website.

for, the staff of the ECB and the members of the Executive Board, all of whom are expected to maintain high standards of professional ethics in the performance of their duties.<sup>6</sup> In accordance with the Code of Conduct's rules against insider trading, the ECB's staff and the members of the Executive Board are prohibited from taking advantage of inside information when conducting private financial activities at their own risk and for their own account, or at the risk and for the account of a third party.<sup>7</sup> The third code is a Supplementary Code of Ethical Criteria for the members of the Executive Board.<sup>8</sup> It complements the other two codes by further detailing the ethical regime applicable to members of the Executive Board. An Ethics Adviser appointed by the Executive Board ensures a consistent interpretation of these rules.

### ANTI-FRAUD MEASURES

In 1999 the European Parliament and the EU Council adopted a regulation<sup>9</sup> to step up the fight against fraud, corruption and any other illegal activity detrimental to the Communities' financial interests. The regulation provides inter alia for the internal investigation of suspected fraud by the European Anti-Fraud Office (OLAF) within the Community institutions, bodies, offices and agencies.

The OLAF Regulation foresees that each of the latter adopt decisions in order for OLAF to be able to carry out its investigations within each of them. In June 2004 the Governing Council adopted a decision<sup>10</sup> concerning the terms and conditions for investigations by OLAF of the ECB, which entered into force on 1 July 2004.

### PUBLIC ACCESS TO ECB DOCUMENTS

The ECB's Decision on public access to ECB documents<sup>11</sup> adopted in March 2004 is in line with the objectives and standards applied by other Community institutions and bodies with regard to public access to their documents. It enhances transparency, while at the same time taking into account the independence of the ECB and of the NCBs and ensuring the

confidentiality of certain matters specific to the performance of the ECB's tasks.<sup>12</sup>

In 2006 the number of public access requests remained limited.

- 6 See the Code of Conduct of the European Central Bank in accordance with Article 11.3 of the Rules of Procedure of the European Central Bank, OJ C 76, 8.3.2001, p. 12, and the ECB's website.
- 7 See Part 1.2 of the ECB Staff Rules containing the rules on professional conduct and professional secrecy, OJ C 92, 16.4.2004, p. 31, and the ECB's website.
- 8 See the Supplementary Code of Ethical Criteria for the members of the Executive Board, OJ C 230, 23.9.2006, p. 46, and the ECB's website.
- 9 Regulation (EC) No 1073/1999 of the European Parliament and of the Council of 25 May 1999 concerning investigations conducted by the European Anti-Fraud Office (OLAF), OJ L 136, 31.5.1999, p. 1.
- 10 Decision ECB/2004/11 concerning the terms and conditions for European Anti-Fraud Office investigations of the European Central Bank, in relation to the prevention of fraud, corruption and any other illegal activities detrimental to the European Communities' financial interests and amending the Conditions of Employment for Staff of the European Central Bank, OJ L 230, 30.6.2004, p. 56. This Decision was adopted in response to the judgement of the European Court of Justice on 10 July 2003 in Case-11/00 *Commission v European Central Bank*, ECR I-7147.
- 11 OJ L 80, 18.3.2004, p. 42.
- 12 In line with the ECB's commitment to openness and transparency, a new "Archives" section was added to the ECB's website in 2006, providing access to historical documentation.

## 2 ORGANISATIONAL DEVELOPMENTS

### 2.1 HUMAN RESOURCES

#### STAFFING

The total number of budgeted staff positions for 2006 was 1,343 full-time equivalent (FTE) positions.<sup>13</sup> This compares with 1,369.5 FTE positions for 2005, a reduction of 26.5 FTE positions resulting from the zero-based budgeting assessment conducted in 2005.

All external recruitment to fill permanent positions was carried out on the basis of fixed-term contracts of five years for managerial positions and three years for all other positions. Fixed-term contracts offered for permanent positions may be converted into unlimited contracts, subject to a review procedure that takes into account organisational considerations and individual performance.

In 2006 the ECB offered 99 short-term contracts of less than one year (as compared with 106 in 2005) in order to fill temporary staffing needs (replacement for staff on maternity, parental or unpaid leave, for example).

The ECB also offered 93 short-term contracts to experts from NCBs (including Българска народна банка (Bulgarian National Bank) and Banca Națională a României), other EU institutions and international organisations. This compares with 80 such contracts in 2005. Such short-term assignments provide an opportunity for ECB and NCB staff to gain from each other's experience, thus fostering an ESCB-wide team spirit. They also continued to contribute to the integration of Българска народна банка (Bulgarian National Bank) and Banca Națională a României into the ESCB.

In September 2006 the first six participants in the ECB's Graduate Programme, which is aimed at recent graduates with a broad educational background, joined the Bank on the basis of two-year non-convertible contracts.

The ECB also offered internship opportunities to students and graduates with backgrounds in economics, statistics, business administration,

law and translation. 173 internships were provided across the ECB in 2006.

The ECB also offered two fellowships as part of the Wim Duisenberg Research Fellowship Programme, which is open to leading economists, and five fellowships to young researchers in the context of its Lamfalussy Fellowship programme.

#### INTERNAL MOBILITY

Internal mobility represents an opportunity for staff to broaden their expertise and a means to increase synergies across business areas. In this respect, the internal recruitment policy, which places emphasis on broad competencies, aims to further facilitate internal staff mobility. Other initiatives, such as exchanges between staff and temporary internal transfers to cover for the absence of colleagues, also support internal mobility. In 2006 more than 80 members of staff, including 15 managers and advisers, moved internally to other positions, either on a temporary or on a long-term basis.

In 2006 the ECB introduced general principles for mobility, which encourage members of staff to change position after every five years of service.

#### EXTERNAL MOBILITY

The ECB's external work experience scheme facilitates the secondment of staff to the 27 NCBs or to relevant international financial institutions (e.g. the IMF and the BIS) for periods of two to twelve months. 24 members of staff were seconded under the scheme in 2006. In addition, the ECB granted unpaid leave, for up to three years, to 29 members of staff who took up employment at NCBs, EU institutions or international organisations.

<sup>13</sup> The actual number of FTE positions as at 31 December 2006 was 1,367. This discrepancy was mainly due to the fact that fixed-term contracts were awarded to replace staff members who were absent for a period of more than 12 months, and to the existence at the end of the year of a small restructuring surplus resulting from the zero-based budgeting exercise.



### **DIVERSITY STRATEGY**

With staff from the 27 EU Member States, the ECB has integrated diversity management into its human resources practices to ensure that the individual competencies of staff are recognised and fully utilised in achieving the ECB's objectives. The diversity policy initiated by the ECB in 2005 was officially launched in 2006. The management of diversity at the ECB seeks to ensure that all members of staff are treated with respect and that they are managed on the basis of merit.

### **STRENGTHENING HUMAN RESOURCES**

In addition to promoting mobility, including managerial rotation, the human resources (HR) strategy continues to focus on the development of ECB management. Managerial and leadership skills continued to be strengthened through training and individual coaching. Training for managers concentrated on the enhancement of leadership skills, performance management and leading organisational change. Following the launch of the ECB diversity strategy in 2006, a specific training course for managers on "dignity at work" was implemented.

In addition, managers participated in an annual mandatory multi-source feedback exercise in which direct reports, peers and external contacts identify areas for managers' personal development. This feeds into the managers' annual performance assessment. Individual coaching is provided based on the results of the multi-source feedback.

In 2006 the ECB introduced an Advisory Positions Framework which provides a parallel career structure to the traditional managerial structure. The role of an adviser is to provide high-level technical or policy expertise, cross-organisational coordination and/or management advice on a wide range of topics.

The six ECB common values (competence, effectiveness and efficiency, integrity, team spirit, transparency and accountability, and working for Europe) were further embedded in the human resources policies in order to translate

them into day-to-day behaviour and performance. HR tools and processes (e.g. performance management, recruitment and selection, training and development) will continue to be further aligned with these values.

The continuous acquisition and development of skills and competencies remains a cornerstone of the ECB's HR strategy. As a basic principle, learning and development are a shared responsibility between staff and institution. The ECB provides the budgetary means and training framework, managers define the training needs to ensure that staff maintain the high level of professional knowledge and skills required for their current position, and staff have the primary responsibility for learning and development. In addition to several in-house training opportunities, staff continued to take up external training opportunities to address individual specific training needs of a more "technical" nature. They also benefited from training opportunities organised as common ESCB programmes or offered by the NCBs.

The ECB granted unpaid leave for study purposes to 10 members of staff and, in the context of the Secondary Training Policy, provided 14 others with support to acquire a qualification that would increase their professional competence beyond the requirements of their current position.

### **THE HUMAN RESOURCES CONFERENCE AND THE FOLLOW-UP TO THE EUROSISTEM MISSION STATEMENT**

With the aim of further promoting the cooperation and team spirit among Eurosystem/ESCB central banks in the field of human resources management, the Governing Council established a Human Resources Conference (HRC) in 2005, thus formalising the long-standing cooperation between the heads of personnel of the central banks of the EU.

The HRC's activities in 2006 covered different aspects of staff training and development, including opportunities for common training activities, career policies, performance appraisal



systems, secondment policies and selection procedures. The HRC's work in this field will extend to developing measures to foster staff exchange.

The HRC also exchanged information on staff costs and, together with ECCO, proposed a comprehensive framework to address the main topics covered by the Eurosystem mission statement, the strategic intents and the organisational principles in shared Eurosystem/ESCB staff induction programmes.

## 2.2 NEW ECB PREMISES

Progress continued to be made in the planning of the ECB's new premises. Following COOP HIMMELB(L)AU's optimisation of its winning design on the basis of the reviewed functional, spatial and technical requirements, as well as a lower target for building costs, the project moved into a planning phase in 2006. This phase involves:

- preparing and implementing the necessary tender procedures to award service contracts

to the planners, experts, architects, engineers and construction companies that will be involved in the planning and construction of the premises;

- submitting the plans to the authorities of the City of Frankfurt in order to obtain the necessary building permits and review all plans for compliance with the applicable building regulations, e.g. the building code, fire protection and health and safety standards;
- preparing an updated cost calculation in order to confirm the overall cost framework (€500 million for building costs and €850 million total investment costs, based on 2005 prices);
- developing detailed plans for the design based on the building specifications and on continuous value engineering.

Accordingly, the architects submitted a preliminary design proposal which included several adaptations in relation to the optimised design. First, the skyscraper and the entrance



building which will connect the Grossmarkthalle to the skyscraper were moved slightly to the west, following the specifications of the historic preservation authorities. Second, the envisaged functions of the Grossmarkthalle were reorganised on the basis of historic preservation and space requirements. Third, the facade of the skyscraper has been made more energy-efficient by improving the solar protection. The landscape design of the site has also been redefined and specifies the incorporation of security measures. Finally, the top of the skyscraper has been changed in shape, with a new slanted roof improving the overall shape and clarity of the building in its urban context.

The City of Frankfurt in collaboration with the ECB continued to prepare a legally binding land use plan for the new premises. In this context, various meetings with the city authorities were held in the course of the year. The process of submitting a request for the building permits is expected to be finalised by the end of October 2007, as scheduled. Construction is envisaged to start in early 2008, with finalisation foreseen by the end of 2011.

A memorial and information space to commemorate the Grossmarkthalle's role in the deportation of Jewish citizens will also be constructed. A task force consisting of representatives of the City of Frankfurt, the Frankfurt Jewish Community and the ECB is currently preparing an international competition for the design of the memorial and information space. The competition is expected to be launched in 2007.

### 3 ESCB SOCIAL DIALOGUE

The ESCB Social Dialogue is a consultative forum involving the ECB and employee representatives from almost all central banks of the ESCB and from European trade union federations<sup>14</sup>. Its purpose is to provide information and an exchange of views on issues that may have a major impact on the employment situation at the central banks of the ESCB.

Meetings of the ESCB Social Dialogue were held in June and December 2006. In addition to issues relating to banknote production and circulation, payment systems (TARGET2) and financial supervision, which are topics regularly addressed by the Social Dialogue, discussions dealt with the implementation of the measures related to the Eurosystem mission statement, strategic intents and organisational principles and with their implications for the day-to-day work of Eurosystem staff. The employee representatives were also informed of the work being carried out by the HRC.

The ECB continued to issue a biannual newsletter to keep employee representatives informed of the latest developments with regard to the above topics.

Additional means to enhance the ESCB Social Dialogue were discussed at the December meeting and agreed between the ECB and the European trade union federations. A mechanism was established through which employee representatives can be informed, at an early stage, of the issues to be addressed by the Governing Council which are relevant to the Social Dialogue.

At the invitation of the trade union federations, the ECB also participated in two seminars on industrial relations and corporate culture, which were mainly aimed at employee representatives from the NCBs of the Member States which joined the EU in May 2004 and in January 2007.

<sup>14</sup> The Standing Committee of European Central Bank Unions (SCECBU), UNI-Finance and the European Federation of Public Service Unions (EPSU).

## 4 ANNUAL ACCOUNTS OF THE ECB

# MANAGEMENT REPORT FOR THE YEAR ENDING 31 DECEMBER 2006

## 1 NATURE OF THE BUSINESS

The ECB's activities in 2006 are described in detail in the relevant chapters of the Annual Report.

## 2 OBJECTIVES AND TASKS

The ECB's objectives and tasks are described in the Statute of the ESCB (Articles 2 and 3). Furthermore, an overview of these objectives is included in the President's foreword to the Annual Report.

## 3 KEY RESOURCES, RISKS AND PROCESSES

### GOVERNANCE OF THE ECB

Information relating to the governance of the ECB is given in Chapter 8.

### MEMBERS OF THE EXECUTIVE BOARD

The members of the Executive Board are appointed from among persons of recognised standing and professional experience in monetary or banking matters by common accord of the governments of the Member States at the level of the Heads of State or Government, upon a recommendation from the EU Council after it has consulted the European Parliament and the Governing Council.

The terms and conditions of members' employment are determined by the Governing Council, based on a proposal from a Committee comprising three members appointed by the Governing Council and three members appointed by the EU Council.

### EMPLOYEES

The average number of staff (full-time equivalent) employed on permanent or fixed-term contracts by the ECB rose from 1,331 in 2005 to 1,360 in 2006. At the end of that year 1,367 staff were employed. For further details,

see the notes on the Profit and Loss Account and Chapter 8, Section 2, which also describes the ECB's human resources strategy.

### INVESTMENT ACTIVITIES AND RISK MANAGEMENT

The ECB's foreign reserves portfolio consists of foreign reserve assets transferred to it by the euro area NCBs in accordance with the provisions of Article 30 of the Statute of the European System of Central Banks and of the European Central Bank, and the income thereon. It serves to fund the ECB's operations in the foreign exchange market for the purposes set out in the Treaty.

The ECB's own funds portfolio reflects the investment of its paid-up capital, the counterpart of the provision against foreign exchange, interest rate and gold price risks, the general reserve fund and income accumulated on the portfolio in the past. Its purpose is to provide the ECB with income to contribute to the coverage of its operating expenses.

The ECB's investment activities and its management of the associated risks are described in greater detail in Chapter 2.

### THE BUDGET PROCESS

The Budget Committee (BUCOM), composed of ECB and euro area NCB experts, is a key contributor to the ECB's financial governance process. In accordance with Article 15 of the Rules of Procedure, BUCOM supports the Governing Council by providing a detailed evaluation of annual ECB budget proposals and requests for supplementary budget funding by the Executive Board, prior to their submission to the Governing Council for approval. Spending against agreed budgets is monitored regularly by the Executive Board, taking into account the advice of the ECB's internal controlling function, and by the Governing Council with the assistance of BUCOM.

## 4 FINANCIAL RESULT

### FINANCIAL ACCOUNTS

Under Article 26.2 of the Statute of the ESCB, the Annual Accounts of the ECB are drawn up by the Executive Board, in accordance with the principles established by the Governing Council. The accounts are then approved by the Governing Council and subsequently published.

### PROVISION FOR FOREIGN EXCHANGE RATE, INTEREST RATE AND GOLD PRICE RISKS

Since most of the ECB's assets and liabilities are periodically revalued at current market exchange rates and security prices, the ECB's profitability is strongly affected by exchange rate exposures and, to a lesser extent, interest rate exposures. These exposures stem mainly from its holdings of foreign reserve assets held in US dollars, Japanese yen and gold, which are predominantly invested in interest-bearing instruments.

In 2005, taking into account the ECB's large exposure to these risks and the size of its revaluation accounts, the Governing Council decided to establish a provision against foreign exchange rate, interest rate and gold price risks. Consequently, as at 31 December 2005, an amount of €992 million was recorded in this provision. As at 31 December 2006, an additional amount of €1,379 million was recorded, increasing its size to €2,371 million and, as in 2005, reducing net profit to exactly zero.

This provision will be used to cover realised and unrealised losses, in particular valuation losses not covered by the revaluation accounts. Its size and continuing requirement is reviewed annually.

### FINANCIAL RESULT FOR 2006

Had the provision against foreign exchange rate, interest rate and gold price risks not been

increased in 2006, the ECB would have reported a net profit of €1,379 million.

In 2006, the appreciation of the euro vis-à-vis the Japanese yen resulted in write-downs in the euro value of the ECB's holdings of yen-denominated assets of some €0.6 billion, which were expensed in the Profit and Loss Account.

In 2006 net interest income increased to €1,972 million from €1,270 in 2005, owing mainly to (a) an increase in euro banknotes in circulation and in the marginal rate for the Eurosystem's main refinancing operations, which determines the remuneration that the ECB receives on its share of euro banknotes in the Eurosystem; and (b) a rise in US dollar interest rates.

Net realised gains arising from financial operations rose from €149 million in 2005 to €475 million in 2006. The depreciation of the euro vis-à-vis gold, in conjunction with increased volumes of gold sales in 2006, resulted in greater realised gains. These sales were conducted in accordance with the Central Bank Gold Agreement of 27 September 2004, of which the ECB is a signatory.

Total administrative expenses of the ECB, including depreciation, increased from €348 million in 2005 to €361 million in 2006.

Staff costs rose primarily owing to an increase in the average number of staff employed during the year and an increased pension charge in 2006. The emoluments of the Executive Board amounted to a total of €2.2 million (2005: €2.1 million).



## BALANCE SHEET AS AT 31 DECEMBER 2006

ASSETS	NOTE NUMBER	2006 €	2005 €
<b>Gold and gold receivables</b>	<b>1</b>	<b>9,929,865,976</b>	<b>10,064,527,857</b>
<b>Claims on non-euro area residents denominated in foreign currency</b>	<b>2</b>		
Receivables from the IMF		414,768,308	170,162,349
Balances with banks and security investments, external loans and other external assets		29,313,377,277	31,062,557,242
		<b>29,728,145,585</b>	<b>31,232,719,591</b>
<b>Claims on euro area residents denominated in foreign currency</b>	<b>2</b>	<b>2,773,828,417</b>	<b>2,908,815,389</b>
<b>Claims on non-euro area residents denominated in euro</b>	<b>3</b>		
Balances with banks, security investments and loans		4,193,677	13,416,711
<b>Other claims on euro area credit institutions denominated in euro</b>	<b>4</b>	<b>33,914</b>	<b>25,000</b>
<b>Intra-Eurosystem claims</b>	<b>5</b>		
Claims related to the allocation of euro banknotes within the Eurosystem		50,259,459,435	45,216,783,810
Other claims within the Eurosystem (net)		3,545,868,495	5,147,038,409
		<b>53,805,327,930</b>	<b>50,363,822,219</b>
<b>Other assets</b>	<b>6</b>		
Tangible fixed assets		175,180,989	175,237,902
Other financial assets		8,220,270,389	6,888,490,580
Off-balance-sheet instruments revaluation differences		29,518,315	0
Accruals and prepaid expenses		1,094,509,354	679,603,366
Sundry		5,580,697	4,397,807
		<b>9,525,059,744</b>	<b>7,747,729,655</b>
<b>Total assets</b>		<b>105,766,455,243</b>	<b>102,331,056,422</b>

LIABILITIES	NOTE NUMBER	2006 €	2005 €
<b>Banknotes in circulation</b>	7	50,259,459,435	45,216,783,810
<b>Liabilities to other euro area residents denominated in euro</b>	8	1,065,000,000	1,050,000,000
<b>Liabilities to non-euro area residents denominated in euro</b>	9	105,121,522	649,304,896
<b>Liabilities to non-euro area residents denominated in foreign currency</b>	10		
Deposits, balances and other liabilities		330,955,249	855,933,000
<b>Intra-Eurosystem liabilities</b>	11		
Liabilities equivalent to the transfer of foreign reserves		39,782,265,622	39,782,265,622
<b>Other liabilities</b>	12		
Accruals and income collected in advance		1,262,820,884	919,344,079
Sundry		899,170,800	632,012,224
		<b>2,161,991,684</b>	<b>1,551,356,303</b>
<b>Provisions</b>	13	2,393,938,510	1,027,507,143
<b>Revaluation accounts</b>	14	5,578,445,671	8,108,628,098
<b>Capital and reserves</b>	15		
Capital		4,089,277,550	4,089,277,550
<b>Profit for the year</b>		<b>0</b>	<b>0</b>
 <b>Total liabilities</b>		 <b>105,766,455,243</b>	 <b>102,331,056,422</b>

## PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING 31 DECEMBER 2006

	NOTE NUMBER	2006 €	2005 €
Interest income on foreign reserve assets		1,318,243,236	889,408,789
Interest income arising from the allocation of euro banknotes within the Eurosystem		1,318,852,000	868,451,848
Other interest income		2,761,697,060	1,794,267,421
<i>Interest income</i>		<i>5,398,792,296</i>	<i>3,552,128,058</i>
Remuneration of NCBs' claims in respect of foreign reserves transferred		(965,331,593)	(710,160,404)
Other interest expense		(2,461,625,254)	(1,572,338,709)
<i>Interest expense</i>		<i>(3,426,956,847)</i>	<i>(2,282,499,113)</i>
<b>Net interest income</b>	<b>20</b>	<b>1,971,835,449</b>	<b>1,269,628,945</b>
Realised gains/losses arising from financial operations	21	475,380,708	149,369,135
Write-downs on financial assets and positions	22	(718,467,508)	(97,494,081)
Transfer to/from provisions for foreign exchange rate and price risks		(1,379,351,719)	(992,043,443)
<b>Net result of financial operations, write-downs and risk provisions</b>		<b>(1,622,438,519)</b>	<b>(940,168,389)</b>
<b>Net expense from fees and commissions</b>	<b>23</b>	<b>(546,480)</b>	<b>(182,373)</b>
<b>Income from equity shares and participating interests</b>	<b>24</b>	<b>911,866</b>	<b>853,403</b>
<b>Other income</b>	<b>25</b>	<b>11,407,583</b>	<b>17,428,558</b>
<b>Total net income</b>		<b>361,169,899</b>	<b>347,560,144</b>
Staff costs	26	(160,847,043)	(153,048,314)
Administrative expenses	27	(166,426,595)	(158,457,219)
Depreciation of tangible fixed assets		(29,162,141)	(31,888,637)
Banknote production services	28	(4,734,120)	(4,165,974)
<b>Profit for the year</b>		<b>0</b>	<b>0</b>

Frankfurt am Main, 27 February 2007

EUROPEAN CENTRAL BANK

Jean-Claude Trichet  
President

# ACCOUNTING POLICIES<sup>1</sup>

## FORM AND PRESENTATION OF THE FINANCIAL STATEMENTS

The financial statements of the European Central Bank (ECB) have been designed to present fairly the financial position of the ECB and the results of its operations. They have been drawn up in accordance with the following accounting policies<sup>2</sup>, which the Governing Council considers to be appropriate to the nature of central bank activity.

## ACCOUNTING PRINCIPLES

The following accounting principles have been applied: economic reality and transparency, prudence, recognition of post-balance-sheet events, materiality, the accruals principle, going concern, consistency and comparability.

## RECOGNITION OF ASSETS AND LIABILITIES

An asset or liability is only recognised in the Balance Sheet when it is probable that any associated future economic benefit will flow to or from the ECB, substantially all of the associated risks and rewards have been transferred to the ECB, and the cost or value of the asset or the amount of the obligation can be measured reliably.

## BASIS OF ACCOUNTING

The accounts have been prepared on a historical cost basis, modified to include market valuation of marketable securities, gold and all other on-balance-sheet and off-balance-sheet assets and liabilities denominated in foreign currency. Transactions in financial assets and liabilities are reflected in the accounts on the basis of the date on which they are settled.

With effect from 1 January 2007, the basis for recording foreign exchange transactions, financial instruments denominated in foreign currency and related accruals in the accounts of Eurosystem central banks has changed. Early application was permitted, and the ECB introduced the change as at 1 October 2006,

with the following effects. With the exception of securities, transactions are now recorded in off-balance-sheet accounts on the trade date. At settlement date the off-balance-sheet entries are reversed and transactions are booked on-balance-sheet. Purchases and sales of foreign currency affect the net foreign currency position on the trade date, rather than on the spot settlement date as has been the case hitherto, and realised results arising from sales are also calculated on the trade date. Accrued interest, premiums and discounts related to financial instruments denominated in foreign currency are calculated and booked daily, and the foreign currency position is also affected daily by these accruals instead of changing only when interest cash flows actually occur, as was the case previously. Retrospective application of this change in accounting policies to earlier periods is not practicable.

## GOLD AND FOREIGN CURRENCY ASSETS AND LIABILITIES

Assets and liabilities denominated in foreign currency are converted into euro at the exchange rate prevailing on the Balance Sheet date. Income and expenses are converted at the exchange rate prevailing on the recording date. The revaluation of foreign exchange assets and liabilities, including on-balance-sheet and off-balance-sheet instruments, is performed on a currency-by-currency basis.

Revaluation to the market price for assets and liabilities denominated in foreign currency is treated separately from the exchange rate revaluation.

Gold is valued at the market price prevailing at the year-end. No distinction is made between

- 1 The detailed accounting policies of the ECB are laid down in Decision ECB/2002/11, OJ L 58, 3.3.2003, p. 38, as amended. With effect from 1 January 2007, this Decision has been repealed and replaced by Decision ECB/2006/17, OJ L 348, 11.12.2006, p. 38.
- 2 These policies are consistent with the provisions of Article 26.4 of the Statute of the ESCB, which require a harmonised approach to the rules governing the accounting and financial reporting of Eurosystem operations.

the price and currency revaluation differences for gold. Instead, a single gold valuation is accounted for on the basis of the price in euro per fine ounce of gold, which, for the year ending 31 December 2006, was derived from the exchange rate of the euro against the US dollar on 29 December 2006.

### SECURITIES

All marketable securities and similar assets are valued at the mid-market prices prevailing at the Balance Sheet date on a security-by-security basis. For the year ending 31 December 2006, mid-market prices on 29 December 2006 were used. Non-marketable securities are valued at cost.

### INCOME RECOGNITION

Income and expenses are recognised in the period in which they are earned or incurred. Realised gains and losses arising from the sale of foreign exchange, gold and securities are taken to the Profit and Loss Account. Such realised gains and losses are calculated by reference to the average cost of the respective asset.

Unrealised gains are not recognised as income but are transferred directly to a revaluation account.

Unrealised losses are taken to the Profit and Loss Account if they exceed previous revaluation gains registered in the corresponding revaluation account. Unrealised losses in any one security, currency or in gold are not netted against unrealised gains in other securities, currencies or gold. In the event of an unrealised loss on any item at the year-end, the average cost of that item is reduced to the year-end exchange rate and/or market price.

Premiums or discounts arising on purchased securities are calculated and presented as part of interest income and are amortised over the remaining life of the assets.

### REVERSE TRANSACTIONS

Reverse transactions are operations whereby the ECB buys or sells assets under a repurchase agreement or conducts credit operations against collateral.

Under a repurchase agreement, securities are sold for cash with a simultaneous agreement to repurchase them from the counterparty at an agreed price on a set future date. Repurchase agreements are recorded as collateralised inward deposits on the liability side of the Balance Sheet and also lead to an interest expense in the Profit and Loss Account. Securities sold under such an agreement remain on the Balance Sheet of the ECB.

Under a reverse repurchase agreement, securities are bought for cash with a simultaneous agreement to sell them back to the counterparty at an agreed price on a set future date. Reverse repurchase agreements are recorded as collateralised loans on the asset side of the Balance Sheet but are not included in the ECB's security holdings. They give rise to interest income in the Profit and Loss Account.

Reverse transactions (including security lending transactions) conducted under an automated security lending programme are recorded on the Balance Sheet only where collateral is provided to the ECB in the form of cash over the maturity of the transaction. In 2006 the ECB did not receive any collateral in the form of cash over the maturity of such transactions.

### OFF-BALANCE-SHEET INSTRUMENTS

Currency instruments, namely foreign exchange forward transactions, forward legs of foreign exchange swaps and other currency instruments involving an exchange of one currency for another at a future date, are included in the net foreign currency position for the purpose of calculating foreign exchange gains and losses.

Interest rate instruments are revalued on an item-by-item basis. Daily changes in the variation margin of open interest rate futures contracts are recorded in the Profit and Loss Account. The valuation of forward transactions in securities is based on a generally accepted valuation method using observable market prices and the discount factors from the settlement date to the valuation date.

### POST-BALANCE-SHEET EVENTS

Assets and liabilities are adjusted for events that occur between the annual Balance Sheet date and the date on which the Governing Council approves the financial statements, if such events materially affect the condition of assets and liabilities at the Balance Sheet date.

### INTRA-ESCB BALANCES/INTRA-EUROSYSTEM BALANCES

Intra-ESCB transactions are cross-border transactions that occur between two EU central banks. These transactions are processed primarily via TARGET – the Trans-European Automated Real-time Gross settlement Express Transfer system (see Chapter 2) – and give rise to bilateral balances in accounts held between those EU central banks connected to TARGET. These bilateral balances are then assigned to the ECB on a daily basis, leaving each NCB with a single net bilateral position vis-à-vis the ECB only. This position in the books of the ECB represents the net claim or liability of each NCB against the rest of the ESCB.

Intra-ESCB balances of the euro area NCBs with the ECB (except for the capital of the ECB and positions resulting from the transfer of foreign reserve assets to the ECB) are described as intra-Eurosystem claims or liabilities and are presented in the Balance Sheet of the ECB as a single net asset or liability position.

Intra-Eurosystem balances arising from the allocation of euro banknotes within the Eurosystem are included as a single net asset under “Claims related to the allocation of euro

banknotes within the Eurosystem” (see “Banknotes in circulation” in the notes on accounting policies).

Intra-ESCB balances of non-euro area NCBs (Denmarks Nationalbank and the Bank of England) with the ECB, arising from their participation in TARGET, are disclosed under “Liabilities to non-euro area residents denominated in euro”. On 31 December 2006, Sveriges Riksbank ceased to participate in TARGET.

### TREATMENT OF FIXED ASSETS

Fixed assets, with the exception of land, are valued at cost less depreciation. Land is valued at cost. Depreciation is calculated on a straight-line basis, beginning in the quarter after acquisition and continuing over the expected economic lifetime of the asset, as follows:

Computers, related hardware and software, and motor vehicles	4 years
Equipment, furniture and plant in building	10 years
Capitalised building and refurbishment expenditure	25 years
Fixed assets costing less than €10,000	Written off in the year of acquisition

The depreciation period for capitalised building and refurbishment expenditure relating to the ECB’s existing premises has been reduced in order to ensure that these assets are completely written off before the ECB moves to its new premises.

### THE ECB’S RETIREMENT PLAN AND OTHER POST-EMPLOYMENT BENEFITS

The ECB operates a defined benefit scheme for its staff. This is funded by assets held in a long-term employee-benefit fund.

### BALANCE SHEET

The liability recognised in the Balance Sheet in respect of the defined benefit plans is the present value of the defined benefit obligation



at the Balance Sheet date, *less* the fair value of plan assets used to fund the obligation, adjusted for unrecognised actuarial gains or losses.

The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash flows, using interest rates of high-quality corporate bonds that are denominated in euro and have similar terms of maturity to the term of the related pension liability.

Actuarial gains and losses can arise from experience adjustments (where actual outcomes are different from the actuarial assumptions previously made) and changes in actuarial assumptions.

#### **PROFIT AND LOSS ACCOUNT**

The net amount charged to the Profit and Loss Account comprises:

- (a) the current service cost of the benefits accruing for the year;
- (b) interest at the discount rate on the defined benefit obligation;
- (c) the expected return on the plan assets; and
- (d) any actuarial gains and losses recognised in the Profit and Loss Account, using a “10% corridor” approach.

#### **“10% CORRIDOR” APPROACH**

Net cumulative unrecognised actuarial gains and losses which exceed the greater of (a) 10% of the present value of the defined benefit obligation and (b) 10% of the fair value of plan assets, are to be amortised over the expected average remaining working lives of the participating employees.

#### **PENSIONS OF EXECUTIVE BOARD MEMBERS AND OTHER POST-RETIREMENT OBLIGATIONS**

Unfunded arrangements are in place for the pensions of members of the Executive Board and disability benefit provisions for the staff. The expected costs of these benefits are accrued over the Executive Board/staff members’ terms of office/employment using an accounting approach similar to that of defined benefit pension plans. Actuarial gains and losses are recognised in the same manner as outlined above.

These obligations are valued annually by independent actuaries to establish the appropriate liability in the financial statements.

#### **BANKNOTES IN CIRCULATION**

The ECB and the 12 euro area NCBs, which together comprise the Eurosystem, issue euro banknotes.<sup>3</sup> The total value of euro banknotes in circulation is allocated to the Eurosystem central banks on the last working day of each month in accordance with the banknote allocation key<sup>4</sup>.

The ECB has been allocated a share of 8% of the total value of euro banknotes in circulation, which is disclosed under the Balance Sheet liability item “Banknotes in circulation”. The ECB’s share of the total euro banknote issue is backed by claims on the NCBs. These claims, which bear interest,<sup>5</sup> are disclosed under the sub-item “Intra-Eurosystem claims: claims related to the allocation of euro banknotes within the Eurosystem” (see “Intra-ESCB balances/intra-Eurosystem balances” in the

3 Decision ECB/2001/15 of 6 December 2001 on the issue of euro banknotes, OJ L 337, 20.12.2001, p. 52, as amended.

4 “Banknote allocation key” means the percentages that result from taking into account the ECB’s share in the total euro banknote issue and applying the subscribed capital key to the NCBs’ share in that total.

5 Decision ECB/2001/16 of 6 December 2001 on the allocation of monetary income of the national central banks of participating Member States from the financial year 2002, OJ L 337, 20.12.2001, p. 55, as amended.

notes on accounting policies). Interest income on these claims is included within the item “Net interest income”. Until 2005, this income was distributed separately to the NCBs in the form of an interim distribution after the end of each quarter.<sup>6</sup> For 2006 onwards, the Governing Council has decided that this income is due to the NCBs in the financial year in which it accrues, but is to be distributed on the second working day of the following year.<sup>7</sup> It is distributed in full unless the ECB’s net profit for the year is less than its income earned on euro banknotes in circulation and subject to any decisions by the Governing Council to make transfers to a provision for foreign exchange rate, interest rate and gold price risks and to charge costs incurred by the ECB in connection with the issue and handling of euro banknotes against this income.

## OTHER ISSUES

Taking account of the ECB’s role as a central bank, the Executive Board considers that the publication of a cash flow statement would not provide the readers of the financial statements with any additional relevant information.

In accordance with Article 27 of the Statute of the ESCB, and on the basis of a recommendation of the Governing Council, the EU Council has approved the appointment of KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft as the external auditors of the ECB for a five-year period up to the end of the financial year 2007.

6 Decision ECB/2002/9 of 21 November 2002 on the distribution of the income of the European Central Bank on euro banknotes in circulation to the national central banks of the participating Member States, OJ L 323, 28.11.2002, p. 49.

7 Decision ECB/2005/11 of 17 November 2005 on the distribution of the income of the European Central Bank on euro banknotes in circulation to the national central banks of the participating Member States, OJ L 311, 26.11.2005, p. 41. This Decision repealed Decision ECB/2002/9.

# NOTES ON THE BALANCE SHEET

## I GOLD AND GOLD RECEIVABLES

As at 31 December 2006 the ECB held 20.6 million ounces of fine gold (2005: 23.1 million ounces). The reduction was due to gold sales in accordance with the Central Bank Gold Agreement of 27 September 2004, of which the ECB is a signatory. The decrease in the euro value of this holding due to these sales was partially compensated by a significant rise in the price of gold during 2006 (see “Gold and foreign currency assets and liabilities” in the notes on accounting policies).

<i>Claims on non-euro area residents</i>	2006 €	2005 €	Change €
Current accounts	1,388,630,590	5,149,756,962	(3,761,126,372)
Money market deposits	1,352,326,756	1,182,580,317	169,746,439
Reverse repurchase agreements	330,983,321	1,306,216,228	(975,232,907)
Security investments	26,241,436,610	23,424,003,735	2,817,432,875
<b>Total</b>	<b>29,313,377,277</b>	<b>31,062,557,242</b>	<b>(1,749,179,965)</b>

## 2 CLAIMS ON NON-EURO AREA AND EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

### RECEIVABLES FROM THE IMF

This asset represents the ECB’s holdings of special drawing rights (SDRs) as at 31 December 2006. It arises as the result of a two-way SDR buying and selling arrangement with the International Monetary Fund (IMF), whereby the IMF is authorised to arrange sales or purchases of SDRs against euro, on behalf of the ECB, within minimum and maximum holding levels. The SDR is defined in terms of a basket of currencies. Its value is determined as the weighted sum of the exchange rates of four major currencies (euro, Japanese yen, pound sterling and US dollar). For accounting purposes, SDRs are treated as a foreign currency (see “Gold and foreign currency assets and liabilities” in the notes on accounting policies).

<i>Claims on euro area residents</i>	2006 €	2005 €	Change €
Current accounts	18,535	25,019	(6,484)
Money market deposits	2,621,949,594	2,908,790,370	(286,840,776)
Reverse repurchase agreements	151,860,288	0	151,860,288
<b>Total</b>	<b>2,773,828,417</b>	<b>2,908,815,389</b>	<b>(134,986,972)</b>

The decrease in these positions in 2006 is primarily due to the depreciation of the US dollar and, to a lesser extent, the Japanese yen against the euro (see “Gold and foreign currency assets and liabilities” in the notes on accounting policies).

The ECB’s net foreign currency holdings<sup>8</sup> of US dollars and Japanese yen, as at 31 December 2006, were as follows:

	(million currency units)
US dollars	35,000
Japanese yen	856,308

## BALANCES WITH BANKS AND SECURITY INVESTMENTS, EXTERNAL LOANS AND OTHER EXTERNAL ASSETS

### CLAIMS ON EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

These claims consist of balances with banks and loans denominated in foreign currency, and investments in securities denominated in US dollars and Japanese yen, as follows:

<sup>8</sup> Net assets denominated in the respective foreign currency that are subject to foreign currency revaluation. These are included under the captions “Claims on non-euro area residents denominated in foreign currency”, “Claims on euro area residents denominated in foreign currency”, “Accruals and prepaid expenses”, “Liabilities to non-euro area residents denominated in foreign currency” and “Accruals and income collected in advance”, also taking into account foreign exchange forward and swap transactions under off-balance-sheet items. The effects of the price revaluation gains on securities denominated in foreign currency are not included.

### 3 CLAIMS ON NON-EURO AREA RESIDENTS DENOMINATED IN EURO

As at 31 December 2006 this claim consisted of bank deposits with non-euro area residents.

### 4 OTHER CLAIMS ON EURO AREA CREDIT INSTITUTIONS DENOMINATED IN EURO

As at 31 December 2006 this claim consisted of bank deposits with euro area residents.

### 5 INTRA-EUROSYSTEM CLAIMS

#### CLAIMS RELATED TO THE ALLOCATION OF EURO BANKNOTES WITHIN THE EUROSYSTEM

This item consists of the claims of the ECB vis-à-vis the euro area NCBs relating to the allocation of euro banknotes within the Eurosystem (see “Banknotes in circulation” in the notes on accounting policies).

#### OTHER CLAIMS WITHIN THE EUROSYSTEM (NET)

This item consists of the TARGET balances of the euro area NCBs vis-à-vis the ECB and amounts due in respect of the interim distributions of the ECB’s income derived from banknotes. As at 31 December 2005 an amount of €634 million was due from the euro area NCBs in respect of interim distributions of the ECB’s income derived from banknotes. This represented the interim distributions of such income to the euro area NCBs for the first three quarters of the year, which were subsequently recalled. Such interim distributions have ceased since 2006 (see “Banknotes in circulation” in the notes on accounting policies and note 20, “Net interest income”).

	2006 €	2005 €
Due from euro area NCBs in respect of TARGET	83,764,470,700	75,906,443,905
Due to euro area NCBs in respect of TARGET	(80,218,602,205)	(71,393,877,603)
Net TARGET position	3,545,868,495	4,512,566,302
Due from/(to) euro area NCBs in respect of the interim distribution of the ECB’s income derived from banknotes	0	634,472,107
Other claims within the Eurosystem (net)	3,545,868,495	5,147,038,409

### 6 OTHER ASSETS

#### TANGIBLE FIXED ASSETS

These assets comprised the following main items on 31 December 2006:

	2006 €	2005 €	Change €
<b>Cost</b>			
Land and buildings	160,272,602	158,681,104	1,591,498
Computer hardware and software	157,573,338	147,880,213	9,693,125
Equipment, furniture, plant in building and motor vehicles	26,670,476	26,238,407	432,069
Assets under construction	28,790,200	11,576,491	17,213,709
Other fixed assets	1,232,143	1,126,210	105,933
<b>Total cost</b>	<b>374,538,759</b>	<b>345,502,425</b>	<b>29,036,334</b>
<b>Accumulated depreciation</b>			
Land and buildings	(39,696,727)	(29,694,172)	(10,002,555)
Computer hardware and software	(135,057,096)	(117,129,048)	(17,928,048)
Equipment, furniture, plant in building and motor vehicles	(24,471,251)	(23,308,719)	(1,162,532)
Other fixed assets	(132,696)	(132,584)	(112)
<b>Total accumulated depreciation</b>	<b>(199,357,770)</b>	<b>(170,264,523)</b>	<b>(29,093,247)</b>
<b>Net book value</b>	<b>175,180,989</b>	<b>175,237,902</b>	<b>(56,913)</b>

The increase in “Land and buildings” at cost is due mainly to the acquisition of a new official residence for Presidents of the ECB in December 2006. The original residence, purchased in 2001, was sold in January 2007.

The increase in the category “Assets under construction” relates mainly to initial works at the site of the new ECB premises. Transfers from this category to the relevant fixed asset captions will occur once the assets are in use.

#### OTHER FINANCIAL ASSETS

The main components of this item are as follows:

	2006 €	2005 €	Change €
Securities denominated in euro	7,303,413,758	5,710,256,343	1,593,157,415
Reverse repurchase agreements in euro	874,669,464	1,136,043,600	(261,374,136)
Other financial assets	42,187,167	42,190,637	(3,470)
Total	8,220,270,389	6,888,490,580	1,331,779,809

- (a) Securities denominated in euro and reverse repurchase agreements in euro constitute the investment of the ECB’s own funds (see note 12, “Other liabilities”). The increase in securities held was due mainly to the investment in the own funds portfolio of the counterpart of the ECB’s provision against foreign exchange, interest rate and gold price risks established by the ECB in 2005.
- (b) The ECB holds 3,211 shares in the BIS, which are included at the acquisition cost of €41.8 million.

#### OFF-BALANCE-SHEET INSTRUMENTS REVALUATION DIFFERENCES

This item is composed of valuation changes in foreign exchange swap and forward transactions that were outstanding on 31 December 2006 (see note 19, “Foreign exchange swap and

forward transactions”). These differences arise from the conversion of such transactions into euro equivalent at the exchange rates prevailing on the Balance Sheet date, compared with the euro values at which the transactions are carried in the accounts (see “Gold and foreign currency assets and liabilities” in the notes on accounting policies).

#### ACCRUALS AND PREPAID EXPENSES

In 2005, accrued interest receivable on the ECB’s claims related to the allocation of euro banknotes within the Eurosystem (see “Banknotes in circulation” in the notes on accounting policies) was reported on a gross basis under “Accruals and prepaid expenses” and “Accruals and income collected in advance”. This interest is now disclosed on a net basis under “Accruals and prepaid expenses” in order better to reflect economic reality. For comparison purposes, €412,341,791 has been reclassified from the 2005 balance shown under “Accruals and income collected in advance” to “Accruals and prepaid expenses”, reducing the balance of both these positions accordingly.

Also included under this item is accrued interest, including the amortisation of discounts, on securities and other financial assets.

#### SUNDRY

This item includes a claim against the German Federal Ministry of Finance in respect of recoverable value added tax and other indirect taxes paid. Such taxes are refundable under the terms of Article 3 of the Protocol on the privileges and immunities of the European Communities, which applies to the ECB by virtue of Article 40 of the Statute of the ESCB.

#### 7 BANKNOTES IN CIRCULATION

This item consists of the ECB’s share (8%) of the total euro banknotes in circulation (see

“Banknotes in circulation” in the notes on accounting policies).

## 8 LIABILITIES TO OTHER EURO AREA RESIDENTS DENOMINATED IN EURO

This item comprises deposits by members of the Euro Banking Association (EBA) which are used in order to provide the ECB with collateral in respect of the EBA’s payments settled through the TARGET system.

## 9 LIABILITIES TO NON-EURO AREA RESIDENTS DENOMINATED IN EURO

These liabilities principally represent balances held at the ECB by non-euro area NCBs arising from transactions processed via the TARGET system (see “Intra-ESCB balances/intra-Eurosystem balances” in the notes on accounting policies).

## 10 LIABILITIES TO NON-EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

This position consists of repurchase agreements conducted with non-euro area residents in connection with the management of the foreign currency reserves of the ECB.

## 11 INTRA-EUROSYSTEM LIABILITIES

These represent the liabilities to the euro area NCBs that arose from the transfer of foreign reserve assets to the ECB when they joined the Eurosystem. No adjustments were made in 2006.

These balances are remunerated at the latest available marginal rate for the Eurosystem’s main refinancing operations, adjusted to reflect a zero return on the gold component (see note 20, “Net interest income”).

	Capital key %	€
Nationale Bank van België/ Banque Nationale de Belgique	2.5502	1,419,101,951
Deutsche Bundesbank	21.1364	11,761,707,508
Central Bank and Financial Services Authority of Ireland	0.9219	513,006,858
Bank of Greece	1.8974	1,055,840,343
Banco de España	7.7758	4,326,975,513
Banque de France	14.8712	8,275,330,931
Banca d’Italia	13.0516	7,262,783,715
Banque centrale du Luxembourg	0.1568	87,254,014
De Nederlandsche Bank	3.9955	2,223,363,598
Oesterreichische Nationalbank	2.0800	1,157,451,203
Banco de Portugal	1.7653	982,331,062
Suomen Pankki – Finlands Bank	1.2887	717,118,926
<b>Total</b>	<b>71.4908</b>	<b>39,782,265,622</b>

## 12 OTHER LIABILITIES

This item consists mainly of interest due to the NCBs in respect of their claims relating to the foreign reserves transferred (see note 11, “Intra-Eurosystem liabilities”). Also included within this balance are (a) other accruals, including the amortisation of coupon bond premiums, and outstanding repurchase transactions of €772 million conducted in connection with the management of the ECB’s own funds (see note 6, “Other assets”) and (b) the net liability in respect of the ECB’s pension obligations.

## THE ECB’S RETIREMENT PLAN AND OTHER POST-EMPLOYMENT BENEFITS

The amounts recognised in the Balance Sheet in respect of the ECB’s pension obligations (see “The ECB’s retirement plan and other post-employment benefits” in the notes on accounting policies) are as follows:

	2006 € millions	2005 € millions
Present value of obligations	258.5	223.5
Fair value of plan assets	(195.3)	(161.2)
Unrecognised actuarial gains/(losses)	17.3	6.5
Liability recognised in the Balance Sheet	80.5	68.8



The present value of the obligations includes unfunded obligations of €32.6 million (2005: €30.4 million) relating to the pensions of Executive Board members and to staff disability provisions.

The amounts recognised in the Profit and Loss Account in 2006 and 2005 in respect of “Current service cost”, “Interest on obligation” and “Expected return on plan assets” are as follows:

	2006 € millions	2005 € millions
Current service cost	27.3	24.6
Interest on obligation	6.8	6.2
Expected return on plan assets	(6.7)	(5.2)
Net actuarial (gains)/losses recognised in year	0	0
Total included in “Staff costs”	27.4	25.6

Under the 10% corridor approach (see “The ECB’s retirement plan and other post-employment benefits” in the notes on accounting policies), no actuarial gains were recognised in the Profit and Loss Account in 2006.

Changes in the present value of the defined benefit obligation are as follows:

	2006 € millions	2005 € millions
Opening defined benefit obligation	223.5	178.5
Service cost	27.3	24.6
Interest cost	6.8	6.2
Contributions paid by plan participants	10.4	9.3
Other net changes in liabilities representing plan participants’ contributions	3.7	6.1
Benefits paid	(2.6)	(2.2)
Actuarial (gains)/losses	(10.6)	1.0
Closing defined benefit obligation	258.5	223.5

Changes in the fair value of plan assets are as follows:

	2006 € millions	2005 € millions
Opening fair value of plan assets	161.2	120.2
Expected return	6.7	5.2
Actuarial gains/(losses)	0.2	7.5
Contributions paid by employer	15.4	14.7
Contributions paid by plan participants	10.3	9.3
Benefits paid	(2.2)	(1.8)
Other net changes in assets representing plan participants’ contributions	3.7	6.1
Closing fair value of plan assets	195.3	161.2

In preparing the valuations referred to in this note, the actuaries have used assumptions which the Executive Board has accepted for the purposes of accounting and disclosure.

The principal assumptions used for the purposes of calculating the staff scheme liability are as follows. The expected rate of return on plan assets is used by the actuaries for the purpose of calculating the annual charge to the Profit and Loss Account.

	2006 %	2005 %
Discount rate	4.60	4.10
Expected return on plan assets	6.00	6.00
Future salary increases	2.00	2.00
Future pension increases	2.00	2.00

### 13 PROVISIONS

Taking into account the ECB’s large exposure to foreign exchange rate, interest rate and gold price risks, and the size of its revaluation accounts, the Governing Council deemed it appropriate to establish a provision against these risks. Consequently, as at 31 December 2005, an amount of €992 million was recorded in this provision. As at 31 December 2006, an additional amount of €1,379 million was recorded, increasing its size to €2,371 million and, as in 2005, reducing net profit to exactly zero.

The provision will be used to fund future realised and unrealised losses, in particular valuation losses not covered by the revaluation

accounts. The size and continuing requirement of this provision is reviewed annually, based on the ECB's assessment of its future exposure to foreign exchange rate, interest rate and gold price risks. This assessment is based on generally accepted methods for estimating financial risks.

An appropriate provision against the contractual obligation of the ECB to restore its current premises to their original condition when they are vacated and the ECB moves to its final site is included in this item, together with other miscellaneous provisions.

#### 14 REVALUATION ACCOUNTS

These accounts represent revaluation reserves arising from unrealised gains on assets and liabilities.

	2006 €	2005 €	Change €
Gold	4,861,575,989	4,362,459,301	499,116,688
Foreign currency	701,959,896	3,737,934,137	(3,035,974,241)
Securities	14,909,786	8,234,660	6,675,126
<b>Total</b>	<b>5,578,445,671</b>	<b>8,108,628,098</b>	<b>(2,530,182,427)</b>

The foreign exchange rates used for the year-end revaluation were as follows:

Exchange rates	2006	2005
US dollars per euro	1.3170	1.1797
Japanese yen per euro	156.93	138.90
Euro per SDR	1.1416	1.2099
Euro per fine ounce of gold	482.688	434.856

#### 15 CAPITAL AND RESERVES

##### CAPITAL

The subscribed capital of the ECB is €5.565 billion. Paid-up capital amounts to €4.089 billion. The euro area NCBs have fully paid up their share of the capital, amounting to €3.978 billion (no changes having occurred in 2006), as follows:<sup>9</sup>

	Capital key %	€
Nationale Bank van België/ Banque Nationale de Belgique	2.5502	141,910,195
Deutsche Bundesbank	21.1364	1,176,170,751
Central Bank and Financial Services Authority of Ireland	0.9219	51,300,686
Bank of Greece	1.8974	105,584,034
Banco de España	7.7758	432,697,551
Banque de France	14.8712	827,533,093
Banca d'Italia	13.0516	726,278,371
Banque centrale du Luxembourg	0.1568	8,725,401
De Nederlandsche Bank	3.9955	222,336,360
Oesterreichische Nationalbank	2.0800	115,745,120
Banco de Portugal	1.7653	98,233,106
Suomen Pankki – Finlands Bank	1.2887	71,711,893
<b>Total</b>	<b>71.4908</b>	<b>3,978,226,562</b>

The 13 non-euro area NCBs are required to pay up 7% of their subscribed capital as a contribution to the operational costs of the ECB. Including the amounts received from the ten new non-euro area NCBs, this contribution amounted to a total of €111,050,988 at end-2006, unchanged from 2005. The non-euro area NCBs are not entitled to receive any share of the distributable profits of the ECB, including income arising from the allocation of euro banknotes within the Eurosystem, nor are they liable to fund any loss of the ECB.

Non-euro area NCBs have paid up the following amounts:

	Capital key %	€
Česká národní banka	1.4584	5,680,860
Danmarks Nationalbank	1.5663	6,101,159
Eesti Pank	0.1784	694,916
Central Bank of Cyprus	0.1300	506,385
Latvijas Banka	0.2978	1,160,011
Lietuvos bankas	0.4425	1,723,656
Magyar Nemzeti Bank	1.3884	5,408,191
Central Bank of Malta	0.0647	252,024
Narodowy Bank Polski	5.1380	20,013,889
Banka Slovenije	0.3345	1,302,967
Národná banka Slovenska	0.7147	2,783,948
Sveriges Riksbank	2.4133	9,400,451
Bank of England	14.3822	56,022,530
<b>Total</b>	<b>28.5092</b>	<b>111,050,988</b>

<sup>9</sup> Individual amounts are shown rounded to the nearest euro. Totals in the tables of this section may not add up due to rounding.

## 16 POST-BALANCE-SHEET EVENTS

### CHANGES TO THE ECB'S CAPITAL KEY

#### BACKGROUND

Pursuant to Article 29 of the ESCB Statute, the shares of the NCBs in the ECB's capital key are weighted according to the shares of the respective Member States in the EU's total population and GDP in equal measure, as notified to the ECB by the European Commission. These weights are adjusted every five years and whenever new Member States join the EU. Based on Council Decision 2003/517/EC of 15 July 2003 on the statistical data to be used for the adjustment of the key for subscription to the capital of the European Central Bank, the NCBs' capital key shares were adjusted on 1 January 2007, upon the accession of Bulgaria and Romania as new Member States, as follows:

	From 1 May 2004 to 31 December 2006 %	From 1 January 2007 %
Nationale Bank van België/ Banque Nationale de Belgique	2.5502	2.4708
Deutsche Bundesbank	21.1364	20.5211
Central Bank and Financial Services Authority of Ireland	0.9219	0.8885
Bank of Greece	1.8974	1.8168
Banco de España	7.7758	7.5498
Banque de France	14.8712	14.3875
Banca d'Italia	13.0516	12.5297
Banque centrale du Luxembourg	0.1568	0.1575
De Nederlandsche Bank	3.9955	3.8937
Oesterreichische Nationalbank	2.0800	2.0159
Banco de Portugal	1.7653	1.7137
Banka Slovenije	-	0.3194
Suomen Pankki – Finlands Bank	1.2887	1.2448
<b>Subtotal for euro area NCBs</b>	<b>71.4908</b>	<b>69.5092</b>
Bulgarian National Bank	-	0.8833
Česká národní banka	1.4584	1.3880
Danmarks Nationalbank	1.5663	1.5138
Eesti Pank	0.1784	0.1703
Central Bank of Cyprus	0.1300	0.1249
Latvijas Banka	0.2978	0.2813
Lietuvos bankas	0.4425	0.4178
Magyar Nemzeti Bank	1.3884	1.3141
Central Bank of Malta	0.0647	0.0622

Narodowy Bank Polski	5.1380	4.8748
Banca Națională a României	-	2.5188
Banka Slovenije	0.3345	-
Národná banka Slovenska	0.7147	0.6765
Sveriges Riksbank	2.4133	2.3313
Bank of England	14.3822	13.9337
<b>Subtotal for non-euro area NCBs</b>	<b>28.5092</b>	<b>30.4908</b>
<b>Total</b>	<b>100.0000</b>	<b>100.0000</b>

#### ENTRY OF SLOVENIA INTO THE EURO AREA

Pursuant to Council Decision 2006/495/EC of 11 July 2006, taken in accordance with Article 122(2) of the Treaty, Slovenia adopted the single currency on 1 January 2007. In accordance with Article 49.1 of the Statute of the ESCB and the legal acts adopted by the Governing Council on 30 December 2006<sup>10</sup>, Banka Slovenije paid up an amount of €17,096,556 as at 1 January 2007, representing the remainder of its capital subscription to the ECB. On 2 and 3 January 2007, in accordance with Article 30.1 of the Statute of the ESCB, Banka Slovenije transferred foreign reserve assets with a total value equivalent to €191,641,809 to the ECB. The total amount transferred was determined by multiplying the euro value, at the exchange rates prevailing on 29 December 2006, of the foreign reserve assets already transferred to the ECB by the ratio between the number of shares subscribed by Banka Slovenije and the number of shares already paid up by the other NCBs without a derogation. These foreign reserve assets comprised amounts of US dollars in the form of cash, and gold, in proportions of 85 to 15 respectively.

Banka Slovenije was credited with a claim in respect of the paid-up capital and foreign reserve assets equivalent to the amounts

<sup>10</sup> Decision ECB/2006/30 of 30 December 2006 on Banka Slovenije's paying-up of capital, transfer of foreign reserve assets and contribution to the European Central Bank's reserves and provisions, OJ L 24, 31.1.2007, p. 17; Agreement of 30 December 2006 between the European Central Bank and Banka Slovenije regarding the claim credited to Banka Slovenije by the European Central Bank under Article 30.3 of the Statute of the European System of Central Banks and of the European Central Bank, OJ C 17, 25.1.2007, p. 26.

transferred. The latter is to be treated in an identical manner to the existing claims of the other participating NCBs (see note 11, “Intra-Eurosystem liabilities”).

## EFFECT OF CHANGES

### CAPITAL OF THE ECB

The enlargement of the European Union through the accession of Bulgaria and Romania and the concomitant change in the subscribed capital and capital key of the ECB, in conjunction with Slovenia joining the euro area, resulted in an increase of €37,858,680 in the ECB’s paid-up capital.

### NCBs’ CLAIMS EQUIVALENT TO THE FOREIGN RESERVE ASSETS TRANSFERRED TO THE ECB

The change in NCBs’ weightings in the ECB’s capital key and Banka Slovenije’s transfer of foreign reserve assets increased the NCBs’ claims by €259,568,376.

## OFF-BALANCE-SHEET INSTRUMENTS

### 17 AUTOMATIC SECURITY LENDING PROGRAMME

As part of the management of the ECB’s own funds, the ECB has concluded an automatic security lending programme agreement, whereby an appointed agent enters into security lending transactions on behalf of the ECB with a number of counterparties, designated by the ECB as eligible counterparties. Under this agreement, reverse transactions with a value of €2.2 billion (2005: €0.9 billion) were outstanding as at 31 December 2006 (see “Reverse transactions” in the notes on accounting policies).

### 18 INTEREST RATE FUTURES

In 2006 interest rate futures were used as part of the management of the ECB’s foreign

reserves and own funds. As at 31 December 2006, the following transactions were outstanding:

Foreign currency interest rate futures	Contract value €
Purchases	9,192,862,566
Sales	367,444,345

Euro interest rate futures	Contract value €
Purchases	40,000,000
Sales	147,500,000

### 19 FOREIGN EXCHANGE SWAP AND FORWARD TRANSACTIONS

Foreign exchange swap and forward transaction claims of €207 million and liabilities of €204 million remained outstanding as at 31 December 2006. These transactions were conducted in the context of the management of the ECB’s foreign reserves.

## NOTES ON THE PROFIT AND LOSS ACCOUNT

### 20 NET INTEREST INCOME

#### INTEREST INCOME ON FOREIGN RESERVE ASSETS

This item includes interest income, net of interest expense, in respect of the assets and liabilities denominated in foreign currency, as follows:

	2006 €	2005 €	Change €
Interest on current accounts	15,399,229	7,519,063	7,880,166
Money market deposit income	195,694,549	124,214,410	71,480,139
Reverse repurchase agreements	201,042,718	153,568,329	47,474,389
Net income on securities	934,077,489	641,956,243	292,121,246
Net interest income on forward and swap transactions in foreign currencies	3,853,216	0	3,853,216
<b>Total interest income on foreign reserve assets</b>	<b>1,350,067,201</b>	<b>927,258,045</b>	<b>422,809,156</b>
Interest expense on current accounts	(225,549)	(221,697)	(3,852)
Repurchase agreements	(31,598,416)	(37,562,595)	5,964,179
Net interest expense on forward and swap transactions in foreign currencies	0	(64,964)	64,964
<b>Interest income on foreign reserve assets (net)</b>	<b>1,318,243,236</b>	<b>889,408,789</b>	<b>428,834,447</b>

Interest income increased significantly during 2006 due to rising interest rates on US dollar-denominated assets.

#### INTEREST INCOME ARISING FROM THE ALLOCATION OF EURO BANKNOTES WITHIN THE EUROSISTEM

This item consists of the interest income relating to the ECB's share in the total euro banknote issue. Interest on the claims of the ECB in respect of its share of banknotes is earned at the latest available marginal rate for the Eurosystem's main refinancing operations. The increase in income in 2006 reflected both the

general increase in euro banknotes in circulation and the increases in the ECB's main refinancing rate. This income is distributed to the NCBs as described in "Banknotes in circulation" in the notes on accounting policies.

Based on the ECB's estimated financial result for 2006, the Governing Council decided to withhold distribution of the whole of this income.

#### REMUNERATION OF NCBs' CLAIMS IN RESPECT OF FOREIGN RESERVES TRANSFERRED

Remuneration paid to euro area NCBs on their claims on the ECB in respect of the foreign reserve assets transferred under Article 30.1 of the Statute of the ESCB is disclosed under this item.

#### OTHER INTEREST INCOME AND OTHER INTEREST EXPENSE

These items include interest income of €2.5 billion (2005: €1.6 billion) and expenses of €2.4 billion (2005: €1.5 billion) on balances arising from TARGET. Interest income and expenses in respect of other assets and liabilities denominated in euro are also shown here.

### 21 REALISED GAINS/LOSSES ARISING FROM FINANCIAL OPERATIONS

Net realised gains arising from financial operations in 2006 were as follows:

	2006 €	2005 €	Change €
Net realised price gains/(losses) on securities and interest rate futures	(103,679,801)	14,854,774	(118,534,575)
Net realised exchange rate and gold price gains	579,060,509	134,514,361	444,546,148
Realised gains arising from financial operations	475,380,708	149,369,135	326,011,573

## 22 WRITE-DOWNS ON FINANCIAL ASSETS AND POSITIONS

	2006 €	2005 €	Change €
Unrealised price losses on securities	(73,609,623)	(97,487,772)	23,878,149
Unrealised exchange rate losses	(644,857,885)	(6,309)	(644,851,576)
Total	(718,467,508)	(97,494,081)	(620,973,427)

The exchange rate losses are primarily due to the write-down of the average acquisition cost of the ECB's Japanese yen holding to its end-of-year exchange rate, following the depreciation of this currency against the euro over the year.

## 23 NET EXPENSE FROM FEES AND COMMISSIONS

	2006 €	2005 €	Change €
Income from fees and commissions	338,198	473,432	(135,234)
Expenses relating to fees and commissions	(884,678)	(655,805)	(228,873)
Net expense from fees and commissions	(546,480)	(182,373)	(364,107)

Income under this heading includes penalties imposed on credit institutions for non-compliance with the minimum reserve requirements. Expenses relate to fees payable on current accounts and in connection with the execution of foreign currency interest rate futures (see note 18, "Interest rate futures").

## 24 INCOME FROM EQUITY SHARES AND PARTICIPATING INTERESTS

Dividends received on shares in the BIS (see note 6, "Other assets") were previously included under "Other income" (€853,403 in 2005), but are now shown under this heading.

## 25 OTHER INCOME

Other miscellaneous income during the year arose principally from the transfer of unused administrative provisions to the Profit and Loss Account.

## 26 STAFF COSTS

Salaries, allowances, staff insurance and other miscellaneous costs of €133.4 million (2005: €127.4 million) are included under this heading. Staff costs of €1.0 million incurred in connection with the construction of the new ECB premises have been capitalised and are excluded from this item. No staff costs were capitalised in 2005.

The emoluments of the Executive Board amounted to a total of €2.2 million (2005: €2.1 million). Transitional payments are made to former members of the Executive Board for a period after the end of their terms of office. In 2006 these payments amounted to €0.3 million in total (€0.4 million in 2005). Pension payments of €0.1 million were made to former members of the Executive Board or their dependents during the year (€0.1 million in 2005).

Salaries and allowances, including the emoluments of holders of senior management positions, are modelled in essence on, and are comparable with, the remuneration scheme of the European Communities.

Also included under this item is an amount of €27.4 million (2005: €25.6 million) recognised in connection with the ECB's retirement plan and other post-employment benefits (see note 12, "Other liabilities").

At the end of 2006 the ECB employed the full-time equivalent of 1,367 staff on permanent or fixed-term contracts, of whom 138 held managerial positions. The change in the number of staff during 2006 was as follows:



	2006	2005
As at 1 January	1,351	1,309
New staff <sup>1)</sup>	55	82
Resignations/end of contract <sup>2)</sup>	39	40
As at 31 December	1,367	1,351
Average number of staff employed	1,360	1,331

1) This item also includes the effects of changes from part to full-time employment.

2) This item also includes the effects of changes from full to part-time employment.

The number of staff as at 31 December 2006 includes the full-time equivalent of 63 staff (2005: 59) on unpaid/parental leave. In addition, as at 31 December 2006, the ECB employed the full-time equivalent of 70 staff (2005: 57) on short-term contracts to replace staff on unpaid/parental and maternity leave.

The ECB also offers the possibility to staff from other central banks of the ESCB to undertake temporary assignments at the ECB. 61 ESCB staff participated in this programme as at 31 December 2006 (2005: 46) and their cost is included within this caption.

## 27 ADMINISTRATIVE EXPENSES

These cover all other current expenses relating to the renting and maintenance of premises, goods and equipment of a non-capital nature, professional fees and other services and supplies, together with staff-related expenses including recruitment, relocation, installation, training and resettlement.

## 28 BANKNOTE PRODUCTION SERVICES

This expense relates to costs arising from cross-border transportation of euro banknotes between NCBs to meet unexpected fluctuations in demand for banknotes. These costs are borne centrally by the ECB.

## NOTE ON PROFIT DISTRIBUTION/ ALLOCATION OF LOSSES

*This note is not part of the financial statements of the ECB for the year 2006.*

general reserve fund or profit distribution to the shareholders of the ECB took place. There was also no requirement to offset a loss.

### INCOME RELATED TO THE ECB'S SHARE OF TOTAL BANKNOTES IN CIRCULATION

In 2005, following a decision by the Governing Council, income of €868 million earned on the ECB's share of total banknotes in circulation was retained to ensure that the ECB's total profit distribution for the year did not exceed its net profit for the year. Similarly, in 2006 an amount of €1,319 million was retained. Both amounts represented the full income earned on the ECB's share of total euro banknotes in circulation in the years in question.

### PROFIT DISTRIBUTION/COVERAGE OF LOSSES

Pursuant to Article 33 of the Statute of the ESCB, the net profit of the ECB shall be transferred in the following order:

- (a) an amount to be determined by the Governing Council, which may not exceed 20% of the net profit, shall be transferred to the general reserve fund subject to a limit equal to 100% of the capital; and
- (b) the remaining net profit shall be distributed to the shareholders of the ECB in proportion to their paid-up shares.

In the event of a loss incurred by the ECB, the shortfall may be offset against the general reserve fund of the ECB and, if necessary, following a decision by the Governing Council, against the monetary income of the relevant financial year in proportion and up to the amounts allocated to the NCBs in accordance with Article 32.5 of the Statute.<sup>1</sup>

In 2006 the funding of the provision against foreign exchange rate, interest rate and gold price risks for the amount of €1,379 million had the effect of reducing net profit to exactly zero. Consequently, as in 2005, no transfers to the

<sup>1</sup> Under Article 32.5 of the Statute of the ESCB, the sum of the NCBs' monetary income shall be allocated to the NCBs in proportion to their paid-up shares in the capital of the ECB.



**Independent auditor's report**

President and Governing Council  
of the European Central Bank

Frankfurt am Main

We have audited the accompanying annual accounts of the European Central Bank, which comprise the balance sheet as at 31 December 2006, the profit and loss account for the year then ended, and a summary of significant accounting policies and other explanatory notes.

*The responsibility of the European Central Bank's Executive Board for the annual accounts*

The Executive Board is responsible for the preparation and fair presentation of these annual accounts in accordance with the principles established by the Governing Council, which are set out in Decisions on the annual accounts of the European Central Bank. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of annual accounts that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

*Auditor's responsibility*

Our responsibility is to express an opinion on these annual accounts based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the annual accounts are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the annual accounts. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the annual accounts, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the annual accounts in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the annual accounts.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

*Opinion*

In our opinion, the annual accounts give a true and fair view of the financial position of the European Central Bank as of 31 December 2006 and of the results of its operations for the year then ended in accordance with the principles established by the Governing Council, which are set out in Decisions on the annual accounts of the European Central Bank.

Frankfurt am Main, 27 February 2007

KPMG Deutsche Treuhand-Gesellschaft  
Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft

Wohlmannstetter  
Wirtschaftsprüfer

Dr. Lemnitzer  
Wirtschaftsprüfer

## 5 CONSOLIDATED BALANCE SHEET OF THE EUROSYSTEM AS AT 31 DECEMBER 2006

(EUR MILLIONS)

ASSETS	31 DECEMBER 2006	31 DECEMBER 2005
<b>1 Gold and gold receivables</b>	<b>176,768</b>	<b>163,881</b>
<b>2 Claims on non-euro area residents denominated in foreign currency</b>	<b>142,288</b>	<b>154,140</b>
2.1 Receivables from the IMF	10,658	16,391
2.2 Balances with banks and security investments, external loans and other external assets	131,630	137,749
<b>3 Claims on euro area residents denominated in foreign currency</b>	<b>23,404</b>	<b>23,693</b>
<b>4 Claims on non-euro area residents denominated in euro</b>	<b>12,292</b>	<b>9,185</b>
4.1 Balances with banks, security investments and loans	12,292	9,185
4.2 Claims arising from the credit facility under ERM II	0	0
<b>5 Lending to euro area credit institutions related to monetary policy operations denominated in euro</b>	<b>450,541</b>	<b>405,966</b>
5.1 Main refinancing operations	330,453	315,000
5.2 Longer-term refinancing operations	120,000	90,017
5.3 Fine-tuning reverse operations	0	0
5.4 Structural reverse operations	0	0
5.5 Marginal lending facility	88	949
5.6 Credits related to margin calls	0	0
<b>6 Other claims on euro area credit institutions denominated in euro</b>	<b>11,036</b>	<b>3,636</b>
<b>7 Securities of euro area residents denominated in euro</b>	<b>77,614</b>	<b>92,367</b>
<b>8 General government debt denominated in euro</b>	<b>39,359</b>	<b>40,113</b>
<b>9 Other assets</b>	<b>216,728</b>	<b>145,635</b>
<b>Total assets</b>	<b>1,150,030</b>	<b>1,038,616</b>

Totals/subtotals may not add up due to rounding.

LIABILITIES	31 DECEMBER 2006	31 DECEMBER 2005
<b>1 Banknotes in circulation</b>	<b>628,238</b>	<b>565,216</b>
<b>2 Liabilities to euro area credit institutions related to monetary policy operations denominated in euro</b>	<b>174,051</b>	<b>155,535</b>
2.1 Current accounts (covering the minimum reserve system)	173,482	155,283
2.2 Deposit facility	567	252
2.3 Fixed-term deposits	0	0
2.4 Fine-tuning reverse operations	0	0
2.5 Deposits related to margin calls	2	0
<b>3 Other liabilities to euro area credit institutions denominated in euro</b>	<b>65</b>	<b>207</b>
<b>4 Debt certificates issued</b>	<b>0</b>	<b>0</b>
<b>5 Liabilities to other euro area residents denominated in euro</b>	<b>53,374</b>	<b>41,762</b>
5.1 General government	45,166	34,189
5.2 Other liabilities	8,208	7,573
<b>6 Liabilities to non-euro area residents denominated in euro</b>	<b>16,614</b>	<b>13,224</b>
<b>7 Liabilities to euro area residents denominated in foreign currency</b>	<b>89</b>	<b>366</b>
<b>8 Liabilities to non-euro area residents denominated in foreign currency</b>	<b>12,621</b>	<b>8,405</b>
8.1 Deposits, balances and other liabilities	12,621	8,405
8.2 Liabilities arising from the credit facility under ERM II	0	0
<b>9 Counterpart of special drawing rights allocated by the IMF</b>	<b>5,582</b>	<b>5,920</b>
<b>10 Other liabilities</b>	<b>71,352</b>	<b>67,325</b>
<b>11 Revaluation accounts</b>	<b>121,887</b>	<b>119,094</b>
<b>12 Capital and reserves</b>	<b>66,157</b>	<b>61,562</b>
<b>Total liabilities</b>	<b>1,150,030</b>	<b>1,038,616</b>





# ANNEXES

## LEGAL INSTRUMENTS ADOPTED BY THE ECB

The following table lists the legal instruments that were adopted by the ECB in 2006 and early 2007 and published in the Official Journal of the European Union. Copies of the Official Journal can be obtained from the Office for Official Publications of the European

Communities. For a list of all the legal instruments adopted by the ECB since its establishment and published in the Official Journal, see the “Legal framework” section of the ECB’s website.

Number	Title	OJ reference
ECB/2006/1	Recommendation of the European Central Bank of 1 February 2006 to the Council of the European Union on the external auditors of the Oesterreichische Nationalbank	OJ C 34, 10.2.2006, p. 30
ECB/2006/2	Guideline of the European Central Bank of 3 February 2006 amending Guideline ECB/2005/5 of 17 February 2005 on the statistical reporting requirements of the European Central Bank and the procedures for exchanging statistical information within the European System of Central Banks in the field of government finance statistics	OJ L 40, 11.2.2006, p. 32
ECB/2006/3	Decision of the European Central Bank of 13 March 2006 amending Decision ECB/2002/11 on the annual accounts of the European Central Bank	OJ L 89, 28.3.2006, p. 56
ECB/2006/4	Guideline of the European Central Bank of 7 April 2006 on the Eurosystem’s provision of reserve management services in euro to central banks and countries located outside the euro area and to international organisations	OJ L 107, 20.4.2006, p. 54
ECB/2006/5	Recommendation of the European Central Bank of 13 April 2006 to the Council of the European Union on the external auditors of the Banque de France	OJ C 98, 26.4.2006, p. 25
ECB/2006/6	Guideline of the European Central Bank of 20 April 2006 amending Guideline ECB/2002/7 on the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts	OJ L 115, 28.4.2006, p. 46
ECB/2006/7	Decision of the European Central Bank of 19 May 2006 amending Decision ECB/2001/16 on the allocation of monetary income of the national central banks of participating Member States from the financial year 2002	OJ L 148, 2.6.2006, p. 56
	Supplementary code of ethical criteria for the members of the Executive Board of the European Central Bank	OJ C 230, 23.9.2006, p. 46
ECB/2006/8	Regulation of the European Central Bank of 14 June 2006 on statistical reporting requirements in respect of post office giro institutions that receive deposits from non-monetary financial institution euro area residents	OJ L 184, 6.7.2006, p. 12

Number	Title	OJ reference
ECB/2006/9	Guideline of the European Central Bank of 14 July 2006 on certain preparations for the euro cash changeover and on frontloading and sub-frontloading of euro banknotes and coins outside the euro area	OJ L 207, 28.7.2006, p. 39
ECB/2006/10	Guideline of the European Central Bank of 24 July 2006 on the exchange of banknotes after the irrevocable fixing of exchange rates in connection with the introduction of the euro	OJ L 215, 5.8.2006, p. 44
ECB/2006/11	Guideline of the European Central Bank of 3 August 2006 amending Guideline ECB/2005/16 of 30 December 2005 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET)	OJ L 221, 12.8.2006, p. 17
ECB/2006/12	Guideline of the European Central Bank of 31 August 2006 amending Guideline ECB/2000/7 on monetary policy instruments and procedures of the Eurosystem	OJ L 352, 13.12.2006, p. 1
ECB/2006/13	Recommendation of the European Central Bank of 6 October 2006 on the adoption of certain measures to protect euro banknotes more effectively against counterfeiting	OJ C 257, 25.10.2006, p. 16
ECB/2006/14	Recommendation of the European Central Bank of 9 October 2006 to the Council of the European Union on the external auditors of Banka Slovenije	OJ C 257, 25.10.2006, p. 19
ECB/2006/15	Regulation of the European Central Bank of 2 November 2006 concerning transitional provisions for the application of minimum reserves by the European Central Bank following the introduction of the euro in Slovenia	OJ L 306, 7.11.2006, p. 15
ECB/2006/16	Guideline of the European Central Bank of 10 November 2006 on the legal framework for accounting and financial reporting in the European System of Central Banks	OJ L 348, 11.12.2006, p. 1
ECB/2006/17	Decision of the European Central Bank of 10 November 2006 on the annual accounts of the European Central Bank	OJ L 348, 11.12.2006, p. 38
ECB/2006/18	Recommendation of the European Central Bank of 13 November 2006 to the Council of the European Union on the external auditors of the Banco de España	OJ C 283, 21.11.2006, p. 16
ECB/2006/19	Decision of the European Central Bank of 24 November 2006 on the approval of the volume of coin issuance in 2007	OJ L 348, 11.12.2006, p. 52
ECB/2006/20	Regulation of the European Central Bank of 14 December 2006 amending Regulation ECB/2001/13 concerning the consolidated balance sheet of the monetary financial institutions sector	OJ L 2, 5.1.2007, p. 3

Number	Title	OJ reference
ECB/2006/21	Decision of the European Central Bank of 15 December 2006 on the national central banks' percentage shares in the key for subscription to the European Central Bank's capital	OJ L 24, 31.1.2007, p. 1
ECB/2006/22	Decision of the European Central Bank of 15 December 2006 laying down the measures necessary for the paying-up of the European Central Bank's capital by the participating national central banks	OJ L 24, 31.1.2007, p. 3
ECB/2006/23	Decision of the European Central Bank of 15 December 2006 laying down the terms and conditions for transfers of the European Central Bank's capital shares between the national central banks and for the adjustment of the paid-up capital	OJ L 24, 31.1.2007, p. 5
ECB/2006/24	Decision of the European Central Bank of 15 December 2006 laying down the measures necessary for the contribution to the European Central Bank's accumulated equity value and for adjusting the national central banks' claims equivalent to the transferred foreign reserve assets	OJ L 24, 31.1.2007, p. 9
ECB/2006/25	Decision of the European Central Bank of 15 December 2006 amending Decision ECB/2001/15 of 6 December 2001 on the issue of euro banknotes	OJ L 24, 31.1.2007, p. 13
ECB/2006/26	Decision of the European Central Bank of 18 December 2006 laying down the measures necessary for the paying-up of the European Central Bank's capital by the non-participating national central banks	OJ L 24, 31.1.2007, p. 15
ECB/2006/27	Guideline of the European Central Bank of 18 December 2006 amending Guideline ECB/2005/5 on the statistical reporting requirements of the European Central Bank and the procedures for exchanging statistical information within the European System of Central Banks in the field of government finance statistics	OJ C 17, 25.1.2007, p. 1
ECB/2006/28	Guideline of the European Central Bank of 21 December 2006 on the management of the foreign reserve assets of the European Central Bank by the national central banks and the legal documentation for operations involving such assets	OJ C 17, 25.1.2007, p. 5
	Memorandum of Understanding amending the Memorandum of Understanding on a Code of Conduct for the members of the Governing Council	OJ C 10, 16.1.2007, p. 6
ECB/2006/29	Recommendation of the European Central Bank of 21 December 2006 to the Council of the European Union on the external auditors of the Oesterreichische Nationalbank	OJ C 5, 10.1.2007, p. 1

<b>Number</b>	<b>Title</b>	<b>OJ reference</b>
ECB/2006/30	Decision of the European Central Bank of 30 December 2006 on Banka Slovenije's paying-up of capital, transfer of foreign reserve assets and contribution to the European Central Bank's reserves and provisions	OJ L 24, 31.1.2007, p. 17



## OPINIONS ADOPTED BY THE ECB

The following table lists the opinions adopted by the ECB in 2006 and early 2007 under Article 105(4) of the Treaty and Article 4 of the Statute of the ESCB, Article 112(2)(b) of the Treaty and Article 11.2 of the Statute. For a list of all the opinions adopted by the ECB since its establishment, see the ECB's website.

### (a) ECB opinions following a consultation by a Member State<sup>1</sup>

Number <sup>2</sup>	Originator	Subject
CON/2006/1	Hungary	General terms and conditions and operating rules of organisations providing clearing house activities
CON/2006/2	Hungary	Protection of forint and euro banknotes and coins against illegal or non-compliant reproductions
CON/2006/3	Estonia	Minimum reserve requirements
CON/2006/4	Cyprus	Amendments to the Central Bank of Cyprus's statutes in preparation for the adoption of the euro
CON/2006/5	Lithuania	Extension of the scope of the legislation on settlement finality in payment and securities settlement systems
CON/2006/6	Finland	Emergency powers and ESCB competences
CON/2006/7	Hungary	General terms and conditions and internal regulations of clearing houses for credit institutions
CON/2006/9	Cyprus	Amendments to the regulatory framework of the Central Depository and Central Registry for securities
CON/2006/10	Malta	Legal framework for adoption of the euro
CON/2006/11	Latvia	Broadening of the reserve base for minimum reserve requirements and the introduction of differentiated reserve ratios
CON/2006/15	Poland	Integration of banking, capital markets, insurance and pension funds supervision
CON/2006/16	Lithuania	Establishing a legal basis for Lietuvos bankas to join the correspondent central banking model
CON/2006/17	Slovenia	Amendments to Banka Slovenije's statutes in preparation for the adoption of the euro
CON/2006/19	Latvia	Amendments to Latvijas Banka's statutes
CON/2006/20	Netherlands	Financial sector supervision
CON/2006/22	Portugal	Codification of various laws on the issue, minting, putting into circulation and marketing of coins

<sup>1</sup> In December 2004 the Governing Council decided that ECB opinions issued at the request of national authorities would, as a rule, be published immediately following their adoption and subsequent transmission to the consulting authority.

<sup>2</sup> Consultations are numbered in the order in which the Governing Council adopted them.

Number <sup>2</sup>	Originator	Subject
CON/2006/23	Malta	Amendments to the Central Bank of Malta's statutes in preparation for the adoption of the euro
CON/2006/24	Slovenia	Amendments to the law on financial collateral
CON/2006/25	Belgium	Introduction of a direct reporting system for balance of payments and international investment position statistics
CON/2006/26	Latvia	Amendments to the minimum liquidity requirements
CON/2006/27	Latvia	Amendment to the Latvian Constitution regarding the status of Latvijas Banka
CON/2006/28	Estonia	Redenomination of the capital and shares of companies and the introduction of no-par value shares resulting from the introduction of the euro
CON/2006/29	Slovenia	Introduction of the euro
CON/2006/30	Sweden	Sveriges Riksbank's regulations on the purchase and return of cash
CON/2006/31	Poland	Provisions allowing banks operating as joint stock companies to be divided in line with the Companies Code
CON/2006/32	France	Amendments to the statutes of the Banque de France
CON/2006/33	Cyprus	Amendments to the Central Bank of Cyprus's statutes in preparation for the adoption of the euro
CON/2006/34	Belgium	Extension of the list of direct participants in securities settlement systems
CON/2006/37	Cyprus	Amendments to the regulatory framework of the Central Depository and Central Registry for securities
CON/2006/38	Greece	Establishment of a consumer protection regime within the scope of the Bank of Greece's prudential supervisory role and other related provisions
CON/2006/39	Poland	Change of composition of the Banking Supervision Commission
CON/2006/40	Belgium	Amendment to the statutes of the Nationale Bank van België/Banque Nationale de Belgique with regard to the pledging of claims to it as collateral for its credit operations
CON/2006/41	Slovenia	Minimum reserves
CON/2006/42	Cyprus	Terms and conditions of affiliation of cooperative credit institutions with a central body
CON/2006/43	Slovenia	Legal basis for the euro cash changeover and frontloading and sub-frontloading

Number <sup>2</sup>	Originator	Subject
CON/2006/44	Italy	General revision of the statutes of the Banca d'Italia
CON/2006/45	Czech Republic	Reproduction of banknotes, coins and other money symbols in the Czech Republic
CON/2006/46	Hungary	Draft Hungarian legislation governing payment transactions, and payment services and electronic payment instruments
CON/2006/47	Czech Republic	Certain Česká národní banka tasks in the area of consumer protection
CON/2006/48	Slovenia	General revision of the banking law
CON/2006/49	Latvia	Monetary policy instruments
CON/2006/50	Cyprus	Amendments to the Central Bank of Cyprus's statutes in preparation for the adoption of the euro
CON/2006/51	Italy	Allocation of powers between supervisory authorities
CON/2006/52	Latvia	Latvijas Banka's securities settlement system
CON/2006/53	Poland	Supervision of clearing and settlement operators
CON/2006/54	Netherlands	Incorporation into De Nederlandsche Bank's statutes of new principles of corporate governance
CON/2006/55	Hungary	Aligning the Magyar Nemzeti Bank's statutes with Community law
CON/2006/56	Luxembourg	Markets in financial instruments
CON/2006/58	Malta	Amendments to the Central Bank of Malta's statutes in preparation for the adoption of the euro
CON/2006/59	Estonia	Minimum reserve requirements
CON/2006/61	Portugal	Authentication of euro coins and the treatment of euro coins that are unfit for recycling
CON/2006/62	Portugal	Establishment of a framework for the detection of counterfeits and the fitness sorting of banknotes
CON/2007/01	Cyprus	Legal framework for adoption of the euro and a smooth changeover
CON/2007/02	Hungary	Establishment of a direct reporting system for balance of payments statistics
CON/2007/03	Ireland	Asset-covered securities

**(b) ECB opinions following a consultation by a European institution<sup>3</sup>**

<b>Number<sup>4</sup></b>	<b>Originator</b>	<b>Subject</b>	<b>OJ reference</b>
CON/2006/8	EU Council	Repeal of obsolete legislation concerning the European Monetary System	OJ C 49, 28.2.2006, p. 35
CON/2006/12	EU Council	Revision of the ESA 95 transmission programme of national accounts data	OJ C 55, 7.3.2006, p. 61
CON/2006/13	EU Council	Temporal coverage of price collection in the HICP	OJ C 55, 7.3.2006, p. 63
CON/2006/14	EU Council	Appointment of a member of the ECB's Executive Board	OJ C 58, 10.3.2006, p. 12
CON/2006/18	EU Council	Major revision of the common statistical classification of economic activities within the Community (NACE)	OJ C 79, 1.4.2006, p. 31
CON/2006/21	EU Council	Payment services in the Internal Market	OJ C 109, 9.5.2006, p. 10
CON/2006/35	EU Council	Amendment to and extension of the exchange, assistance and training programme for the protection of the euro against counterfeiting (the "Pericles" programme)	OJ C 163, 14.7.2006, p. 7
CON/2006/36	EU Council	Conversion rate between the euro and the Slovenian tolar and other measures necessary for the introduction of the euro in Slovenia	OJ C 163, 14.7.2006, p. 10
CON/2006/57	EU Council	Draft Commission directive implementing Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards the clarification of certain definitions	OJ C 31, 13.2.2007, p. 1
CON/2006/60	EU Council	Proposal for a directive amending certain Community directives as regards procedural rules and evaluation criteria for the prudential assessment of acquisitions and increase of shareholdings in the financial sector	OJ C 27, 7.2.2007, p. 1

<sup>3</sup> Also published on the ECB's website.

<sup>4</sup> Consultations are numbered in the order in which the Governing Council adopted them.

<b>Number<sup>4</sup></b>	<b>Originator</b>	<b>Subject</b>	<b>OJ reference</b>
CON/2007/4	EU Council	Introduction of a new comitology procedure in eight Financial Services Action Plan directives	OJ C 39, 23.2.2007, p. 1

# CHRONOLOGY OF MONETARY POLICY MEASURES OF THE EUROSYSTEM<sup>1</sup>

## 12 JANUARY AND 2 FEBRUARY 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.25%, 3.25% and 1.25% respectively.

## 6 JULY 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.75%, 3.75% and 1.75% respectively.

## 2 MARCH 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 2.50%, starting from the operation to be settled on 8 March 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 3.50% and 1.50% respectively, both with effect from 8 March 2006.

## 3 AUGUST 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.0%, starting from the operation to be settled on 9 August 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 4.0% and 2.0%, both with effect from 9 August 2006.

## 6 APRIL AND 4 MAY 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.50%, 3.50% and 1.50% respectively.

## 31 AUGUST 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 3.0%, 4.0% and 2.0% respectively.

## 8 JUNE 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 2.75%, starting from the operation to be settled on 15 June 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 3.75% and 1.75% respectively, both with effect from 15 June 2006.

## 5 OCTOBER 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.25%, starting from the operation to be settled on 11 October 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by

<sup>1</sup> The chronology of monetary policy measures of the Eurosystem taken between 1999 and 2005 can be found on pages 176 to 180 of the ECB's Annual Report 1999, on pages 205 to 208 of the ECB's Annual Report 2000, on pages 219 to 220 of the ECB's Annual Report 2001, on pages 234 to 235 of the ECB's Annual Report 2002, on pages 217 to 218 of the ECB's Annual Report 2003, on page 217 of the ECB's Annual Report 2004 and on page 211 of the ECB's Annual Report 2005 respectively.

25 basis points, to 4.25% and 2.25%, both with effect from 11 October 2006.

#### **2 NOVEMBER 2006**

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 3.25%, 4.25% and 2.25% respectively.

#### **7 DECEMBER 2006**

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.50%, starting from the operation to be settled on 13 December 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 4.50% and 2.50%, both with effect from 13 December 2006.

#### **21 DECEMBER 2006**

The Governing Council of the ECB decides to increase the allotment amount for each of the longer-term refinancing operations to be conducted in the year 2007 from €40 billion to €50 billion. This increased amount takes the following aspects into consideration: the liquidity needs of the euro area banking system have grown strongly in recent years and are expected to increase further in 2007. Therefore, the Eurosystem has decided to increase slightly the share of the liquidity needs satisfied by the longer-term refinancing operations. The Eurosystem will, however, continue to provide the bulk of liquidity through its main refinancing operations. The Governing Council may decide to adjust the allotment amount again at the beginning of 2008.

#### **11 JANUARY AND 8 FEBRUARY 2007**

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 3.50%, 4.50% and 2.50% respectively.

#### **8 MARCH 2007**

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.75%, starting from the operation to be settled on 14 March 2007. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 4.75% and 2.75%, both with effect from 14 March 2007.



## DOCUMENTS PUBLISHED BY THE EUROPEAN CENTRAL BANK SINCE 2006

This list is designed to inform readers about selected documents published by the European Central Bank since January 2006. For Working Papers, the list only refers to publications released between December 2006 and February 2007. Unless otherwise indicated, hard copies can be obtained or subscribed to free of charge, stock permitting, by contacting [info@ecb.int](mailto:info@ecb.int).

For a complete list of documents published by the European Central Bank and by the European Monetary Institute, please visit the ECB's website (<http://www.ecb.int>).

### ANNUAL REPORT

"Annual Report 2005", April 2006.

### CONVERGENCE REPORT

"Convergence Report May 2006".

"Convergence Report December 2006".

### MONTHLY BULLETIN ARTICLES

"The predictability of the ECB's monetary policy", January 2006.

"Hedge funds: developments and policy implications", January 2006.

"Assessing house price developments in the euro area", February 2006.

"Fiscal policies and financial markets", February 2006.

"The importance of public expenditure reform for economic growth and stability", April 2006.

"Portfolio management at the ECB", April 2006.

"Monetary and exchange rate arrangements of the euro area with selected third countries and territories", April 2006.

"The contribution of the ECB and the Eurosystem to European financial integration", May 2006.

"The single list in the collateral framework of the Eurosystem", May 2006.

"Equity issuance in the euro area", May 2006.

"Measures of inflation expectations in the euro area", July 2006.

"Competitiveness and the export performance of the euro area", July 2006.

"Sectoral money holding: determinants and recent developments", August 2006.

"The evolution of large-value payment systems in the euro area", August 2006.

"Demographic change in the euro area: projections and consequences", October 2006.

"Integrated financial and non-financial accounts for the institutional sectors in the euro area", October 2006.

"Monetary policy 'activism'", November 2006.

"The Eurosystem's experience with fine-tuning operations at the end of the reserve maintenance period", November 2006.

"Financial development in central, eastern and south-eastern Europe", November 2006.

"The enlarged EU and euro area economies", January 2007.

"Developments in the structural features of the euro area labour markets over the last decade", January 2007.

"Putting China's economic expansion in perspective", January 2007.

"Challenges to fiscal sustainability in the euro area", February 2007.

"The EU arrangements for financial crisis management", February 2007.

"Migrant remittances to regions neighbouring the EU", February 2007.

### **STATISTICS POCKET BOOK**

Available monthly since August 2003.

### **LEGAL WORKING PAPER SERIES**

- 1 “The developing EU legal framework for clearing and settlement of financial instruments” by K. M. Löber, February 2006.
- 2 “The application of multilingualism in the European Union context” by P. Athanassiou, March 2006.
- 3 “National central banks and Community public sector procurement legislation: a critical overview” by J. García-Andrade and P. Athanassiou, October 2006.

### **OCCASIONAL PAPER SERIES**

- 43 “The accumulation of foreign reserves” by an International Relations Committee Task Force, February 2006.
- 44 “Competition, productivity and prices in the euro area services sector” by a task force of the Monetary Policy Committee of the European System of Central Banks, April 2006.
- 45 “Output growth differentials across the euro area countries: some stylised facts” by N. Benalal, J. L. Diaz del Hoyo, B. Pierluigi and N. Vidalis, May 2006.
- 46 “Inflation persistence and price-setting behaviour in the euro area – a summary of the IPN evidence” by F. Altissimo, M. Ehrmann and F. Smets, June 2006.
- 47 “The reform and implementation of the Stability and Growth Pact” by R. Morris, H. Ongena and L. Schuknecht, June 2006.
- 48 “Macroeconomic and financial stability challenges for acceding and candidate countries” by the International Relations Committee Task Force on Enlargement, July 2006.
- 49 “Credit risk mitigation in central bank operations and its effects on financial markets: the case of the Eurosystem” by U. Bindseil and F. Papadia, August 2006.
- 50 “Implications for liquidity from innovation and transparency in the European corporate bond market” by M. Laganà, M. Peřina, I. von Köppen-Mertes and A. Persaud, August 2006.
- 51 “Macroeconomic implications of demographic developments in the euro area” by A. Maddaloni, A. Musso, P. Rother, M. Ward-Warmedinger and T. Westermann, August 2006.
- 52 “Cross-border labour mobility within an enlarged EU” by F. F. Heinz and M. Ward-Warmedinger, October 2006.
- 53 “Labour productivity developments in the euro area” by R. Gomez-Salvador, A. Musso, M. Stocker and J. Turunen, October 2006.
- 54 “Quantitative quality indicators for statistics – an application to euro area balance of payment statistics” by V. Damia and C. Picón Aguilar, November 2006.
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### **WORKING PAPER SERIES**

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- 734 “Inflation risk premia in the term structure of interest rates” by P. Hördahl and O. Tristani, February 2007.

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- “Bond markets and long-term interest rates in non-euro area Member States of the European Union and in acceding countries – Statistical tables”, January 2006 (online only).
- “Data collection from credit institutions and other professional cash handlers under the framework for banknote recycling”, January 2006 (online only).
- “Euro Money Market Survey 2005”, January 2006.
- “Euro area balance of payments and international investment position statistics – Annual quality report”, February 2006.
- “Towards a Single Euro Payments Area – Objectives and Deadlines (4th Progress Report)”, February 2006 (with the exception of the English version, online only).
- “Handbook for the compilation of flows statistics on the MFI balance sheet”, February 2006 (online only).
- “Methodological notes for the compilation of the revaluation adjustment”, February 2006 (online only).
- “National implementation of Regulation ECB/2001/13”, February 2006 (online only).
- “Payment and securities settlement systems in the European Union and in the acceding countries – Addendum incorporating 2004 data” (Blue Book), March 2006.
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- “Differences in MFI interest rates across euro area countries”, September 2006.
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- “Recent developments in supervisory structures in EU and acceding countries”, October 2006 (online only).
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“Financial Stability Review”, December 2006.

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“List of monetary financial institutions and institutions subject to minimum reserves”, February 2007 (online only).

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“Euro Money Market Study 2006”, February 2007 (online only).

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#### **INFORMATION BROCHURES**

“The European Central Bank, the Eurosystem, the European System of Central Banks”, May 2006.

“TARGET2-Securities brochure”, September 2006.

“The Single Euro Payments Area (SEPA): an integrated retail payments market”, November 2006.



## GLOSSARY

*This glossary contains selected terms that are used in the Annual Report. A more comprehensive and detailed glossary can be found on the ECB's website.*

**Balance of payments (b.o.p.):** a statistical statement that summarises, for a specific period of time, the economic transactions of an economy with the rest of the world. The transactions considered are those involving goods, services and income; those involving financial claims on, and liabilities to, the rest of the world; and those (such as debt forgiveness) that are classified as transfers.

**Benchmark portfolio:** in relation to investments, a reference portfolio or index constructed on the basis of the objectives for the liquidity and risk of, as well as the return on, the investments. The benchmark portfolio serves as a basis for comparison of the performance of the actual portfolio.

**Bond market:** the market in which longer-term **debt securities** are issued and traded.

**Candidate countries:** countries for which the EU has accepted an application for EU membership. Accession negotiations with Croatia and Turkey began on 3 October 2005, while those with the Former Yugoslav Republic of Macedonia have not yet started.

**Central counterparty:** an entity that interposes itself between the **counterparties** to trades, acting as the buyer to every seller and the seller to every buyer.

**Central government:** the government as defined in the **European System of Accounts 1995** but excluding regional and local governments (see also **general government**).

**Central securities depository (CSD):** an entity that holds and administrates securities and enables securities transactions to be processed by book entry. Securities can be held in physical (but immobilised) or dematerialised form (i.e. so that they exist only as electronic records). In addition to the safekeeping and administration of securities, a CSD may incorporate clearing and settlement functions.

**Collateral:** assets pledged or otherwise transferred (e.g. by **credit institutions** to central banks) as a guarantee for the repayment of loans, as well as assets sold (e.g. by credit institutions to central banks) under **repurchase agreements**.

**Consolidated balance sheet of the MFI sector:** a balance sheet obtained by netting out inter-MFI positions (e.g. inter-MFI loans and deposits) in the aggregated MFI balance sheet. It provides statistical information on the MFI sector's assets and liabilities vis-à-vis residents of the **euro area** not belonging to this sector (i.e. **general government** and other euro area residents) and vis-à-vis non-euro area residents. It is the main statistical source for the calculation of monetary aggregates, and it provides the basis for the regular analysis of the counterparts of **M3**.

**Corporate governance:** rules, procedures and processes according to which an organisation is directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among the different participants in the organisation – such as the board, managers, shareholders and other stakeholders – and lays down the rules and procedures for decision-making.



**Corporate profitability:** a measure of the earnings performance of corporations, mainly in relation to their sales, assets or equity. There are a number of different corporate profitability ratios based on company financial statements, such as the ratio of operating income (sales minus operating expenses) to sales, the ratio of net income (operating and non-operating income, after tax, depreciation and extraordinary items) to sales, the return on assets (relating net income to total assets) and the return on equity (relating net income to shareholders' funds). At the macroeconomic level, the **gross operating surplus**, based on national accounts, for instance in relation to GDP or value added, is often used as a measure of profitability.

**Cost of the external financing of non-financial corporations (real):** the cost incurred by non-financial corporations when taking up new external funds. For **euro area** non-financial corporations, it is calculated as a weighted average of the cost of bank lending, the cost of **debt securities** and the cost of equity, based on the amounts outstanding (corrected for valuation effects) and deflated by inflation expectations.

**Counterparty:** the opposite party in a financial transaction (e.g. any party transacting with a central bank).

**Credit derivative:** a financial instrument which separates the credit risk from an underlying financial transaction, enabling the credit risk to be priced and transferred separately.

**Credit institution:** i) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credit for its own account; or ii) an undertaking or any other legal person, other than those under i), which issues means of payment in the form of electronic money.

**Credit risk:** the risk that a **counterparty** will not settle an obligation at full value, either when it becomes due or at any time thereafter. Credit risk includes replacement cost risk and principal risk. It also includes the risk of settlement bank failure.

**Debt security:** a promise on the part of the issuer (i.e. the borrower) to make one or more payments to the holder (the lender) at a specified future date or dates. Such securities usually carry a specific rate of interest (the coupon) and/or are sold at a discount to the amount that will be repaid at maturity. Debt securities issued with an original maturity of more than one year are classified as long-term.

**Deposit facility:** a **standing facility** of the **Eurosystem** which **counterparties** may use to make overnight deposits, remunerated at a pre-specified interest rate, at an NCB (see also **key ECB interest rates**).

**Direct investment:** cross-border investment for the purpose of obtaining a lasting interest in an enterprise resident in another economy (assumed, in practice, for ownership of at least 10% of the ordinary shares or voting power).

**ECOFIN Council:** the EU Council meeting in the composition of the ministers of economy and finance.

**Economic analysis:** one pillar of the **European Central Bank's** framework for conducting a comprehensive analysis of the risks to **price stability**, which forms the basis for the **Governing**

**Council's** monetary policy decisions. The economic analysis focuses mainly on the assessment of current economic and financial developments and the implied short to medium-term risks to price stability from the perspective of the interplay between supply and demand in goods, services and factor markets at those horizons. Due attention is paid to the need to identify the nature of shocks affecting the economy, their effects on cost and pricing behaviour and the short to medium-term prospects for their propagation in the economy (see also **monetary analysis**).

**Economic and Financial Committee (EFC):** a consultative Community body which contributes to the preparation of the work of the **ECOFIN Council** and the European Commission. Its tasks include reviewing the economic and financial situation of the Member States and of the Community, and budgetary surveillance.

**Economic and Monetary Union (EMU):** the process that led to the single currency, the euro, and the single monetary policy in the **euro area**, as well as to the coordination of the economic policies of the EU Member States. This process, as laid down in the Treaty, took place in three stages. Stage Three, the final stage, started on 1 January 1999 with the transfer of monetary competence to the **European Central Bank** and the introduction of the euro. The cash changeover on 1 January 2002 completed the process of setting up EMU.

**Effective exchange rate (EER) of the euro (nominal/real):** weighted average of bilateral euro exchange rates against the currencies of the **euro area's** important trading partners. The **European Central Bank** publishes nominal EER indices for the euro against two groups of trading partners: the EER-24 (comprising the 14 non-euro area EU Member States and 10 main trading partners outside the EU) and the EER-44 (composed of the EER-24 and 20 additional countries). The weights used reflect the share of each partner country in euro area trade and account for competition in third markets. Real EERs are nominal EERs deflated by a weighted average of foreign, relative to domestic, prices or costs. They are thus measures of price and cost competitiveness.

**EONIA (euro overnight index average):** a measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest rates on unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

**Equities:** securities representing ownership of a stake in a corporation. They comprise shares traded on stock exchanges (quoted shares), unquoted shares and other forms of equity. Equities usually produce income in the form of dividends.

**Equity market:** the market in which **equities** are issued and traded.

**ERM II (exchange rate mechanism II):** the exchange rate arrangement that provides the framework for exchange rate policy cooperation between the **euro area** countries and the non-euro area EU Member States.

**EURIBOR (euro interbank offered rate):** the rate at which a prime bank is willing to lend funds in euro to another prime bank, as reported by a panel of contributing banks, computed daily for interbank deposits with different maturities of up to 12 months.

**Euro area:** the area encompassing those Member States which have adopted the euro as the single currency in accordance with the **Treaty** and in which a single monetary policy is conducted under

the responsibility of the **Governing Council** of the **European Central Bank**. The euro area currently comprises Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Slovenia and Finland.

**European Central Bank (ECB):** the ECB lies at the centre of the **Eurosystem** and the **European System of Central Banks (ESCB)** and has its own legal personality in accordance with the **Treaty** (Article 107(2)). It ensures that the tasks conferred upon the Eurosystem and the ESCB are implemented either through its own activities or through those of the NCBs, pursuant to the Statute of the ESCB. The ECB is governed by the **Governing Council** and the **Executive Board**, and, as a third decision-making body, by the **General Council**.

**European Monetary Institute (EMI):** a temporary institution established at the start of Stage Two of **Economic and Monetary Union** on 1 January 1994. It went into liquidation following the establishment of the **European Central Bank** on 1 June 1998.

**European System of Accounts 1995 (ESA 95):** a comprehensive and integrated system of macroeconomic accounts based on a set of internationally agreed statistical concepts, definitions, classifications and accounting rules aimed at achieving a harmonised quantitative description of the economies of the EU Member States. The ESA 95 is the Community's version of the world System of National Accounts 1993 (SNA 93).

**European System of Central Banks (ESCB):** composed of the **European Central Bank (ECB)** and the NCBs of all 27 EU Member States, i.e. it includes, in addition to the members of the **Eurosystem**, the NCBs of those Member States that have not yet adopted the euro. The ESCB is governed by the **Governing Council** and the **Executive Board** of the ECB, and, as a third decision-making body of the ECB, by the **General Council**.

**Eurosystem:** the central banking system of the **euro area**. It comprises the **European Central Bank** and the NCBs of the Member States that have adopted the euro.

**Eurosystem credit assessment framework (ECAF):** the framework that defines the procedures, rules and techniques which ensure that all eligible assets meet the **Eurosystem's** high credit standards.

**Excessive deficit procedure:** the provision set out in Article 104 of the **Treaty** and specified in Protocol No 20 on the excessive deficit procedure requires EU Member States to maintain budgetary discipline, defines the criteria for a budgetary position to be considered an excessive deficit and regulates steps to be taken following the observation that the requirements for the budgetary balance or government debt have not been fulfilled. Article 104 is supplemented by Council Regulation (EC) No 1467/97 of 7 July 1997 on speeding up and clarifying the implementation of the excessive deficit procedure (as amended by Council Regulation (EC) No 1056/2005 of 27 June 2005), which is one element of the **Stability and Growth Pact**.

**Executive Board:** one of the decision-making bodies of the **European Central Bank (ECB)**. It comprises the President and the Vice-President of the ECB and four other members appointed by common accord by the Heads of State or Government of the Member States that have adopted the euro.

**Financial stability:** condition in which the financial system – comprising financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities.

**Fine-tuning operation:** an **open market operation** executed by the **Eurosysteem** in order to deal with unexpected liquidity fluctuations in the market. The frequency and maturity of fine-tuning operations are not standardised.

**Foreign exchange swap:** simultaneous spot and forward transactions exchanging one currency against another.

**General Council:** one of the decision-making bodies of the **European Central Bank (ECB)**. It comprises the President and the Vice-President of the ECB and the governors of all the NCBs of the **European System of Central Banks**.

**General government:** a sector defined in the **European System of Accounts 1995** as comprising resident entities that are engaged primarily in the production of non-market goods and services intended for individual and collective consumption and/or in the redistribution of national income and wealth. Included are central, regional and local government authorities, as well as social security funds. Excluded are government-owned entities that conduct commercial operations, such as public enterprises.

**Governing Council:** the supreme decision-making body of the **European Central Bank (ECB)**. It comprises all the members of the **Executive Board** of the ECB and the governors of the NCBs of the Member States that have adopted the euro.

**Gross operating surplus:** the surplus (or deficit) on the value of output of production activities after the costs of intermediate consumption, compensation of employees and taxes less subsidies on production have been deducted, but before payments and receipts of income related to the borrowing/renting or owning of financial and non-produced assets have been taken into account.

**Harmonised Index of Consumer Prices (HICP):** a measure of consumer prices that is compiled by Eurostat and harmonised for all EU Member States.

**Implied volatility:** the expected volatility (i.e. standard deviation) in the rates of change of the price of an asset (e.g. a share or a bond). It can be derived from the asset's price, maturity date and exercise price of its options, as well as from a riskless rate of return, using an option pricing model such as the Black-Scholes model.

**International investment position (i.i.p.):** the value and composition of an economy's outstanding net financial claims on (or financial liabilities to) the rest of the world.

**Key ECB interest rates:** the interest rates, set by the **Governing Council**, which reflect the monetary policy stance of the **European Central Bank**. They are the **minimum bid rate** on the **main refinancing operations**, the interest rate on the **marginal lending facility** and the interest rate on the **deposit facility**.

**Liquidity risk:** the risk that a **counterparty** will not settle an obligation at its full value when due but on some unspecified date thereafter.

**Lisbon strategy:** a comprehensive agenda of structural reforms aimed at transforming the EU into “the most dynamic and competitive knowledge-based economy in the world”, launched in 2000 by the Lisbon European Council.

**Longer-term refinancing operation:** a regular **open market operation** executed by the **Eurosystem** in the form of **reverse transactions**. Such operations are carried out through a monthly standard tender and normally have a maturity of three months.

**M1:** a narrow monetary aggregate that comprises currency in circulation plus overnight deposits held with **MFIs** and **central government** (e.g. at the post office or treasury).

**M2:** an intermediate monetary aggregate that comprises **M1** plus deposits redeemable at a period of notice of up to and including three months (i.e. short-term savings deposits) and deposits with an agreed maturity of up to and including two years (i.e. short-term time deposits) held with **MFIs** and **central government**.

**M3:** a broad monetary aggregate that comprises **M2** plus marketable instruments, in particular **repurchase agreements**, **money market** fund shares/units, and **debt securities** with a maturity of up to and including two years issued by **MFIs**.

**Main refinancing operation:** a regular **open market operation** executed by the **Eurosystem** in the form of **reverse transactions**. Such operations are carried out through a weekly standard tender and normally have a maturity of one week.

**Maintenance period:** the period over which **credit institutions’** compliance with **reserve requirements** is calculated. The maintenance period begins on the settlement day of the first **main refinancing operation** following the meeting of the **Governing Council** at which the monthly assessment of the monetary policy stance is pre-scheduled. The **European Central Bank** publishes a calendar of the reserve maintenance periods at least three months before the start of the year.

**Marginal lending facility:** a **standing facility** of the **Eurosystem** which **counterparties** may use to receive overnight credit from an NCB at a pre-specified interest rate against eligible assets (see also **key ECB interest rates**).

**Market risk:** the risk that the value of an investment will decrease owing to moves in market factors. There are generally considered to be four market risk factors: equity risk, interest rate risk, currency risk and commodity risk.

**MFIs (monetary financial institutions):** financial institutions which together form the money-issuing sector of the **euro area**. These include the **Eurosystem**, resident **credit institutions** (as defined in Community law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or invest in securities. The latter group consists predominantly of **money market** funds.

**MFI credit to euro area residents:** MFI loans granted to non-MFI **euro area** residents (including **general government** and the private sector) and MFI holdings of securities (shares, other equity and **debt securities**) issued by non-MFI euro area residents.

**MFI interest rates:** the interest rates that are applied by resident **credit institutions** and other **MFIs**, excluding central banks and **money market** funds, to euro-denominated deposits and loans vis-à-vis households and non-financial corporations resident in the **euro area**.

**MFI longer-term financial liabilities:** deposits with an agreed maturity of over two years, deposits redeemable at a period of notice of over three months, **debt securities** issued by **euro area MFIs** with an original maturity of more than two years and the capital and reserves of the euro area MFI sector.

**MFI net external assets:** the external assets of the **euro area MFI** sector (such as gold, foreign currency banknotes and coins, securities issued by non-euro area residents and loans granted to non-euro area residents) minus the external liabilities of the euro area MFI sector (such as non-euro area residents' deposits and **repurchase agreements**, as well as their holdings of **money market** fund shares/units and **debt securities** issued by MFIs with a maturity of up to and including two years).

**Minimum bid rate:** lower limit to the interest rates at which **counterparties** may submit bids in the variable rate tenders of the **main refinancing operations**. This is one of the **key ECB interest rates** reflecting the stance of monetary policy.

**Monetary analysis:** one pillar of the **European Central Bank's** framework for conducting a comprehensive analysis of the risks to **price stability**, which forms the basis for the **Governing Council's** monetary policy decisions. The monetary analysis helps to assess medium to long-term trends in inflation, in view of the close relationship between money and prices over extended horizons. The monetary analysis takes into account developments in a wide range of monetary indicators including **M3**, its components and counterparts, notably credit, and various measures of excess liquidity (see also **economic analysis**).

**Monetary income:** income accruing to the NCBs in the performance of the **Eurosystem's** monetary policy function, derived from assets earmarked in accordance with guidelines established by the **Governing Council** and held against banknotes in circulation and deposit liabilities to **credit institutions**.

**Money market:** the market in which short-term funds are raised, invested and traded using instruments which generally have an original maturity of up to and including one year.

**Open market operation:** an operation executed on the initiative of the central bank in the financial market. With regard to their aims, regularity and procedures, **Eurosystem** open market operations can be divided into four categories: **main refinancing operations**; **longer-term refinancing operations**; **fine-tuning operations**; and structural operations. As for the instruments used, **reverse transactions** are the main open market instrument of the Eurosystem and can be employed in all four categories of operations. In addition, the issuance of debt certificates and outright transactions are available for structural operations, while outright transactions, **foreign exchange swaps** and the collection of fixed-term deposits are available for the conduct of fine-tuning operations.



**Option:** a financial instrument that gives the owner the right, but not the obligation, to buy or sell specific assets (e.g. a bond or a stock) at a predetermined price (the strike or exercise price) at or up to a certain future date (the exercise or maturity date).

**Other financial intermediary (OFI):** a corporation or quasi-corporation (other than an insurance corporation or pension fund) that is engaged mainly in financial intermediation by incurring liabilities in forms other than currency, deposits and/or close substitutes for deposits from institutional entities other than MFIs. OFIs include in particular corporations engaged primarily in long-term financing, such as financial leasing, securitised asset holdings, other financial holdings, securities and derivatives dealing (on their own account), venture capital and development capital.

**Portfolio investment: euro area** residents' net transactions and/or positions in securities issued by non-residents of the euro area ("assets") and non-residents' net transactions and/or positions in securities issued by euro area residents ("liabilities"). Included are equity securities and **debt securities** (bonds and notes, and **money market** instruments), excluding amounts recorded in **direct investment** or reserve assets.

**Price stability:** the maintenance of price stability is the primary objective of the **Eurosystem**. The **Governing Council** defines price stability as a year-on-year increase in the **Harmonised Index of Consumer Prices** for the **euro area** of below 2%. The Governing Council has also made it clear that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2% over the medium term.

**Primary balance:** government net borrowing or net lending excluding interest payments on consolidated government liabilities.

**Projections:** the results of exercises conducted four times a year to project possible future macroeconomic developments in the **euro area**. **Eurosystem** staff projections are published in June and December, whereas **European Central Bank (ECB)** staff projections are published in March and September. They form part of the **economic analysis** pillar of the monetary policy strategy of the ECB and are thus one of several inputs into the **Governing Council's** assessment of the risks to **price stability**.

**Real-time gross settlement (RTGS) system:** a settlement system in which processing and settlement take place on an order-by-order basis (without netting) in real time (continuously) (see also **TARGET**).

**Reference value for M3 growth:** the annual growth rate of **M3** over the medium term that is consistent with the maintenance of **price stability**. At present, the reference value for annual M3 growth is 4½%.

**Repurchase agreement:** an agreement whereby an asset is sold while the seller simultaneously obtains the right and obligation to repurchase it at a specified price on a future date or on demand. Such an agreement is similar to collateralised borrowing, with the difference that ownership of the securities is not retained by the seller.



**Reserve base:** the sum of the eligible balance sheet items (in particular liabilities) that constitute the basis for calculating the **reserve requirement** of a **credit institution**.

**Reserve ratio:** the ratio defined by the central bank for each category of eligible balance sheet items included in the **reserve base**. The ratio is used to calculate **reserve requirements**.

**Reserve requirement:** the minimum amount of reserves a **credit institution** is required to hold with the **Eurosystem**. Compliance is determined on the basis of the average of the daily balances over a **maintenance period**.

**Reverse transaction:** an operation whereby the central bank buys or sells assets under a **repurchase agreement** or conducts credit operations against **collateral**.

**Securities settlement system (SSS):** a system which permits the holding and transfer of securities, either free of payment or against payment (delivery versus payment) or against another asset (delivery versus delivery). It comprises all the institutional and technical arrangements required for the settlement of securities trades and the safekeeping of securities. Such a system can operate on a real-time gross settlement, gross settlement or net settlement basis. A settlement system allows for the calculation (clearing) of the obligations of participants.

**Settlement risk:** a general term used to designate the risk that settlement in a transfer system will not take place as expected. This risk may comprise both **credit** and **liquidity risk**.

**Stability and Growth Pact:** the Stability and Growth Pact is intended to serve as a means of safeguarding sound government finances in Stage Three of **Economic and Monetary Union** in order to strengthen the conditions for price stability and for strong, sustainable growth conducive to employment creation. To this end, the Pact prescribes that Member States specify medium-term budgetary objectives. It also contains concrete specifications on the **excessive deficit procedure**. The Pact consists of the Resolution of the Amsterdam European Council of 17 June 1997 on the Stability and Growth Pact and two Council Regulations, namely i) Regulation (EC) No 1466/97 of 7 July 1997 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies as amended by Regulation (EC) 1055/2005 of 27 June 2005, and ii) Regulation (EC) No 1467/97 of 7 July 1997 on speeding up and clarifying the implementation of the excessive deficit procedure as amended by Regulation (EC) 1056/2005 of 27 June 2005. The Stability and Growth Pact is complemented by the ECOFIN Council's report entitled "Improving the implementation of the Stability and Growth Pact", which was endorsed by the Brussels European Council of 22 and 23 March 2005. It is also complemented by the new Code of Conduct entitled "Specifications on the implementation of the Stability and Growth Pact and Guidelines on the format and content of stability and convergence programmes", which was endorsed by the ECOFIN Council on 11 October 2005.

**Standing facility:** a central bank facility available to counterparties on their own initiative. The **Eurosystem** offers two overnight standing facilities: the **marginal lending facility** and the **deposit facility**.

**Straight-through processing (STP):** the automated end-to-end processing of trades/payment transfers including the automated completion of generation, confirmation, clearing and settlement of instructions.

**Systemic risk:** the risk that the inability of one institution to meet its obligations when due will cause other institutions to be unable to meet their obligations when due. Such a failure may cause significant liquidity or credit problems and, as a result, could threaten the stability of or confidence in markets.

**TARGET (Trans-European Automated Real-time Gross settlement Express Transfer system):** the **real-time gross settlement (RTGS) system** for the euro. It is a decentralised system consisting of 17 national RTGS systems, the ECB payment mechanism (EPM) and the interlinking mechanism.

**TARGET2:** a new generation of the **TARGET** system in which the current decentralised technical structure will be replaced by a single shared platform offering a harmonised service with a uniform pricing scheme.

**Treaty:** refers to the Treaty establishing the European Community (“Treaty of Rome”). The Treaty has been amended on several occasions, in particular by the Treaty on European Union (“Maastricht Treaty”) which laid the foundations for **Economic and Monetary Union** and contained the Statute of the **ESCB**.

ISSN 1561457-3



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