EUROPEAN CENTRAL BANK

EUROSYSTEM

# ANNUAL REPORT 2007

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In 2008 all ECB publications feature a motif taken from the €10 banknote.

# ANNUAL REPORT 2007

**Address**
Kaiserstrasse 29
60311 Frankfurt am Main, Germany

**Postal address**
Postfach 16 03 19
60066 Frankfurt am Main, Germany

**Telephone**
+49 69 1344 0

**Website**
http://www.ecb.europa.eu

**Fax**
+49 69 1344 6000



*Photographs:*
*Martin Joppen*
*Walter Vorjohann*

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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

When looking back at the events of the last year, the third enlargement of the euro area since its creation in 1999 stands out as an important event. Implementing the decision made in 2007, on 1 January 2008 Cyprus and Malta became the 14th and 15th EU Member States to adopt the euro, following Greece in 2001 and Slovenia in 2007, and their national central banks (NCBs) joined the Eurosystem. I would like to extend a very warm welcome to the Cypriot and Maltese citizens. The good economic performance of Cyprus and Malta, thanks to the implementation of stability-oriented macroeconomic policies over recent years, made it possible for these two countries to introduce the euro as their currency. The currency changeover to the euro proceeded in a smooth and efficient manner in both countries. Looking ahead, the main policy challenge for both countries following their adoption of the euro will be to ensure the conduct of appropriate national economic policies in order to secure a high degree of sustainable convergence.

Another important event in 2007 was the signing by the Heads of State or Government of the EU's new Treaty in Lisbon on 13 December. This Treaty is now in the process of being ratified by all 27 Member States with a view to it entering into force on 1 January 2009. The ECB welcomes the fact that the new Treaty states that price stability is an objective of the EU, while making Economic and Monetary Union (EMU), with the euro as its currency, an EU objective. The ECB becomes a Union institution and the new Treaty confirms the independence of the ECB, of the ESCB and of the NCBs, as well as the legal personality, regulatory powers and financial independence of the ECB. The ECB considers that the new Treaty confirms the current set-up of EMU and is looking forward to the successful completion of the ratification process.

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In 2007 annual HICP inflation in the euro area was 2.1%, compared with 2.2% in 2006. While this exceeded the ECB's definition of price stability of "below, but close to, 2%", the ECB's monetary policy nonetheless continued to firmly anchor medium to long-term inflation expectations at levels broadly consistent with price stability, notwithstanding an economic environment characterised by significant upward price pressures. These mainly stemmed from increases in commodity prices, in particular energy and – particularly in the fourth quarter – food prices, as well as, on the domestic side, the impact of increases in indirect taxes, capacity constraints in the context of an expanding economy and tightening labour markets. The continued anchoring of inflation expectations at medium and longer-term horizons in 2007 therefore reflects favourably on the credibility of the ECB in delivering price stability over the medium term, in line with its mandate. Such anchoring is an indispensable precondition for well-functioning markets, sustainable growth and job creation in the euro area and is of the highest priority to the Governing Council.

Throughout 2007 risks to price stability over the medium term were clearly on the upside. The risks included possible additional rises in oil and agricultural prices and potential unforeseen increases in administered prices and indirect taxes. More fundamentally, there were substantial risks of increases in the pricing power of firms, especially in market segments with low competition, and of stronger than expected wage dynamics, implying a threat of second-round effects stemming from temporarily elevated inflation rates on wage and price-setting. In order to ensure that price stability was preserved over the medium term, the Governing Council monitored wage negotiations and price-setting in the euro area with particular attention.

Economic activity in the euro area continued to expand at solid rates in 2007, with annual real GDP growing by 2.6%, despite volatile energy prices and an environment of heightened uncertainty stemming from the financial turmoil in the second half of the year. While euro area exports continued to benefit from strong but moderating global economic growth, domestic demand – in particular the fixed investment component – remained the main driver of the expansion of economic activity. During the first half of 2007, strong investment growth was supported by favourable financing conditions, strong corporate earnings and further gains in business efficiency. In the second half of 2007, the heightened financial uncertainty partly clouded the situation in the real economy and the balance of risks to the baseline scenario for euro area growth tilted to the downside.

Cross-checking with the monetary analysis confirmed the Governing Council's assessment that risks to price stability continued to lie clearly on the upside at medium to longer horizons. A broad-based assessment of available data confirmed that the underlying rate of money and credit expansion was very vigorous. In the second half of 2007, the influence of the financial turmoil on the underlying dynamics of broad money and credit expansion remained limited. This was underlined in particular by the sustained growth of bank loans to the domestic private sector, especially to non-financial corporations, suggesting that the credit supply had not been significantly impaired. The Governing Council paid particular attention to monetary developments over this period.

In order to contain the prevailing upside risks to price stability over the medium term, the Governing Council raised the key ECB interest rates in March and June 2007 by 25 basis points in each case. As a result, the minimum bid rate in the main refinancing operations of the Eurosystem rose to 4.00% in June 2007, from 3.50% at the end of 2006. In the second half of the year, the Governing Council decided to maintain key ECB interest rates at an unchanged level. Taking due account also of the unusually high degree of uncertainty about the impact of the financial turmoil on the real economy, the Governing Council deemed it necessary to collect and assess additional information and to monitor developments in financial markets particularly closely before drawing further conclusions for monetary policy. At the same time, the Governing Council confirmed its permanent readiness to do whatever was needed in order to ensure that upside risks to price stability would not materialise and that the firm anchoring of long-term inflation expectations would be preserved.

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Further progress with fiscal consolidation was made in 2007, according to the updated stability programmes, with the average fiscal deficit ratio for the euro area declining to 0.8% of GDP, compared with 1.5% in 2006. However, a renewed increase in this ratio is already projected for 2008 at a time when many countries have still not achieved sound fiscal positions. This implies a risk that some countries will not comply with the provisions of the preventive arm of the Stability and Growth Pact. In order not to undermine the credibility of the Pact, these countries should pursue much more ambitious policies and improve their structural position by a benchmark rate of 0.5% of GDP per year as required by the Pact. It is crucial that all countries live up to their commitments and aim to achieve their medium-term objective of a sound fiscal position by 2010 at the latest, as agreed and announced at the Eurogroup's Berlin meeting of April 2007. Discretionary fiscal loosening would be totally inappropriate. On the contrary, allowing the free operation of automatic stabilisers in countries with sound budgetary positions and safeguarding the long-term sustainability of public finances is the best contribution fiscal policy can make to macroeconomic stability.

As regards structural reforms, recent achievements in the context of the Lisbon strategy are encouraging. Structural reforms and wage moderation over recent years have led to a significant rise in employment in the euro area of around 15.8 million persons in the period of nine years since the start of Stage Three of EMU, compared with an increase of around 4.5 million for the same group of countries in the nine years before 1999. In the same vein, the unemployment rate in the euro area continued to decline, from 8.3% in 2006 to 7.4% in 2007, a level not seen for 25 years. However, there is no room for complacency. Unemployment rates in many countries are still high and the labour participation rate remains low by international standards. Moreover, productivity growth in the euro area continues to be weak, limiting the scope for wage increases. It is thus important that governments continue to sustain momentum and step up their reform efforts to remove remaining barriers to job creation and productivity growth. Most importantly, this requires improvements in education and life-long learning, which would enhance human capital, improve employment prospects and increase innovation. Continuous efforts are also needed to enhance competition and flexibility and to improve the functioning of labour, product and services markets. In particular, enhancing competition in the services sectors and network industries, as well as applying adequate measures in the EU agricultural market, would support productivity growth and price stability in the euro area.

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2007 was marked by very difficult challenges in financial markets. As of August, a very significant worldwide market correction with episodes of acute turbulence and a high level of volatility affected euro money markets. The drying-up of liquidity in the euro money market on 9 August led the ECB to provide €95 billion at its policy rate of 4.00% with overnight maturity. The ECB conducted further similar operations, of decreasing amounts, over the following days. In the subsequent weeks and months, the ECB also conducted supplementary longer-term refinancing operations as well as fine-tuning operations. It also provided liquidity in dollars in parallel with the Term Auction Facility of the Federal Reserve Bank of New York. At the end of the year, the ECB took special liquidity measures in order to accommodate the specific needs of the banking system.

As a result of the ECB's operations, the overnight interest rate returned to the stable levels around the policy rate set by the Governing Council which had prevailed before the start of the turmoil. Tensions remain, however, at longer maturities in the money market.

The financial market correction triggered a substantial reappraisal of risk by market participants. The ECB, as well as the other members of the Eurosystem, had warned on several occasions, in particular in its Financial Stability Review, that the situation was characterised by an underpricing of risks. While the present significant market correction is not over, some provisional lessons can be drawn, including: i) the necessity for banks to enhance their risk management systems; ii) the need to reflect on the advantages and disadvantages of the "originate-to-distribute model" developed before the correction started; iii) the need for enhanced transparency from all actors in the markets; iv) the need to assess the overall role of credit rating agencies; and v) the need for supervisors to implement the new capital framework under Basel II as rapidly and effectively as possible and to reflect on possible enhancements to the supervisory regime for liquidity risk.

The euro area financial system remained resilient in 2007, but its shock-absorbing capacity was severely tested throughout the second half of the year. Apart from the possible consequences of the credit market turbulence, future risks to the euro area banking system mainly relate to the possibility of adverse developments in the credit cycle, with negative implications for banks' asset quality and loan impairment charges. In addition, the possibility of a disorderly unwinding of global imbalances remains a source of medium-term risk to global financial stability.

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During 2007 the ECB continued to make an active contribution to the process of European financial integration. In addition to monitoring progress in this field and providing advice on relevant legislation and regulation, the ECB confirmed its role as a catalyst for private sector activities, in particular by continuing its strong support for the Single Euro Payments Area initiative. The Eurosystem maintained a constant dialogue with banks and other stakeholders and intensified coordination efforts with the European Commission. It supported the adoption of the Payment Services Directive, which was approved by the EU Council on 15 October 2007.

Furthermore, the TARGET2 system started operating on 19 November 2007, when a first group of eight countries migrated their operations to the single shared platform. A second group of seven countries migrated on 18 February this year, and the third group will migrate on 19 May. With a view to reaping the full benefits of TARGET2, the Eurosystem continued to explore the possibility of offering a new service, called TARGET2-Securities (T2S), to provide a common technical infrastructure for the euro settlement of securities transactions in central bank money by central securities depositories and to process both securities and cash settlements on a single technical platform. With T2S, there would be no difference between conducting domestic and cross-border settlements within the euro area. It should therefore contribute to integrating and harmonising European post-trading financial services and should foster competition by providing equal, cheaper and harmonised access to settlement services within the European financial market.

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The total number of budgeted staff positions for 2007 was 1,348 full-time equivalent (FTE) positions. This compares with 1,343 FTE positions for 2006. Following the introduction in 2006 of general principles for mobility which encourage members of staff to change positions after every five years of service, internal mobility has received considerable support. In total, 152 members of staff, including 31 managers and advisers, moved internally to other positions in 2007, on either a temporary or a long-term basis.

In addition to promoting mobility, the Human Resources (HR) strategy continued to focus on the development of ECB management and, in particular, on strengthening managerial skills through training and individual coaching. The continuous acquisition and development of skills and competencies by all members of staff remains a cornerstone of the ECB's HR strategy. In addition to numerous in-house training opportunities, staff continued to take up external training opportunities to address individual training needs of a more technical nature.

The Human Resources Conference, which was established in 2005 to promote cooperation and team spirit among Eurosystem/ESCB central banks in the field of HR management, covered different aspects of staff training and development in 2007, including opportunities for ESCB training activities and the development of measures to increase intra-ESCB mobility.

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2007 saw the completion of the detailed planning for the ECB's new premises. In mid-July, a contract notice was published in the Official Journal of the European Union for the selection of a general contractor in charge of building the ECB's future headquarters. After receiving expressions of interest by early October, the ECB selected some companies and invited them to tender an offer. The ECB will select a company by October 2008. The project is progressing in compliance with both the timing and the financial budget approved by the Governing Council.

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In 2007 the ECB earned a surplus of €286 million compared with a surplus of €1,379 million in 2006. As in 2006, 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 2008

Jean-Claude Trichet


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CHAPTER I

# ECONOMIC DEVELOPMENTS AND MONETARY POLICY

# 1 MONETARY POLICY DECISIONS[1]

In 2007 the ECB conducted its monetary policy in an environment of sound economic growth and vigorous money and credit expansion in the euro area. Throughout the year, the medium-term risks to price stability remained clearly on the upside, as identified by the Governing Council's regular economic and monetary analyses. To contain these risks, the Governing Council continued to adjust the monetary policy stance, raising the key ECB interest rates by a total of 50 basis points in March and June. As a result, the minimum bid rate in the main refinancing operations of the Eurosystem rose to 4.00% in June 2007.

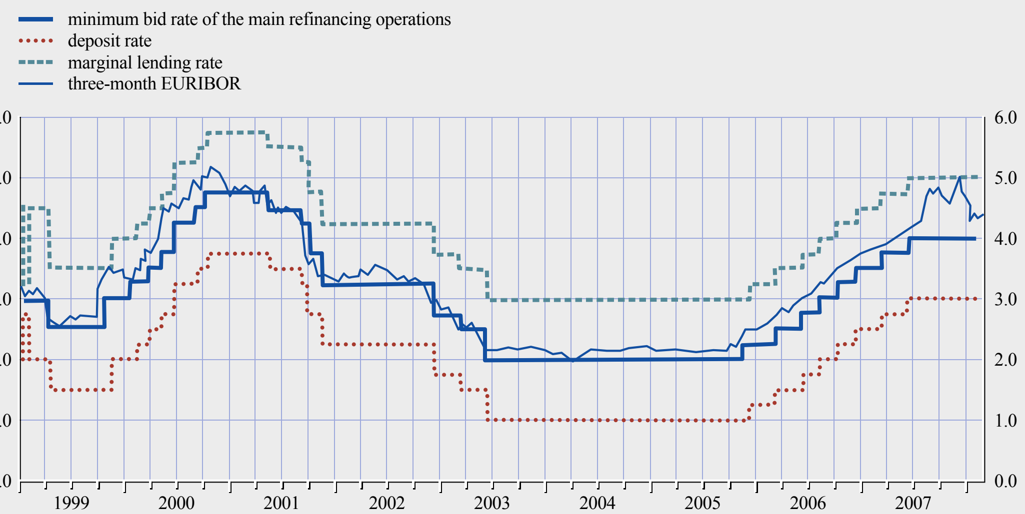
Following the onset of the turmoil and increased volatility in financial markets in early August 2007, which had been triggered by a deterioration in the US sub-prime mortgage market and the repricing of risk, the outlook for economic activity in the euro area became clouded by unusually high uncertainty. Notwithstanding the confirmation of upside risks to price stability over the medium term, it was necessary in this environment of heightened uncertainty to collect and assess further information before drawing conclusions for monetary policy. The Governing Council therefore left the key ECB interest rates unchanged in the second half of the year (see Chart 1).

Average annual HICP inflation stood at 2.1% in 2007, compared with 2.2% in 2006. Headline inflation fluctuated significantly in the course of the year, largely on account of developments in energy prices. Until the third quarter of 2007, annual HICP inflation developed in line with the ECB's definition of price stability (i.e. below, but close to, 2% over the medium term), partly as a result of favourable base effects stemming from energy price developments a year earlier. Towards the end of the year, by contrast, annual inflation rose sharply, reaching levels significantly above 2%. The rise was mainly due to substantial increases in international oil and food prices in the second half of 2007, which

1 All data references regarding real GDP growth and HICP inflation reflect revised data as available on the cut-off date of this report (29 February 2008). The use of updated revised data rather than real-time data available at the time monetary policy decisions were taken does not change the line of reasoning underlying the monetary policy deliberations and decisions presented in this section.

**Chart 1 ECB interest rates and money market rates**

(percentages per annum; daily data)




Source: ECB.
Note: The rate for 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.

were amplified by unfavourable base effects stemming from the decline in energy prices in the last quarter of 2006. At the same time, wage developments remained rather moderate throughout 2007, despite an environment of robust economic growth, emerging capacity constraints and tightening labour markets. While longer-term inflation expectations derived from surveys remained anchored at levels consistent with price stability, break-even inflation rates derived from bond yields, which include an inflation risk premium, rose slightly. Overall, risks to price stability over the medium term remained clearly on the upside. These risks included: the scope for additional rises in prices of oil and agricultural products; unforeseen increases in administered prices and indirect taxes; and the possibility of increases in firms' pricing power, particularly in sectors sheltered from competition. More fundamentally, the possible emergence of stronger than expected wage dynamics and, in particular, of second-round effects in wage and price-setting as a consequence of higher commodity prices and elevated headline inflation rates posed substantial upside risks to price stability.

Economic activity in the euro area continued to expand at solid rates throughout 2007. While euro area exports continued to benefit from strong, albeit moderating, global growth, domestic demand was the main driver of the continued expansion. Investment remained dynamic over the year, supported by favourable financing conditions (especially in the first half), strong corporate earnings and continued gains in business efficiency on account of restructuring in the corporate sector over an extended period of time. Consumption also continued to contribute to economic expansion in the euro area, supported by developments in real disposable income, as labour market conditions continued to improve. In the context of the financial turmoil that started in early August 2007, the prospects for economic activity became more uncertain and downside risks to growth intensified. Nevertheless, the economic fundamentals of the euro area remained sound, with corporate profitability sustained, household balance sheets strong, employment growth robust and unemployment rates declining from 8.2% in 2006 to 7.4% in 2007, which was the lowest level for 25 years. Overall, notwithstanding the challenges posed by volatile energy prices and financial turbulence, real GDP in the euro area grew by 2.6% on an annual basis in 2007. While short-term risks to the outlook for economic growth were broadly balanced for most of the year, longer-term risks remained on the downside. These risks mainly related to external developments, notably possible further rises in oil and other commodity prices, global imbalances and potential protectionist pressures. After the onset of the financial turmoil, downside risks to growth intensified, given the potential impact of the reappraisal of risk in financial markets on financing conditions, economic sentiment and the global environment.

A cross-check of the outcome of the economic analysis with that of the monetary analysis confirmed that upside risks to price stability prevailed at medium to longer horizons. Money and credit continued to grow vigorously throughout 2007. Although a number of temporary factors (such as the flattening of the yield curve and, later in the year, the financial turmoil and specific transactions associated with the restructuring of certain banking groups) influenced developments in the broad aggregate M3, a broad-based assessment of the data confirmed the strength of the underlying rate of money and credit expansion, as underlined, in particular, by the sustained growth of loans to the private sector. The Governing Council therefore paid particular attention to monetary developments, also with a view to better understanding the shorter-term response of financial institutions, households and firms to the financial market turmoil in the second half of 2007.

To address the prevailing upside risks to price stability identified by both its economic and monetary analyses, the Governing Council decided in March and June 2007 to raise the key ECB interest rates by 25 basis points in each case. Following the onset of the financial turmoil in early August 2007, the prospects for economic activity in the euro area were subject to higher than usual uncertainty in the face of the increased volatility and the repricing of risk in financial markets. Against this background, and notwithstanding the assessment that risks to price stability over the medium term remained clearly on the upside, the Governing Council deemed it appropriate to collect additional information and to carefully examine incoming data before drawing further monetary policy conclusions. With due consideration of the heightened level of uncertainty, the Governing Council therefore left the key ECB interest rates unchanged in the second half of the year.

In its communications to financial market participants and the general public, the Governing Council stressed that it would monitor all developments very closely, in particular those in financial markets. Furthermore, the Governing Council signalled its readiness to counter upside risks to price stability by acting in a firm and timely manner to prevent second-round effects in wage and price-setting from materialising over the medium term. This would ensure that medium to long-term inflation expectations remain firmly anchored at levels consistent with price stability. Reflecting the Governing Council's mandate, such anchoring is an indispensable prerequisite for well-functioning markets, sustained economic growth and job creation.

### FURTHER ADJUSTMENT OF THE MONETARY POLICY STANCE IN THE FIRST HALF OF 2007

At the start of the year, incoming information further underpinned the reasoning behind the interest rate increases implemented in 2006. In particular, the incoming data clearly confirmed the view that risks to price stability remained on the upside, while economic activity in the euro area was continuing to expand robustly.

With a quarter-on-quarter increase of 0.8% in the fourth quarter of 2006, euro area real GDP growth exceeded earlier expectations. Strong contributions from domestic demand and exports were the main drivers of growth, pointing to the increasingly self-sustaining nature of the economic expansion. In addition, available confidence indicators continued to support the Governing Council's view that the robust economic growth dynamics had continued into early 2007. Moreover, the medium-term outlook for economic activity remained favourable, with conditions in place for the euro area economy to grow at a sustained pace, given robust global growth and dynamic investment growth in the euro area in a context of improving labour market conditions. In the ECB staff macroeconomic projections of March 2007, the ranges projected for economic growth were revised upwards in comparison with those in the Eurosystem staff projections of December 2006, largely reflecting the continued strength of real GDP growth in the second half of 2006 and lower energy prices, which were seen – if these developments were to be sustained – to have a positive impact on real disposable income. Average annual real GDP growth was projected to be in a range between 2.1% and 2.9% in 2007, and between 1.9% and 2.9% in 2008.

As regards price developments, annual HICP inflation rates remained at 1.9% at the start of the year, and were thus consistent with the ECB's definition of price stability. The fall in headline inflation rates since the summer of 2006 was due predominantly to lower energy prices. In assessing the outlook for price developments, the Governing Council stressed the importance of taking a medium-term perspective and of looking beyond the possible volatility in inflation rates in the course of 2007. In the ECB staff macroeconomic projections of March 2007, the upper bound of the range projected for inflation in 2007 was somewhat lower than in the Eurosystem staff projections of December 2006, largely reflecting the significant decline in oil prices. The projected range for inflation in 2008, by contrast, was slightly higher than in the December projections, mainly as a result of the anticipation of stronger growth dynamics in the euro area that were likely to exert more intense pressure on factor utilisation and costs. Average annual HICP inflation was projected to stand between 1.5% and 2.1% in 2007, and between 1.4% and 2.6% in 2008. At the policy-relevant medium-term horizon, this outlook remained subject to upside risks.

The outcome of the monetary analysis confirmed the upside risks to price stability that had been identified by the economic analysis. The continued robust expansion of money and credit in an environment of ample liquidity pointed to inflationary risks at medium to longer horizons. At the beginning of 2007, annual M3 growth reached levels not seen since the introduction of the euro. Moreover, the annual rate of growth in loans to the private sector remained strong, largely reflecting the continuation of the upward trend in the growth of borrowing by non-financial corporations that had been recorded since mid-2004. At the same time, in the context of rising mortgage rates throughout the euro area and slowing housing markets in some regions, the growth of household borrowing showed signs of moderation, although at a high level. The monetary data thus confirmed the persistent upward trend in the underlying rate of money and credit expansion that had been observed since mid-2004. The Governing Council therefore took the view that monetary developments continued to require very careful monitoring, especially in a context of sound economic expansion and persistently strong property market dynamics in the euro area.

Overall, in view of the prevailing upside risks to price stability identified by both the economic and monetary analyses, the Governing Council decided to increase the key ECB interest rates by 25 basis points on 8 March 2007. Furthermore, the Governing Council took the view that, even after the decision to further raise the key ECB interest rates, and given the favourable economic environment, the monetary policy of the ECB continued to be on the accommodative side.

As regards economic activity, available data clearly confirmed that the euro area economy was continuing to expand at a pace that was significantly stronger than expected a year earlier. With a quarter-on-quarter growth rate of 0.8%, real GDP in the first quarter of 2007 again somewhat exceeded previous expectations. Moreover, the medium-term outlook for economic activity remained favourable. This was reflected by the Eurosystem staff projections of June 2007, which saw average annual real GDP growth as being within the upper band of the range projected by ECB staff in March. At the same time, the projected ranges for 2008 were revised marginally downwards after the increase in oil prices and with the balance of risks to the outlook at medium to longer horizons being considered to be on the downside.

Moreover, the annual HICP inflation rate stood at 1.9% in May, somewhat higher than expected earlier in 2007, as a result of higher oil prices. Given the upward path of oil prices implied by futures contracts, and viewed against the background of past energy price developments, annual inflation rates were expected to fall only slightly in the ensuing months before rising significantly towards the end of the year. In the Governing Council's view, risks to the outlook for price developments remained on the upside at the medium-term horizon. These risks were in particular related to stronger than expected wage dynamics in an environment of increasing capacity utilisation and gradually improving labour markets.

The monetary analysis continued to confirm prevailing upside risks to price stability at medium to longer horizons, with the underlying rate of monetary expansion remaining vigorous in a context of already ample liquidity. This was reflected in the continued rapid growth of both M3 and credit. At the same time, after looking through the factors affecting monetary and credit developments in the short term, there were increasing signs that higher short-term interest rates were gradually influencing monetary dynamics, although they were still not dampening the underlying rate of monetary and credit expansion.

All in all, a cross-check of the outcome of the economic analysis with that of the monetary analysis underpinned the Governing Council's view that upside risks to price stability prevailed over the medium term. Against this background, the Governing Council decided to raise the key ECB interest rates by a further 25 basis points on 6 June. On this occasion, the Governing Council stated that, even after this decision, the ECB's monetary policy was still on the accommodative side. Therefore, it would be warranted to act in a firm and timely manner to ensure price stability over the medium term. The Governing Council also made clear that it would monitor all developments closely to prevent the risks to price stability from materialising over the medium term.

### NO CHANGES TO KEY ECB INTEREST RATES IN THE SECOND HALF OF 2007

In the course of the third quarter, incoming data on economic activity remained positive, supporting the view that the euro area economy was continuing to expand at sustained rates in line with the Governing Council's baseline scenario. While quarter-on-quarter real GDP growth declined to 0.3% in the second quarter, after 0.8% in the first quarter, economic growth in the first half of the year, viewed as a whole, was in line with potential. Following the outbreak of the crisis in the US sub-prime mortgage loan market and the associated financial turmoil in August 2007, however, the prospects for economic activity in the euro area were subject to an unusually high level of uncertainty, which warranted the close monitoring of all developments, particularly those in financial markets.

In the ECB staff macroeconomic projections of September 2007, the range foreseen for real GDP growth in 2007 was 2.2% to 2.8%, implying a slight downward revision compared with that of the Eurosystem staff projections of June 2007. This was due mainly to the assumption of somewhat higher oil prices and somewhat tighter financing conditions, the latter reflecting higher risk premia in the light of the financial turmoil. For 2008, the projected range for economic growth remained between 1.8% and 2.8%, unchanged from that in the June 2007 Eurosystem staff projections. The risks to these projections were deemed to lie on the downside, relating mainly to a potentially broader impact of the increased volatility and ongoing repricing of risk in financial markets on financing conditions and economic sentiment.

As regards price developments, annual HICP inflation stood at 1.7% in August, but over the remainder of the year, inflation rates were projected to exceed 2%, largely determined by the pattern of base effects in energy prices. In the ECB staff projections of September 2007, annual HICP inflation was projected to be between 1.9% and 2.1% in 2007, and between 1.5% and 2.5% in 2008, as declining pressure from indirect taxes and energy prices was expected to be offset by pressures stemming from higher unit labour costs. In the view of the Governing Council, the risks to this outlook for price developments remained on the upside.

The monetary analysis continued to confirm this assessment, with the continued vigour of the underlying rate of monetary and credit expansion pointing to the existence of upside risks to price stability at medium to longer horizons. Against the background of the ongoing financial turmoil, the Governing Council recalled that volatility in financial markets could temporarily influence monetary dynamics, since – as demonstrated in previous episodes – changes in private sector attitudes towards risk could be associated with large portfolio shifts into safe and liquid monetary assets. Thus, the Governing Council was of the view that an in-depth and comprehensive analysis of monetary and credit data was needed to better understand the impact of financial developments on monetary developments and to extract the policy-relevant signals from monetary growth with regard to longer-term inflationary trends.

Notwithstanding the prevalence of upside risks to price stability, as identified by both its economic and monetary analyses, the Governing Council took the view that, given the high level of uncertainty in the wake of the financial turmoil, additional information was needed before further conclusions for monetary policy could be drawn. Consequently, the Governing Council decided to leave the key ECB interest rates unchanged in the third quarter, while reaffirming that it would monitor all developments very closely, in particular those in financial markets, so as to ensure that risks to price stability did not materialise and that longer-term inflation expectations remained firmly anchored in line with price stability.

In the fourth quarter incoming data supported the sustained nature of economic expansion in the euro area. Real GDP grew by 0.8%, quarter on quarter, in the third quarter of 2007, with domestic demand as the main driver. Moreover, available confidence indicators, while declining somewhat in the context of the high volatility and the repricing of risk in financial markets since early August 2007, generally remained at levels that pointed to ongoing economic growth in the fourth quarter, albeit probably at a more moderate pace than in the third quarter. Overall, it was the assessment of the Governing Council that the economic fundamentals of the euro area remained sound, with profitability sustained and employment growth robust. In December 2007 Eurosystem staff projected real GDP growth to be in the range between 2.4% and 2.8% in 2007, between 1.5% and 2.5% in 2008, and between 1.6% and 2.6% in 2009. While the ranges projected for 2008 were revised slightly downwards, the new range for 2007 remained in the upper part of the previous one.

Against this background, the Governing Council's main scenario of real GDP growing around its trend potential remained in place in 2008 and 2009. On the domestic side, both consumption and investment were expected to contribute to economic expansion. At the same time, external demand was expected to continue to support euro area exports, provided that the global economy remained resilient, with the economic slowdown in the United States being partly offset by the sustained strength of emerging market economies. Prospects for economic growth in the euro area thus remained resilient, although the risks to this outlook remained on the downside. These risks related mainly to the potential impact of the ongoing financial turmoil on financing conditions and economic sentiment, with possible adverse effects on growth in the euro area and the world.

On the price side, the annual rate of HICP inflation reached levels above 3% at the turn of the year. Substantial increases in international oil and food prices, together with unfavourable base effects from energy prices, were the main factors driving this development. The Governing Council took the view that annual inflation rates would remain significantly above 2% in the first months of 2008, before moderating again over the course of 2008. Hence, the period of temporarily high rates of inflation would be somewhat more protracted than previously expected.

In December 2007 Eurosystem staff projected inflation to rise to a range between 2.0% and 3.0% in 2008, before moderating to a range between 1.2% and 2.4% in 2009. Compared with the ECB staff projections of September 2007, the range for 2008 was shifted upwards, largely reflecting the assumed path of oil and food prices.

On the money side, there was little evidence that the financial turmoil since August 2007 had strongly influenced the dynamics of broad money and credit expansion. In fact, the growth of bank loans to the domestic private sector remained robust in the second half of 2007, suggesting that the supply of credit had not been impaired. Overall, a broad-based assessment of the monetary data supported the view that the underlying rate of money and credit expansion remained strong.

With the prevalence of upside risks to price stability, especially in a context of existing capacity constraints and positive labour market developments, it was imperative to avoid the emergence of second-round effects on wage and price-setting from temporarily high inflation rates, so as to ensure price stability over the medium term. As a consequence, the Governing

Council re-emphasised that it was monitoring wage negotiations in the euro area with particular attention. In addition, any scheme indexing nominal wages to the consumer price index should be avoided. Other upside risks related to further rises in oil and agricultural prices, in particular if they continued their upward trend observed in the last months of 2007, as well as to unanticipated increases in administered prices and indirect taxes.

Against this background, the Governing Council decided to leave the key ECB interest rates unchanged in the fourth quarter of 2007. At the same time, it clearly communicated that the ECB's monetary policy stood ready to act in a firm and timely manner so as to counter upside risks to price stability, as required by its mandate under the Treaty. Readiness to act was seen as being warranted in order to ensure both that second-round effects from high inflation rates and other risks to price stability did not materialise and that medium to long-term inflation expectations remained firmly anchored in line with price stability.

# 2 MONETARY, FINANCIAL AND ECONOMIC DEVELOPMENTS

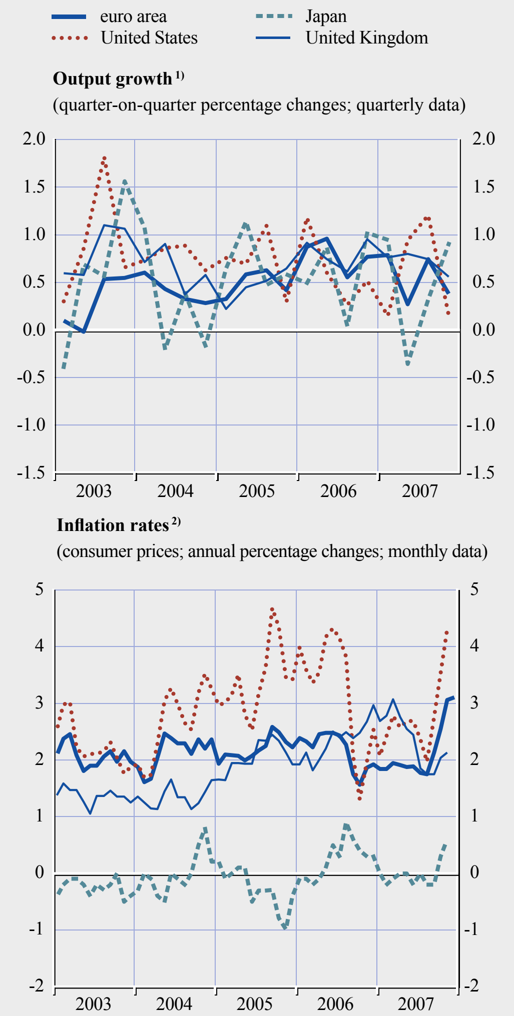
## 2.1 THE GLOBAL MACROECONOMIC ENVIRONMENT

### GLOBAL GROWTH RESILIENT BUT SLOWING DOWN

In 2007 global economic growth (outside the euro area) moderated somewhat from the very buoyant conditions recorded in the previous three years. This was partly related to the global financial tensions that surfaced in the middle of 2007 and overshadowed economic developments across the globe, as well as to a certain maturing of the global manufacturing cycle. While the US housing market weakness had only limited immediate spillover effects on other components of US domestic demand, which grew strongly in the second and third quarters of 2007, US economic growth slowed down markedly in the fourth quarter. The global repercussions of the weaker economic outlook in the United States, however, remained rather limited in 2007. In major emerging markets, the turmoil led temporarily to a rise in financial market volatility, but the capacity of most emerging markets to withstand this turbulence appeared to be stronger than in the past. Over the year as a whole, the economic expansion in emerging markets proceeded at a fast pace, particularly in emerging Asia. At the same time, uncertainty about the global economic outlook increased, associated with the broad-based reappraisal of risks, tighter financing conditions, the rise in commodity prices and a decline in confidence indicators.

Following a period of broadly contained global inflationary pressures in the year to September 2007, headline inflation in most economies rose strongly towards the end of 2007 (see Chart 2). In the OECD countries, headline consumer price inflation increased to 3.3% in December 2007. This was mainly attributable to higher commodity prices and unfavourable base effects. Amid tight market conditions, oil prices continued to rise strongly in the course of 2007. In addition, non-oil commodity prices continued to increase strongly in the first half of 2007 and subsequently remained rather volatile at elevated levels. These latter developments reflected a strong rise in agricultural prices, particularly food, which was only partly offset by a decline in metals prices. Agricultural prices continued to be affected by strong demand from emerging economies, developments in the production of biofuels and poor harvests in some countries. In view of the higher weight of food in their price index, inflationary pressures have been even more pronounced in emerging markets than in industrialised countries.

**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.

Excluding food and energy, however, consumer price inflation remained contained, standing at 2.1% in December in the OECD countries.

In the United States, the annual rate of growth in real GDP for 2007 as a whole was 2.2%, which was 0.7 percentage point below the rate in 2006. The housing market correction, which had already begun in 2006, remained a major drag on growth and shaved almost a full percentage point off GDP growth through decreased residential investment. In addition, the sub-prime mortgage-related financial market turbulence intensified from summer 2007 onwards, and contributed to curbing growth towards the end of the year. In the course of 2007 economic activity was volatile, with GDP growth falling below its potential rate in the first quarter, surging above it in the second and third quarters, and declining again in the fourth quarter. Amid this volatility, private consumption growth remained surprisingly strong, despite high energy prices and the housing and financial market turbulence, mainly owing to continued employment and income growth, which, however, deteriorated significantly towards the end of the year. In addition, non-residential business investment growth was brisk, supported by high levels of corporate profitability and, during the first half of the year, favourable financing conditions. The net trade contribution turned positive in 2007 for the first time since 1995, reflecting buoyant global growth, as well as the depreciation of the real effective exchange rate of the US dollar. These factors also explain the decline in the current account deficit from 6.2% of GDP in 2006 to 5.5% in the first three quarters of 2007. The narrowing of the goods deficit accounted for the bulk of the improvement.

The financial market turbulence, which originated from increased delinquency and foreclosure rates for US sub-prime mortgages, heightened in the summer. However, its effects on the US real economy remained fairly limited during most of 2007 and were mainly related to the availability and price of loans, especially non-conforming mortgages. Otherwise the turbulence was manifest mainly in money markets and in the financial sector, where banks had to make substantial write-downs.

In the United States, the annual rate of change in the CPI for 2007 was 2.8%, down from 3.2% the year before. Consumer price inflation rose in the first half of the year on account of significant increases in energy prices and an acceleration in the owner-equivalent rent component of the CPI. After being somewhat muted during the summer months, inflationary pressures subsequently increased, with the year-on-year change in the CPI peaking at 4.3% in November. This was in particular attributable to strong base effects and increases in energy and food prices towards the end of the year. The annual rate of inflation excluding energy and food also showed signs of renewed acceleration in the last months of the year. In 2007 as a whole, it stood at 2.3%, 0.2 percentage point lower than in 2006.

In the first half of 2007 the Federal Open Market Committee (FOMC) of the Federal Reserve System kept the federal funds target rate unchanged at 5.25%. After the financial market turbulence began to heighten in late summer, the Federal Reserve made a series of rate cuts in September and October by a total of 75 basis points. After one additional 25 basis point cut made in December the target rate stood at 4.25% at the end of the year, a full percentage point below its January level. The Federal Reserve also used other monetary policy tools. In August it cut the spread between the federal funds and discount rates from 100 basis points to 50 basis points. On 12 December it announced additional changes to its monetary policy tools. The Federal Reserve established a temporary Term Auction Facility to auction term funds to depository institutions with longer maturities and looser collateral requirements than is the case in open market operations. At the same time it agreed on temporary liquidity-providing operations with the ECB and the Swiss National Bank to provide US dollars for use in their jurisdictions.

As regards fiscal policy, the federal budget deficit declined in the fiscal year 2007 compared with 2006. This was mainly the result of increased personal tax revenues and reduced outlays. According to estimates by the Congressional Budget Office, the federal budget deficit stood at 1.2% of GDP in the fiscal year 2007.

In Japan, the economic recovery continued in 2007, although domestic demand and in particular private consumption weakened. Growth in real activity moderated in 2007, with real GDP growing by 2.1% after 2.4% in 2006, remaining around potential for the fourth consecutive year. While economic activity remained supported by the continuing strength of exports, the contribution of domestic demand to GDP growth decreased. Export activity benefited from developments in the effective exchange rate of the Japanese yen and sound external demand, especially from Asia. Private consumption growth declined to 1.4% after 2.0% in 2006, although employment conditions remained favourable overall. Moreover, despite export momentum, private investment growth slowed down. This reflected a decrease in residential investment driven by a contraction in construction activity following the revision of the Building Standards Law, and a slowdown in non-residential investment driven by some moderation in business confidence, especially among small and medium-sized firms. Despite moderating economic conditions, bank lending continued to increase in 2007, although at a slower pace than in 2006, amid increased uncertainties in the global financial environment.

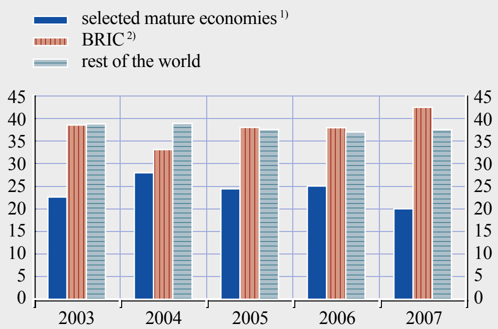
Consumer price inflation remained subdued in Japan in 2007, reflecting in particular subdued wage growth. After being positive in 2006 in the wake of higher commodity prices, annual consumer price inflation returned to negative territory at the beginning of 2007, before turning positive again in October as a result of the renewed increase in the price of imported raw materials. For the year as a whole, the annual rate of change in consumer prices was 0.0% after 0.3% in 2006, while excluding fresh food the annual rate of inflation was 0.0% after 0.1% in 2006. In 2007 the Bank of Japan continued its policy of a very gradual tightening of monetary conditions, in line with subdued inflationary pressures. For the second time since the end of the quantitative easing policy in March 2006, the Bank of Japan decided in February 2007 to raise its target for the uncollateralised overnight call rate from 0.25% to 0.50%.

Growth in emerging economies remained solid and accounted for a significant share of world GDP growth in 2007, as mature economies' expansion weakened (see Chart 3). Some inflationary pressure surfaced in a number of countries.

Economic activity remained robust in emerging Asia. Notwithstanding a less favourable external environment in the second half of the year, strong domestic demand helped to support the growth momentum, notably in the largest economies of the region. Inflationary pressures remained contained in most economies owing, in part, to the tightening in monetary policy implemented in many economies. One exception was China, where inflation rose during the year. Reflecting the region's solid macroeconomic performance, valuations in local equity markets continued to rise amid large fluctuations. Developments appeared to be more mixed in foreign exchange markets. Some emerging Asian currencies – such as the Thai baht or the Indian rupee – appreciated substantially in effective terms

**Chart 3 Geographical contributions to world GDP growth**

(percentages)




Source: ECB staff calculations.
Note: Estimates based on the IMF World Economic Outlook database and forecasts of October 2007 with the revised purchasing power parity exchange rates.
1) The United States, Japan and the euro area.
2) Brazil, Russia, India and China.

on the back of strong capital inflows, while other currencies remained broadly stable or depreciated in effective terms.

Focusing on China, the economy continued to expand briskly last year. Real GDP grew by 11.4% in 2007, up from 11.1% in 2006, on account of both sustained domestic demand and strong net exports. Inflationary pressures picked up, with CPI inflation increasing from 2.2% in January to 6.5% in December, largely driven by higher food prices. The Chinese renminbi continued to appreciate gradually against the US dollar throughout the year, although movements in effective terms were more subdued. In May the People's Bank of China announced a widening of the daily trading band of the renminbi exchange rate against the US dollar from +/-0.3% of the reference rate to +/-0.5%. The trade surplus continued to widen, bringing the cumulated surplus in 2007 to USD 262 billion – or about 8% of GDP – almost 50% higher than the surplus for the whole of 2006. In this context, foreign exchange reserves continued to rise, totalling USD 1.5 trillion, close to 50% of GDP, at the end of 2007.

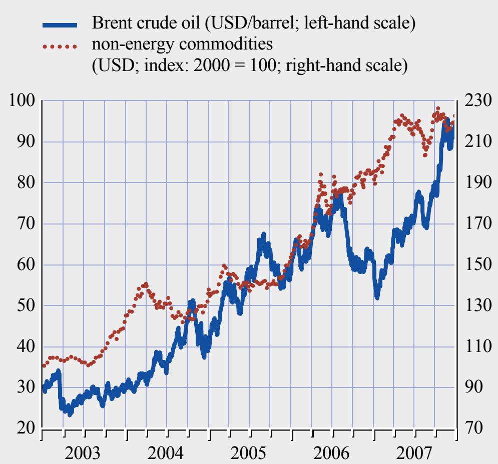
Economic growth also remained sustained in Latin America, albeit with some heterogeneity in the inflation and growth performances across economies. Improved macroeconomic fundamentals, a further reduction in financial vulnerabilities, high commodity prices and strong domestic demand continued to support the economic outlook. External financial conditions deteriorated in the wake of the recent period of global financial market turbulence, albeit less than in previous episodes of market volatility. In particular, spreads on credit default swaps on Latin American sovereign debt widened, but remained at low levels by historical standards. In the region's leading economies, the pace of economic activity was more moderate in Mexico, reflecting a less favourable external environment, but was robust in Brazil, while inflation remained contained in both countries. Argentina continued to post high real GDP growth rates, and inflation remained at elevated levels.

### COMMODITY PRICE DEVELOPMENTS IN 2007

Oil prices surged for the fourth year in a row in 2007. The price of Brent crude oil increased to around USD 95.6 per barrel in late November. Oil prices were subsequently volatile and stood at USD 94.9 per barrel at the end of the year, around USD 17 above the peaks reached in August 2006. Measured in terms of euro, prices were only around EUR 4 above the August 2006 peak and around 40% above the level of end-2006. For the year as a whole, the average price of a barrel of Brent crude oil was USD 71, which was 9% above the average of the previous year.

Throughout the year oil markets remained tight. As regards supply, the Organization of the Petroleum Exporting Countries (OPEC) had lowered its production quota and actual production towards the end of 2006, while non-OPEC supply growth fell short of expectations and, thus, did not compensate for lower OPEC output. In addition, some production disruptions attributable to the hurricane season temporarily reduced output. Global demand growth remained relatively robust. Some weakness in OECD demand towards the end of the year was compensated for by robust non-OECD

**Chart 4 Main developments in commodity markets**




Sources: Bloomberg and Hamburg Institute of International Economics.

demand growth. Demand in most non-OECD countries, in particular China, remained strong, reflecting robust economic performance. In addition, oil demand was supported by subsidies on oil products in many of these countries. Inventories in both the United States and the OECD countries failed to build up before the northern hemisphere heating season, a period when inventories normally increase. The low level of oil inventories triggered concerns about the lack of a safety cushion against possible future supply disruptions (related to geopolitical tensions and extreme weather) at a time when oil market conditions were already tight. Towards the end of the year, prices became increasingly volatile as a result of changing market perceptions about a slowdown in the US and global economy and some unwinding of speculative activity. Prices stayed at high levels, however, as the International Energy Agency confirmed the positive outlook for global oil demand in 2008 owing to strong non-OECD demand growth and hinted at possible lower rates of oil discovery over the next decade.

Not only oil but also other commodity prices increased markedly in 2007. The prices of non-energy commodities, as measured by the Hamburg Institute of International Economics, continued to be buoyant in most of 2007 and peaked in mid-October amid some volatility. In the first half of the year non-energy commodity prices were supported both by strong increases in industrial raw materials prices and by surges in agricultural prices attributable to strong economic growth, bad harvests and the increased use of agricultural raw materials in the production of biofuel. In the second half of the year the upward trend in agricultural and food prices continued, mainly driven by robust demand from China, while industrial raw materials (and in particular non-ferrous metals) prices declined, reflecting the slowdown in industrial production in OECD countries. In aggregate terms, non-energy commodity prices (denominated in US dollars) increased by an average of approximately 19% in 2007 compared with the previous year.

## 2.2 MONETARY AND FINANCIAL DEVELOPMENTS

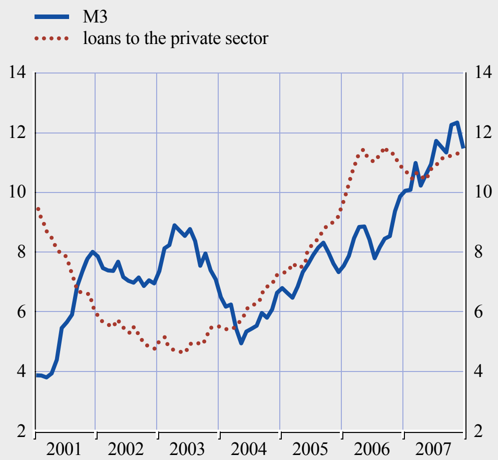
### THE PACE OF MONETARY EXPANSION REMAINED STRONG

The year 2007 was again characterised by strong monetary and credit growth, following the strengthening observed since mid-2004. This strength is reflected in the continued high growth rates of both the broad monetary aggregate M3 and lending to the private sector (see Chart 5), which stood at 12.0% and 11.1% respectively in the fourth quarter of 2007.

A broad-based analysis of monetary developments shows that the growth of M3 in 2007 may somewhat overstate the underlying rate of monetary expansion, owing to the stimulative effect of the relatively flat yield curve, which increased the attractiveness of short-term MFI deposits relative to longer-term deposits and securities. Consequently, strong M3 growth may, to some extent, have been driven by speculative demand for monetary assets. At the same time, the increases in key ECB interest rates since December 2005 have clearly continued to influence money and credit developments. The impact of these increases in short-term interest rates on monetary dynamics remained visible, for example, in the

**Chart 5 M3 and loans to the private sector**

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




Source: ECB.

moderation in the annual growth rates of both M1 and loans to the household sector.

Thus far, the financial turmoil observed as of the second half of 2007 appears to have had a limited impact on the dynamics of the broad monetary aggregate. The turmoil has, however, affected specific components and counterparts of M3, particularly those closely related to the tensions emerging in the money market, such as the issuance of money market fund shares/units and MFI debt securities. However, a more general shift into monetary assets, possibly triggered by a more widespread increase in risk aversion in the non-financial private sector in the context of that financial turmoil, does not – thus far, at least – appear to have occurred. This assessment is supported by the detailed analysis of components and counterparts of M3 reported below.

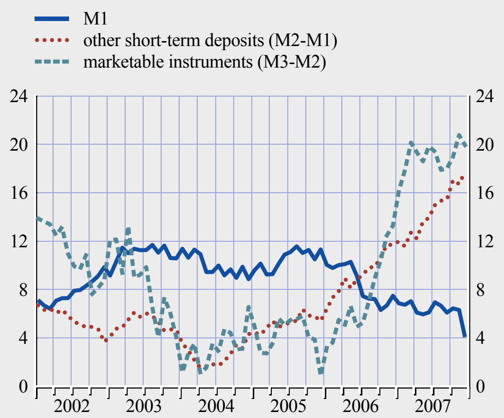
### COMPONENTS OF M3 WERE INFLUENCED BY THE FLAT YIELD CURVE

On the components side, the annual growth rate of M1 moderated further to stand at 4.1% at the end of 2007, well below the double-digit growth rates observed between 2003 and late 2005 before the key ECB interest rates were increased. This moderation is visible in both components of M1, i.e. overnight deposits and currency in circulation. M1 growth in 2007 was influenced mainly by two countervailing forces. On the one hand, there was a dampening effect resulting from the rising opportunity cost of holding M1 associated with the increases in interest rates since December 2005. On the other hand, there was greater transaction-related demand for M1 given the continued strength of economic activity, as well as, potentially, a desire to hold M1 as a buffer in the context of the recent financial turmoil.

The strengthening observed since mid-2004 in the annual growth rate of short-term deposits other than overnight deposits (M2-M1) continued in 2007, with that growth rate reaching 17.8% in December (see Chart 6). The contribution of these other short-term deposits to annual M3 growth increased to 6.6 percentage points in December, with such deposits accounting for

**Chart 6 Main components of M3**

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



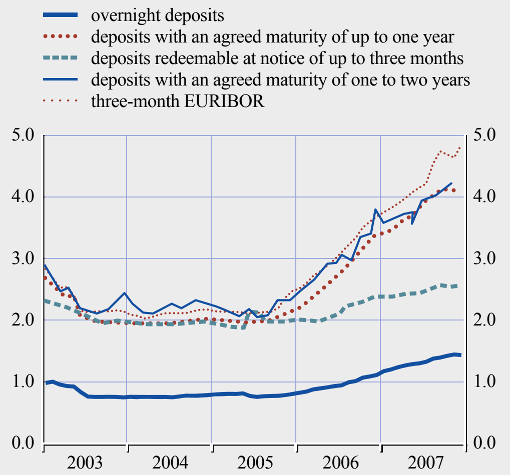

Source: ECB.

most of the strong overall monetary expansion as well as its recent dynamics. However, this strong growth masks divergent developments across the various sub-components. The ongoing strong inflows for short-term time deposits (i.e. deposits with an agreed maturity of up to two years), which grew at an annual rate of 41.4% in December, up from 27.2% in December 2006, were accompanied by a continuous decline in the holdings of deposits redeemable at notice of up to three months, which declined by 3.6% in the year to December, after low levels of growth at the end of 2006.

The remuneration of short-term time deposits has broadly followed the rise in short-term money market interest rates (see Chart 7). The spread vis-à-vis the remuneration of short-term savings deposits and overnight deposits has thus widened, as the remuneration of these deposits has increased more slowly and modestly, in line with historical patterns. This has supported shifts into time deposits from M1 and savings deposits. Moreover, with a relatively flat yield curve, short-term time deposits have been attractive by comparison with riskier longer-maturity assets outside M3, since they offer greater liquidity and less risk at little cost in terms of return, thereby supporting shifts away from longer-term assets as well.

**Chart 7 MFI interest rates on short-term deposits and a money market interest rate**

(percentages per annum)




Source: ECB.

Having already strengthened considerably in 2006, the annual growth rate of marketable instruments (M3-M2) increased further in the course of 2007, standing at 19.9% in December, up from 13.3% in December 2006. To a large extent, this reflects the impact of the relatively flat yield curve in the euro area, which encouraged shifts into shorter-term monetary assets. As a result, the contribution of these instruments to the annual growth rate of M3 was relatively strong, standing at 2.7 percentage points in December 2007.

This strong contribution conceals divergent developments before and after the start of the financial turmoil, which become visible when looking at developments in the sub-components. For instance, the annual growth rate of money market fund shares/units strengthened continuously in the year to July 2007. Some money market funds took on exposure to the structured credit market in order to boost returns and thereby outperform their benchmark money market rate. In the context of the financial turmoil, money market fund shares/units suffered particularly large net outflows in August and September and again in December, leading to a decline in their annual growth rate. These outflows are likely to have reflected general risk aversion towards such funds, as investors seemingly felt unable to judge the risks taken by individual funds in terms of exposure to asset-backed securities at a time when the price of such instruments was volatile and difficult to assess. The disinvestment observed for money market fund shares/units was mirrored by strong inflows for MFI short-term debt securities. Between August and November the money-holding sector's holdings of such securities increased at the strongest rate since the start of Stage Three of EMU, thereby providing funding to the MFI sector.

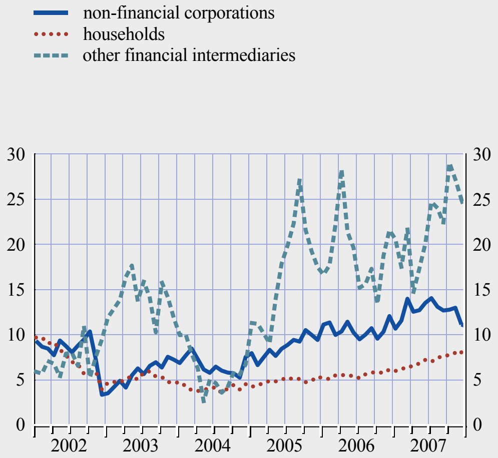
## HOUSEHOLDS' MONEY HOLDINGS GREW STRONGLY

The broadest aggregation of M3 components for which reliable information is available by holding sector is short-term deposits plus repurchase agreements (hereafter referred to as "M3 deposits"). The annual growth rate of the aggregate M3 deposits of the household sector, the sector contributing the most to total M3 deposit growth, reached 8.1% in December 2007 (see Chart 8). The upward trend observed in this growth rate since mid-2004 thus continued, supported by income and wealth growth and the increasing remuneration of M3 deposits. The robust growth of household M3 deposits is therefore evidence of the strength of underlying money growth.

Continuing the strengthening observed since late 2004, the annual growth rate of M3 deposits held by non-financial corporations increased further in the first half of 2007, before levelling off to stand at 11.1% in December 2007. The strong corporate demand for liquid assets in 2007 was in line with strong profitability and robust (current and expected) business investment. The growth rate of M3 deposits held by other financial intermediaries (OFIs), which do not include insurance corporations and pension funds, stood at 25.0% on an annual basis in December 2007. To some extent, this strengthening reflects an increase in secured interbank lending settled through electronic trading platforms, as a loss of confidence in counterparties in the context of the financial market turmoil has caused market

**Chart 8 Sectoral M3 deposits**

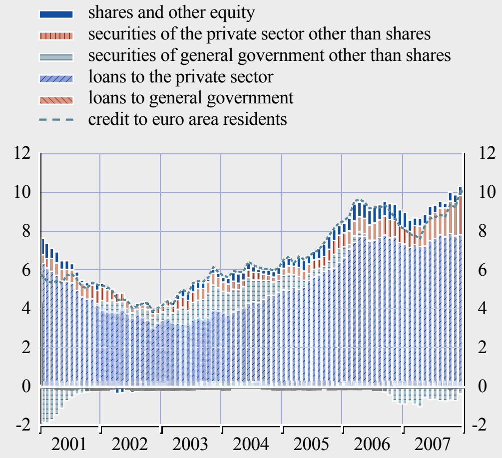
(annual percentage changes; not adjusted for seasonal or calendar effects)




Source: ECB.
Notes: The reporting sector comprises MFIs excluding the Eurosystem and central government. M3 deposits include short-term deposits and repurchase agreements.

**Chart 9 Credit to euro area residents**

(annual percentage changes; contributions in percentage points)




Source: ECB.
Note: The reporting sector comprises MFIs excluding the Eurosystem.

participants to prefer secured to unsecured interbank lending. In addition, this strengthening is also related in part to some investment funds' need to maintain larger cash buffers and, in the fourth quarter of 2007, to additional deposit holdings in the context of the acquisition, through a non-monetary financial intermediary, of a euro area MFI by several other MFIs.

## CREDIT TO THE PRIVATE SECTOR GREW VIGOROUSLY

After strengthening in both 2004 and 2005, the annual growth rate of MFI credit to euro area residents stabilised in 2006. It remained robust in 2007, standing at 9.3% in the fourth quarter (see Chart 9). This strong lending activity by MFIs reflected the rapid expansion of credit to the private sector, while credit extended to general government was curtailed.

More specifically, MFIs reduced somewhat their holdings of loans granted to general government, while they removed, on a net basis, fairly substantial amounts of general government debt securities from their portfolios. The annual rate of decline of holdings of general government securities stood at 5.0% in the fourth quarter of 2007. This development has – with some brief exceptions – been observed since mid-2006 and is typical of periods with rising short-term interest rates and funding costs.

The annual growth rate of MFI credit to the private sector strengthened gradually over the period 2004-05, before stabilising at a high level in 2006. It remained robust in 2007, hovering at around 11.5%. Loans granted to the private sector remained the dominant form of credit granted by MFIs in 2007, while the importance of MFIs' purchases of securities other than shares increased.

The annual growth rate of MFI lending to the private sector stood at 11.1% in the fourth quarter of 2007, having hovered at this high level since mid-2006 with strong economic activity and favourable credit standards supporting loan growth. At the same time, rising bank interest rates, reflecting the increases in key ECB interest rates since December 2005, have dampened private sector demand for credit.

The strength of lending to the private sector masks divergent developments across the individual sectors. While the annual growth rate of loans to households moderated in 2007, continuing a trend observed since early 2006, the annual growth rates of lending to financial and non-financial corporations increased.

The moderation in the annual growth rate of loans to households was driven mainly by the falling annual growth rate of lending for house purchase, which reflected the slowdown observed in house price growth and housing market activity in a number of euro area economies and the gradual increase seen in mortgage rates throughout the euro area over the past few quarters.

The annual growth rate of MFI loans to non-financial corporations increased in 2007, reaching a very high level by the standards of the past three decades. In the first half of the year demand for loans was supported by strong economic growth and merger and acquisition (M&A) activity, as well as favourable credit conditions. In the second half of 2007, against the background of the financial turmoil, the large quantities of MFI loans to the private non-financial sector raised the question of whether the reported flow of loans to households and non-financial corporations had been distorted by banks' balance sheet management in the face of the turmoil. The information available on the volume of loans removed from MFI balance sheets suggested that banks had been able to continue to remove loans from their balance sheets in the second half of 2007, albeit at a somewhat lower rate, suggesting that the flow of MFI loans to this sector continued to be understated by the data reported.

Thus, the large quantities of loans in 2007 appeared to reflect the flow of financing from banks to non-financial corporations and households, rather than re-intermediation triggered by the financial turmoil, which probably accounted for a small part of the expansion in MFI loans. Thus, the evidence did not support the view that the supply of bank credit had been severely affected by the turmoil in 2007. However, this evidence is consistent with the more restrictive supply conditions indicated by the two bank lending surveys for the third and fourth quarters, which point to significant tightening of credit standards applied to the corporate sector, especially in the case of loans to larger firms and loans with longer maturities. At the same time, non-financial corporations may have been able to continue borrowing through approved lines of credit under conditions agreed prior to the turmoil.

The annual growth rate of loans to OFIs strengthened markedly in the course of 2007. In the first half of the year MFI lending to these entities seems to have been driven mainly by demand on the part of investment funds and demand for bridge financing for true-sale securitisation transactions. In the second half of the year demand for loans reflected, for instance, the takeover of an MFI and investment funds' portfolio management, as well as demand related to the turmoil resulting from the drawing-down of credit lines to conduits and structured investment vehicles (SIVs) and MFIs' increased preference for secured interbank lending through electronic trading platforms.

In 2007 MFIs provided credit to the private sector by increasing their holdings of securities issued by the corporate sector, especially through purchases of debt securities rather than through the acquisition of shares and other equity. The bulk of the securities purchased in 2007 had long maturities. The strong growth of these securities holdings, particularly prior to the onset of the turmoil, reflected loan securitisation activity in some euro area countries and the growing financial integration of the euro area, whereby MFIs in one euro area country purchase instruments securitising mortgage loans in other euro area countries as a substitute for direct investment in those mortgage markets. Additionally, in late 2007 MFIs purchased sizeable holdings of debt securities in the context of a takeover of an MFI executed by a financing vehicle belonging to the OFI sector. However, in the context of the financial turmoil, MFIs may have purchased instruments related to previously securitised loans, thus re-intermediating some of their loan portfolios.

Among the other counterparts of M3, the annual growth rate of MFI longer-term financial liabilities (excluding capital and reserves) held by the money-holding sector moderated to stand at 7.8% in December 2007, having stood at 9.7% at the end of 2006. However, these figures mask the fact that this growth rate strengthened until mid-2007 before gradually moderating thereafter, a pattern generally visible for both longer-term deposits and MFI debt securities. This is consistent with a shift in the preferences of the money-holding sector (namely an increased preference for shorter maturities) and may, to some extent, reflect a moderation in the pace of securitisation activity, which is often associated with the creation of long-term deposits.

The net external asset position of the MFI sector was marked by volatile developments in 2007. Sizeable capital inflows in the first quarter of 2007 led to the annual inflows in the net external asset position of the MFI sector reaching a record €340 billion in March as financial market participants saw favourable investment opportunities in the euro area in the context of low volatility and ample financial market liquidity. The net annual inflow then moderated over the remainder of the year, reaching €17 billion in December, as investment positions ceased to be profitable and were therefore partly unwound. (For a detailed analysis of developments in the net external asset position of the MFI sector, see Box 1.) The monetary presentation of the balance of payments reveals that the annual inflows in the net external asset position of MFIs mainly reflect investment in euro area debt securities by non-resident investors.

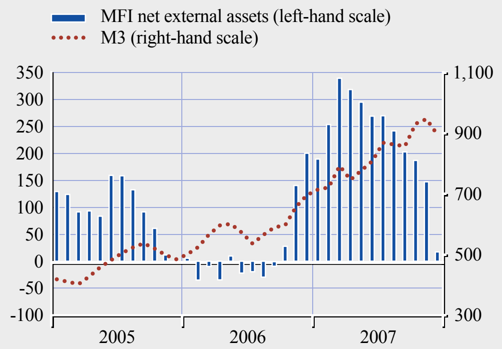
**Box 1**

## MFI NET EXTERNAL ASSETS AND THEIR IMPACT ON MONETARY DEVELOPMENTS

The net external asset position of the MFI sector measures the net transactions, settled via resident MFIs, between the euro area money-holding sector and its counterparties outside the euro area. The net external asset position is one of the counterparts of the broad monetary aggregate M3 and at times plays an important role in accounting for monetary developments in the euro area. By contrast with most of 2006, pronounced movements were observed in 2007 in the annual flow of the net external asset position, with a strong build-up at the end of 2006 and the beginning of 2007 and a subsequent unwinding in the second half of the year. While these movements were mirrored by the pattern of annual flows into M3 between October 2006 and April 2007, in the period between May and October 2007 this ceased to be the case (see Chart A). This box reviews the developments in MFI net external assets and investigates possible explanations.

**Chart A MFI net external assets and M3**

(annual flows in EUR billions)




Source: ECB.

### Some conceptual issues

The question of whether developments in the MFI net external asset position have an impact on M3 depends on the way in which euro area money-holding sectors, such as households or non-financial corporations, finance their transactions with the rest of the world.[1] For example, consider a situation in which a euro area household purchases a bond from a foreign entity resident in the United States. If this transaction is conducted using accounts held at an MFI, it implies a decline in the net external assets of the MFI sector, as the euro area credit institution in charge of the transaction either decreases its claims on its correspondent bank in the United States or grants a deposit to the US correspondent bank. However, the impact on M3 is ambiguous. On the one hand, if the purchase is financed using the overnight deposits that the household holds with its credit institution, there will be a dampening impact on M3 as the M1 component declines. On the other hand, if the transaction is financed by means of a loan granted to the household by the bank, there will be no impact on M3, but a change in the composition of the counterparts of M3.[2]

Vice versa, if a foreign entity purchases a security from an entity in the euro area money-holding sector and settles this purchase by transferring money from its bank account at a euro area MFI to the bank account of the euro area entity, M3 will increase in connection with an increase in the net external assets of the euro area MFI sector.

An important tool for investigating the factors underlying developments in the MFI net external asset position is the "monetary presentation of the balance of payments". This framework establishes a link between the balance of payments statistics and the MFI balance sheet statistics and makes it possible to determine whether the capital flows behind developments in the net external asset position originate from euro area money-holding sectors or from non-residents, and whether they reflect the exchange of goods and services or direct and portfolio investment.

### Explaining developments in MFI net external assets since late 2006

The monetary presentation of the balance of payments suggests that the main source of the upward movement in the MFI net external asset position between late 2006 and spring 2007 was portfolio investment in euro area assets – particularly in debt securities, but also in equities (see Chart B).[3]

### Debt securities

Looking at the origin of the capital flows suggests that the rise in the annual flow of MFI net external assets resulted mostly from foreigners' stronger investment in the euro area, rather than euro area residents' repatriation of funds from abroad. Foreign investors' portfolio investment in euro area debt securities was strong as of mid-2006, with annual flows reaching a new high in April 2007 and remaining elevated until the third quarter of 2007

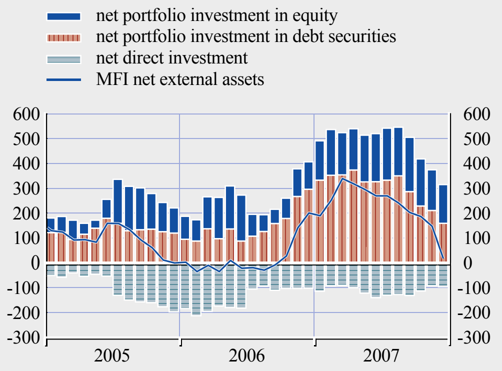
1 When analysing monetary developments, it should be borne in mind that only transactions between euro area money holders on the one hand and banks and non-euro area residents on the other have a direct impact on the money stock. A transaction between euro area non-MFIs simply represents the circulation of money within the money-holding sector, with no impact on the total money stock in the euro area. This is the case where private transactions are financed by an exchange of shares.

2 It should be emphasised that some transactions which affect MFI net external assets have no impact whatsoever on either money or credit. For example, a credit institution selling a euro area government bond to a non-resident will affect MFI net external assets (upwards) and credit to general government (downwards), without any impact on M3.

3 For additional information regarding the monetary presentation of the euro area balance of payments, see the box entitled "Monetary presentation of the euro area balance of payments" in the June 2003 issue of the ECB's Monthly Bulletin.

**Chart B Composition of capital flows of the money-holding sector and MFI net external assets**

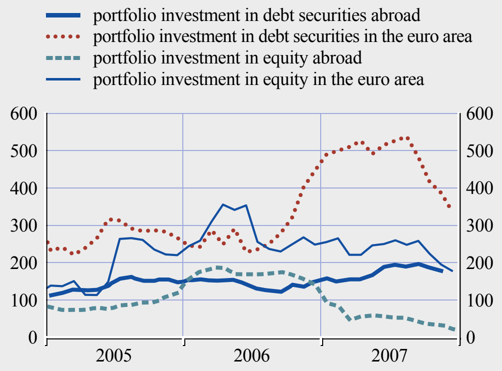
(annual flows in EUR billions)




Source: ECB.

**Chart C Composition of portfolio investment flows**

(annual flows in EUR billions)




Source: ECB.

(see Chart C). This may reflect a favourable investment environment in the euro area for foreign financial market participants, characterised by low volatility and ample liquidity in financial markets. Non-residents' strong demand for euro area debt securities, in the context of reduced net issuance by euro area general government, was offset to a significant extent by sales of government securities by MFIs.

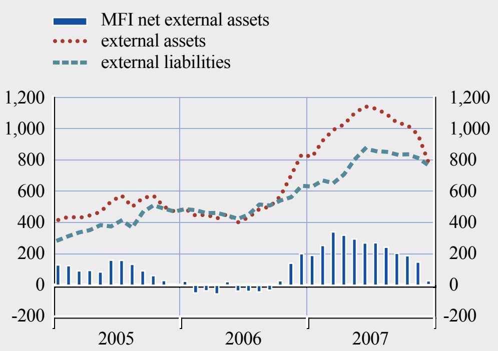
In the second half of the year, in the context of the financial turmoil and repricing of risk, certain investment positions may have ceased to be attractive. Non-euro area investors may also have needed liquidity for other operations and may therefore not have increased their investment in the euro area. At the same time, favourable investment opportunities in the rest of the world attracted investment by euro area residents. This was visible in the gradual increase in the annual flow of portfolio investment in foreign debt securities by euro area investors. Such investment may have become increasingly attractive in the context of a strengthening euro exchange rate. With foreign investment in debt securities in the euro area remaining broadly unchanged until August 2007 and declining strongly thereafter, and investment by euro area residents abroad remaining broadly stable, the annual flow in the MFI net external asset position moderated in the second half of the year.

### Equities and foreign direct investment

As regards portfolio investment in equities, while investment by euro area non-MFIs abroad has been continuously declining, investment by foreigners in the euro area has remained fairly stable, albeit at a much more subdued level than investment in debt securities and despite declining slightly towards the end of the year. Qualitative information at the end of 2006 and the beginning of 2007 indicated that global investors viewed euro area equity markets favourably and that investors' expectations for euro area corporate profits were positive. Up to mid-2007 net portfolio investment in equity pointed to stronger annual inflows in the net external asset position of MFIs, which were offset by the moderating impact of net direct investment. However, this pattern was reversed somewhat in the fourth quarter of 2007, when annual inflows for net portfolio investment in equity decreased somewhat, but were offset by reduced net outflows for direct investment.

**Chart D Developments in gross external assets and liabilities**

(annual flows in EUR billions)




Source: ECB.

In addition to the pronounced movements observed in MFI net external assets since late 2006, there have been equally pronounced developments in the gross external assets (and liabilities) of the euro area MFI sector. This marks a change compared with the relatively gradual strengthening observed previously (see Chart D). The simultaneous expansion of these gross positions in 2007 resulted mainly from a rapid strengthening in MFI credit granted to the rest of the world, which led to the incurrence of deposit liabilities by euro area MFIs vis-à-vis non-euro area residents.

Such a simultaneous expansion of gross external assets and liabilities can be a reflection of stronger financial integration. One consequence of this could be that intra-MFI sector transactions, such as MFIs in one euro area country funding the lending of MFIs in another euro area country, are increasingly channelled through a financial centre located outside the euro area. Another possibility is that resident credit institutions, for instance money market funds, operate solely on behalf of their non-euro area parent companies. If these institutions receive their funds only from the rest of the world and also invest them only in the parent company's home market, their entire business will appear only in the external assets and liabilities of the consolidated balance sheet of the euro area MFI sector.

The strong expansion of the gross external positions has no immediate implications for the net external position. However, this situation could possibly lead to large amounts of liquidity being shifted quickly, resulting in significant short-term changes in the magnitude and direction of flows in the MFI net external asset position. This, in turn, increases the exposure of domestic monetary developments to external forces.

## Conclusions

The net external asset position of the euro area MFI sector has seen strong movements since late 2006, with net annual inflows in March 2007 that exceeded those observed in the period of portfolio shifts from 2001 to 2003. Developments in the net external asset position up to spring 2007 had a visible impact on the pattern of M3 growth, at least from an accounting perspective. Transactions between the euro area money-holding sector and the rest of the world are likely to increase in scope with the worldwide integration of financial markets. Given the multiple driving forces and originators of such transactions, a detailed assessment of developments in net external assets in the context of the ECB's monetary analysis will be an important challenge.

## MONEY MARKET TENSIONS EMERGED IN THE CONTEXT OF THE FINANCIAL MARKET TURMOIL

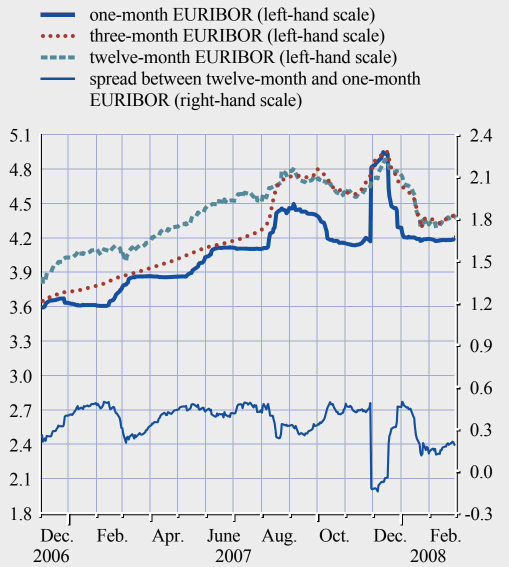
Money market rates rose across the entire maturity spectrum in 2007. In the first half of the year this was in line with the increases in key ECB interest rates. Further significant increases in unsecured money market rates were seen in the second half of the year, following the turbulence in money and financial markets. The spread between unsecured and secured money market rates widened at all maturities with the exception of the very short term. These spreads, despite having declined, remained at elevated levels in early 2008.

The Governing Council raised the key ECB interest rates by 25 basis points in both March and June 2007, with the marginal lending rate, the minimum bid rate and the deposit rate reaching 5%, 4% and 3% respectively (see Chart 1). In the remainder of 2007 and early 2008 the key ECB interest rates remained unchanged. After rising steadily in the first half of the year in line with expectations of further increases in key ECB interest rates, unsecured money market rates rose strongly from 9 August onwards owing to the tensions in money and financial markets following concerns about banks' exposure to losses resulting from US sub-prime mortgages and complex derivative instruments (see Chart 10). These rates reached peak levels in mid-December, when the underlying tensions in the interbank market were exacerbated by uncertainties related to the year-end. On 29 February 2008 the one-month, three-month and twelve-month EURIBOR rates stood at 4.20%, 4.38% and 4.38% respectively, i.e. 57, 66 and 35 basis points higher than the levels observed on 2 January 2007. By contrast, secured interbank interest rates fell gradually from early August onwards, reflecting the downward revision of markets' expectations regarding the future path of key ECB interest rates.

With the substantial increases seen in unsecured money market interest rates, the corresponding spread between unsecured and secured money market rates widened significantly, particularly at maturities of one month and longer (see Chart 11). These spreads remained at elevated levels in the final months of the year, with the spread between

**Chart 10 Money market interest rates**

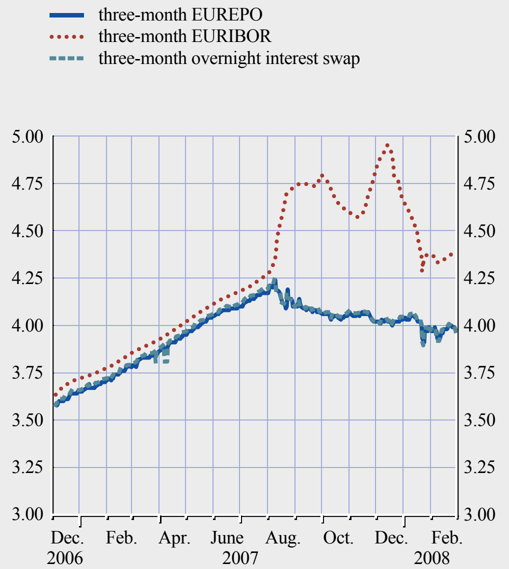
(percentages per annum; daily data)




Sources: ECB and Reuters.

**Chart 11 Three-month EUREPO, EURIBOR and overnight interest swap**

(percentages per annum; daily data)




Sources: ECB and Reuters.

the three-month EURIBOR and the three-month EUREPO (an index for private sector repurchase agreements) reaching a peak of 93 basis points on 17 December on account of the particular tensions observed towards the end of the year. While this spread subsequently declined, reaching 43 basis points on 29 February 2008, it remained elevated by comparison with its average level of around 7 basis points in the first half of 2007.

The slope of the money market yield curve – as measured by the spread between the twelve-month and one-month EURIBOR rates – showed some volatility in the course of 2007, with that spread fluctuating between -15 and 50 basis points. On 29 February 2008 this spread stood at 18 basis points, compared with 40 basis points on 2 January 2007 (see Chart 10). However, the slope of the money market yield curve should be interpreted with some caution, since by historical standards the spreads between unsecured EURIBOR rates and secured rates (such as EUREPO rates) were exceptionally pronounced during the second half of the year at maturities beyond the very short term as a result of the turbulence seen in money markets since August 2007.

Interest rates implied by three-month EURIBOR futures for 2008 increased in the course of 2007. Nonetheless, this too must be interpreted with caution given the sharp increases seen in EURIBOR rates in the context of the money market tensions, which are likely to blur the usual information content of these rates with regard to interest rate expectations. On 29 February 2008 the interest rates implied by three-month futures contracts maturing in March, June and September 2008 stood at 4.36%, 4.05% and 3.71% respectively, i.e. 33 and 6 basis points higher and 27 basis points lower than on 2 January 2007.

During the first half of 2007 the implied volatility derived from options on three-month EURIBOR futures decreased. However, implied volatilities then increased significantly from August onwards as the tensions in money and financial markets took hold (see Box 2).

**Box 2**

## THE VOLATILITY OF MONEY MARKET INTEREST RATES IN 2007

When assessing developments in the money market during 2007, it is important to analyse not only the level of interest rates (as described in the main text) but also their volatility. Two issues are particularly relevant in this regard: i) assessing the impact of monetary policy decisions on the money markets; and ii) analysing how well the market functions, in particular as regards the transmission of monetary policy signals from the short end to the long end of the interest rate maturity spectrum.

As far as the first issue is concerned, central banks strive to ensure that their policy actions and communication do not themselves foster unnecessary uncertainty (e.g. by adding "noise" to the economy), which would typically manifest itself in higher volatility in financial markets.

As regards the second issue, analysing volatility offers insights into the microstructure of money markets and the efficiency with which they operate.[1] For instance, comparing the volatility of

1 One issue is thus the question of how to measure the volatility of interest rates and financial yields. This is discussed in the article entitled "The analysis of the euro money market from a monetary policy perspective" in the February 2008 issue of the ECB's Monthly Bulletin.

interest rates at specific maturities with the average level of volatility across the whole maturity spectrum may allow the central bank to detect atypical movements in some segments of the money market, which, in turn, could be related to imperfections in the market's structure and might impede the effective transmission of the monetary policy impulse.

Against this background, an analysis of the volatility of money market interest rates over the course of 2007 may help to shed light on the impact of the financial turmoil observed as of August 2007. This box focuses on developments in the unsecured segment of the interbank market (i.e. transactions conducted without collateral), the segment most affected by the turmoil. It considers volatility measures derived from the overnight interest rate, interbank deposit rates at one, three, six and twelve-month maturities and the three-month EURIBOR (for which a variety of derivative contracts exist).[2]

### The evolution of money market interest rate volatility in 2007

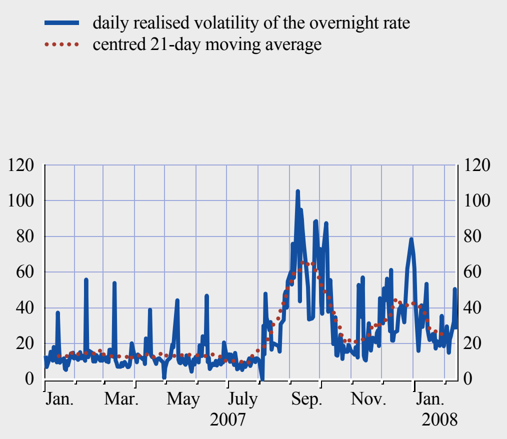
Chart A shows the evolution of historical realised volatility in the overnight interest rate in 2007. Between January and mid-July realised volatility was relatively low, standing at levels similar to those observed in recent years. Volatility exhibited the usual pattern of periodic rises confined to specific periods, namely the days between the last main refinancing operation and the last day of the reserve maintenance period.

Following the increased volatility observed in most financial markets towards the end of July, growing tensions in the money market were observed in early August on account of the rising uncertainty related to banks' potentially large losses on their investments in US sub-prime mortgage markets and related instruments. This resulted in higher demand for overnight liquidity and a sharp rise in the level of volatility. Volatility remained at very high levels until October,

2 The two measures of volatility reviewed in this box, namely realised historical volatility and implied volatility, are described in detail in the box entitled "Measuring volatility in the money market" in the article referred to in footnote 1.

**Chart A Daily realised volatility of the overnight interest rate**

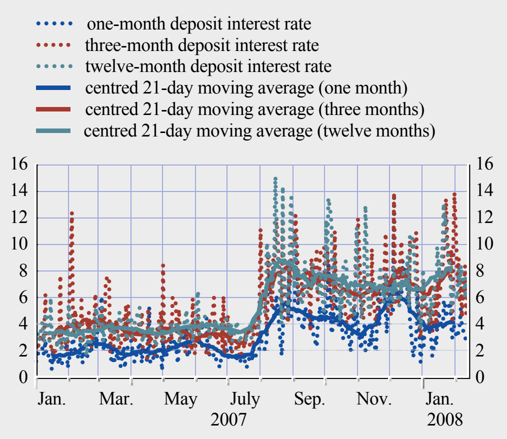
(basis points)




Sources: Reuters and ECB estimates.

**Chart B Daily realised volatility of longer-term deposit interest rates**

(basis points)




Sources: Reuters and ECB estimates.

when the situation stabilised somewhat, partly owing to the effectiveness of the liquidity policy conducted by the ECB in order to address the tensions in the money market. However, after mid-November renewed tensions were observed. The overnight interest rate was again characterised by unusually high levels of volatility, particularly approaching the end of the year amid widespread market concerns regarding a potential liquidity shortage at the turn of the year.

When considering longer-term rates – namely deposit interest rates with a maturity of one, three or twelve months – the profile which emerges is broadly similar (see Chart B). However, some significant differences emerge, with longer-term interest rates showing, in particular, a tendency to react more sharply to the August turmoil.

### What explained the increased volatility in August 2007

Between the end of June and early August it became clear that a number of European financial institutions had incurred substantial losses on their activities in the US sub-prime mortgage markets. As concerns about exposure to US sub-prime mortgage defaults intensified, the ability of conduits to refinance themselves diminished and demand for liquidity on the part of banks needing to provide credit to these conduits increased. These phenomena were further exacerbated by difficulties in the valuation of these financial products. The increased demand for liquidity, together with a loss of trust among counterparties, resulted in a tendency to hoard liquidity on the part of a large proportion of banks, and overall market liquidity thus declined significantly. Interest rates in the money market increased significantly, not least in the overnight segment, where the interest rate reached, on an intraday basis, levels almost 70 basis points above the minimum bid rate.

On 9 August, in view of the strong demand for liquidity in the overnight market, which was also causing a substantial increase in very short-term market interest rates, the Eurosystem injected a significant amount of liquidity into the market for that day through an overnight refinancing operation. As money market tensions persisted, increases were observed in interest rates in the longer-term segments of the unsecured money market (i.e. on interbank loans not secured by an exchange of collateral), leading to spreads against the secured segments of up to five times the historical average. In order to facilitate a better distribution of liquidity among banks, the Eurosystem conducted various forms of liquidity-providing operation during the second half of the year. These measures, together with an active communication policy, helped the market to function more smoothly, at least in the short term, and helped to reassure banks that their liquidity needs would be fulfilled. As a result, the level of volatility in the secured market decreased somewhat for various maturities.

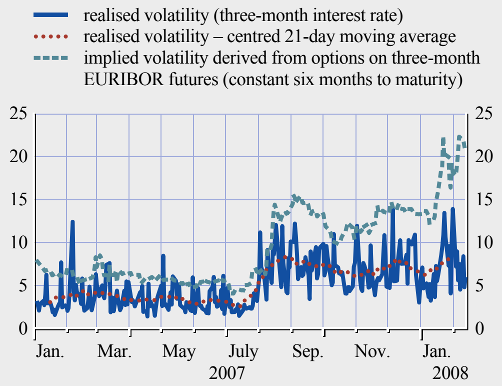
### Comparison of developments in realised and implied volatilities

Implied volatility[3] is calculated on the basis of options based on forward-looking expectations, thereby providing some indications of volatility over the horizon covered by the contracts (three months for the standard EURIBOR futures contracts). By contrast, realised volatility reflects the perceived uncertainty prevailing in the market.

3 The implied volatility used for this box is derived from options on three-month futures contracts with a constant six months to maturity.

**Chart C Realised volatility and implied volatility for three-month money market interest rates**

(basis points)




Sources: Reuters and ECB estimates.

Although the profiles of the two volatility measures are broadly similar, developments in implied volatility are more pronounced than those in realised volatility calculated on the basis of the three-month deposit interest rate. Looking at Chart C, implied volatility started increasing in mid-July, before rising more strongly in early August, with pronounced fluctuations being observed thereafter. A similar development was observed for realised volatility calculated on the basis of three-month deposit interest rates, although the rise in this measure was more gradual and, overall, more contained, including in August (i.e. in the most critical period for the euro money market).

These developments observed in the two volatility measures mostly reflect the nature of these measures. While the increase in the realised volatility of the three-month interest rate reflects the perceived tensions in the three-month unsecured segment of the money market, implied volatility also takes into account the uncertainty surrounding the future impact of the tensions resulting from the announcements made by a number of European banks regarding their exposure to securitised products related to the sub-prime mortgage market. In particular, these ongoing tensions in the money market have led to increased uncertainty regarding the future financial and macroeconomic environment, which is captured by the measure of implied volatility, but not by the realised volatility measure.

Following the exceptionally high levels observed until the beginning of September, the realised volatility measure declined somewhat during that month, possibly in response to the generous liquidity policy conducted as of mid-August. At the same time, implied volatility remained high, probably affected by the more pronounced tensions in the unsecured segment of the market, particularly at the three-month horizon, although it also showed a tendency to decline in September.

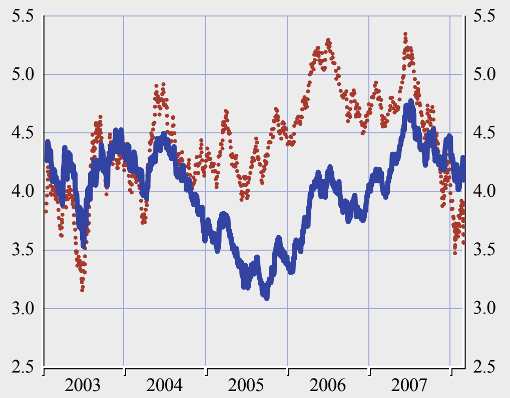
Overall, notwithstanding the above-mentioned declines, both measures broadly stabilised thereafter, although at levels higher than those prevailing before the onset of the turmoil in August, indicating that a return to the stable market conditions that prevailed prior to the turmoil may take some time.

## LARGE SWINGS IN GLOBAL BOND MARKETS IN 2007

Long-term government bond yields in the euro area stood at 4.4% at the end of 2007, which was around 40 basis points higher than the levels prevailing one year earlier (see Chart 12). However, this fairly small overall increase in yields masks relatively marked swings within the year. In particular, the financial turmoil emanating from problems in the US real estate sector led to heightened volatility in the global bond markets in the latter part of the year. Underlying the moderate overall change in long-term nominal bond yields in the euro area were slight increases in the real yields offered on ten-year inflation-linked bonds and

## Chart 12 Long-term government bond yields [1]

(percentages per annum; daily data)

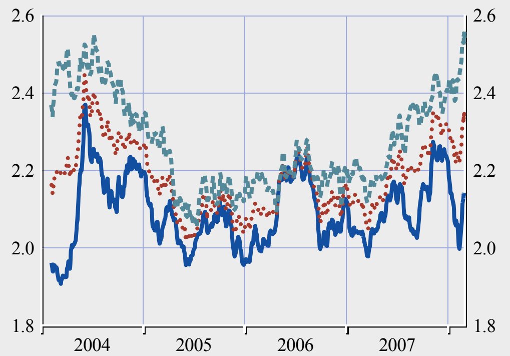



Sources: Reuters, Bloomberg and Thomson Financial Datastream.
1) Ten-year bonds or the closest available bond maturity.

in corresponding long-term break-even inflation rates. The yield on inflation-linked government bonds maturing in 2015 – a measure of long-term real interest rates – stood at 2% in late 2007, around 20 basis points higher than at the end of 2006. The five-year forward break-even inflation rate five years ahead, which measures market participants' long-term inflation expectations and related risk premia, increased by 20 basis points in 2007, standing close to the 2.4% mark at the end of the year.

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

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




Sources: Reuters and ECB calculations.

In the first half of 2007 long-term government bond yields rose markedly on both sides of the Atlantic. In the euro area, the yields on government bonds with a ten-year maturity increased by a maximum of around 70 basis points between the end of December 2006 and early July 2007, whereas ten-year bond yields in the United States peaked in mid-June at a level around 60 basis points higher than at the end of 2006. The upturn in euro area long-term interest rates reflected markets' expectations of strong economic growth. This assessment was consistent with what were, on average, better than expected data releases on macroeconomic and business sentiment. The gradual increase in euro area bond yields was briefly interrupted on two occasions in the first six months of 2007. First, long-term bond yields fell in late February and early March, following a pronounced decline in risk appetite and resulting portfolio shifts from stock markets to bond markets. Second, in early June long-term bond yields rose markedly, reflecting strong sell-offs originating in the US bond markets.

All in all, the relatively strong recovery observed in nominal euro area bond yields in the first half of 2007 was driven mainly by an increase in the real interest rate component. At the same time, market participants' long-term inflation expectations in the euro area and the related risk premia edged up only marginally over this period. For instance, the five-year forward break-even inflation rate five years ahead increased by 10 basis points in the first six months of 2007, standing at a level of 2.3% at end-June (see Chart 13).

In the summer months of 2007 concerns relating to the state of the US real estate market began to mount. In particular, it became clear that borrowers with the lowest level of creditworthiness were experiencing problems in repaying "sub-prime" mortgages taken out during the period of very low interest rates between 2002 and 2004. Investors initially felt that the problems would be restricted to the United States and that only a relatively limited set of assets would be affected. In late July that relatively benign scenario was seriously challenged when it became clear that European financial institutions, too, were heavily exposed to the US sub-prime mortgage market. In some limited cases, the losses from such exposures even endangered the financial health of the institutions concerned. The revelation of such serious risks led to broader-based financial market turmoil with a general increase in risk aversion, prompting flight-to-safety portfolio shifts from riskier assets into government bonds, for example.

As a result of the turmoil, by the end of the year the yield on ten-year euro area government bonds had declined, overall, by 30 basis points by comparison with early July, being driven mainly by lower real yields. The fall in US bond yields was far more pronounced, with the ten-year yield standing at the end of the year around 130 basis points lower than its peak in mid-June. The more marked decline in US yields appears to reflect a weaker growth outlook for the US economy in the eyes of investors, as well as the decision of the FOMC to lower interest rates on 18 September, 31 October and 11 December.

All in all, the recent turbulence came at the end of a relatively long period of calm market conditions. It is likely that the relatively tranquil market conditions prior to the turmoil led many market participants to take investment decisions on the basis of risk assessments that turned out to be too optimistic. Box 3 highlights the main similarities and differences between the turmoil of 2007 and that of 1998.

The five-year forward break-even inflation rate five years ahead increased by another 10 basis points over the last six months of 2007, standing at 2.4% at the end of the year. The overall increase in break-even inflation rates in 2007 might have been related to the deterioration in the short-term outlook for inflation, which was linked, in particular, to surging oil and food prices. It is unclear, however, to what extent the overall increase in this indicator reflects shifts in market participants' long-term inflation expectations and changes in the related risk premia.

Market participants' perception of bond market uncertainty in the euro area, as measured by implied volatility, remained stable throughout the first six months of the year. This reflected expectations of a continued favourable environment in both the euro area and the global economy. This favourable assessment on the part of investors changed on account of the turmoil, with the result that implied bond market volatility surged between June and August. Thereafter implied volatility in the euro area remained broadly unchanged at those somewhat elevated levels.

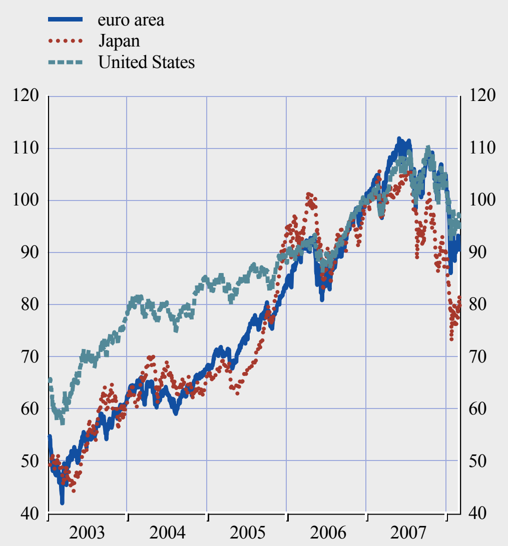
In the first two months of 2008 euro area long-term bond yields declined by around 30 basis points to stand at 4.1% on 29 February. Similar declines in real yields offered on inflation-linked bonds suggest that market participants have, in early 2008, become slightly more pessimistic regarding the prospects for economic activity in the euro area.

### EURO AREA STOCK PRICES INCREASED AMID HIGH VOLATILITY IN 2007

Despite strong volatility over the year, euro area stock prices increased overall in 2007, thereby continuing the upward trend observed since early 2003 (see Chart 14). All in all, the Dow Jones EURO STOXX index ended the year with a gain of 5% vis-à-vis the end of 2006. The stock markets in the United States likewise ended 2007 on a positive note, with the Standard & Poor's 500 index having risen by 3.5%, while Japanese stock prices, as measured by the Nikkei 225 index, fell by around 11%. As with developments on the bond markets, fluctuations in euro area stock prices were particularly pronounced in the summer months, when investors became reluctant to hold risky assets such as stocks. The

**Chart 14 Major stock market indices [1]**

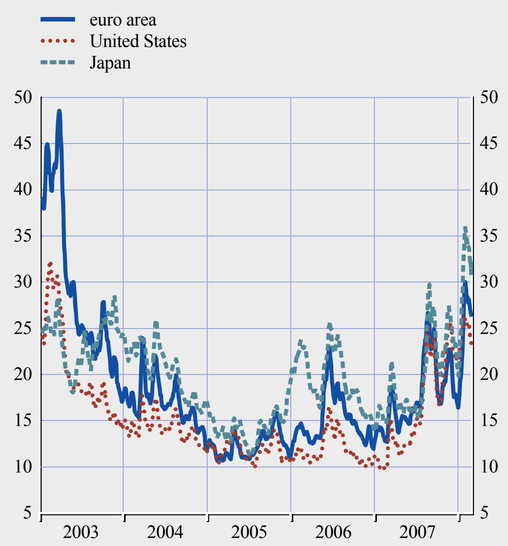
(index rebased to 100 on 2 January 2007; daily data)




Sources: Reuters, Thomson Financial Datastream and ECB calculations.
1) The Dow Jones EURO STOXX broad index for the euro area, the Standard & Poor's 500 index for the United States and the Nikkei 225 index for Japan.

**Chart 15 Implied stock market volatility**

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




Sources: Bloomberg and ECB calculations.
Notes: The implied volatility series reflects the expected standard deviation of percentage changes in stock prices over a period of up to three months, as implied in the prices of options on stock price indices. The equity indices to which the implied volatilities refer are the Dow Jones EURO STOXX 50 for the euro area, the Standard & Poor's 500 for the United States and the Nikkei 225 for Japan.

positive overall performance of the stock markets in the euro area was due mainly to the continued strength of actual and expected earnings growth.

Euro area stock prices tended to rise steadily in the first six months of 2007. This upward trend was temporarily interrupted in late February and early March, when stock prices in the euro area, mirroring developments in most other major markets, experienced a sharp correction partly triggered by developments in the Chinese markets. The Dow Jones EURO STOXX index lost around 4% of its value between 6 February and 7 March. After that, the markets recovered, partly fuelled by increased risk appetite, by M&A activities and by the persistently favourable developments in earnings. Evidence of the robust manner in which earnings developed can be seen in the fact that between January and June the earnings per share of companies included in the Dow Jones EURO STOXX index grew at an average annual rate of close to 17%. All in all, euro area stock prices stood in late June 10% higher than the levels recorded at the end of 2006.

The optimism prevailing in global stock markets came to an abrupt halt with the outbreak of the financial turmoil, triggering a broad reassessment of credit and financial risks and heightened risk aversion among investors. The resulting fall in euro area stock prices seems mainly to have reflected a strong upsurge in the equity risk premium demanded for holding euro area stocks, in particular those of firms in the financial sector. At the same time, implied stock market volatility picked up strongly and reached levels not observed since 2003 (see Chart 15). The sell-off in the euro area stock markets was particularly strong in July and August, when the Dow Jones EURO STOXX price index lost around 5% of its value.

In September and early October euro area stock prices witnessed a recovery similar to that observed after the short-lived correction in late

February and early March. Later on, however, between mid-October and the end of the year, investors' risk aversion increased again after a number of financial institutions revealed that they had suffered larger than expected losses in US sub-prime investments. As a result, euro area and global stock prices plummeted and stock market uncertainty, as reflected in implied volatility, rebounded again to reach levels close to those observed in the summer months.

The financial market turmoil had remarkably little impact on the expected and actual profitability of euro area firms. Between December 2006 and December 2007 the earnings per share of firms included in the Dow Jones EURO STOXX index grew by 15%. At the same time, analysts expected earnings to grow at an annual rate of around 9% in 2008. The fact that euro area firms' profitability was largely unaffected by the financial market turmoil probably helped to dampen the overall decline observed in the second half of 2007.

Looking at developments in individual sectors, the telecommunications and utility sectors strongly outperformed the overall index. The strong performance of these sectors was probably due to investors' preference for firms with relatively steady cash flows. At the same time, the financial sector underperformed by comparison with the overall index. The poor performance of this sector was related to increasing concerns about its profitability in the context of its generally strong exposure to assets linked either directly or indirectly to the ailing sub-prime mortgage market in the United States.

In early 2008 continued credit risk concerns coupled with lower earnings expectations contributed to lower stock prices. The Dow Jones EURO STOXX index and the Standard & Poor's 500 index both fell, by 14% and 9% respectively, between the end of 2007 and 29 February 2008.

**Box 3**

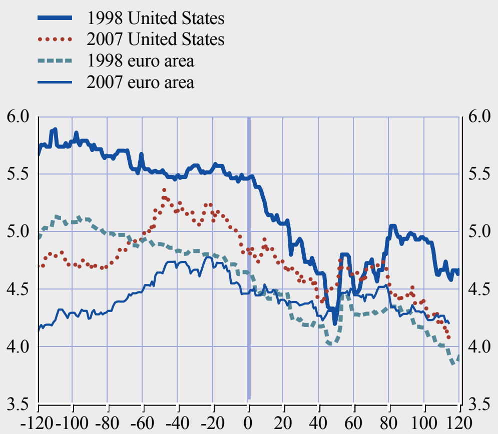
### SIMILARITIES AND DIFFERENCES BETWEEN THE EPISODES OF FINANCIAL TURBULENCE IN 2007 AND 1998

In the second half of 2007 global financial market prices were seriously affected by a general repricing of financial risk, which spread from one specific credit market segment (assets backed by US sub-prime mortgages) to the credit markets as a whole and the financial system more generally. The sequence and nature of the events characterising the recent turmoil resemble to some extent those of the financial market turbulence experienced in the second half of 1998, typically referred to as the "LTCM crisis". Looking at financial market indicators, this box highlights the main similarities and differences between the two episodes.

In the first half of 1998 most advanced economies experienced favourable market conditions in the form of surging stock prices, stable long-term bond yield developments and a narrowing of corporate bond spreads, partly fuelled by strong macroeconomic conditions (see Charts A and B on US and euro area bond yields and stock prices). The generally tranquil global financial market environment began to change in the summer of 1998. The shifts observed in financial market sentiment and investors' risk appetite appeared to be closely related to two main factors: first, market participants became more pessimistic about the impact that the 1997 contraction in Asian emerging markets would have on the global economy; and second, market concerns regarding the sustainability of Russian debt began to mount. These worries culminated on 17 August, when Russia announced debt restructuring, devaluation and a moratorium on private principal repayments. These announcements sparked a sell-off in global equity markets and corporate bond markets. Flight-to-safety portfolio shifts led to lower yields on long-term government bonds (see Chart A).

**Chart A US and euro area long-term bond yields in 1998 and 2007**

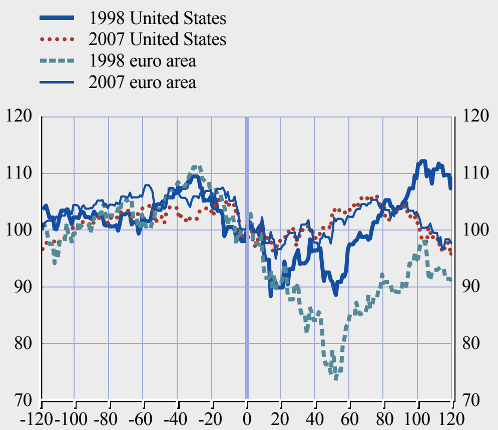
(percentages per annum)




Sources: Reuters and ECB calculations.
Notes: The x-axis corresponds to the 120 business days before and after 17 August 1998 and 30 July 2007 respectively. The 1998 date was that of the announcement of the Russian moratorium and the 2007 date was the point at which a German bank, IKB, warned of heavy losses from conduits/SIVs investing in US structured credit instruments.

**Chart B US and euro area stock prices in 1998 and 2007**

(index rebased to 100 on 17 August 1998 and 30 July 2007)




Sources: Reuters and ECB calculations.
Notes: The x-axis corresponds to the 120 business days before and after 17 August 1998 and 30 July 2007 respectively. The 1998 date was that of the announcement of the Russian moratorium and the 2007 date was the point at which a German bank, IKB, warned of heavy losses from conduits/SIVs investing in US structured credit instruments.

The strong market reaction to the Russian default led to mounting concerns about a global credit crunch. Many hedge funds and banks' proprietary desks reported big losses, mainly as a result of the widening of corporate bond spreads and other risk spreads. The widening of spreads resulted in margin calls and a corresponding need for additional liquidity in order to fund positions. In early September 1998 short-term funding problems became particularly severe for one of the largest hedge funds – Long-Term Capital Management (LTCM). There were widespread concerns that LTCM would be forced to unwind big positions in already tight market conditions, which could in turn give rise to severe systemic risks for the global financial system. However, several actions over the next few weeks helped the market to begin functioning normally again: first, on 23 September a private rescue plan was announced for LTCM; and second, the Federal Reserve decided to lower policy rates by a total of 100 basis points in three steps. Overall, the crisis had little impact on the real economy.

Two notable similarities can be discerned between the episodes of turbulence in 2007 and 1998, the first relating to the financial market environment prior to the turbulence and the second to the fact that in each case the factor triggering the turmoil was only a relatively small shock.

As regards the first similarity, in both cases the environment prior to the turbulence was characterised by prolonged periods of general upward movements in asset prices across most segments, coupled with low levels of financial market volatility. These very favourable market conditions may have led some investors to take investment decisions on the basis of risk assessments which turned out to be too optimistic. As a result, those investors probably placed too much weight on recent experience, extrapolating recent trends that were at odds with long-run equilibrium values and probabilities.

Second, in both cases the financial turbulence erupted in the absence of major inflationary or economic shocks, the two crises being triggered, instead, by relatively small shocks (i.e. unexpected defaults in sizeable, although not extremely large, market segments) which gave rise to general repricing of financial risk, leading to extreme price movements in specific market segments (particularly the credit market segment). It cannot be ruled out that the strong market reactions may have been amplified by the above-mentioned tranquil market environment, in which valuations for some asset classes seem, at least ex post, to have been somewhat elevated from a fundamental point of view.

Despite the similarities reported above, developments during the two crises differ in a number of respects. First, the financial innovations of the past decade in the field of credit risk transfer have substantially increased the difficulty of determining the sectors and specific entities in which such risks ultimately reside. Although the increased use of securitisation, where illiquid loans are converted into liquid instruments, has enhanced investors' diversification opportunities, the pricing of these new products is, in many cases, extremely complex. The surge in the use of these instruments and uncertainties regarding counterparties' exposures may partly explain recent developments in a number of market segments. Second, the recent turmoil has predominantly affected spreads and liquidity in the credit and money markets. In 1998, by contrast, liquidity dried up in the government bond markets, too, as many risky investment strategies pursued during this period also involved positions in government debt securities.

Third, the two charts show that there was some decoupling of asset price reactions in the euro area and the United States during the two financial crises. In 1998 stock prices dropped more sharply in the euro area than in the United States. This difference in stock price performance was probably related to an increase in economic growth differentials between the two economies. This could be seen in the fact that output growth was stable in the United States throughout 1998, while in the euro area real GDP growth fell from an annual rate of 3.8% in the first quarter of 1998 to 2.4% in the fourth quarter. By contrast, long-term bond yields declined by similar amounts in the two economies. In 2007, too, expected growth differentials may have contributed to the somewhat different patterns seen in euro area and US asset prices. For instance, the interest rate differential between US and euro area long-term bond yields narrowed in the months following the outbreak of the turmoil, even turning negative for the first time since early 2004. It seems that in the latter part of 2007 market participants viewed the euro area economy as being somewhat more resilient to the recent turmoil than the US economy. Corresponding expectations of stronger monetary policy reactions in the United States on the back of such changes in investors' relative growth forecasts for the two economies contributed to this change of sign in the US-euro area long-term interest rate differential. At the same time, US and euro area stock prices have moved more or less in tandem during the recent turbulence, suggesting a strong international factor driving stock prices on both sides of the Atlantic.

Fourth, emerging markets have weathered the 2007 market turmoil much better than in 1998. The moderate impact in 2007 suggests that emerging markets have, over the past decade, become more resilient to shocks in the global financial system. While emerging markets' indebtedness played a central role in the 1998 turmoil, emerging markets have hardly been involved in the recent turmoil, cushioning instead the resulting risks for the global economy.

### GRADUAL MODERATION IN THE DYNAMICS OF HOUSEHOLD BORROWING

The dynamics of household borrowing slowed in the course of 2007, reflecting the dampening impact of higher lending rates, lenders' more cautious assessment of credit risks and a moderation in housing market dynamics. MFIs were the main source of household borrowing, with the annual growth rate of MFI loans to households remaining robust at 6.2% in December 2007, having stood at 7.2% in mid-2007 and 8.2% at the end of 2006. The gradual and continuous nature of this slowdown in lending to households suggests that it is being driven mainly by fundamental factors and that the financial turmoil has, so far, had a limited impact on lending to households. At the same time, the annual growth rate of loans to households by non-MFIs (i.e. OFIs and insurance corporations and pension funds) continued to exceed that of MFI loans to households in 2007.

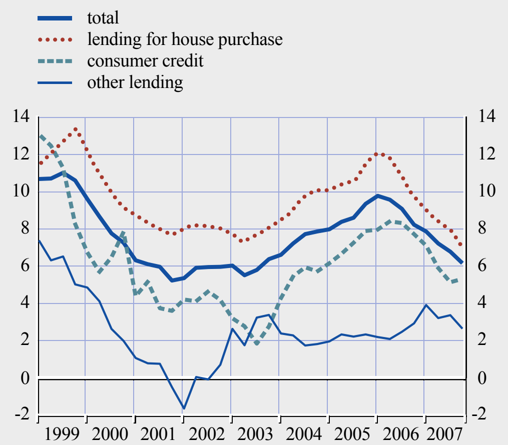
The breakdown of MFI loans to households by purpose indicates that the main driver of borrowing remained house purchases. The annual growth rate of loans for house purchase was 7.1% in December 2007, having stood at 9.6% in December 2006 (see Chart 16). This moderation wasconsistent with the slowdown observed in house price growth and housing market activity in a number of euro area economies. The results of the Eurosystem's bank lending survey support this assessment, as in the course of 2007 banks identified housing market prospects and, increasingly, developments in consumer confidence as factors contributing to the dampening of households' demand for housing loans. The moderation in loan growth observed towards the end of 2007 may also have reflected the dampening impact of tighter credit standards as banks became more worried about housing market prospects and the general economic outlook.

The moderation in the annual growth rate of loans for house purchase also reflected the dampening impact of the increases in key ECB interest rates since December 2005. Continuing the trend observed in 2006, MFI lending rates for house purchase rose by 66 basis points between December 2006 and the end of December 2007 (see Chart 17). Rates increased more strongly for loans for house purchase with a floating rate and an initial rate fixation period of up to one year or over ten years than for loans with intermediate maturities.

Similarly, although at a lower level, the annual growth rate of consumer credit declined to 5.3% in December 2007, down from 7.7% at the end of 2006. The annual growth rate of consumer credit has declined in line with falling consumer confidence and the gradual moderation seen in the

**Chart 16 MFI loans to households**

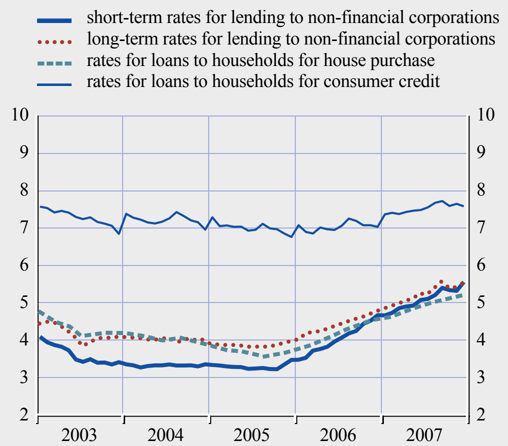
(annual percentage changes)




Source: ECB.

**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.

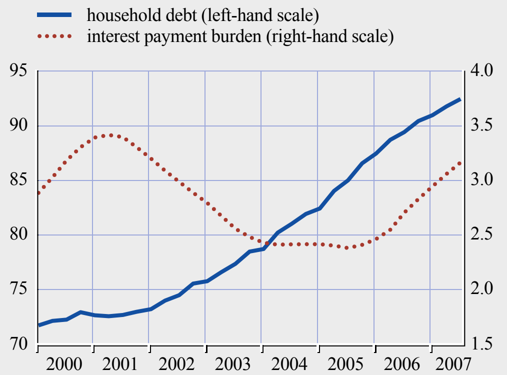
growth of retail sales in the euro area. The results of the bank lending survey indicate that over the first three quarters of 2007 credit standards were eased on a net basis, thereby supporting the growth of loans, while in the fourth quarter, in the context of the financial turmoil, credit standards were tightened. In this regard, it should also be noted that banks reported growing concerns in the course of the year regarding consumer creditworthiness and the outlook for general economic activity, which may have reduced lending activity. At the same time, MFI interest rates on consumer credit, which remained well above those on loans for house purchase, increased by 55 basis points between December 2006 and December 2007, thus contributing to the dampening of demand for such loans.

### HOUSEHOLD INDEBTEDNESS INCREASED FURTHER

Notwithstanding the moderation observed in the growth rate of lending to households, the robust pace of borrowing led to a further increase in the ratio of household debt to disposable income, which reached 92.5% in the third quarter (see Chart 18), while the debt-to-GDP ratio rose to 60.3% in that quarter on the basis of data from the euro area integrated accounts. However, when compared with the United States or the United Kingdom, the level of indebtedness of euro area households is still relatively modest. The continued rise in households' indebtedness has increased their exposure to changes in interest rates, income and asset prices. It should be noted that this ratio represents an average level and the level of indebtedness may vary markedly across different households in the various countries of the euro area. Higher levels of exposure apply, for instance, where households took advantage of the exceptionally favourable interest rate conditions prevailing in previous years and took out mortgages at variable rates with low initial interest payments. This rising indebtedness, combined with higher lending rates for households, contributed to an increase in the debt servicing burden in 2007, measured as interest payments plus principal repayments as a percentage of disposable income. The interest payment burden increased further to stand at 3.2% in the third quarter of 2007, up from 2.8% at the end of 2006 and well above the levels observed in 2004 and 2005, but also below the previous peak observed in 2001.

**Chart 18 Household debt and interest payments**

(as a percentage of households' gross disposable income)




Source: ECB.

### THE COST OF THE EXTERNAL FINANCING OF NON-FINANCIAL CORPORATIONS INCREASED IN 2007

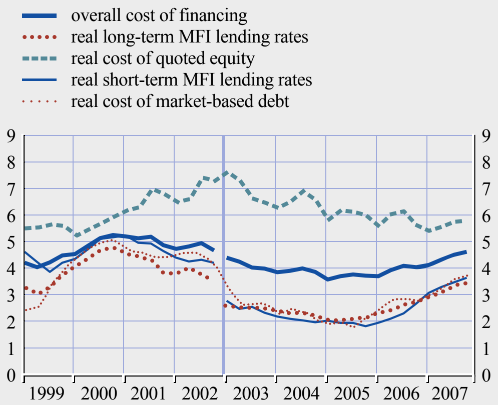
In 2007 the real cost of the external financing of non-financial corporations in the euro area increased progressively, thereby continuing the trend observed in 2006, while corporate profitability remained strong. Despite this, and reflecting an increase in the funding gap, the growth rate of the external financing of non-financial corporations remained very high, fuelled by strong demand for MFI loans. As a result, the leverage of the non-financial corporate sector is expected to have increased further in 2007.

Following the increases in key ECB interest rates in 2006 and the first half of 2007, the real overall cost of the external financing of euro area non-financial corporations continued to rise in 2007 (see Chart 19).[2] Throughout the year the increase was driven mainly by continued increases in the real cost of debt financing, although the cost of equity financing also edged upwards. In the last quarter of 2007 the turmoil in the credit markets contributed to an increase

2 The real cost of the external financing of non-financial corporations is calculated by weighting the different sources of external financing 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.

**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 the harmonised MFI lending rates at the beginning of 2003 led to a break in the statistical series.

in the cost of external corporate financing as lenders and other investors re-evaluated their perceptions of credit risk, with the result that market financing conditions became tighter than in the past.

Turning to the components of the cost of external corporate financing, interest rates on MFI loans to non-financial corporations increased significantly in both real and nominal terms in the course of 2007 (see Chart 19). The rise in short-term money market interest rates – which totalled 120 basis points between the end of 2006 and the end of 2007 in the case of the three-month EURIBOR – was followed by smaller increases in short-term MFI lending rates to corporate borrowers. In particular, the rates on loans with floating rates and an initial rate fixation period of up to one year increased by around 90 to 100 basis points in the case of small and large loans over the same period. These increases probably also reflected the effects that previous increases in money market rates in 2006 had on MFI short-term lending rates, thereby broadly following the pattern of a lagged pass-through observed in previous cycles. Long-term MFI lending rates also increased in the same period – by between 60 and 85 basis points. In the same period five-year government bond yields increased by 30 basis points. As a result, the spreads between long-term bank lending rates and comparable market rates widened significantly, especially in the second half of the year. The widening of the spreads reflected the increase in banks' funding costs.

The real cost of non-financial corporations' financing through market-based debt also increased significantly in 2007, continuing the trend started in 2006. By December 2007 this cost was around 190 basis points above the low recorded in the summer of 2005. From June 2007 onwards increases in the yields on corporate bonds were larger than those observed for corresponding government bonds, with the result that spreads widened accordingly in the second half of the year. This increase in spreads is likely to have reflected perceptions of higher credit and liquidity risk among investors across the globe, as well as an increase in financial market volatility after a prolonged period of highly compressed spreads.[3]

The real cost of non-financial corporations' financing through quoted equity also rose progressively in the course of 2007, despite the increases in stock market prices (measured, for instance, by the broad euro area index) in the first half of the year. In the second half of 2007 declines in stock market prices contributed to the increase in the cost of issuing equity. However, the calculation of the cost of equity relies on certain assumptions concerning firms' expected future cash flows and the results should therefore be interpreted with some caution.

### FURTHER RISE IN NON-FINANCIAL CORPORATIONS' DEMAND FOR EXTERNAL FINANCING

Non-financial corporations' demand for external financing remained robust in the course of

3 See the box entitled "The recent repricing of credit risk" in the October 2007 issue of the ECB's Monthly Bulletin.

2007, continuing the upward trend observed as of late 2004. In the fourth quarter the real annual growth rate of the external financing of non-financial corporations stood at 5%, up from an average of 4% in 2006. This development was driven mainly by an increase in the contribution of loans granted by MFIs, with a more limited rise in the contribution of debt securities and quoted shares (see Chart 21).

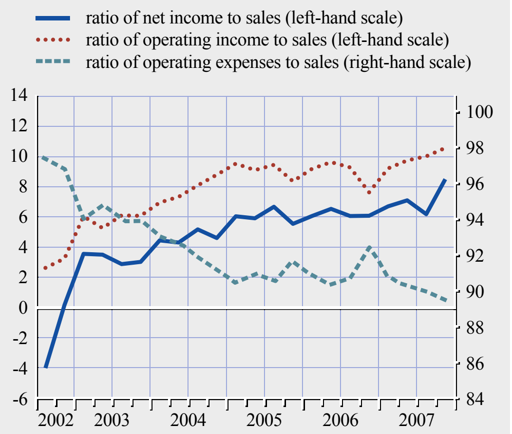
Demand for external financing remained very strong in spite of the robust generation of internal funds. In particular, profits remained at sound levels throughout 2007 according to evidence from aggregated firm-level data taken from the financial statements of listed firms (see Chart 20).[4] However, it must also be borne in mind that, while earnings expectations in the euro area remained high throughout the year, the last quarter of 2007 saw a significant increase in the number of downward revisions to the earnings expectations of listed euro area firms.

The rate of growth of MFI loans to non-financial corporations generally increased further in 2007, continuing the trend observed since the beginning of 2004. This rate of growth stood at 14.5% in December 2007 and rose further to stand at 14.6% in January 2008. Indeed, such strong loan growth dynamics have not been seen since the introduction of the euro in 1999. Consequently, on the basis of hard data, there were no signs of a weakening in the growth of lending to non-financial corporations in the wake of the recent turbulence in the credit markets. Part of the continued strength of MFI loan growth in the euro area may be explained by the following two factors. First, according to banks' assessment of the situation, as revealed in the latest bank lending surveys, financing needs related to real economic activity – particularly for inventories, working capital and fixed capital investment – continue to explain the persistent increase in loan demand. Second, non-financial corporate loan growth could also

4 Euro area firms' recent strong earnings performance seems also to be broadly based across the countries of the euro area. See also the box entitled "Volatility and cross-country dispersion of corporate earnings in the euro area" in the October 2007 issue of the ECB's Monthly Bulletin.

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

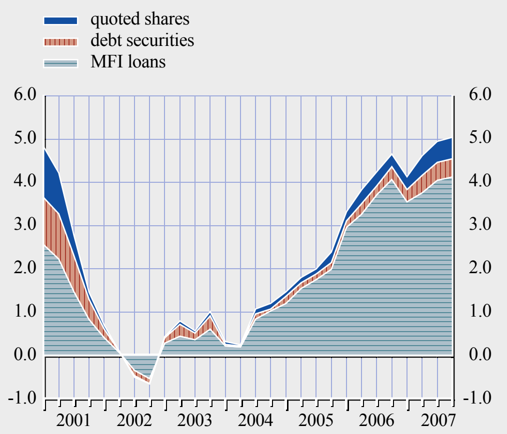
(quarterly data; percentages)




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. By contrast with operating income, which is defined as sales minus operating expenses, net income refers to operating and non-operating income after taxation and deduction of extraordinary items.

**Chart 21 Breakdown of the real annual growth rate of the external financing of non-financial corporations [1]**

(annual percentage changes)



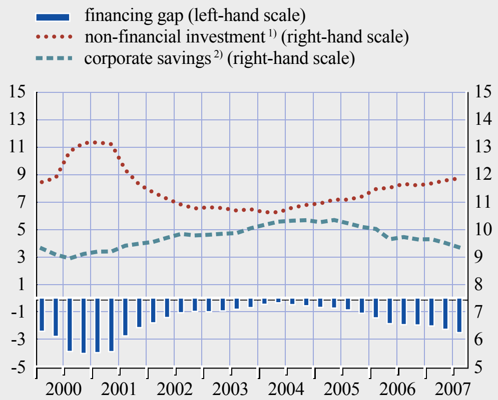

Source: ECB.
1) The real annual growth rate is defined as the difference between the actual annual growth rate and the growth rate of the GDP deflator.

have been supported by some shifts away from market-based debt financing in the light of the more difficult conditions seen in the corporate debt markets in the latter part of 2007. By contrast, other factors of a more financial nature, such as reduced financing needs for M&As or the increases seen in lending rates, probably contributed to the dampening of loan demand. In this respect, the less favourable financing conditions experienced by the banks themselves may also have contributed to the lower loan demand, with banks passing on their more stringent financing conditions when granting credit to corporate borrowers.

Market-based financing – through both debt and equity – also increased in line with the growth of bank-based corporate financing, although to a far lesser extent. The annual growth rate of debt securities issued by non-financial corporations rose from around 4.5% at the beginning of the year to 10.1% in July 2007, which was a significant increase, particularly when compared with the relatively modest growth of previous years. More recently the annual growth rate of debt securities issued by non-financial corporations has declined somewhat. Looking at short-term developments in seasonally adjusted data, the decline in the net issuance activity of non-financial corporations became far more marked as of August 2007. This may have been related to the rise in corporate bond spreads following problems in the credit markets, as well as to reduced M&A activity. The annual growth rate of quoted shares issued by non-financial corporations tended to increase somewhat in 2007, but it remained subdued. The overall modest contribution made by the net issuance of quoted shares to the net financing of the euro area corporate sector was probably related both to the fact that the real cost of equity is significantly higher than the real cost of debt financing and to the ample availability of internal funds. At the same time, gross issuance rose somewhat in 2007, supported by developments in both initial and secondary public offerings.

**Chart 22 Non-financial corporations' financing gap and its main components**

(percentages of GDP; four-quarter moving averages)




Source: ECB.
1) Includes inventories and accumulation of non-financial assets.
2) Includes net capital transfers.

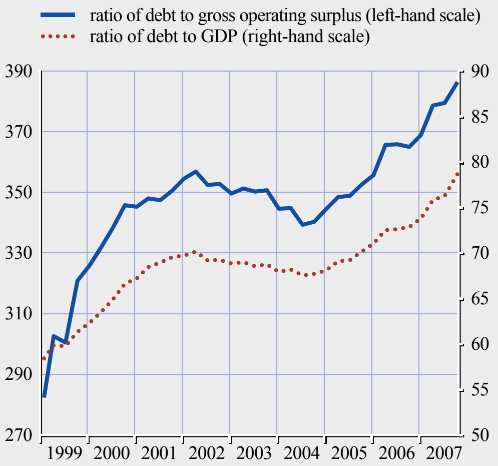
The overall increase in the external financing of non-financial corporations can be linked to the increase in the financing gap or net borrowing – calculated as the difference between corporate savings and non-financial investment (see Chart 22). The wider financing gap experienced by non-financial corporations in the euro area in 2006 and the first three quarters of 2007 resulted from the increase in real investment and the decline in corporate savings. In an environment of strong operating profits, declines in corporate savings mainly reflected increases in interest rate payments, but also the fact that corporations distributed a larger share of their profits during that period.

### RISING CORPORATE DEBT

As regards developments in the balance sheet position of non-financial corporations in the euro area, the strong rise in debt financing led to further increases in debt ratios, continuing the trend observed since the beginning of 2005 (see Chart 23). In this respect, the estimated ratios of debt to GDP and debt to gross operating surpluses rose to around 78% and 386% respectively in the last quarter of 2007. After a period of consolidation between 2002 and 2004, which had followed a sharp increase in debt in the second half of the 1990s, the debt ratios

**Chart 23 Debt ratios of non-financial corporations**

(percentages)




Sources: ECB, Eurostat and ECB calculations.
Notes: Debt is reported on the basis of the quarterly European sector accounts. It includes loans, debt securities issued and pension fund reserves. Data include information up to the fourth quarter of 2007.

of non-financial corporations have risen continuously over the last three years. By contrast with their debt-to-income ratios, the ratio of non-financial corporations' debt to financial assets remained stable in the first three quarters of 2007, after having been on a declining trend since the first quarter of 2003. The recent increases in debt, coupled with interest rate increases, caused the net interest burden of non-financial corporations to rise significantly in the course of 2007.

## 2.3 PRICE AND COST DEVELOPMENTS

Overall HICP inflation was 2.1% on average in 2007, 0.1 percentage point lower than in the preceding two years (see Table 1). However, the 2007 average is the result of two distinct patterns in HICP developments over the course of the year: annual inflation rates remained below 2% and broadly stable until the end of the summer, and grew rapidly thereafter. In September 2007 consumer price inflation rose slightly above 2% for the first time since August 2006. It then increased to elevated levels, reaching a peak of 3.1% in November and December 2007.

HICP inflation developments in 2007 were largely determined by strong energy and food price increases (see Chart 24). The effects of the rise in oil prices in early 2007 on the energy price component of the HICP were reduced by favourable base effects until July 2007; thereafter, a combination of surging oil prices and adverse base effects led to a substantial contribution from this component to overall HICP inflation. Annual rates of

**Table 1 Price developments**

(annual percentage changes, unless otherwise indicated)

| | 2005 | 2006 | 2007 | 2006 Q4 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 | 2008 Jan. | 2008 Feb. |
|---|---|---|---|---|---|---|---|---|---|---|
| **HICP and its components** | | | | | | | | | | |
| Overall index [1] | 2.2 | 2.2 | 2.1 | 1.8 | 1.9 | 1.9 | 1.9 | 2.9 | 3.2 | *3.2* |
| Energy | 10.1 | 7.7 | 2.6 | 1.5 | 1.1 | 0.5 | 0.7 | 8.1 | 10.6 | . |
| Unprocessed food | 0.8 | 2.8 | 3.0 | 4.1 | 3.1 | 3.3 | 2.4 | 3.1 | 3.3 | . |
| Processed food | 2.0 | 2.1 | 2.8 | 2.2 | 2.1 | 2.0 | 2.5 | 4.5 | 5.8 | . |
| Non-energy industrial goods | 0.3 | 0.6 | 1.0 | 0.8 | 1.1 | 1.0 | 1.0 | 1.0 | 0.7 | . |
| Services | 2.3 | 2.0 | 2.5 | 2.1 | 2.4 | 2.6 | 2.5 | 2.5 | 2.5 | . |
| **Other price and cost indicators** | | | | | | | | | | |
| Industrial producer prices [2] | 4.1 | 5.1 | 2.8 | 4.1 | 2.9 | 2.4 | 2.1 | 4.0 | 4.9 | . |
| Oil prices (EUR per barrel) [3] | 44.6 | 52.9 | 52.8 | 47.3 | 44.8 | 51.0 | 54.2 | 61.0 | 62.4 | 64.0 |
| Commodity prices [4] | 9.4 | 24.8 | 9.2 | 23.0 | 15.7 | 13.8 | 6.7 | 1.6 | 10.4 | 15.0 |

Sources: Eurostat, Thomson Financial Datastream, Hamburg Institute of International Economics and ECB calculations.
Note: Data on industrial producer prices refer to the euro area including Cyprus and Malta.
1) HICP inflation in February 2008 refers to Eurostat's flash estimate.
2) Excluding construction.
3) Brent Blend (for one-month forward delivery).
4) Excluding energy; in euro.

change in unprocessed food prices remained elevated for most of 2007, and processed food prices accelerated from the end of the summer onwards, contributing substantially to the higher inflation in the last few months of the year.

In addition, HICP inflation in 2007 was significantly affected by a 3 percentage point VAT increase in Germany, which came into effect on 1 January 2007.

Labour costs remained moderate up to the third quarter of 2007, but unit labour costs rose slightly owing to the decline in labour productivity growth.

### HICP INFLATION WAS SIGNIFICANTLY INFLUENCED BY ENERGY AND FOOD PRICE DEVELOPMENTS

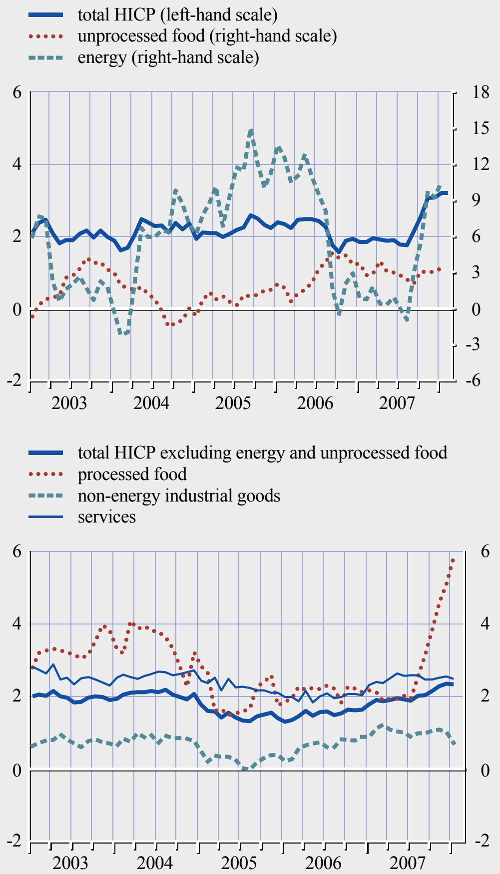
Looking in more detail at HICP developments in 2007, oil price increases and base effects stemming from previous energy price developments, together with food price increases, significantly affected the profile of HICP inflation.

In mid-January 2007 the strong downward trend in oil prices on international markets that had started in August 2006 came to a halt, and prices began rising again. In December 2007 oil prices in euro were about 32% higher than a year earlier.[5]

5 The annual average price in euro of a barrel of Brent crude oil remained practically unchanged in 2007, whereas oil prices in 2006 were on average 19% higher than those in 2005.

**Chart 24 Breakdown of HICP inflation: main components**

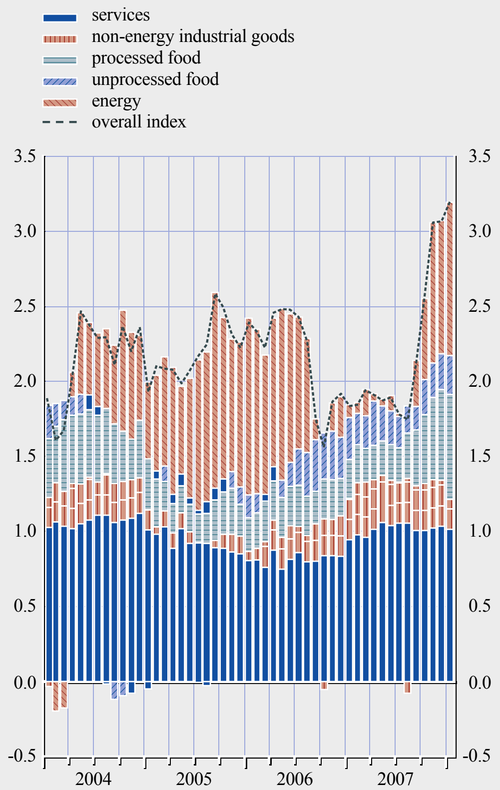
(annual percentage changes; monthly data)




Source: Eurostat.

**Chart 25 Contributions to HICP inflation from main components**

(annual percentage point contributions; monthly data)




Source: Eurostat.
Note: Due to rounding, the contributions do not add up exactly to the overall index.

In a number of months in the period from January to July 2007 the effects of the rise in oil prices on the energy price component of the HICP were reduced by favourable base effects from the strong increase in energy prices observed a year earlier. From September 2007 onwards, a combination of surging oil prices and adverse base effects led to a substantial contribution from the energy component to overall HICP inflation (see Chart 25). In the fourth quarter of the year, the annual rate of change in HICP energy prices was 8.1%, compared with 0.8% on average in the first three quarters of the year. While base effects influenced the monthly developments of annual HICP inflation, favourable and unfavourable base effects broadly offset each other for the year as a whole, implying that the contribution of the energy component to overall inflation in 2007 reflected the increases in oil prices that occurred over the year (see Box 4).

The contribution of the other typically volatile component of inflation, unprocessed food prices, to the overall inflation rate also increased in 2007, following an acceleration in this component in 2006. The annual rate of change in unprocessed food prices remained elevated for most of 2007, although monthly developments were characterised by considerable volatility, mainly on account of changes in fruit and vegetable prices, which were affected by bad weather conditions in Europe, especially in the spring of 2007. Meat prices, which had

**Box 4**

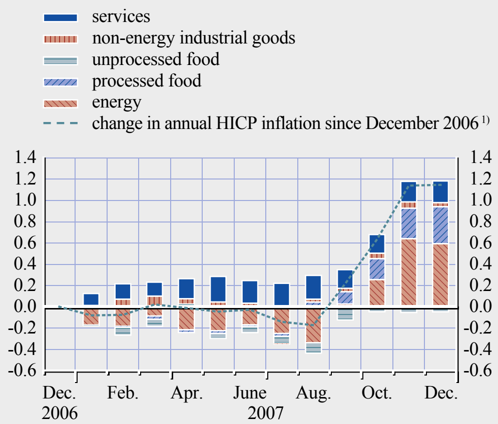
## THE IMPACT OF ENERGY BASE EFFECTS ON HICP INFLATION IN 2007

The annual rate of HICP inflation increased substantially in the course of 2007. In December it stood at an elevated 3.1% – a level unseen since May 2001 – up from 1.9% in November 2006. This increase was almost entirely the result of three consecutive sharp rises in annual inflation in September, October and November, and was driven mostly by significant contributions from price developments in the energy and processed food components (see Chart A).

It is important to establish to what extent changes in the year-on-year inflation rate reflect current developments (i.e. actual "news" from one month to the next) and to what extent they reflect the impact of price volatility in the previous year, through "base effects"[1]. This box reviews the role of base effects, in particular from energy price developments, in driving recent HICP inflation developments and provides some insight into their prospective impact over 2008.

**Chart A Contributions to the change in annual HICP inflation since December 2006**

(percentage points)

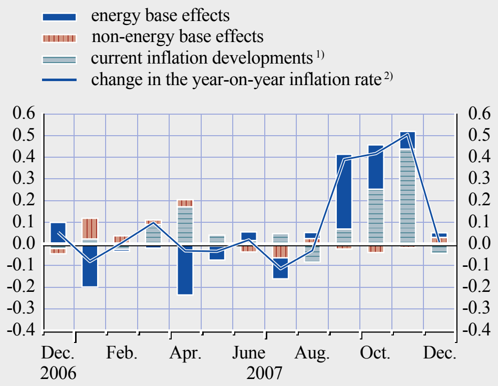



Sources: Eurostat and ECB calculations.
1) Calculated as the difference between the year-on-year HICP growth rate in a given month and the year-on-year HICP growth rate in December 2006.

1 A base effect can be defined as the contribution to the change in the year-on-year inflation rate in a particular month that stems from a deviation of the month-on-month rate of change in the base month (i.e. the same month one year earlier) from its usual or "normal" pattern, taking account of seasonal fluctuations.

## Chart B Decomposition of the monthly change in annual HICP inflation

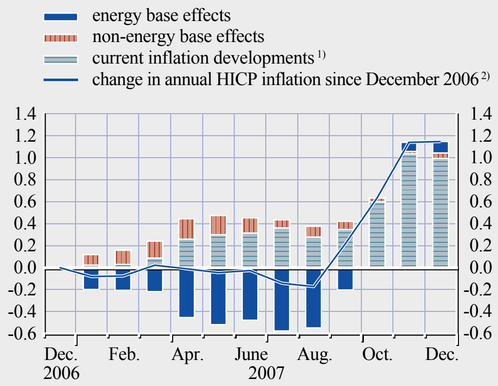
(percentage points)




Sources: Eurostat and ECB calculations.
1) Calculated as the difference between the change in the year-on-year inflation rate and the combined base effects from energy and non-energy components.
2) Calculated as the difference between the year-on-year inflation rate in two consecutive months.

## Chart C Decomposition of the change in annual HICP inflation since December 2006

(percentage points)




Sources: Eurostat and ECB calculations.
1) Calculated as the difference between the change in the annual inflation rate since December 2006 and the cumulated base effects from energy and non-energy components since December 2006.
2) Calculated as the difference between the year-on-year HICP growth rate in a given month and the year-on-year HICP growth rate in December 2006.

The derivation of a monthly seasonal pattern for each HICP component makes it possible to separate the contributions of base effects and current developments to monthly changes in the annual rate of HICP inflation (see Chart B).[2]

Base effects had a substantial impact on the pattern of headline inflation rates in 2007, as had been anticipated.[3] Over the course of the year, the most significant monthly contributions came from base effects in the energy price component, owing to the volatile pattern of month-on-month oil price developments in 2006. From January to July 2007 favourable energy base effects had a downward impact on the headline inflation rate. In the second half of 2007, by contrast, the year-on-year rate of increase in the HICP was affected by unfavourable energy base effects, which were especially strong in September and October. Base effects from non-energy components were, overall, relatively small in 2007.

Nevertheless, inflation developments in the last quarter of the year were essentially driven by month-on-month price dynamics, owing to the surge in energy prices and also processed food prices. In November, in particular, most of the contribution from the energy component to the increase in HICP inflation was due to the pass-through of the recent increases in oil prices in international markets. In addition to the impact from crude oil prices, there was some increase in the refining margin, reflecting higher profits for energy suppliers. In December, by contrast, the energy component exerted some downward pressure on the overall headline inflation rate, but this was broadly offset by further upward pressure from processed food prices. The fall in the

2 The contribution of base effects to the monthly changes in the year-on-year rate of inflation is calculated as the deviation of the (non-seasonally adjusted) month-on-month change 12 months earlier from the estimated "normal" month-on-month change. The "normal" month-on-month change is obtained by adding an estimated seasonal factor for each month to the average month-on-month change observed since January 1995.
3 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.

energy component was mainly due to the impact of a decrease in crude oil prices over the month, while the base effect from energy price developments a year earlier was almost negligible.

Looking at the year as a whole, total base effects from energy and non-energy components had a relatively minor cumulated impact on the annual rate of increase in HICP inflation, as favourable and unfavourable influences almost exactly offset one another (see Chart C).

Overall, of the total 1.1 percentage point increase in the HICP annual growth rate between December 2006 and December 2007, only 0.1 percentage point reflected the cumulative upward impact of energy base effects, while the remaining 1 percentage point reflected price dynamics in 2007. It therefore appears that most of the total increase in annual HICP inflation was accounted for by current inflation developments.

Looking ahead, the HICP inflation rate is expected to moderate over the course of 2008, assuming some reversal of the recent rises in energy and food commodity prices in international markets, as currently embedded in futures prices. In 2008 total base effects from both energy and non-energy prices are expected to make substantial downward contributions to inflation developments (of around 1.1 percentage point cumulatively in the 12 months to December 2008).[4] The impact will generally be concentrated towards the end of the year as the significant increases in energy and food prices recorded in the second half of 2007 will drop out of the annual comparison 12 months later. However, the extent to which these negative base effects will also lead to lower HICP inflation hinges crucially on the absence of further shocks to oil and food prices and on the moderate evolution of the other HICP components, which in particular requires the absence of second-round effects.

4 See the box entitled "Accounting for recent and prospective movements in HICP inflation: the role of base effects" in the January 2008 issue of the ECB's Monthly Bulletin.

increased at a sustained pace in 2006, continued to record heightened annual rates of growth in 2007. In part, this development reflected the price increases in global markets of animal feed and other input costs.

A major contribution to the rise in HICP inflation in late 2007 came from processed food prices, which started to rise at stronger rates towards the end of the summer. In the last quarter of the year the annual growth rate of the processed food component stood at 4.5%, the highest rate ever recorded since the start of Monetary Union in 1999. The increase in the annual rate of change of processed food prices occurred in the context of strong increases in the prices of some agricultural commodities in world markets, which were driven by a combination of temporary and structural factors (see Box 5). The "bread and cereals" and "milk, cheese and eggs" sub-components were the most affected.

Non-energy industrial goods prices rose by 1.0% in 2007, a higher rate than in previous years. This acceleration mainly reflected the effects of the VAT increase in Germany, the input cost pressures signalled by domestic producer prices for consumer goods, and the fact that capacity utilisation in the manufacturing sector stood around historically high levels throughout the whole year. These effects more than offset the dampening influence of lower import price pressures, which reflected exchange rate developments, in an environment of strong international competition. Finally, services price inflation increased markedly at the beginning of 2007, mostly influenced by the VAT increase in Germany, and remained at elevated levels throughout the year.

While the annual average growth rate of the overall HICP was broadly stable in 2007, the annual growth rate of the HICP excluding the volatile unprocessed food and energy components increased to 2.0% in 2007 from 1.5% in the previous two years. This indicator was affected by the German VAT increase at the beginning of the year. It remained stable at 1.9% from February to July 2007 and then started to move upwards again in August, mainly because of strong increases in processed food prices. By the end of the year, HICP inflation excluding unprocessed food and energy had reached 2.3%, the highest level since end-2002.

**Box 5**

## FOOD PRICE INFLATION IN THE EURO AREA

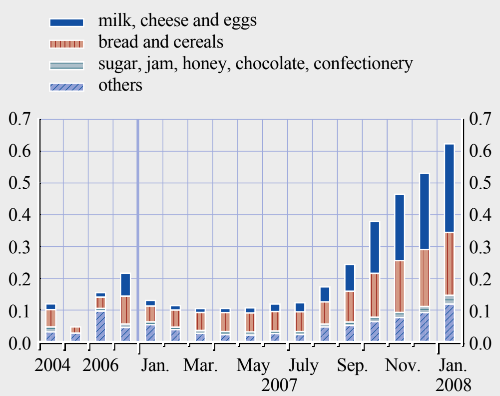
Food price inflation increased sharply in the euro area in the second half of 2007, at both the producer and consumer level. Producer prices of food products and beverages rose by 4.5% on average in 2007, the highest rate for more than six years. HICP food prices rose by 4.3% in December 2007, up from 2.4% on average in 2006. The increase in HICP food prices was mainly driven by the processed food component. Within this component, the prices of cereals and bread and those of milk, cheese and eggs rose particularly sharply (see Chart A). Food prices played an important role in the rise in overall HICP inflation in the second half of 2007. This box considers the potential factors driving movements in food price inflation in the euro area and discusses the outlook.

The rise in food price inflation in the euro area largely reflects global factors. The prices of several agricultural commodities, such as cereals and oilseeds, increased sharply in global markets in 2007 (see Chart B).

In part, these price increases reflected temporary factors, such as adverse weather conditions in some major agricultural commodity-exporting countries which affected the global supply of these commodities. High energy prices also increased the cost of energy-intensive inputs for agriculture, such as fertiliser, fuel for transport and machinery. In addition, international food prices were pushed up by the strong rise in the global demand for foodstuffs resulting from the changes in food consumption patterns in many developing economies, as well as from the emergence of new sources of demand for some agricultural commodities, particularly for the production of biofuels. As these latter

**Chart A Contributions of processed food prices to annual HICP inflation**

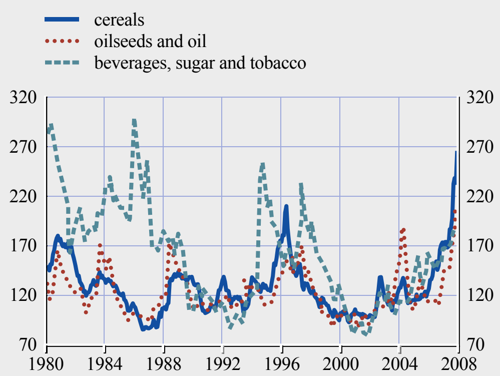
(percentage points)




Sources: Eurostat and ECB calculations.
Note: The left-hand panel shows the annual contributions for the years 2004-07.

## Chart B Developments in food and tropical beverage prices

(monthly data in USD; index: average 2000 = 100)




Sources: Hamburg Institute of International Economics and ECB calculations.
Note: Latest observation refers to December 2007.

developments are of a structural nature, they are likely to continue to exert upward pressure on global food prices in the future. The increases in the prices of dairy products may have also reflected the differing structure of the milk market across European countries, in addition to the price increases in global markets for milk, animal feed and other inputs.

Underscoring the global nature of the food price shock, food prices increased simultaneously in several major economies outside the euro area in 2007. Furthermore, the food price components that contributed most to euro area inflation (such as cereals and dairy products) also rose in these economies, suggesting that a common shock lay behind the price increases.

Within the euro area, the impact of the global food price shock on prices in individual euro area countries differed considerably in terms of both speed and size. For example, the annual rate of increase of HICP processed food excluding tobacco in 2007 ranged from 5.7% in Slovenia – the highest rate within the euro area – to 0.7% in France and 0.8% in Finland, where the rate was significantly below the euro area average (see the table). More recent data show stronger processed food price inflation in the latter two countries.

Retail food markets are traditionally segmented across countries. In this respect, differences in demand conditions, market structures, food price levels and competitive pressures in the retail and distribution sectors are likely to explain the diverse reactions of consumer food prices across countries to the common external shock.

## HICP processed food excluding tobacco across euro area countries

(annual percentage changes)

| | Weights | Averages | | | | |
|---|---|---|---|---|---|---|
| | 2007 | 2005 | 2006 | 2007 | 2007 Dec. | 2008 Jan. |
| Belgium | 10.8 | 2.0 | 1.9 | 4.1 | 7.3 | 8.2 |
| Germany | 8.3 | 0.2 | 1.0 | 3.0 | 6.7 | 7.4 |
| Ireland | 10.2 | 0.0 | 0.2 | 1.2 | 7.3 | 7.2 |
| Greece | 9.7 | 3.2 | 4.7 | 2.2 | 6.0 | 6.3 |
| Spain | 10.4 | 2.8 | 4.4 | 3.0 | 8.9 | 9.3 |
| France | 9.7 | -0.6 | 0.7 | 0.7 | 3.0 | 4.7 |
| Italy | 9.9 | 0.6 | 1.9 | 2.5 | 4.7 | 5.1 |
| Luxembourg | 9.6 | 1.7 | 1.8 | 2.6 | 5.4 | 5.3 |
| The Netherlands | 9.3 | -1.8 | 0.2 | 1.5 | 4.7 | 5.6 |
| Austria | 8.3 | 0.8 | 1.5 | 3.7 | 7.7 | 8.4 |
| Portugal | 8.4 | -0.8 | 1.7 | 1.4 | 5.6 | 6.5 |
| Slovenia | 11.4 | -1.3 | 1.4 | 5.7 | 11.9 | 13.8 |
| Finland | 13.0 | -0.8 | 0.9 | 0.8 | 1.1 | 6.6 |
| Euro area | 9.4 | 0.5 | 1.6 | 2.3 | 5.6 | 6.6 |

Sources: Eurostat and ECB calculations.

Looking ahead, the outlook for both world and domestic food prices remains highly uncertain. Although the supply of agricultural products should eventually respond to the increase in demand, the catch-up period may be more prolonged than currently envisaged. Moreover, food prices depend on a number of factors which are difficult to predict, including technology advances and possible changes in energy policy. Overall, risks seem to be on the upside.

### LOWER AVERAGE PRODUCER PRICE INFLATION BUT UPWARD PRESSURE TOWARDS THE END OF 2007

Producer price inflation declined in the first part of the year, mainly on account of base effects from the energy component, and rose thereafter, pushed up by energy and food price developments.

The annual rate of change in industrial producer prices (excluding construction) in the euro area was 2.8% in 2007, considerably lower than in the previous two years. Producer price inflation, which had peaked at 6% in July 2006, gradually declined to stand at 1.8% in July 2007, mainly on account of base effects affecting the energy component. From September 2007 higher annual rates of energy producer price growth – pushed up by oil price increases and base effects – and food producer price growth led to an increase in producer price inflation. In December 2007 producer price inflation stood at 4.3%.

**Chart 26 Breakdown of industrial producer prices**

(annual percentage changes; monthly data)


Source: Eurostat.
Note: Data refer to the euro area including Cyprus and Malta.

The annual growth rate of industrial producer prices excluding construction and energy declined somewhat in the course of the year, but remained at elevated levels. This development reflected different patterns in the main components (see Chart 26).

The annual rate of growth of intermediate goods prices continued to slow down gradually over the course of 2007, declining to 3.5% in December from a peak of 6.5% in August 2006. In the first part of the year intermediate goods prices were still affected by upward pressure from higher prices of industrial raw materials, which constitute their main drivers. The subsequent decline in industrial raw materials prices on world markets, together with the appreciation of the euro, dampened price developments in many parts of the intermediate goods sector. Manufacturers of food-related items experienced strong price increases in the third quarter of the year in the wake of surging prices for some agricultural commodities in world markets (see Box 5). The annual growth in capital goods prices reversed its upward movement in June 2007 and declined to 1.5% in the fourth quarter of 2007, reflecting the favourable effects of the appreciation of the euro.

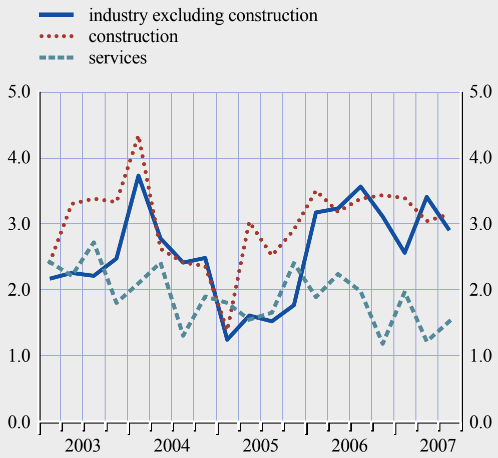
Further down the production chain, consumer goods prices continued on the upward path observed since mid-2005. The annual rate of change in overall consumer goods prices rose to 3.9% in December 2007, the highest rate of increase since the beginning of Monetary Union in 1999. This development was mainly driven by non-durable consumer goods prices, which accelerated from July onwards, reflecting global food price pressures which pushed up food consumer goods prices. Excluding tobacco and food prices, however, the annual rate of change in consumer goods prices remained stable throughout the year, hovering around 1.3%.

### LABOUR COSTS REMAINED MODERATE

The annual growth rate of compensation per employee remained moderate in 2007. The average annual growth rate in the first three quarters of the year was 2.0%, slightly lower than the average growth rate recorded in 2006 (see Table 2). Sectoral data indicate that, as in the previous year, growth rates in compensation per employee in 2007 were higher in the industrial sector than in the services sector, in line with sectoral productivity developments (see Chart 27). In the industrial sector, the average growth rate in the first three quarters of 2007 was broadly in line with developments since the beginning of 2006. The annual rate of growth of compensation per employee in the construction sector, although slightly higher than in the industrial sector, moderated in the course of the year amid the first signs of a slowdown in employment in this sector. The annual growth rate of compensation per employee in services in the first three quarters of 2007 was lower than in the previous two years.

**Chart 27 Sectoral compensation per employee**

(annual percentage changes; quarterly data)




Sources: Eurostat and ECB calculations.

The average growth in total hourly labour costs in the first three quarters of 2007 was lower than the growth rate recorded in 2006. The moderation of annual growth rates of compensation per employee and total hourly labour costs was partially due to the dampening effects of cuts in social security contributions which were implemented in some euro area economies in 2007.

Other available labour cost indicators confirm that wage developments remained moderate in 2007. In particular, negotiated wage growth stood at 2.1% on average in the euro area in 2007, slightly below the rate in 2006, although wage developments varied considerably from country

**Table 2 Labour cost indicators**

(annual percentage changes)

| | 2005 | 2006 | 2007 | 2006 Q4 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 |
|---|---|---|---|---|---|---|---|---|
| Negotiated wages | 2.1 | 2.3 | 2.1 | 2.5 | 2.0 | 2.3 | 2.1 | 2.1 |
| Total hourly labour costs | 2.7 | 2.6 | . | 2.3 | 2.3 | 2.4 | 2.5 | . |
| Compensation per employee | 1.8 | 2.2 | . | 1.8 | 2.2 | 1.9 | 2.0 | . |
| *Memo items* | | | | | | | | |
| Labour productivity | 0.7 | 1.3 | . | 1.6 | 1.3 | 0.7 | 0.7 | . |
| Unit labour costs | 1.0 | 0.9 | . | 0.2 | 0.9 | 1.2 | 1.2 | . |

Sources: Eurostat, national data and ECB calculations.
Note: Data on compensation per employee, labour productivity and unit labour costs refer to the euro area including Cyprus and Malta.

to country. The impact of lower unemployment on wage agreements appears to have remained relatively moderate. It appears that structural reforms in labour and product markets, changes in the composition of the labour supply and employment, and international competition have contributed to the continuation of moderate labour cost developments in the euro area.

Despite moderate wage developments, the annual growth rate of unit labour costs rose slightly in the course of the year, mainly reflecting declining labour productivity growth. Unit labour costs grew by an average of 1.1% in the first three quarters of 2007, compared with average growth rates of 0.9% and 1.0% in the previous two years. The increase in unit labour costs brought about some slowdown in profit developments in the course of 2007. The indicator of overall profit mark-up, measured as the difference in the rates of growth of the GDP deflator and of unit labour costs, still signalled dynamic growth in profits up to the third quarter of 2007, but at a lower rate than in 2006. Average profit mark-up growth in the first three quarters of 2007 was 0.6%, whereas it had been 0.8% in 2006.

## RESIDENTIAL PROPERTY PRICE INCREASES SLOWED DOWN FURTHER

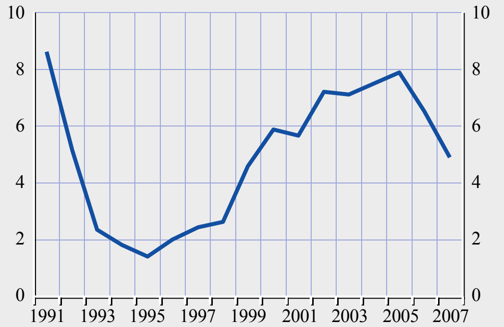
Residential property prices, which are not included in the measurement of the HICP, decelerated in the first half of 2007, continuing the slowing trend observed in the second half of 2005 and in 2006 (see Chart 28). According to the latest estimates, the annual growth rate of residential property prices for the euro area as a whole declined to 5.0% in the first half of 2007, from 6.1% in the second half of 2006. Available country data suggest that the moderation in euro area house price inflation was particularly marked in those countries that have recorded relatively high residential property price rises in recent years, such as Belgium, Ireland, Spain, France and Malta. By contrast, in the case of Italy, the Netherlands and Austria, available data suggest that house price increases in 2007 were roughly unchanged compared with those recorded in 2006. As regards Germany, house prices recorded a further small increase in 2007, following a period of subdued developments until 2005.

## DEVELOPMENTS IN INFLATION PERCEPTIONS AND EXPECTATIONS

In view of the rise in headline inflation towards the end of 2007, inflation perceptions and expectations became a key issue in the assessment of future inflation developments. The European Commission's measure of consumers' qualitative perceptions of inflation over the previous 12 months increased significantly in the second half of

**Chart 28 Residential property price developments in the euro area**

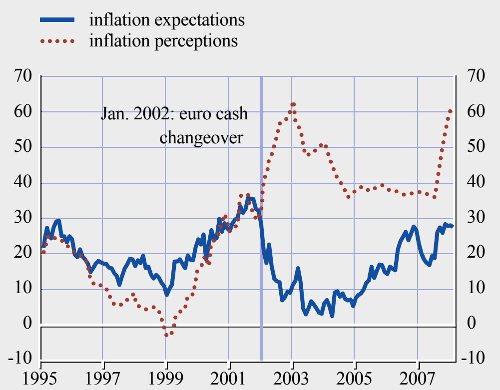
(annual percentage changes; annual data)




Source: ECB calculations, based on non-harmonised national data.
Note: Data for 2007 refer to the first half of the year.

**Chart 29 Euro area consumers' qualitative inflation perceptions and expectations**

(percentage balance; seasonally adjusted)

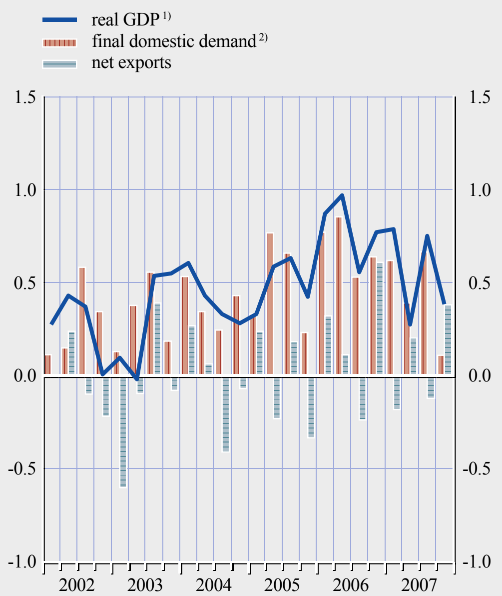



Source: European Commission Business and Consumer Surveys.
Note: Data refer to the euro area including Cyprus and Malta.

2007 following the rise in actual inflation, reaching levels last seen in the wake of the euro cash changeover in January 2002 (see Chart 29).[6] In contrast to 2002, consumers' inflation expectations for the next 12 months increased – although by a smaller amount – in the second half of 2007. Similarly, information derived from professional forecasters indicated that survey-based long-term inflation expectations remained at 1.9% according to the October 2007 Consensus Economics forecasts and increased to 2.0% according to the January 2008 Euro Zone Barometer and the ECB Survey of Professional Forecasters for the first quarter of 2008. Furthermore, break-even inflation rates derived from inflation-linked bonds and swaps in the euro area increased after September 2007, suggesting a rise in inflation expectations or inflation risk premia in financial markets (see also Section 2.2 of this chapter).

**Chart 30 Contributions to quarterly real GDP growth**

(quarterly percentage point contributions; seasonally adjusted)




Sources: Eurostat and ECB calculations.
Note: Data refer to the euro area including Cyprus and Malta.
1) Percentage change compared with the previous quarter.
2) Defined as domestic demand excluding changes in inventories.

## 2.4 OUTPUT, DEMAND AND LABOUR MARKET DEVELOPMENTS

### ECONOMIC GROWTH DEVELOPED FAVOURABLY IN 2007

Economic developments in 2007 were favourable overall, although growth slowed somewhat in the course of the year. On average, real GDP growth in the euro area was 2.6% in 2007, which is slightly below the 2.8% recorded in 2006 and above the growth rates recorded in previous years (see Chart 30).

The slower GDP growth in 2007 was mainly due to developments in private consumption and residential investment. The contribution of net exports to GDP growth was 0.4 percentage point, twice the contribution in 2006 (see Table 3).

Among the factors underlying this slower growth – besides the one-off impact on consumption of a VAT increase in Germany – of particular significance was the negative impact of higher food and energy prices on the real disposable income of households and on consumer and business confidence. These inflation developments and, subsequently, the financial turmoil which commenced in August and was closely linked to the sub-prime mortgage crisis in the United States contributed to a deterioration in consumer and business expectations in the second half of 2007. In addition, weakening conditions in the housing markets of several euro area countries contributed to a moderation in economic activity.

Despite the growing uncertainty during the second half of the year, the euro area economy performed well in 2007, as reflected in the sizeable and steady decline in the unemployment rate. The euro area unemployment rate fell to 7.1% in December, which constitutes the lowest level observed in the past 25 years. This positive trend reflects the strength of the fundamentals

6 For more information, see the box entitled "Recent developments in consumers' inflation perceptions and expectations in the euro area" in the November 2007 issue of the ECB's Monthly Bulletin.

**Table 3 Composition of real GDP growth**

(percentage changes, unless otherwise indicated; seasonally adjusted)

| | Annual rates[1] | | | | | | | | Quarterly rates[2] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2006 Q4 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 | 2006 Q4 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 |
| Real gross domestic product | 1.7 | 2.9 | 2.6 | 3.2 | 3.1 | 2.4 | 2.6 | 2.2 | 0.8 | 0.8 | 0.3 | 0.8 | 0.4 |
| *of which:* | | | | | | | | | | | | | |
| Domestic demand[3] | 1.9 | 2.7 | 2.2 | 2.4 | 2.9 | 2.0 | 2.1 | 2.0 | 0.2 | 1.0 | 0.1 | 0.9 | 0.0 |
| Private consumption | 1.6 | 1.8 | 1.4 | 2.1 | 1.4 | 1.6 | 1.6 | 1.1 | 0.4 | 0.0 | 0.6 | 0.5 | -0.1 |
| Government consumption | 1.5 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.2 | 1.8 | 0.3 | 1.1 | 0.2 | 0.7 | -0.1 |
| Gross fixed capital formation | 3.0 | 5.3 | 4.8 | 5.7 | 6.9 | 4.1 | 4.5 | 3.7 | 1.5 | 1.7 | 0.0 | 1.2 | 0.8 |
| Changes in inventories[4] | 0.0 | 0.1 | 0.0 | -0.4 | 0.1 | -0.2 | -0.2 | 0.1 | -0.5 | 0.3 | -0.3 | 0.2 | -0.1 |
| Net exports[3] | -0.2 | 0.2 | 0.4 | 0.8 | 0.3 | 0.4 | 0.5 | 0.3 | 0.6 | -0.2 | 0.2 | -0.1 | 0.4 |
| Exports[5] | 4.9 | 8.1 | 5.9 | 9.0 | 6.6 | 5.8 | 7.1 | 4.4 | 3.1 | 0.9 | 0.8 | 2.1 | 0.5 |
| Imports[5] | 5.7 | 7.8 | 5.2 | 7.1 | 6.0 | 5.0 | 5.9 | 3.8 | 1.6 | 1.4 | 0.3 | 2.5 | -0.4 |
| Real gross value added | | | | | | | | | | | | | |
| *of which:* | | | | | | | | | | | | | |
| Industry excluding construction | 1.2 | 3.8 | 3.7 | 4.2 | 3.8 | 3.4 | 4.1 | 3.7 | 0.9 | 1.2 | 0.6 | 1.4 | 0.4 |
| Construction | 1.7 | 4.6 | 3.1 | 5.2 | 7.1 | 2.5 | 2.0 | 1.0 | 1.2 | 1.8 | -1.4 | 0.4 | 0.2 |
| Purely market-related services[6] | 2.3 | 3.1 | 2.9 | 3.6 | 3.3 | 2.8 | 2.9 | 2.6 | 0.7 | 0.7 | 0.6 | 0.8 | 0.4 |

Sources: Eurostat and ECB calculations.
Notes: 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. Data refer to the euro area including Cyprus and Malta.
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 and repairs, hotels and restaurants, transport and communication, financial intermediation, real estate, renting and business activities.

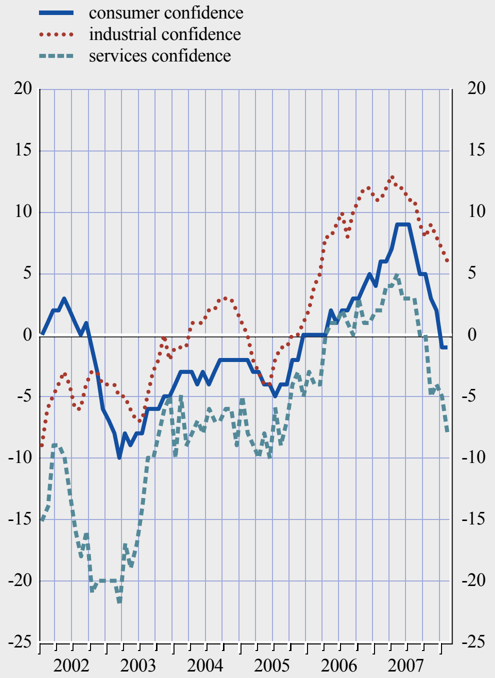
of the euro area economy and, in particular, the profitability of firms and robust job creation.

Private consumption grew by 1.4% in 2007, down from 1.8% in 2006. The consumption growth path in 2007 was strongly influenced by a VAT increase in Germany in January 2007. This led to purchases being made earlier, particularly purchases of expensive items such as durable consumer goods, in order to avoid the tax increase. As a result, the annual growth rate of euro area private consumption declined sharply to 1.4% in the first quarter of 2007, from 2.1% in the fourth quarter of 2006. Household consumption rebounded in subsequent months, in line with improvements in real household disposable income which were mainly driven by the positive developments in employment and, to a lesser extent, by growth in household real wealth. The second half of the year witnessed a progressive weakening in consumer confidence, which appears to have been linked to the turmoil in financial markets, concerns about the external environment and the rise in inflation (see Chart 31). However, the financial turmoil is considered to have had only a limited direct impact on consumption, although consumer credit standards were tightened in the last few months of the year, in contrast to the net easing of credit standards observed in previous quarters.

Having rebounded strongly in 2006, total investment growth was robust in 2007, at 4.4% for the year as a whole. However, the pace of growth gradually moderated in the course of the year. The deceleration was most pronounced in residential investment, marking the end of the expansionary phase of the business cycle in the construction sector in the context of a slowdown in house price growth. The deceleration in housing investment was more marked in certain countries which had experienced very fast growth in previous years. As reported in the Eurosystem's bank lending survey, net demand for housing loans to households dropped considerably in the

## Chart 31 Confidence indicators

(percentage balances; seasonally adjusted)




Source: European Commission Business and Consumer Surveys.
Notes: Data shown are calculated as deviations from the average over the period since January 1985 for consumer and industrial confidence, and since April 1995 for services confidence. Data refer to the euro area including Cyprus and Malta.

fourth quarter of 2007, reflecting less favourable assessments of housing market prospects and the deterioration in consumer confidence.

Euro area exports expanded robustly by 5.9% in 2007, reflecting the strong growth of external demand, despite the rapid appreciation of the euro observed during the year and strong competition from China and other Asian countries. Euro area imports also grew strongly, boosted by the robust performance of business investment and exports and also by the appreciation of the euro. Overall, net trade made a positive contribution of 0.4 percentage point to GDP growth.

From a sectoral perspective, economic activity in 2007 was mainly supported by the sustained performance of services, with the annual growth rate of this sector decreasing slightly from 2.5% in 2006 to 2.4% in 2007. The industrial sector (excluding construction) showed considerable resilience throughout the year which was closely related to the robust growth of exports, and this offset the slowdown in construction activity. Value added growth in the euro area construction sector declined sharply in 2007, particularly in the second half of the year. As mentioned above, this

## Table 4 Labour market developments

(percentage changes compared with the previous period; percentages)

| | 2005 | 2006 | 2007 | 2005 Q3 | 2005 Q4 | 2006 Q1 | 2006 Q2 | 2006 Q3 | 2006 Q4 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Labour force | 0.9 | 0.9 | 0.8 | 0.2 | 0.3 | 0.4 | 0.3 | -0.1 | 0.2 | 0.3 | 0.4 | 0.2 | 0.0 |
| Employment | 0.9 | 1.5 | 1.7 | 0.3 | 0.4 | 0.4 | 0.6 | 0.2 | 0.4 | 0.6 | 0.5 | 0.3 | 0.2 |
| Agriculture [1] | -1.2 | -1.6 | . | 0.3 | -0.1 | -1.0 | 0.4 | -1.5 | -0.9 | 1.0 | -1.1 | -1.5 | . |
| Industry [2] | -0.3 | 0.6 | . | -0.1 | 0.1 | 0.0 | 0.4 | 0.3 | 0.4 | 0.6 | 0.3 | 0.1 | . |
| – excluding construction | -1.4 | -0.3 | . | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | -0.0 | 0.1 | 0.0 | 0.1 | . |
| – construction | 2.3 | 2.7 | . | -0.1 | 0.4 | 0.4 | 1.3 | 0.9 | 1.5 | 1.7 | 1.0 | 0.0 | . |
| Services [3] | 1.5 | 2.1 | . | 0.4 | 0.5 | 0.7 | 0.7 | 0.3 | 0.4 | 0.6 | 0.7 | 0.5 | . |
| **Rates of unemployment [4]** | | | | | | | | | | | | | |
| Total | 8.8 | 8.2 | 7.4 | 8.8 | 8.7 | 8.6 | 8.4 | 8.1 | 7.9 | 7.6 | 7.4 | 7.3 | 7.2 |
| Under 25 years | 17.2 | 16.1 | 14.8 | 17.2 | 16.8 | 16.8 | 16.2 | 15.7 | 15.8 | 15.0 | 14.7 | 14.6 | 14.4 |
| 25 years and over | 7.8 | 7.2 | 6.5 | 7.7 | 7.7 | 7.6 | 7.4 | 7.1 | 6.9 | 6.7 | 6.6 | 6.4 | 6.3 |

Sources: Eurostat and ECB calculations.
Note: Data refer to the euro area including Cyprus and Malta.
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.

trend was mainly the result of the deterioration in expectations regarding housing markets, although other construction activities – including non-residential building and civil engineering – also experienced slower growth.

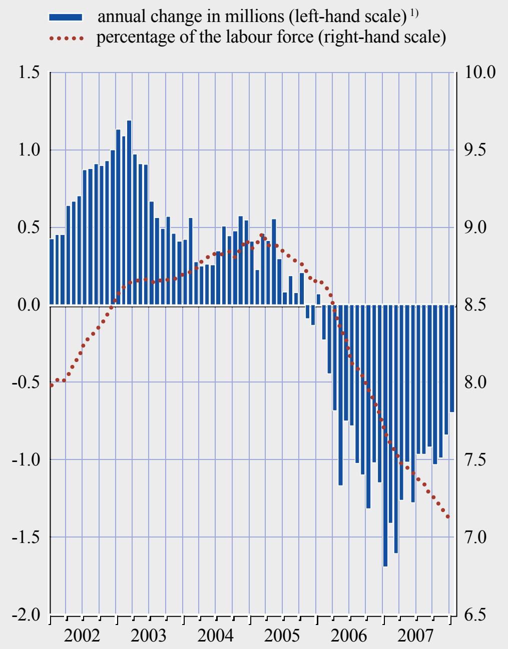
## FURTHER IMPROVEMENT IN THE LABOUR MARKET

The euro area labour market has shown a clear improvement in recent years. In 2006, after years of subdued growth, employment increased by 1.5%. Job creation was also more balanced across age, gender and skill groups.[7] This strong employment growth continued in 2007, with the annual growth rate of 1.7% being the highest seen since 2001 (see Table 4). However, employment growth declined in the second half of 2007, reflecting weaker economic conditions.

From a sectoral perspective, the faster employment growth in 2007 partly reflected strong job creation in the construction sector, which posted an annual growth rate of 4.3% in the third quarter of 2007, up from 2.7% in 2006 as a whole. The protracted contraction of employment in industry (excluding construction) came to a halt in 2007 when, for the first time since 2001, net job creation – albeit very modest – was observed. Employment in services also grew faster, rising to 2.2% in the third quarter of 2007 from an average of 2.1% in 2006. This was mainly related to developments in the finance and business and trade and transport sub-sectors. In the second half of 2007 these services sub-sectors experienced slower employment growth, as did the construction sector, where the slowdown was more pronounced. The developments in the latter sector reflect the end of the cyclical upswing in housing and other construction activities.

**Chart 32 Unemployment**

(monthly data; seasonally adjusted)




Source: Eurostat.
Note: Data refer to the euro area including Cyprus and Malta.
1) Annual changes are not seasonally adjusted.

The unemployment rate, which started to decline at the beginning of 2005 and stood at 7.9% in the fourth quarter of 2006, decreased further in 2007, falling to 7.1% at the end of the year (see Chart 32).

The average monthly decline in the number of unemployed persons during 2007 stood at around 80,000. Overall, lower unemployment reflects employment growth associated with cyclical conditions as well as the impact of market reforms and continued wage moderation.

Labour productivity growth for the economy as a whole, as measured by real GDP divided by total employment, increased by just 0.8% in 2007, down from 1.3% in 2006 when labour productivity peaked in the fourth quarter at an annual growth rate of 1.6%. The acceleration in labour productivity seen in 2006, which was mainly associated with the cyclical upswing of the euro area economy, proved to be short-lived and the annual growth rate fell to 0.6% in the fourth quarter of 2007.

7 For further details, see Box 8 in the September 2007 issue of the ECB's Monthly Bulletin.

## Box 6

### THE DECLINE IN UNEMPLOYMENT IN THE EURO AREA IN RECENT YEARS

For the last nine years employment growth in the euro area has expanded by a 1.3% annual average growth rate. Since the second quarter of 2003, the euro area unemployment rate has fallen by 1.5 percentage points, to stand at 7.2% in December 2007. This decline reflects not only the economic upturn but also the effect of sustained moderate wage developments as well as reforms in the euro area labour market.

Two periods can be identified regarding unemployment developments in recent years (see Chart A). First, a period from mid-2003 to early 2005, during which the unemployment rate continued to increase slowly in spite of the acceleration in activity. This followed a period in which the unemployment rate increased sharply from a low of 7.8% in mid-2001 to 8.7% in mid-2003. Then a second period, from early 2005 to 2007, in which the unemployment rate fell markedly in a context of sustained economic growth, bringing the rate to levels not seen since the early 1980s. In absolute terms, unemployment has declined by around 1.6 million since June 2003, absorbing the increase recorded from mid-2001 to mid-2003. This box reviews the decline in unemployment in the euro area since 2003, focusing in particular on age, gender, skills and duration patterns.

#### Strong employment growth largely accounts for the decline in unemployment

The decline in unemployment stemmed from the vigorous growth in employment. Total employment has been growing at an average quarter-on-quarter rate of 0.3% since mid-2003, compared with only 0.1% between mid-2001 and mid-2003. This corresponds to an increase of more than 7.5 million employed. At the sectoral level, the services sector was responsible for around 85% of the increase in employment, while the remainder was created in the construction sector. Employment in agriculture and industry excluding construction remained on a declining trend.

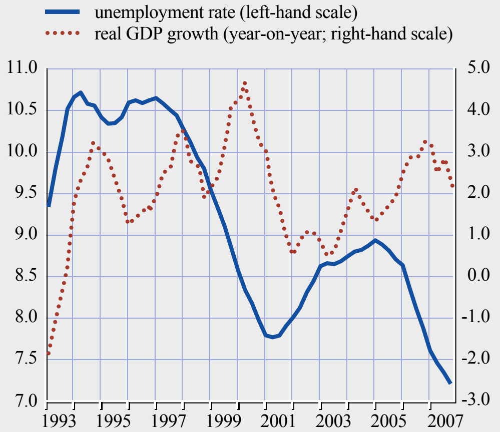
It is worth noting that the decline in unemployment occurred against the background of an ongoing increase in the labour force, although in the last two years this showed some signs of decelerating. Mainly on account of an increasing participation rate, labour force growth has remained sustained since early 2003 at an average annual rate of slightly above 0.9%. In other words, the dynamism of employment since 2003 not only absorbed the increasing labour force but also led to a significant decline in unemployment.

#### All groups are benefiting from the improvements in the labour market

All relevant groups have recorded unemployment rate declines since 2003, and particularly some categories which have been

**Chart A Euro area unemployment rate and GDP growth**

(percentages; annual percentage changes)




Source: Eurostat.
Note: Unemployment as a percentage of the labour force.

**Unemployment rates in the euro area by gender, age group and skills**

(percentages; percentage points)

| | Age | 2003 | 2005 | 2007 | Change 2003-07 |
|---|---|---|---|---|---|
| **All** | above 15 | 8.7 | 9.0 | 7.2 | -1.5 |
| **Men** | above 15 | 7.7 | 8.2 | 6.5 | -1.2 |
| **Women** | above 15 | 9.9 | 10.0 | 8.0 | -1.9 |
| **Younger** | 15-24 | 16.5 | 17.6 | 14.3 | -2.2 |
| **Older** | 55-64 | 7.4 | 7.5 | 6.1 | -1.3 |
| **Skills** | 25-64 | | | | |
| below secondary education | | 10.3 | 10.2 | 9.1 | -1.2 |
| at least secondary education | | 7.7 | 7.9 | 6.2 | -1.5 |
| tertiary education | | 5.2 | 5.0 | 4.0 | -1.2 |
| **Long-term unemployment rate** | above 15 | 44.2 | 45.4 | 44.4 | 0.2 |

Source: Eurostat.
Note: Data for 2003, 2005 and 2007 refer to June, March and December respectively and are derived from the harmonised unemployment rate for all categories, except older workers, the skills breakdown and long-term unemployment, for which the data refer to March in all cases and are derived from the EU Labour Force Survey data.

most affected by high unemployment, i.e. young people and women. However, differences in unemployment rates across groups are still significant (see the table).

Youth unemployment (unemployment of those aged under 25) – which in the euro area is around twice as high as the overall unemployment rate – has decreased, from 16.5% in June 2003 to 14.3% in December 2007. Overall, around a third of the total decrease in unemployment is attributable to this group. The female unemployment rate fell by 1.9 percentage points, to 8.0%, between June 2003 and December 2007, clearly a more pronounced decline than that recorded for male workers. Both groups, youths and women, have continued to benefit from the easing of regulations applicable to fixed-term contracts and the introduction of measures aimed at promoting part-time employment, which have increased these groups' employability. They have also benefited from the structural rise in employment in the services sector.

On a less positive note, the ratio of long-term unemployed to the total number of unemployed persons appears to have remained broadly unchanged between 2003 and 2007, at slightly above 44%, which is very high compared with other economic areas. However, the ratio of those unemployed for more than a year to total unemployment has decreased by 1.0 percentage point since 2005. This indicates that persons in that group are benefiting from the economic recovery with some lag. As reflected in the trend decline, long-term unemployment is also benefiting from labour market reforms aimed in particular at improving the employability of the most vulnerable groups and at increasing work incentives.

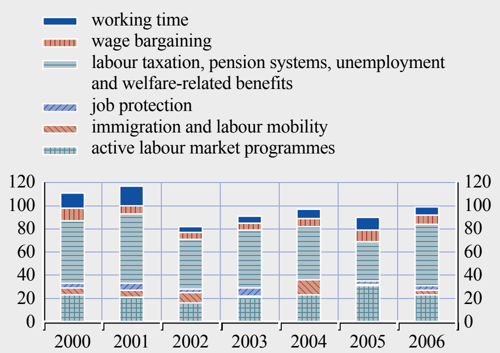
### Additional reforms and continuing wage moderation are necessary to encourage a further decline in unemployment

Overall, the decline in unemployment since mid-2003 has been significant. A sustainable continuation of this decline in the coming years will necessitate, in addition to wage moderation, ongoing reforms in euro area labour and product markets. The European Commission has recently compiled a database (called LABREF), recording the key features of policy initiatives since the year 2000, focusing on their design, scope and durability.[1] Chart B shows that on average the

1 Reforms have been classified along eight main policy dimensions, covering labour taxation, the unemployment benefit systems (together with other welfare-related benefits), active labour market programmes, job protection, pension systems, wage bargaining, working time organisation, migration policies and labour mobility; within these broad policy domains, an overall set of 36 areas of intervention are investigated.

**Chart B Reform intensity in the euro area 1) and distribution by type of reform, 2000-06**

(number of reforms enacted)




Source: ECB computation based on the LABREF database.
1) Includes Slovenia.

overall number of policy changes in euro area labour markets amounted to about 98 measures enacted between 2000 and 2006. Measures have mostly been taken in the field of active labour market policies (particularly initiatives affecting public employment services and training), followed by pension systems (mainly concerning the amount and the eligibility criteria) and labour taxation (in the form of policies mostly affecting income taxation and employers' social security contributions).

Although several euro area countries have made progress in adopting and implementing structural reforms, further effort is needed in a number of policy areas. Reforms should increase employment opportunities for young people and women in particular. It is therefore essential for each euro area country to remove market distortions and to rigorously implement the national reform programmes that are at the heart of the Lisbon process. Progress in terms of changing employment protection legislation and providing incentives to work via tax and benefit systems has been rather limited. Vigorous reforms in these areas could substantially contribute to the flexibility of the labour markets and support the adjustment capacity of countries in the euro area. In addition, increased efforts to complete and deepen the EU internal market for goods and services and to increase research and development and innovation are required to raise productivity and increase employment opportunities. Furthermore, reforms of the wage bargaining systems, aimed at removing rigidities, are welcome because of their importance in decreasing unemployment rate differentials across groups.

## 2.5 FISCAL DEVELOPMENTS

### CONTINUED BUDGETARY IMPROVEMENT IN 2007

Fiscal developments in 2007 continued to be relatively favourable, mainly owing to strong economic activity, further revenue windfalls, some consolidation efforts and the unwinding of temporary factors that had pushed up the 2006 deficit in Italy. According to the euro area countries' updated stability programmes, the average general government deficit in the euro area declined from 1.5% of GDP in 2006 to 0.8% in 2007 (see Table 5).[8] Deficits in Italy and Portugal, the two countries in the euro area that are subject to an excessive deficit procedure, fell to 2.4% and 3% of GDP respectively. In the case of Italy, according to more recent estimates, the deficit fell to 1.9% of GDP. In the case of Belgium, according to more recent estimates, the 2007 deficit ratio amounted to 0.1% of GDP and the debt ratio to 85.1% of GDP. No country participating in the euro area had a deficit of more than 3% of GDP in 2007, a situation that was last witnessed in 2000 (proceeds from the sale of UMTS licences excluded).

Comparing the 2007 figures with the targets set in the stability programme updates released at the end of 2006 and in early 2007, the euro area average deficit improved by 0.7 percentage point of GDP. This improvement is largely accounted for by the base effect, which reflects the better than expected outcomes in 2006. Better than planned outcomes in 2007 were realised in the

8 The 2007 figures in the stability programmes are based on estimates and hence could differ from final outcomes.

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

(as a percentage of GDP)

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

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Euro area | -2.5 | -1.5 | -0.8 |
| Belgium | -2.3 | 0.4 | -0.3 |
| Germany | -3.4 | -1.6 | 0.0 |
| Ireland | 1.2 | 2.9 | 0.5 |
| Greece | -5.1 | -2.5 | -2.7 |
| Spain | 1.0 | 1.8 | 1.8 |
| France | -2.9 | -2.5 | -2.4 |
| Italy | -4.2 | -4.4 | -2.4 |
| Luxembourg | -0.1 | 0.7 | 1.0 |
| Netherlands | -0.3 | 0.6 | -0.4 |
| Austria | -1.6 | -1.4 | -0.7 |
| Portugal | -6.1 | -3.9 | -3.0 |
| Slovenia | -1.5 | -1.2 | -0.6 |
| Finland | 2.7 | 3.8 | 4.5 |

**General government gross debt**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Euro area | 70.3 | 68.6 | 66.7 |
| Belgium | 92.2 | 88.2 | 84.6 |
| Germany | 67.8 | 67.5 | 65.0 |
| Ireland | 27.4 | 25.1 | 25.1 |
| Greece | 98.0 | 95.3 | 93.4 |
| Spain | 43.0 | 39.7 | 36.2 |
| France | 66.7 | 64.2 | 64.2 |
| Italy | 106.2 | 106.8 | 105.0 |
| Luxembourg | 6.2 | 6.6 | 6.9 |
| Netherlands | 52.3 | 47.9 | 46.8 |
| Austria | 63.4 | 61.7 | 59.9 |
| Portugal | 63.7 | 64.8 | 64.4 |
| Slovenia | 27.4 | 27.1 | 25.6 |
| Finland | 41.4 | 39.2 | 35.3 |

Sources: European Commission (for 2005-06; for Belgium also 2007), updated stability programmes (for 2007) and ECB calculations.
Note: The 2007 figures in the stability programmes are based on estimates and hence could differ from final outcomes.

majority of countries, most notably in Germany, Luxembourg and Finland.

Against this background, the average government debt ratio in the euro area declined by close to 2 percentage points to a level of 66.7% of GDP, the lowest debt level as a percentage of GDP since the start of Stage Three of EMU in 1999. France and low-debt countries Ireland and Luxembourg were the exceptions to this declining trend. Moreover, in six countries debt ratios remained above the 60% of GDP reference value. Despite improved fiscal outcomes, there was an increase in debt issuance activity of euro area governments in 2007 (see Box 7).

The average structural budget balance (the cyclically adjusted balance excluding one-off and other temporary measures) in the euro area improved from -1.2% of GDP in 2006 to -0.8% in 2007. Rather than concrete consolidation measures on the expenditure side, this improvement reflected buoyant tax revenue growth over and above the growth that can be explained by developments in the assumed macroeconomic tax bases. Looking at individual countries, a substantial improvement in structural balances, of 0.5 percentage point of GDP or more, was seen in Germany, Greece, Italy, Portugal and Slovenia. By contrast, there was significant structural budgetary loosening, of over 1 percentage point of GDP, in Ireland and the Netherlands. A small majority of euro area countries reached or continued to meet their medium-term budgetary objective (MTO) in 2007.

## Box 7

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

In an environment of rising interest rates, which characterised most of the year, euro area net issuance of general government debt securities increased in 2007. The increase was remarkably strong for short-term issuance. In net terms, the growth rate of euro area general government debt issuance was 2.8% in December 2007, or only 0.4 percentage point higher than in 2006 (see Table A).[1] However, the general government debt-to-GDP ratio declined in most euro area countries, in the context of stronger economic growth.

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

(annual percentage changes; end of period)

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|
| Total general government | 3.4 | 2.7 | 3.2 | 5.0 | 5.5 | 5.8 | 4.6 | 2.4 | 2.8 |
| *Long-term* | *5.6* | *3.5* | *2.9* | *3.9* | *4.8* | *6.1* | *5.4* | *3.4* | *2.3* |
| Fixed rate | | 5.2 | 5.6 | 4.6 | 5.7 | 6.4 | 5.3 | 3.5 | 2.0 |
| Floating rate | | -2.5 | -13.4 | -4.5 | -1.6 | 7.0 | 8.3 | 3.0 | 5.4 |
| *Short-term* | *-16.5* | *-7.1* | *8.5* | *18.4* | *13.5* | *2.3* | *-3.9* | *-8.8* | *9.4* |

Source: ECB.

One reason for the 2007 percentage increase in governments' issuance of short-term debt securities relative to long-term debt securities could be the rise in long-term interest rates in the first half of the year. Accordingly, as governments were faced with a steep yield curve, the annual growth rate of long-term debt securities fell from 3.4% in 2006 to 2.3% in 2007, while the annual growth rate of short-term debt securities rose sharply, and even turned positive in 2007.

An analysis of the structure of outstanding general government debt securities reveals that government debt issuance is undertaken predominantly by central government. In 2007 it accounted for 93.5% of outstanding debt securities, while the other general government sub-sectors were responsible for the remaining 6.5%. The latter, however, have become more active over time, their issuance of debt securities having more or less doubled during the years 1999-2006, while that of central government declined steadily over the same period.

In general, countries have not changed their long-term debt management orientation. In 2007 long-term debt accounted for around 92.5% of outstanding debt securities, which is slightly less than in 2006. The share of short-term debt securities, however, increased from 7.1% in 2006 to 7.5% in 2007 (see Table B). Table B also indicates that by far the largest proportion of long-term general government debt securities was issued at a fixed rate. The share of floating rate issues increased slightly in 2007, thus continuing the upward trend that started in 2004.

1 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 | 2007 |
|---|---|---|---|---|---|---|---|---|---|
| Central government | 96.9 | 96.7 | 96.3 | 95.5 | 94.7 | 94.3 | 93.9 | 93.5 | 93.5 |
| *Long-term securities* | *89.3* | *89.8* | *89.0* | *87.3* | *85.9* | *85.8* | *86* | *86.5* | *86.1* |
| *Short-term securities* | *7.6* | *6.9* | *7.2* | *8.2* | *8.9* | *8.5* | *7.8* | *7.0* | *7.4* |
| Other general government | 3.1 | 3.3 | 3.7 | 4.5 | 5.3 | 5.7 | 6.1 | 6.5 | 6.5 |
| *Long-term securities* | *3.0* | *3.2* | *3.6* | *4.4* | *5.2* | *5.6* | *6.0* | *6.4* | *6.4* |
| *Short-term securities* | *0.2* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* | *0.1* |
| Total general government | | | | | | | | | |
| *Long-term* | *92.3* | *93.0* | *92.7* | *91.7* | *91.1* | *91.4* | *92.1* | *92.9* | *92.5* |
| Fixed rate | 79.2 | 81.1 | 82.5 | 82.1 | 82.2 | 82.7 | 83.2 | 84.0 | 83.3 |
| Floating rate | 10.6 | 10.0 | 8.8 | 8.1 | 7.5 | 7.6 | 7.9 | 8.0 | 8.2 |
| *Short-term* | *7.7* | *7.0* | *7.3* | *8.3* | *8.9* | *8.6* | *7.9* | *7.1* | *7.5* |
| Total general government in EUR billions | 3,453.3 | 3,549.0 | 3,775.3 | 3,949.2 | 4,151.6 | 4,386.6 | 4,602.9 | 4,704.8 | 4,835.0 |

Source: ECB.

In order to illustrate the effect of rising interest rates on general government debt interest payments, the change in interest payments can be decomposed as follows: i) an effect stemming from changes in government debt, ii) an effect resulting from changes in interest rates and iii) a residual cross effect.[2] Chart A shows that in 2007, for the first time since 2000, there was a positive contribution from the change in interest rates to the overall change in interest payments. Moreover, the impact of the change in interest rates was higher than the effect from the change in debt.

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. Chart B shows the government bond yield spreads for the euro area countries other than Germany under the excessive deficit procedure at the end of 2006, against German bonds.

The differences between government bond yields across euro area countries ultimately reflect differences in liquidity and credit risk. There were two discernible trends in government bond yield spreads during 2007. In the first half of the year, government bond yield spreads were on a downward trend in some euro area countries. However, during the financial market turmoil in the second half of 2007 and as a result of a general repricing of risks, they increased, particularly in Greece, France, Italy and Portugal. The declines that were observed towards the end of September were reversed in November, following investors' renewed concerns regarding the turmoil in credit markets.

In order to confirm the recent widening of the government bond yield spreads, Chart C shows sovereign credit default swap (CDS) spreads. By construction, sovereign CDS spreads can also be considered as measures of the credit risk associated with holding corresponding government

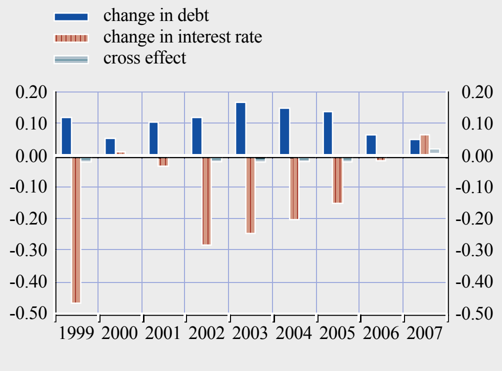
2 The change in interest payments, $I$, can be decomposed as follows:

$$\Delta I = \underbrace{\Delta B \times i}_{\text{Effect via change in debt}} + \underbrace{\Delta i \times B}_{\text{Effect via change in interest rate}} + \underbrace{\Delta B \times \Delta i}_{\text{Cross effect (residual)}}$$

where $B$ is general government debt and $i$ is the average implicit interest rate ($I/B$).

**Chart A Decomposition of the change in interest payments**

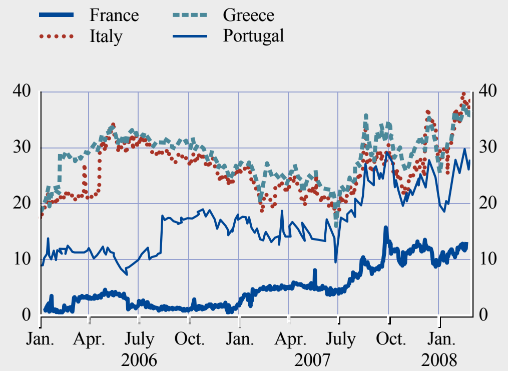
(as a percentage of GDP; annual data)




Sources: European Commission (AMECO database) and ECB calculations.

**Chart B Government bond yield spreads against Germany**

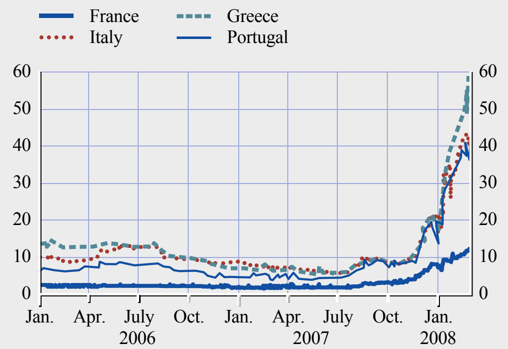
(in basis points; daily data)




Sources: Reuters and ECB calculations.

**Chart C Sovereign credit default swaps**

(in basis points; daily data)




Source: Bloomberg.

bonds. For the specific purpose at hand, sovereign CDS spreads have the advantage of not being distorted by changes in the benchmark bonds of the countries concerned, of not being affected by any maturity mismatch, and of tending to be more responsive to market changes. In line with the above analysis on government bond yield spreads, CDS spreads for the above-mentioned countries have also increased since the summer of 2007, and in early 2008 continued this upward trend.

### STANDSTILL IN FISCAL CONSOLIDATION EXPECTED IN 2008

Fiscal plans in euro area countries for 2008, as included in the stability programme updates of end-2007, indicate that the decline in the average government deficit in the euro area, observed since 2004, will come to a halt, with the deficit marginally increasing to 0.9% of GDP. Government expenditure and revenues would both decrease by approximately the same amount (0.25 percentage point of GDP). With economic growth expected to be broadly in line with potential, the near stabilisation of the euro area average deficit reflects a slowdown or even a reversal of consolidation efforts in some countries and a reduction of surpluses in others. Against this background, the average government debt ratio in the euro area is expected to decline less rapidly in 2008, by around 1.5 percentage points, to 65.1% of GDP.

In more detail, no substantial consolidation progress towards sound public finances is expected in France and Italy, leaving their headline deficits rather close to the 3% of GDP reference value, as is the case in Portugal. Progress in the other countries that have not yet reached their MTO would be rather limited on average, with structural fiscal positions even deteriorating in some cases. The number of countries meeting their MTO target is expected to fall following fiscal deteriorations in Germany and Ireland.

### MORE AMBITION IN FISCAL CONSOLIDATION EFFORTS ESSENTIAL

According to the updated stability programmes, the macroeconomic environment in 2008 remains conducive to swift progress towards the MTOs set by the euro area countries. The Stability and Growth Pact calls on the euro area countries to attain annual improvements of the structural budget balance of 0.5% of GDP as a benchmark, with greater consolidation efforts to be undertaken in good times. In April 2007 the Eurogroup ministers reaffirmed their commitment to pursue sound fiscal policies in line with the provisions of the Stability and Growth Pact. They recognised that the euro area was experiencing economic good times and undertook to make full use of the expected benign economic environment and the better than expected tax revenues to speed up the pace of deficit and debt reduction. Eurogroup ministers committed to the objective that most euro area members would achieve their MTO in 2008 or 2009 and all of them should aim for 2010 at the latest. Member countries that had already achieved their MTO were expected to maintain this strong budgetary position so as to avoid fiscal loosening in good times. In October 2007 the ECOFIN Council agreed on a number of welcome measures to improve the effectiveness of the Stability and Growth Pact, in particular by strengthening its preventive arm. They also confirmed the need to comply with the Pact's structural consolidation benchmark of 0.5% of GDP per year. Uncertainty surrounding the impact of the financial market turbulence, which began in summer 2007, on the economy and on the budget suggests that greater prudence is warranted in setting fiscal policies.

Euro area countries still subject to the excessive deficit procedure should bring their deficit ratios below the 3% of GDP reference value in a sustainable manner. They should also comply both with the benchmark improvement in the structural balance of 0.5% of GDP and with additional consolidation requirements included in the respective ECOFIN Council recommendations. To avoid the risk of exceeding the deficit reference value in the near future, it is essential to continue progressing towards sound public finances after having reduced the deficit to below 3% of GDP. Otherwise, adverse developments might cause the deficit to quickly exceed that value again. Current projections, as included in the stability programmes of the two countries subject to an excessive deficit procedure, Italy and Portugal, indicate that deficits would be below 3% of GDP in 2008 but would remain rather high, warranting further consolidation.

Other euro area countries that did not reach their medium-term objective in 2007 should pursue a consolidation strategy in line with the requirements of the Stability and Growth Pact. This requires a structural consolidation of 0.5% of GDP per annum as a benchmark, with greater consolidation efforts to be undertaken if countries experience good times. In addition, as noted above, euro area countries should reach their MTO by 2010 at the latest. Compliance with these political commitments appears limited, based on the latest update of the stability programmes. In particular, Ireland, Greece, France and Italy are not expected to reach their MTO by 2010, and the structural fiscal adjustment in 2008 would fall short of the 0.5% of GDP benchmark in Belgium, France, Italy and Austria. These developments are all the more disappointing as some countries continue to benefit from exceptionally buoyant revenues that enhance the structural budget balances, although their persistence is far from certain. Failure to meet the requirements of the Stability and Growth Pact and recent political commitments put the credibility of the preventive arm of the Pact at serious risk.

It is advisable that those euro area countries that have already reached their MTO avoid pro-cyclical fiscal policies, which would fuel inflation and macroeconomic imbalances, in good times.

The free operation of automatic stabilisers would help to smoothen out macroeconomic fluctuations. Some countries that achieved their MTO in 2007 are planning to depart from this structural budgetary position in 2008.

More determined efforts in euro area countries to achieve and maintain sound public finances are not only warranted from the viewpoint of short-term macroeconomic stabilisation, by allowing a free play of automatic stabilisers, but also because of the need to enhance long-term fiscal sustainability. A lower government debt burden would partially compensate for the expenditure pressure resulting from an ageing population in the decades ahead. Other measures needed to enhance fiscal sustainability relate to reforms in the areas of health care and pension systems as well as to increasing effective labour supply. Failure to act in a timely manner to address the budgetary consequences of ageing will put fiscal sustainability at risk and increase the burden on future generations.

Indications that part of the buoyant revenue growth has been used to fuel additional government spending in some countries point to the risk of expansionary fiscal policies and a repetition of the policy mistakes of 2000-01 when safety margins were eroded, causing several countries to enter the excessive deficit procedure once economic conditions deteriorated (see Box 8). In this regard, a binding national medium-term fiscal framework, if properly designed and rigorously implemented, can help to counter domestic pressure to use revenue windfalls for additional spending or tax cuts, and contribute to the creation of a sufficiently large budgetary buffer below the 3% of GDP reference value.

**Box 8**

## LEARNING FROM THE FISCAL POLICY EXPERIENCE OF 2000-01

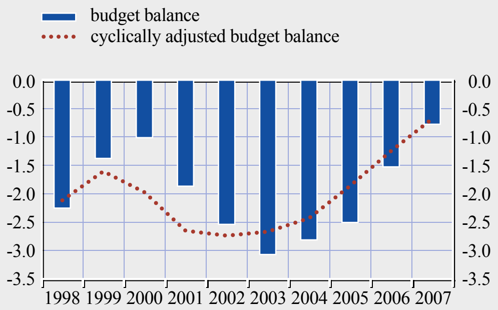
In 2007 the euro area general government deficit is expected to have declined to 0.8% of GDP. Excluding the impact of proceeds from the sales of UMTS licences, this is a lower level than that reached in 2000, at the peak of the previous economic cycle (see Chart A). Looking ahead, a key issue for fiscal policy is to avoid a repetition of the experience in the early part of this decade when fiscal positions deteriorated rapidly and a number of euro area countries incurred excessive deficits. In this regard, past experience points to a tendency to overestimate the strength of the underlying budgetary position in good times, which calls for a particularly prudent fiscal policy when economic conditions are favourable.

In 1999-2000, at the peak of the last economic cycle, a number of countries adopted expansionary fiscal policy measures (primarily tax cuts). These measures were deemed to be "affordable" in view of the favourable economic projections and estimates of underlying (cyclically adjusted) budgetary positions available at the time. With hindsight, however, the strength of countries' underlying fiscal positions was overestimated. As the euro area economy unexpectedly entered a downturn, fiscal balances deteriorated rapidly and several countries soon exceeded the 3% of GDP deficit reference value (see Chart B, left panel).

Two technical problems hamper the accurate estimation of the "true" cyclically adjusted budget balance. The first relates to the difficulty of assessing the cyclical position of the economy in real time. In autumn 2000 the European Commission, as well as most professional forecasters, expected the fiscal position of the euro area to continue to improve. This assessment was based on the assumption that the output gap – and hence the cyclical component of the budget balance –

**Chart A Fiscal developments, 1998-2007**

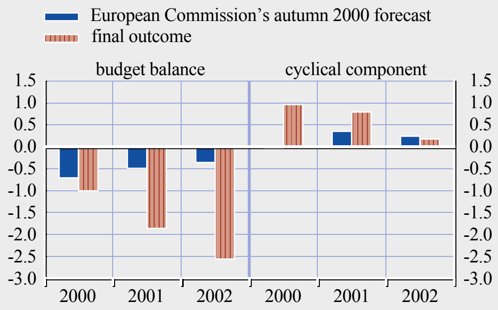
(as a percentage of GDP)




Sources: European Commission (AMECO database) and ECB calculations.
Note: Budget balance figures exclude proceeds from the sale of UMTS licences.

**Chart B Budget balance and cyclical component**

(as a percentage of GDP)




Sources: European Commission (AMECO database) and ECB calculations.
Note: Budget balance figures exclude proceeds from the sale of UMTS licences.

was close to zero and that in the near future economic conditions would continue to exert a positive influence on the budget balance. In fact, as of 2001, the euro area economy entered a downturn. This gave rise to considerable ex post revisions of estimates of both the output gap and the cyclical component of the budget balance (see Chart B, right-hand panel). Hence the final outcome for 2000 in fact reflected a strong positive cyclical impact of approximately 1% of GDP. By contrast, the cyclical contribution was estimated to be zero in that year.

Another reason relates to uncertainty regarding the behaviour of tax revenues over the economic cycle. Current forecasting and cyclical adjustment methodologies generally assume a fairly stable relationship between the growth rate of tax revenues and the growth rate of GDP or, in disaggregated methodologies, the growth rate of other macroeconomic bases, which are also national accounts aggregates. During boom periods, however, taxes on profits and capital gains in particular have been shown to grow at a much faster rate than the assumed macroeconomic bases and then decline sharply during the subsequent downturn. The occurrence and magnitude of such effects can hardly be predicted given that they depend on factors such as the timing of the realisation of capital gains and complex tax rules, which usually allow profits in one year to be offset against losses in previous years. A breakdown of changes in the ratio of government revenue to GDP since 2000 suggests that revenue losses in 2000 and 2001 were mainly attributable to tax cuts, but these were then exacerbated by other factors which depressed tax revenues, especially in 2002. By contrast, in 2005 and 2006 the revenue-to-GDP ratio increased significantly, despite a relative lack of tax-increasing measures. The potential for such revenues to disappear in the near future represents a downside risk to the current fiscal outlook.

Given these experiences, an important lesson from the fiscal policy misjudgements of 2000-01 is that one should beware of interpreting budgetary improvements in good times as being structural, even if changes in cyclically adjusted budget balances point in this direction. Rather, and as agreed by the Eurogroup in April 2007, unexpectedly high tax revenues in good times should be allocated to deficit and debt reduction rather than be used to increase spending or cut taxes in a potentially unsustainable manner.

To that end, such rules need to be drawn up ex ante, and could include rules allocating exceptional surplus revenues to deficit and debt reduction. Higher spending in priority areas or cuts in taxes and social security contributions to increase the quality of public finances should be financed primarily via expenditure reductions to avoid increases in the tax burden and/or fiscal deficits. Increasing efficiency in the provision of government services in general, and in public administration in particular, as well as in government revenue structures, is an effective way to release budget resources for more productive purposes.

## 2.6 EXCHANGE RATES AND BALANCE OF PAYMENTS DEVELOPMENTS

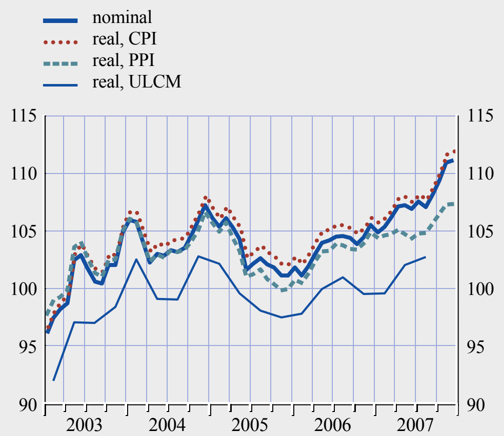
### THE EURO CONTINUED TO APPRECIATE IN 2007 IN EFFECTIVE TERMS

After having receded somewhat from its end-2004 peak in the course of 2005, the nominal effective exchange rate of the euro largely recovered in the course of 2006. Initially, the euro continued to appreciate in 2007, building on the strengthening momentum of the previous year. The appreciation trend was briefly interrupted between May and mid-August, when the euro moved within a relatively narrow range. In the context of the global financial market turmoil, the euro depreciated in August before experiencing a strong appreciation throughout the remainder of the year. By the year-end the euro was, in nominal effective terms, 6.3% stronger than its level at the beginning of January and 8.2% above its average level in 2006. The appreciation was particularly pronounced vis-à-vis the US dollar. In addition, the euro also appreciated strongly against the pound sterling. A more moderate appreciation was recorded against the Japanese yen, the Chinese renminbi and the Swiss franc.

The appreciation of the euro vis-à-vis the US dollar was driven largely by a changing market assessment of the relative cyclical outlook for the two economic areas in favour of the euro area and developments in interest rate differentials. In addition, the persistently large US current account deficit is likely to have contributed to some extent to the weakness of the US currency. In the early months of the year, relatively robust data releases for the euro area contrasted with a more mixed data environment for the United States, which led to a narrowing of interest rate differentials between the two areas. From May to mid-August the euro/US dollar exchange rate underwent some fluctuations as market participants revised their assessment of the relative cyclical strength of the two economies. After a short initial period of depreciation as a result of the financial turbulence triggered by concerns about liquidity conditions in global money and credit markets, the euro appreciated strongly against the US currency from late August to late November. The weakening of the US dollar appears to have been related to a downgrading of expectations for the growth outlook of the US economy by market participants, reflecting, in particular, weaker than expected data releases for the US housing

**Chart 33 Euro nominal and real effective exchange rates 1)**

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




Source: ECB.
1) Effective exchange rate indices vis-à-vis the currencies of 24 of the euro area's important trading partners (EER-24). An upward movement of the EER-24 indices represents an appreciation of the euro. The latest observations for monthly data are for December 2007. In the case of the ULCM-based real EER-24, the latest observation is for the third quarter of 2007 and is partly based on estimates.

and labour markets. After reaching USD 1.49 on 27 November 2007, the single currency depreciated slightly to stand at USD 1.47 on 31 December 2007, 11.8% stronger than at the beginning of that year.

The euro also strengthened against the Japanese yen in 2007, amid some considerable short-term volatility. One of the main factors influencing the evolution of the Japanese currency appears to have been shifts in the attitude to risk by international investors and changes in the perceived attractiveness of "carry trade" transactions. Low Japanese interest rates and historically low implied volatility, combined with a favourable risk attitude of international investors, appear to have contributed to a significant increase in the volume of outstanding carry trades. On 13 July the euro reached a high of JPY 168.68. This appreciation trend subsequently came to a halt in the context of the global financial turbulence, which led to a reappraisal of risk by international investors and appears to have contributed to a significant unwinding of carry trades. From mid-August to mid-October, however, the euro strengthened again against the Japanese yen, while throughout the remainder of the year movements in the euro/yen exchange rate saw significant volatility without any clear directional trend. On 31 December 2007 the euro stood at JPY 164.93, 5.1% higher than at the beginning of the year.

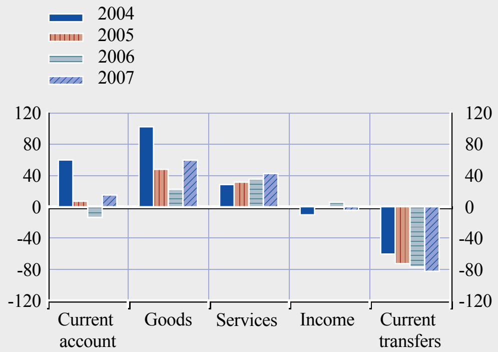
The euro also appreciated noticeably against the pound sterling in 2007 (by 9.2%), with most of the appreciation being concentrated in the period between September and December. In late December 2007 the euro was trading at GBP 0.73, its highest level since the inception of the single currency in 1999. The weakening of the pound was reportedly related to market expectations of a further reduction in policy interest rates by the Bank of England in response to the less favourable financial and economic outlook.

The euro also strengthened against the currencies of a number of Asian trading partners, reflecting, in part, their formal or informal link to the US dollar. The euro appreciated markedly vis-à-vis the Korean won (12.5%) and the Hong Kong dollar (12.1%), and more moderately against the Singapore dollar (4.8%) and the Chinese renminbi (4.6%). The relatively contained appreciation against the Chinese currency reflects, to some extent, the apparent greater willingness of the Chinese authorities to allow a stronger appreciation of their currency against the US dollar, especially towards the end of the year. The appreciation of the euro against these currencies was partly counterbalanced by the euro's depreciation against the Polish zloty (by 6.2%), the Canadian dollar (by 5.4%), the Norwegian krone (by 3.4%) and the Czech koruna (by 3.1%).

The real effective exchange rates of the euro – based on different cost and price measures – also appreciated during 2007 (see Chart 33). In the last quarter of the year the real effective exchange rate of the euro, based on consumer prices, was about 5.5% above the level observed one year earlier.

**Chart 34 Current account balance and its components**

(annual data; EUR billions; seasonally adjusted data)




Source: ECB.

## CURRENT ACCOUNT SHIFTED INTO SURPLUS IN 2007

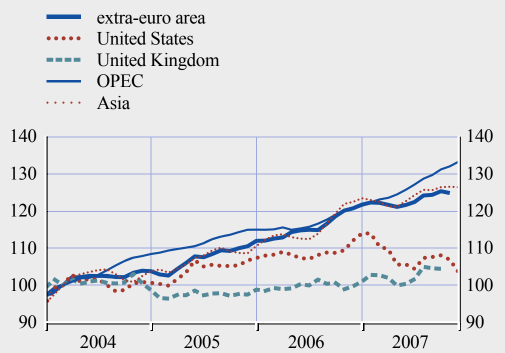
In 2007 the current account of the euro area recorded a surplus of €15.0 billion (or 0.2% of euro area GDP), compared with a deficit of €13.6 billion in 2006. The shift largely resulted from an increase in the goods surplus of €37.3 billion and, to a lesser extent, from an increase in the surplus for services of €7.2 billion. These surpluses were only partly counterbalanced by a shift in the income account to a deficit and an increase in the current transfers deficit (see Chart 34).

After witnessing exceptionally strong growth rates in 2006, the value of extra-euro area trade in goods grew at a slower pace in 2007. The value of goods exports increased by 8.1% in 2007, compared with growth of 14.3% in 2006. Meanwhile, the growth in goods imports showed a stronger deceleration, from 17.0% in 2006 to 5.5% in 2007. This was one of the main factors behind the overall improvement in the euro area current account balance. Imports and exports of services, by contrast, grew more strongly in 2007 than in 2006, partly counterbalancing the weaker growth in goods trade.

According to the breakdown of trade in goods into volumes and prices, available up to November 2007, the deceleration in the growth rate of export values mainly reflected developments in export volumes. Somewhat weaker growth in foreign demand and the appreciation of the euro contributed to the slowdown in extra-euro area exports in the first half of the year. Nevertheless, these developments may also be seen, to some extent, as a normalisation after a period of exceptionally strong growth at the end of 2006. Subsequently, growth in export volumes picked up in the third quarter of 2007, largely reflecting a rebound in foreign demand. The geographical breakdown of euro area goods trade shows that exports towards Asia, especially China, and the central and eastern European countries continued to be particularly dynamic in 2007, amid strong economic activity in these regions. Export volumes to the United States declined in absolute terms (see Chart 35). Nevertheless, it appears that the appreciation of the euro has so far had a relatively contained impact on euro area export performance, with the latter mainly driven by continued robust growth in foreign demand. Meanwhile, export prices grew only moderately, indicating that euro area firms might have adjusted their profit margins to offset the decline in price and cost competitiveness resulting from the euro appreciation.

**Chart 35 Euro area export volumes to selected trading partners**

(indices: Q1 2004 = 100; seasonally adjusted; three-month moving average)




Source: ECB.
Note: Last observation refers to December 2007 except for extra-euro area (November) and the United Kingdom (October).

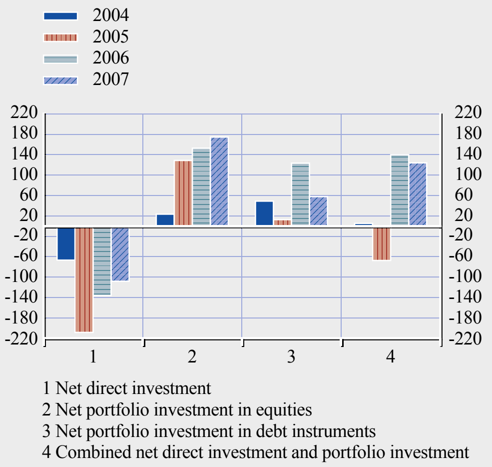
On the imports side, import volumes followed similar trends to those of export volumes in 2007. After subdued growth in the first half of the year, they accelerated in the second half, reflecting the rebound in business investment and the appreciation of the euro. Meanwhile, import prices – following a significant decline towards the end of 2006 – picked up again in 2007. This was mostly the result of the large increases in oil prices that were partly offset by the appreciation of the euro. In the 12-month cumulated period up to October 2007, the oil trade deficit stood at €161 billion, against €170 billion registered a year earlier.

## NET INFLOWS IN COMBINED DIRECT AND PORTFOLIO INVESTMENT DECREASED IN 2007

In the financial account, the euro area experienced net inflows of €124 billion in combined direct and portfolio investment in

**Chart 36 Euro area direct and portfolio investment**

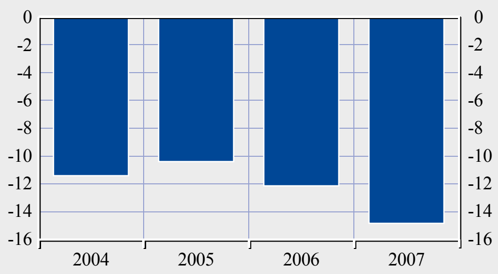
(annual data; EUR billions)




Source: ECB.

**Chart 37 Net international investment position**

(as a percentage of GDP)




Source: ECB.
Note: Data refer to the year-end except for 2007 (third quarter).

2007, compared with net inflows of €140 billion a year earlier. This decline mainly reflected a decrease in net inflows in portfolio investment of €44 billion, which was counterbalanced, to some extent, by lower net outflows in direct investment of €28 billion (see Chart 36).

Lower net inflows of debt securities, amounting to €60 billion as opposed to €124 billion in 2006, accounted for most of the decrease in net portfolio inflows and mainly reflected considerably smaller net purchases of euro area bonds and notes by non-resident investors. However, this masks two distinct trend movements in the course of 2007. After a sharp increase in the early part of the year, net inflows in debt instruments subsequently subsided.

As for equity securities, the euro area registered higher net inflows in 2007, amounting to €175 billion as opposed to €153 billion in 2006. This was mainly the result of considerably smaller net purchases of foreign equity by euro area residents (down from €156 billion to €50 billion), which were only partly offset by lower purchases of euro area equity by foreign investors.

All in all, recent data seem to suggest that the financial account of the euro area was affected by the credit market turbulence that began in August 2007. Despite some rebound in October 2007, euro area and foreign investors appear to have reduced their foreign investments in both debt and equity instruments in the wake of the turmoil, possibly reflecting more cautious foreign investment strategies.

Turning to direct investment, the lower net outflows in 2007 primarily reflected higher foreign direct investment inflows into the euro area. At the same time, direct investment abroad by euro area companies remained relatively strong. This reflected the high profitability of euro area multinational enterprises, which has steadily improved in the past few years. In addition, euro area firms may have been taking advantage of the strengthening of the euro to buy assets abroad.

Based on cumulated flows over four quarters, up to the third quarter of 2007 the main recipients of euro area direct investment were the United States, the United Kingdom, offshore financial centres, Switzerland and countries that have joined the EU since 2004.

The United States and the United Kingdom were the biggest investors in the euro area over this period.

### INTERNATIONAL INVESTMENT POSITION DETERIORATED FURTHER IN 2007

Data on the international investment position of the euro area vis-à-vis the rest of the world, available up to the third quarter of 2007, indicate that the euro area recorded net liabilities of €1,299 billion vis-à-vis the rest of the world (representing 14.8% of euro area GDP), compared with net liabilities of €1,024 billion (12.1% of GDP) at the end of 2006 (see Chart 37). This increase in net liabilities in 2007 resulted mainly from an increase in the net liability positions in portfolio investment (by €340 billion) and other investment (by €72 billion), which were offset by an increase in the net asset positions in direct investment (by €80 billion) and financial derivatives (by €43 billion). Reserve assets remained broadly unchanged.

Overall, the increase in the euro area's net international liability position was largely driven by revaluation effects resulting from asset price changes and movements in the euro exchange rate. An appreciation of the euro typically lowers the euro value of assets by more than the value of liabilities and leads to an increase in the net debtor position.

# 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 remained robust in 2007 (see Table 6).[9] While this pattern of strong economic activity was widely observed across countries, annual growth rates differed considerably. Annual average real GDP growth was highest in the Baltic States and Slovakia, where it stood around 8%. In the Czech Republic, Poland and Romania, annual average real GDP growth was also very strong, at between 6.0% and 6.5%. Real GDP growth was lowest in Denmark and Hungary, at 1.8% and 1.3% respectively. In Cyprus, Malta, Sweden and the United Kingdom, growth remained robust between 2.8% and 4.4%.

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 accelerated wage increases and rising employment. Growth in gross fixed capital formation benefited inter alia from an extended period of favourable financing conditions and a stronger inflow of EU structural funds in many countries. In the majority of countries, rapid credit growth and an expansionary fiscal stance also contributed to robust growth in domestic demand.

Net exports contributed negatively to growth in most non-euro area EU Member States, despite solid growth in foreign demand, as strong demand for imports outpaced export growth. The contribution of net exports to real GDP growth was significantly positive only in Hungary, Malta, Slovakia and Sweden. Overall, export growth in 2007 remained robust, although it decelerated in most countries compared with 2006. Growth in exports was supported by strong demand in key trading partners and sizeable foreign direct investment inflows in recent years, while strong import growth was underpinned by robust domestic demand and the relatively high import content of exports.

9 The non-euro area EU Member States referred to in this section comprise the 14 EU Member States outside the euro area in the period to the end of December 2007 (i.e. Bulgaria, the Czech Republic, Denmark, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovakia, Sweden and the United Kingdom).

**Table 6 Real GDP growth in the non-euro area EU Member States and the euro area**

(annual percentage changes)

| | 2004 | 2005 | 2006 | 2007 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 |
|---|---|---|---|---|---|---|---|---|
| Bulgaria | 6.6 | 6.2 | 6.1 | . | 6.2 | 6.6 | 4.5 | . |
| Czech Republic | 4.5 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.3 | 6.6 |
| Denmark | 2.3 | 2.5 | 3.9 | 1.8 | 3.9 | -0.1 | 1.5 | 2.0 |
| Estonia | 8.3 | 10.2 | 11.2 | . | 10.1 | 7.6 | 6.2 | . |
| Cyprus | 4.2 | 4.0 | 4.0 | 4.4 | 4.3 | 4.2 | 4.7 | 4.3 |
| Latvia | 8.7 | 10.6 | 11.9 | 10.4 | 11.1 | 11.1 | 10.6 | 8.6 |
| Lithuania | 7.3 | 7.9 | 7.7 | 8.8 | 7.6 | 7.6 | 11.6 | 8.2 |
| Hungary | 4.8 | 4.1 | 3.9 | 1.3 | 2.5 | 1.5 | 0.9 | 0.4 |
| Malta | 0.2 | 3.4 | 3.4 | 3.8 | 3.9 | 3.5 | 4.0 | 3.7 |
| Poland | 5.3 | 3.6 | 6.2 | 6.5 | 6.7 | 6.7 | 6.0 | 6.7 |
| Romania | 8.5 | 4.2 | 7.9 | 6.0 | 6.1 | 5.7 | 5.7 | 6.6 |
| Slovakia | 5.2 | 6.6 | 8.5 | 10.3 | 8.7 | 9.7 | 10.7 | 12.2 |
| Sweden | 4.1 | 3.3 | 4.1 | 2.8 | 3.1 | 2.8 | 2.6 | 2.6 |
| United Kingdom | 3.3 | 1.8 | 2.9 | 3.1 | 3.1 | 3.2 | 3.3 | 2.9 |
| EU11 1) | 5.7 | 4.9 | 6.4 | . | 6.2 | 6.0 | 5.8 | . |
| EU14 2) | 3.8 | 2.7 | 3.9 | . | 3.8 | 3.5 | 3.6 | . |
| Euro area | 2.1 | 1.6 | 2.8 | 2.6 | 3.1 | 2.4 | 2.6 | 2.2 |

Source: Eurostat.
Note: Quarterly data are seasonally adjusted with the exception of Bulgaria, the Czech Republic, Malta and Romania (not seasonally adjusted) and Hungary, Poland, Sweden and the United Kingdom (seasonally and working day-adjusted).
1) The EU11 aggregate refers to the 11 countries that joined the EU on 1 May 2004 and 1 January 2007 (with the exception of Slovenia).
2) The EU14 aggregate refers to the 14 non-euro area EU Member States as at 31 December 2007.

Along with the stronger economic activity, the labour market situation continued to improve in 2007 in most non-euro area EU Member States. Unemployment rates continued their decline, mainly as a result of strong employment growth. Labour market conditions tightened further in many countries, particularly in the Baltic States, Denmark and the United Kingdom. International labour flows continued to affect the labour supply of many countries. Bulgaria, Latvia, Lithuania, Poland and Romania appear to have experienced particularly large labour outflows in recent years. This was also the case in Estonia in 2007. These outflows have contributed to skill shortages and bottlenecks in several sectors of the countries' economies, thereby increasing wage pressures. By contrast, the Czech Republic, Denmark, Cyprus, Hungary, Malta, Slovakia, Sweden and the United Kingdom have experienced net positive migration flows.

## PRICE DEVELOPMENTS

HICP inflation increased significantly in many non-euro area EU Member States in 2007 (see Table 7). Inflation was highest in the fast-growing Baltic States, Bulgaria, Hungary and Romania (between 4.9% and 10.1%), and stood close to or moderately above the euro area average in most other non-euro area EU Member States (between 0.7% and 3.0%). Average inflation was below 2% in Denmark, Malta, Slovakia and Sweden in 2007, but picked up also in these countries towards the year-end owing primarily to increasing import prices for food and energy.

The upward trend in inflation in the non-euro area EU Member States in 2007 was partly attributable to a significant increase in energy and food prices. In addition, rapid growth in domestic demand in the majority of the countries contributed to underlying inflationary pressures.

Energy prices increased in most non-euro area EU Member States. Food prices also increased significantly, with the strongest increases observed in the Baltic States, Bulgaria and Hungary, generally reflecting unfavourable weather conditions, food prices in the world markets and stronger global demand. Moreover, robust domestic demand continued to add to inflationary pressures, especially in countries

**Table 7 HICP inflation in the non-euro area EU Member States and the euro area**

(annual percentage changes)

| | 2004 | 2005 | 2006 | 2007 | 2007 Q1 | 2007 Q2 | 2007 Q3 | 2007 Q4 |
|---|---|---|---|---|---|---|---|---|
| Bulgaria | 6.1 | 6.0 | 7.4 | 7.6 | 5.3 | 4.7 | 9.0 | 11.2 |
| Czech Republic | 2.6 | 1.6 | 2.1 | 3.0 | 1.7 | 2.6 | 2.7 | 4.9 |
| Denmark | 0.9 | 1.7 | 1.9 | 1.7 | 1.9 | 1.5 | 1.0 | 2.2 |
| Estonia | 3.0 | 4.1 | 4.4 | 6.7 | 5.1 | 5.8 | 6.7 | 9.2 |
| Cyprus | 1.9 | 2.0 | 2.2 | 2.2 | 1.4 | 1.8 | 2.3 | 3.2 |
| Latvia | 6.2 | 6.9 | 6.6 | 10.1 | 7.6 | 8.5 | 10.4 | 13.7 |
| Lithuania | 1.2 | 2.7 | 3.8 | 5.8 | 4.4 | 5.0 | 5.9 | 7.9 |
| Hungary | 6.8 | 3.5 | 4.0 | 7.9 | 8.8 | 8.5 | 7.3 | 7.1 |
| Malta | 2.7 | 2.5 | 2.6 | 0.7 | 0.8 | -0.9 | 0.4 | 2.5 |
| Poland | 3.6 | 2.2 | 1.3 | 2.6 | 2.0 | 2.3 | 2.4 | 3.7 |
| Romania | 11.9 | 9.1 | 6.6 | 4.9 | 3.9 | 3.9 | 5.1 | 6.8 |
| Slovakia | 7.5 | 2.8 | 4.3 | 1.9 | 2.1 | 1.7 | 1.4 | 2.4 |
| Sweden | 1.0 | 0.8 | 1.5 | 1.7 | 1.7 | 1.4 | 1.4 | 2.3 |
| United Kingdom | 1.3 | 2.1 | 2.3 | 2.3 | 2.8 | 2.6 | 1.8 | 2.1 |
| EU11 1) | 5.2 | 3.7 | 3.3 | 4.1 | 3.4 | 3.6 | 4.0 | 5.5 |
| EU14 2) | 2.6 | 2.6 | 2.6 | 2.9 | 2.9 | 2.8 | 2.5 | 3.3 |
| Euro area | 2.1 | 2.2 | 2.2 | 2.1 | 1.9 | 1.9 | 1.9 | 2.9 |

Source: Eurostat.
1) The EU11 aggregate refers to the 11 countries that joined the EU on 1 May 2004 and 1 January 2007 (with the exception of Slovenia).
2) The EU14 aggregate refers to the 14 non-euro area EU Member States as at 31 December 2007.

with strong private consumption growth fuelled by strong credit growth on the back of negative real interest rates and substantial capital inflows. Inflationary pressures also resulted from strong wage growth in many countries, as labour market conditions tightened further. Nominal wage growth was particularly pronounced in the countries with higher output growth rates (i.e. the Baltic States, Bulgaria and Romania), where it exceeded productivity gains, triggering fast (in most cases double-digit) unit labour cost growth. Import price trends differed significantly across countries, partly reflecting diverse exchange rate developments. In countries that allow for a significant degree of exchange rate flexibility, currency appreciation had a broadly dampening impact on import prices and, ultimately – given the countries' relatively high degree of openness – headline inflation.

#### FISCAL POLICIES

Fiscal policies in the non-euro area EU Member States continued to be heterogeneous in 2007. Bulgaria, Denmark, Estonia, Cyprus, Latvia and Sweden recorded fiscal surpluses, whereas the remaining countries registered fiscal deficits (see Table 8). With the exception of Romania and the United Kingdom, budgetary outcomes for 2007 were in line with, or better than, the budget balance targets of the updated convergence programmes submitted at the end of 2006 or the beginning of 2007. However, in many cases, this was due to the starting position at the end of 2006 turning out to be better than foreseen in the programmes and buoyant tax revenues, which can be partly explained by higher GDP growth than initially expected. Progress in structural fiscal consolidation seems to have stalled in most countries. Only Cyprus, Hungary, Poland and Sweden are estimated to have achieved a positive change in the cyclically adjusted budget balance of at least 0.5% of GDP between 2006 and 2007 (net of one-off and other temporary measures). By contrast, the fiscal stance in a number of countries was even loosened in a pro-cyclical way, despite strong output growth.

At the end of 2007 the Czech Republic, Hungary, Poland and Slovakia were subject to excessive deficit procedures. According to the 2007-08 updates of the convergence programmes, the deficit ratio decreased in all of these countries in 2007 except in the case of the Czech Republic. However, the Czech Ministry of Finance announced in January 2008 that the 2007 deficit is estimated at only 1.9% of GDP, instead of the 3.4% of GDP stated in the convergence programme. Only in the case of Slovakia did the convergence programme point to a return of the deficit ratio to below the reference value of 3% of GDP in 2007.

With respect to the main decisions of the ECOFIN Council concerning the excessive deficit procedure in 2007, Malta and the United Kingdom received abrogations in June and October respectively, after reporting a deficit ratio below the 3% of GDP reference value for the fiscal year 2006-07 and improvements in the structural balance. As regards Poland, in November 2007 the ECOFIN Council adopted a decision stating that the action taken by the Polish authorities was consistent with the Council recommendations made in February 2007; nevertheless, the excessive deficit procedure was not abrogated as the correction of the excessive deficit was considered vulnerable to serious risks.

The government debt ratio remained substantially below 60% of GDP in 2007 in most non-euro area EU Member States. Only in Malta and Hungary did the debt ratio remain above the 60% reference value, despite falling in 2007. In most of the other non-euro area EU Member States the debt ratio declined or remained broadly unchanged.

## Table 8 Fiscal positions in the non-euro area EU Member States and the euro area

(as a percentage of GDP)

| General government surplus (+) / deficit (-) | 2004 | 2005 | 2006 | Convergence programme data 2007 |
|---|---|---|---|---|
| Bulgaria | 2.3 | 2.0 | 3.2 | 3.1 |
| Czech Republic | -3.0 | -3.5 | -2.9 | -3.4 |
| Denmark | 1.9 | 4.6 | 4.6 | 3.8 |
| Estonia | 1.8 | 1.9 | 3.6 | 2.6 |
| Cyprus | -4.1 | -2.4 | -1.2 | 1.5 |
| Latvia | -1.0 | -0.4 | -0.3 | 0.3 |
| Lithuania | -1.5 | -0.5 | -0.6 | -0.9 |
| Hungary | -6.5 | -7.8 | -9.2 | -6.2 |
| Malta | -4.9 | -3.1 | -2.5 | -1.6 |
| Poland | -5.7 | -4.3 | -3.8 | -3.0 |
| Romania | -1.5 | -1.4 | -1.9 | -2.9 |
| Slovakia | -2.4 | -2.8 | -3.7 | -2.5 |
| Sweden | 0.8 | 2.4 | 2.5 | 3.0 |
| United Kingdom | -3.4 | -3.3 | -2.7 | -3.0 |
| EU11 [1] | -4.0 | -3.6 | -3.4 | -2.8 |
| EU14 [2] | -2.7 | -2.3 | -1.8 | -1.9 |
| Euro area | -2.8 | -2.5 | -1.5 | -0.8 |

| General government gross debt | 2004 | 2005 | 2006 | Convergence programme data 2007 |
|---|---|---|---|---|
| Bulgaria | 37.9 | 29.2 | 22.8 | 19.8 |
| Czech Republic | 30.4 | 30.2 | 30.1 | 30.4 |
| Denmark | 44.0 | 36.3 | 30.3 | 25.6 |
| Estonia | 5.1 | 4.4 | 4.0 | 2.7 |
| Cyprus | 70.2 | 69.1 | 65.2 | 60.0 |
| Latvia | 14.5 | 12.5 | 10.6 | 9.4 |
| Lithuania | 19.4 | 18.6 | 18.2 | 17.6 |
| Hungary | 59.4 | 61.6 | 65.6 | 65.4 |
| Malta | 72.7 | 70.8 | 64.7 | 62.9 |
| Poland | 45.7 | 47.1 | 47.6 | 47.0 |
| Romania | 18.8 | 15.8 | 12.4 | 11.9 |
| Slovakia | 41.4 | 34.2 | 30.4 | 30.6 |
| Sweden | 52.4 | 52.2 | 47.0 | 39.7 |
| United Kingdom | 40.4 | 42.1 | 43.2 | 43.9 |
| EU11 [1] | 40.3 | 39.4 | 38.2 | 37.2 |
| EU14 [2] | 41.9 | 42.1 | 41.6 | 40.7 |
| Euro area | 69.6 | 70.3 | 68.6 | 66.7 |

Sources: European Commission (for 2004-06), updated convergence programmes (for 2007) 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. The 2007 figures in the convergence programmes are estimates by the national governments and hence could differ from the final outcomes.
1) The EU11 aggregate refers to the 11 countries that joined the EU on 1 May 2004 and 1 January 2007 (with the exception of Slovenia).
2) The EU14 aggregate refers to the 14 non-euro area EU Member States as at 31 December 2007.

### 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 2007 (see Table 9), although the overall picture showed a deterioration in comparison with 2006. While Denmark and Sweden reported surpluses, the remainder of the countries all recorded deficits. Compared with 2006, these deficits mostly increased, except in the case of Hungary, Malta and Slovakia. The deficits in Bulgaria and Latvia were above 20% of GDP and exceeded 10% of GDP in Estonia, Lithuania and Romania. In Cyprus, Hungary, Slovakia and the United Kingdom, the deficit stood between 4% and 8% of GDP. The external imbalances in most countries originated from deficits in goods, except in the Czech Republic, Hungary,

**Table 9 Balance of payments of the non-euro area EU Member States and the euro area**

(as a percentage of GDP)

| | Current and capital account balance | | | | Net direct investment | | | | Net portfolio investment | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2004 | 2005 | 2006 | 2007 3) | 2004 | 2005 | 2006 | 2007 3) | 2004 | 2005 | 2006 | 2007 3) |
| Bulgaria | -5.8 | -11.0 | -15.0 | -20.1 | 11.3 | 14.5 | 16.8 | 19.2 | -2.1 | -5.5 | 1.0 | -0.6 |
| Czech Republic | -5.7 | -1.5 | -2.8 | -3.1 | 3.6 | 9.4 | 3.2 | 3.8 | 1.9 | -2.7 | -0.8 | -1.0 |
| Denmark | 3.0 | 4.5 | 2.6 | 1.3 | 0.4 | -1.3 | -1.8 | -3.8 | -6.0 | -4.4 | -6.8 | 2.3 |
| Estonia | -11.5 | -9.3 | -13.2 | -15.0 | 5.8 | 15.6 | 3.5 | 3.2 | 6.0 | -15.7 | -8.1 | -0.7 |
| Cyprus | -4.2 | -5.4 | -5.8 | -7.1 | 2.5 | 3.8 | 3.6 | 5.9 | 7.2 | -0.8 | -4.2 | -8.6 |
| Latvia | -11.8 | -11.2 | -21.1 | -24.3 | 3.8 | 3.6 | 7.4 | 8.1 | 1.6 | -0.8 | 0.2 | -1.3 |
| Lithuania | -6.4 | -5.9 | -9.6 | -11.8 | 2.3 | 2.7 | 5.1 | 6.6 | 0.9 | -1.0 | -0.8 | -2.5 |
| Hungary | -8.1 | -6.0 | -5.9 | -4.4 | 3.3 | 5.0 | 3.9 | -0.2 | 6.7 | 4.0 | 5.7 | 2.5 |
| Malta | -4.6 | -5.5 | -3.7 | -3.2 | 7.0 | 11.5 | 28.0 | 13.5 | -37.7 | -44.8 | -39.2 | -10.8 |
| Poland | -3.8 | -1.3 | -2.6 | -2.9 | 4.8 | 2.3 | 2.9 | 3.7 | 3.7 | 4.1 | -0.9 | -2.2 |
| Romania | -7.5 | -7.9 | -10.5 | -12.9 | 8.4 | 6.6 | 8.9 | 8.1 | -0.7 | 1.0 | -0.2 | 0.4 |
| Slovakia | -7.5 | -8.5 | -7.1 | -4.8 | 7.2 | 4.8 | 6.8 | 3.6 | 2.1 | -2.0 | 2.9 | 0.2 |
| Sweden | 6.8 | 6.9 | 6.3 | 6.7 | -2.8 | -4.5 | 1.7 | -3.2 | -6.3 | -0.1 | -5.1 | -4.4 |
| United Kingdom | -1.5 | -2.4 | -3.8 | -4.9 | -1.0 | 4.4 | 2.6 | -1.0 | -4.5 | -2.4 | -3.1 | 0.4 |
| EU11 1) | -5.9 | -4.2 | -5.6 | -6.1 | 5.1 | 5.2 | 4.9 | 4.5 | 2.7 | 0.9 | 0.0 | -1.0 |
| EU14 2) | -1.3 | -1.4 | -2.7 | -3.6 | 0.3 | 3.3 | 2.7 | -0.2 | -3.2 | -1.6 | -2.9 | -0.3 |
| Euro area | 1.0 | 0.3 | 0.0 | 0.4 | -0.9 | -2.6 | -1.6 | -2.0 | 0.9 | 1.8 | 3.3 | 4.5 |

Source: ECB.
1) The EU11 aggregate comprises the weighted contributions of the 11 countries that joined the EU on 1 May 2004 and 1 January 2007 (with the exception of Slovenia).
2) The EU14 aggregate comprises the weighted contributions of the 14 non-euro area EU Member States as at 31 December 2007.
3) Data for 2007 refer to the four-quarter cumulative sum up to the third quarter of 2007. For Malta, data refer to the four-quarter cumulative sum up to the second quarter of 2007.

Poland and Slovakia, where the deficits in income – often linked to the reinvested earnings of foreign-owned companies – were the most important factor.

In many of the countries that joined the EU on 1 May 2004 and 1 January 2007, deficits are, to a certain degree, a normal feature of the catching-up process, to the extent that they reflect favourable investment opportunities and intertemporal consumption smoothing. However, very large current and capital account deficits in some non-euro area EU Member States were also driven by cyclical factors and buoyant domestic demand, which signals risks to the sustainability of external positions, particularly if accompanied by deteriorating international price and cost competitiveness and a slowdown of export growth.

In comparison with 2006, net direct investment in 2007 decreased substantially in Denmark, Sweden and the United Kingdom. It remained rather stable for the EU11 aggregate, although a marked decline was recorded in Hungary, Slovakia and Malta. Especially for the latter country, the significant drop might be seen as a normalisation following the high levels recorded in 2006. While net direct investment continued to constitute an important source of financing in a number of non-euro area EU Member States, in the case of the Baltic States, Hungary, Romania and the United Kingdom the deficit in the basic balance, i.e. the sum of the combined current account and capital account balance and net direct investment, was higher than 4% of GDP, and for Latvia it exceeded 15% of GDP. As regards net portfolio inflows, the balance remained negative or broadly neutral in all non-euro area EU Member States, with the exceptions of Denmark and Hungary. In these two countries, net portfolio investment inflows resulted from substantial net debt inflows related, in the case of Hungary, to yield differentials, whereas net equity flows were negative. Net "other investment" flows were largely positive in most countries that joined the EU on 1 May 2004 and 1 January 2007, reflecting mainly loans from foreign-owned parent banks to their subsidiaries in the region.

## EXCHANGE RATE DEVELOPMENTS

Exchange rate developments in the non-euro area EU Member States in 2007 mainly reflected the exchange rate regimes of the individual countries. The currencies of Denmark, Estonia, Cyprus, Latvia, Lithuania, Malta and Slovakia participated in ERM II. They maintained a standard fluctuation band of ±15% around their central rates against the euro, except the Danish krone, with a narrower band of ±2.25%. ERM II participation is, in some cases, also accompanied by 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 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 decided that they would maintain the exchange rate of the lats at the central rate against the euro with a fluctuation band of ±1%. The agreements on participation for the countries whose currencies joined ERM II after 2004 (i.e. all the countries listed above except Denmark) are all 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.

The Danish krone, the Estonian kroon, the Cyprus pound, the Lithuanian litas and the Maltese lira were stable against the euro in 2007 and traded continuously at, or very close to, their central rates. Moreover, the Cyprus pound and the Maltese lira were converted irrevocably to the euro following euro area enlargement on 1 January 2008.

The Slovak koruna, by contrast, experienced a relatively high degree of volatility (see Table 10). Against the background of improving macroeconomic fundamentals and a favourable economic outlook, in mid-2006 the koruna entered a period of protracted appreciation, which gained further momentum during February and the first half of March 2007. To contain exchange rate volatility and excessive market pressures, in early March 2007 Národná banka Slovenska intervened to weaken the currency. On 19 March 2007, at the request of the Slovak authorities, by mutual agreement and following a common procedure, the central rate of the Slovak koruna was revalued by 8.5% vis-à-vis the euro. Owing to a more moderate inflation outlook, Národná banka Slovenska lowered its policy rate by a total of 50 basis points in late March and late April 2007 to 4.25%, which helped to stabilise the koruna vis-à-vis the euro. Since April 2007 the Slovak koruna has remained relatively stable, fluctuating at values between 5% and 8% stronger than the new central parity. The Latvian lats also

**Table 10 Developments in ERM II**

| Currency | Entry date | Upper rate | Central rate | Lower rate | Maximum deviation in % Upward | Maximum deviation in % Downward |
|---|---|---|---|---|---|---|
| DKK | 1 January 1999 | 7.62824 | 7.46038 | 7.29252 | 0.28 | -0.03 |
| EEK | 28 June 2004 | 17.9936 | 15.6466 | 13.2996 | 0.00 | 0.00 |
| CYP | 2 May 2005 | 0.673065 | 0.585274 | 0.497483 | 1.21 | 0.00 |
| LVL | 2 May 2005 | 0.808225 | 0.702804 | 0.597383 | 0.98 | -1.00 |
| 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 |
| SKK | 28 November 2005 | 44.2233 | 38.4550 | 32.6868 | 11.78 | 0.00 |
| SKK (post-revaluation) | | 40.7588 | 35.4424 | 30.1260 | 8.22 | 0.00 |

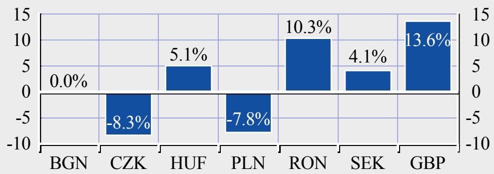
Source: ECB.
Note: A downward (upward) deviation corresponds to a movement towards the lower (upper) rate and constitutes a strengthening (weakening) of the currency against the euro. The central rate of the Slovak koruna was revalued by 8.5% on 16 March 2007. The reference period for reported maximum deviations from respective ERM II central rates is from 2 January 2007 to 29 February 2008.

experienced higher volatility than in previous years, although the fluctuations remained within the unilateral narrow band of ±1% around its central rate. Having traded around 1% stronger than its ERM II central rate for most of 2006, the lats moved towards the weaker side of its unilateral narrow fluctuation band on two occasions (in mid-February 2007 and in September 2007). The first episode followed Standard & Poor's downgrading – from stable to negative – of Latvia's future outlook on 19 February 2007 and rumours of a potential devaluation of the Latvian currency's ERM II central rate. In mid-March 2007 Latvijas Banka stepped in to prevent further weakness of the lats by intervening in foreign exchange markets and by increasing the refinancing rate, from 5.0% to 5.5%, as of the end of March 2007 and again, to 6.0%, almost two months later. One-month interbank deposit rates increased significantly, fluctuating approximately between 100 and 400 basis points above the refinancing rate. In April 2007 the tensions in the foreign exchange markets gradually subsided amid the government's commitment to implement an anti-inflation plan, but the one-month interest rate remained considerably above the ECB's minimum bid rate. On 12 May 2007 the lats again reached the stronger side of its ±1% fluctuation band and the central bank intervened to prevent further appreciation. In September 2007 the lats once more came under pressure, following a downgrade by Moody's and concerns over further increases in the current account deficit and inflation. Latvijas Banka did not intervene on this occasion, but money market conditions nonetheless remained tight.

Turning to the currencies of the non-euro area EU Member States that were not participating in ERM II, developments varied considerably across countries (see Chart 38). The Czech koruna and the Polish zloty appreciated against the euro throughout most of 2007, standing, respectively, 8.3% and 7.8% stronger vis-à-vis the euro on 29 February 2008 than at the beginning of 2007. After a period of relative stability in the first three quarters of 2007, the pound sterling weakened considerably against the euro owing to increased economic uncertainty that may be partly attributed to less favourable economic growth prospects linked also to a weaker housing market. As a result, on 29 February 2008 the pound stood 13.6% below its 2 January 2007 level against the euro. Owing to both domestic factors and the broad strength of the euro, the Romanian leu and the Swedish krona also recorded a period of weakness vis-à-vis the euro, declining by 10.3% and 4.1% respectively in the period under review. Notwithstanding some fluctuations, the Hungarian forint remained broadly unchanged in 2007, depreciating somewhat at the beginning of 2008. On 25 February 2008 the Magyar Nemzeti Bank, in agreement with the Hungarian government, decided to abolish the fluctuation bands around the forint and introduced a free float. Finally, the Bulgarian lev remained stable at BGN/EUR 1.95583, reflecting the unchanged Bulgarian exchange rate policy under the euro-based currency board arrangement.

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

(percentages)




Source: ECB staff calculations.
Note: A positive (negative) value represents an appreciation (depreciation) of the euro. Changes refer to the period from 2 January 2007 to 29 February 2008.

## FINANCIAL DEVELOPMENTS

Between January 2007 and February 2008, the evolution of long-term government bond yields in most of the non-euro area EU Member States[10] was similar to that in the euro area, with an increase in the first part of the year followed by a decrease from August 2007 onwards amid global turmoil in financial markets.

In February 2008 long-term interest rates in the non-euro area EU Member States were, on

10 No comparable long-term interest rate is available for Estonia.

average, around 25 basis points higher than at the beginning of 2007, compared with an increase of more than 30 basis points in the euro area. The largest increases took place in Bulgaria (almost 100 basis points), the Czech Republic, Hungary and Poland (around 80 basis points), largely reflecting the deterioration in the inflation outlook. Although they remained somewhat high, long-term interest rates in Romania dropped by 50 basis points between January 2007 and February 2008.

Compared with euro area rates, government bond yield spreads in the non-euro area EU Member States in February 2008 recorded mixed developments when compared with the beginning of last year. Long-term interest rate differentials remained comparatively large in Romania and Hungary, where they stood at around 340 and 280 basis points respectively. In these countries, fiscal developments and external imbalances contributed to keeping long-term bond differentials high. Additionally, for Romania this evolution is due to higher inflation rates during the last years.

Overall, between January 2007 and February 2008, stock markets in most non-euro area EU Member States recorded positive growth. Stock prices rose most in Bulgaria, Cyprus and Romania, clearly outperforming the average stock price developments in the euro area as measured by the Dow Jones EURO STOXX index. In Estonia and Latvia, however, stock prices had declined by the end of February 2008 to the average levels prevailing in 2006, after reaching historical peaks during 2007. Stock exchange indices in most non-euro area EU Member States declined in the wake of the turmoil in global financial markets during the summer months, as some investors withdrew their assets from stock markets in order to improve their overall liquidity. The negative sentiment in stock exchanges improved somewhat during September and October 2007. Later, however, equity markets in most of the EU14 countries declined again owing to a lower global risk appetite, in line with stock markets in the euro area and other major economies.

**Chart 39 Credit to the private sector in 2007**

(percentages)


Sources: BIS, ECB, Eurostat, Central Bank of Cyprus and Bank of England.
Notes: The data refer to domestic credit to non-MFIs excluding general government. For credit growth in 2007 for each country the latest available month was used. The data for the United Kingdom are based on a national definition.

In 2007 growth in credit to the private sector remained high in all non-euro area EU Member States. Towards the end of 2007 annual credit growth appeared to stabilise in many countries, partly reflecting the rise in bank interest rates. However, it continued to accelerate in some countries, such as Bulgaria, the Czech Republic, Lithuania and Poland. Credit growth was the most dynamic in the fast-growing Baltic States, Bulgaria, Poland and Romania, with the growth rates standing between 32% and 62% at the end of 2007. In the Czech Republic, Cyprus, Hungary and Slovakia, the annual growth rate of credit to the private sector was between 19% and 29% in 2007. Rapid credit expansion in these economies, with the exception of Cyprus, needs to be seen in the context of financial deepening. Indeed, the ratios of credit to the private sector to GDP in all EU11 countries, with the exceptions of Cyprus and Malta, remain well below the euro area average. Nevertheless, rapid credit expansion also poses a risk as it contributes in some countries to strong domestic demand and thereby to excessive external and internal imbalances. In addition, the large, rising share of foreign currency-denominated borrowing is of particular concern in a number of countries. In Denmark, Sweden and the United Kingdom, the annual rate of growth in credit to the private sector was around 13% at the end of 2007.

### MONETARY POLICY

The primary objective for monetary policy in all non-euro area EU Member States is price

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

| | Monetary policy strategy | Currency | Features |
|---|---|---|---|
| Bulgaria | Exchange rate target | Bulgarian lev | Exchange rate target: peg to the euro at BGN 1.95583 per euro within the framework of a currency board arrangement. |
| Czech Republic | Inflation target | Czech koruna | Target: 3% ±1 percentage point until end-2009; thereafter 2% ±1 percentage point. Managed floating exchange rate. |
| Denmark | Exchange rate target | Danish krone | Participates in ERM II with a ±2.25% fluctuation band around central rate of DKK 7.46038 per euro. |
| Estonia | Exchange rate target | Estonian kroon | Participates in ERM II with a ±15% fluctuation band 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 | Participated in ERM II with a ±15% fluctuation band around central rate of CYP 0.585274 per euro. |
| Latvia | Exchange rate target | Latvian lats | Participates in ERM II with a ±15% fluctuation band around central rate of LVL 0.702804 per euro. Latvia continues with a fluctuation band of ±1% as a unilateral commitment. |
| Lithuania | Exchange rate target | Lithuanian litas | Participates in ERM II with a ±15% fluctuation band around central rate of LTL 3.45280 per euro. Lithuania continues with its currency board arrangement as a unilateral commitment. |
| Hungary | Inflation target | Hungarian forint | Inflation target: 3% ±1 percentage point medium-term target. Free-floating exchange rate since February 2008 when the exchange rate peg to the euro was abolished. |
| Malta | Exchange rate target | Maltese lira | Participated in ERM II with a ±15% fluctuation band around central rate of MTL 0.429300 per euro. Malta maintained the exchange rate against the euro unchanged from the central rate as a unilateral commitment. |
| Poland | Inflation target | Polish zloty | Inflation target: 2.5% ±1 percentage point (12-month increase in the CPI). Free-floating exchange rate. |
| Romania | Inflation target | Romanian leu | Inflation target: 4%, 3.8% and 3.5%, ±1 percentage point for end-2007, 2008 and 2009 respectively. Managed floating exchange rate. |
| Slovakia | Inflation targeting under the conditions of ERM II | Slovak koruna | Participates in ERM II with a ±15% fluctuation band around central rate of SKK 35.4424 per euro. The inflation target for the period 2006-08 is set below 2.5% for end-2006 and below 2% for end-2007 and end-2008. |
| Sweden | Inflation target | Swedish krona | Inflation target: 2% increase in the CPI with a tolerance margin of ±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 1). In 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.

stability. Monetary policy strategies, however, differ considerably from country to country (see Table 11).

In 2007 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. However, in February 2008 Hungary abolished its exchange rate peg to the euro and moved to a fully-fledged inflation target with a free-floating exchange rate.

With regard to monetary policy decisions between January 2007 and February 2008, most central banks participating in ERM II adopted measures to tighten monetary policy conditions. These often mirrored moves by the ECB, which in 2007 raised the minimum bid rate on the main refinancing operations of the Eurosystem by a total of 50 basis points, in two steps (in March and June), to 4.0%.

Българска народна банка (Bulgarian National Bank), Eesti Pank and Lietuvos bankas have no official policy rates given their currency board arrangements; they automatically adjust to the rates set by the ECB. However, in view of strong inflation, several NCBs took additional measures. Българска народна банка (Bulgarian National Bank) abolished, as of January 2007, the requirement for additional reserves for banks exceeding certain credit growth ceilings. At the same time, to cushion strong credit growth, it decided to raise the minimum reserve requirement by 400 basis points to 12%. Confronted with increasing volatility of the nominal exchange rate of the Latvian lats, persistently very high inflation and overheating domestic demand, Latvijas Banka increased its refinancing rate by a total of 100 basis points to 6.0% as well as the marginal lending facility rate by a total of 150 basis points to 7.5% in the first five months of 2007 and intervened in the foreign exchange market on several occasions. Despite the rise in policy interest rates, short-term real interest rates (in the four above-mentioned countries) remain negative, against the background of fast real GDP growth, rising inflationary pressures and large persistent external imbalances.

Following the ECB's moves, Danmarks Nationalbank increased its lending rate in two steps to 4.25%. On 12 March and 6 June 2007 the Central Bank of Cyprus increased its marginal lending and overnight deposit facility rates by 25 basis points each time to 5.00% and 3.00% respectively, in a move to gradually establish a 1 percentage point margin between the two rates and the Cypriot main refinancing rate, which remained at 4.5%. In December 2007 the main refinancing rate was reduced by 50 basis points and thereby became realigned with that of the euro area at 4%. The Central Bank of Malta raised its central intervention rate twice by 25 basis points on 25 January and 29 May 2007, to 4.25%. The decisions were taken against the background of a further decline in external reserves and a marked narrowing of the short-term interest rate differential vis-à-vis the euro in favour of the Maltese lira, mainly as a result of the increase in interest rates in the euro area. In December 2007 the main policy rate was reduced by 25 basis points, thereby realigning itself with that of the euro area. The last interest rate decisions by the central banks of Cyprus and Malta were part of their final preparations before joining the euro area on 1 January 2008. Národná banka Slovenska lowered its repo rate by a total of 50 basis points to 4.25% on 25 April 2007 (and widened the corridor of overnight rates around that rate), based on a more moderate inflation outlook.

The monetary policy decisions of those NCBs with inflation targets that are not participating in ERM II differed across countries, mainly reflecting their different cyclical positions and inflationary outlook. In view of rising inflationary pressures and an upward revision of its inflation forecast for 2007 and 2008, Česká národní banka increased its main refinancing rate four times in 2007 – by a total of 100 basis points – to 3.5%. Narodowy Bank Polski raised its main policy rate in four steps – by a total of 100 basis points – to 5%. In January and

February 2008 the main policy rate was raised again by a total of 50 basis points to 5.5%. A tightening was felt necessary given that inflation is likely to exceed the inflation target owing to real GDP growing above potential, high wage and unit labour cost growth and a loosening of fiscal policy. Sveriges Riksbank increased its main policy rate in five steps by a total of 125 basis points to 4.25% in February 2008 in order to bring the inflation forecast back to the target level of 2%.

In 2007 the Bank of England increased its main policy rate on three occasions – by a total of 75 basis points – to 5.75%, mainly against the background of firm growth and high inflation. However, the Bank of England subsequently lowered it by 50 basis points to 5.25%. The latest decisions were made amid signs of weaker growth momentum.

In contrast to most other countries, the Magyar Nemzeti Bank decreased its key interest rate in two steps – by 50 basis points altogether – to 7.5%, as the medium-term inflation target seemed to be attainable. In 2007 Banca Naţională a României cut its key interest rate in four steps – by a total of 175 basis points – to 7.0% by June 2007, in view of an improving inflationary outlook and a stronger than expected appreciation of the nominal exchange rate. However, in October 2007 and January and February 2008, the policy rate was increased by a total of 200 basis points to 9.0% on the back of the deteriorating inflation outlook owing to both supply and demand shocks.


10

CHAPTER 2

# CENTRAL BANK OPERATIONS AND ACTIVITIES

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

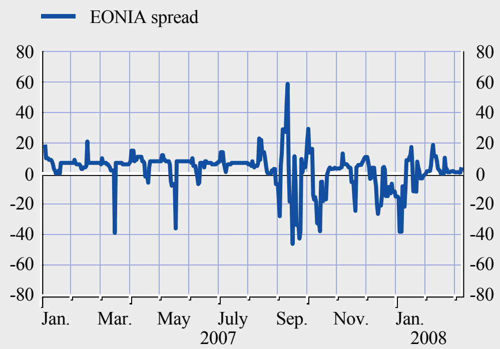
## 1.1 MONETARY POLICY OPERATIONS

The monetary policy operations of the Eurosystem comprise on the one hand open market operations, such as main refinancing operations (MROs), longer-term refinancing operations (LTROs) and fine-tuning operations, and on the other hand standing facilities. Within the operational framework for the implementation of monetary policy, which also includes the system of minimum reserve requirements, these instruments are used to manage liquidity conditions in the interbank money market, first of all with a view to steering very short-term interest rates – in particular the overnight money market rate – close to the minimum bid rate in the MROs, which is the Eurosystem's key policy rate.

On two occasions in 2007, namely on 8 March and 6 June, the Governing Council increased the minimum bid rate by 25 basis points, to 3.75% and 4.00% respectively. As on previous occasions since the amendment of the operational framework in March 2004, these interest rate changes did not influence liquidity conditions or the overnight money market rate in a noticeable way before they actually entered into effect, illustrating that the amended framework has significantly helped in shielding very short-term money market interest rates from the impact of expectations about changes in the monetary policy stance. However, after 9 August 2007 the Eurosystem faced one of the most challenging periods for the implementation of monetary policy since the introduction of the euro, when the turmoil in financial markets originating from the US sub-prime mortgage market spilled over into the euro money market. Within hours of the liquidity drying up in the euro money market on the morning of 9 August, the Eurosystem reacted by providing €95 billion of additional liquidity to the market at its policy rate of 4.00% in a fine-tuning operation with overnight maturity. This was the largest volume that had ever been allotted in a fine-tuning operation up until that point. Thereafter, the Eurosystem's open market operations continued to be heavily influenced by the turmoil until the end of 2007. Box 9 describes the specific operational measures which the Eurosystem used

**Chart 40 EONIA spread**

(basis points)




Source: ECB.

to address the tensions in the money market and highlights the role of the collateral framework in supporting monetary policy implementation in this period of financial market volatility.

A particularly important indicator for assessing how successful the ECB was in steering very short-term interest rates is the spread between the overnight money market rate, as measured by the EONIA (euro overnight index average), an important reference rate for the money market, and the minimum bid rate in the MROs (see Chart 40). In 2007 this EONIA spread stood on average at 3 basis points, lower than the 8 basis points observed in 2006. At the same time, the volatility of the EONIA spread, as measured by the standard deviation, increased to 12 basis points in 2007, from 5 basis points in the previous year. These developments mainly reflect the more volatile market environment as of 9 August: even though the ECB was indeed able to steer the average overnight rate fairly close to the minimum bid rate throughout the year, this was accompanied by an increase in the standard deviation of the EONIA spread from 6 basis points before 9 August to 17 basis points as of 9 August. Over the same period, the average level of the spread decreased from 6 basis points to -3 basis points.

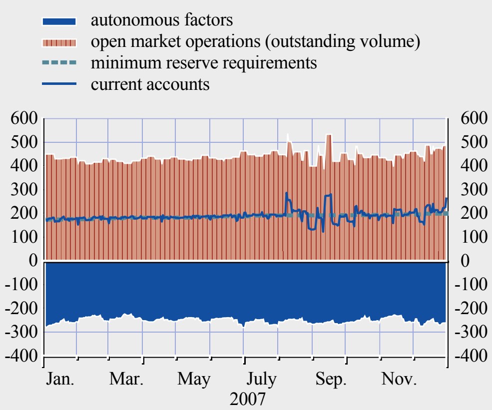
### LIQUIDITY NEEDS OF THE BANKING SYSTEM

When supplying liquidity through open market operations, the Eurosystem takes into account a daily assessment of the liquidity needs of the aggregate euro area banking system. These liquidity needs are determined by the sum of minimum reserve requirements, funds held in excess of these requirements on credit institutions' current accounts with the Eurosystem (excess reserves) and autonomous factors. Autonomous factors are those items on the Eurosystem's balance sheet, such as "banknotes in circulation" and "government deposits", which have an impact on credit institutions' current account holdings but are not under the direct control of the Eurosystem's liquidity management.

In 2007 the average daily liquidity needs of the euro area banking system (see Chart 41) amounted to €441.5 billion, 5% higher than in 2006. The main reason for the increase was the continued growth in average reserve requirements, by 14%, to €187.4 billion, which was only partially offset by a decrease in autonomous factors of 2% to €252.2 billion. Among the autonomous factors, banknotes in circulation rose significantly, although the growth rate decreased to 9%, from 11% in 2006. The liquidity-draining impact of the growth in banknotes was, however, more than offset by other autonomous factors. Although average excess reserves for the maintenance periods ending in 2007 increased by €0.2 billion to €0.9 billion, they remained negligible in relative terms at 0.5% of reserve requirements.

**Chart 41 Liquidity factors in the euro area in 2007**

(EUR billions)




Source: ECB.

## MINIMUM RESERVE SYSTEM

Credit institutions in the euro area are required to hold minimum reserves on current accounts with the Eurosystem. As has been the case since 1999, the minimum reserve requirements amounted to 2% of credit institutions' reserve base in 2007. It is the growth in the reserve base, which is determined by certain short-term liabilities on credit institutions' balance sheets, which explains the above-mentioned 14% increase in the total amount of reserve requirements during 2007. Since for any maintenance period the Eurosystem remunerates the reserve holdings at a rate which is the average of the marginal rate of the MROs, the minimum reserve system does not impose noticeable costs on the banking sector. At the same time, it fulfils two important functions in the operational framework for monetary policy implementation: first, it stabilises short-term money market rates, because the reserve requirements have to be fulfilled only on average over the maintenance period, allowing credit institutions to smooth out temporary and unexpected liquidity inflows and outflows on their accounts; second, it enlarges the liquidity deficit of the banking system, i.e. banks' overall need for refinancing from the Eurosystem.

## OPEN MARKET OPERATIONS

The Eurosystem uses MROs, LTROs and fine-tuning operations to manage the liquidity situation in the money market. All liquidity-providing operations have to be fully collateralised. MROs are regular operations with a weekly frequency and normally have a maturity of one week. They are the main instrument for managing the liquidity situation in the market and signalling the monetary policy stance. In 2007 they were conducted as variable rate tenders with a minimum bid rate, which is the key monetary policy rate of the ECB. While a wide range of counterparties (1,693 at the end of 2007) are eligible for these operations, 338 actually participated on average in 2007, 10% less than in

2006 (377). Up until 8 August the ECB on average allotted €292 billion in the MROs. The ECB provided €1 billion more liquidity than the benchmark allotment, which is the amount that allows counterparties to fulfil their reserve requirements smoothly until the settlement of the next MRO,[1] on all but one occasion (when €2 billion more than the benchmark amount was allotted). The ECB thereby continued a policy which had started in October 2005 of providing liquidity slightly above the benchmark to counter apparent upward pressure on the EONIA spread. After 9 August the average allotment dropped to €200 billion, reflecting the provision of additional liquidity in supplementary LTROs (see below and Box 9).

LTROs are monthly liquidity-providing operations with a three-month maturity. They are conducted as pure variable rate tenders (with no limits on bid rates) with a pre-announced allotment volume, which was set at €50 billion at the beginning of 2007. LTROs are open to the same set of counterparties as MROs, 145 of which on average participated in LTROs in 2007, compared with 162 in 2006. After 9 August 2007 two supplementary LTROs (with settlement on 24 August and 13 September) were conducted and later rolled over with an adjustment to the overall amount. At the end of 2007 the outstanding amount of LTROs stood at €268 billion, almost 80% higher than the amount outstanding at the beginning of August.

1 The benchmark allotment allows counterparties, in the aggregate, to maintain current accounts close to their reserve requirements, taking into account foreseen liquidity needs and liquidity imbalances that have already accumulated in the same maintenance period. For an exact definition of the benchmark, see the box entitled "Publication of the benchmark allotment in the main refinancing operations" in the April 2004 issue of the ECB's Monthly Bulletin.

**Box 9**

## MONETARY POLICY OPERATIONS DURING THE FINANCIAL MARKET VOLATILITY

### Providing liquidity earlier in the reserve maintenance period

In its open market operations the Eurosystem usually provides liquidity in a way that enables credit institutions to maintain current accounts with the Eurosystem which are close to their reserve requirements, thereby fulfilling these requirements proportionally over the maintenance period. This is achieved by allotting amounts in the main refinancing operations (MROs) which are close to the benchmark amount. The purpose of this allotment policy is to maintain very short-term rates close to the main official rate, namely the minimum bid rate in the Eurosystem's MROs. However, after the turmoil in financial markets had spilled over into the overnight euro money market on the morning of 9 August 2007, it appeared that credit institutions developed a preference for fulfilling their reserve requirements relatively early in the maintenance period against the background of indications of decreasing turnover in longer-term money market segments.

In order to achieve its target for very short-term interest rates, the ECB "frontloaded" the supply of reserves, i.e. it increased the supply of liquidity towards the beginning of the maintenance period, while reducing the provision at the end of the period.[1] This frontloading of reserves in the first few days after 9 August was achieved by injecting additional liquidity in four overnight fine-tuning operations. A fifth overnight fine-tuning operation was conducted at the beginning of September. Thereafter, the additional

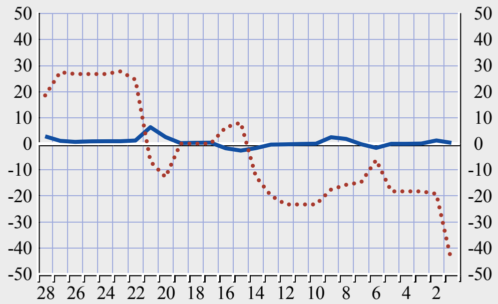
1 The Eurosystem had frontloaded the supply of reserves by providing liquidity slightly above the benchmark allotment in the MROs already before the turmoil. However, the degree of frontloading was much higher during the period of turmoil, as the chart illustrates.

liquidity at the beginning of the maintenance period was mainly provided in the regular MROs. In all cases, the liquidity provision for the whole maintenance period remained unchanged, only the timing of the provision was adapted. This is illustrated by the path of the daily reserve surplus, i.e. the difference between current account holdings of credit institutions and reserve requirements in the course of a maintenance period (see the chart). While the daily reserve surplus was on average relatively close to zero in the maintenance periods before August 2007, it was well above zero at the beginning of subsequent maintenance periods and well below zero towards the end of those periods.

**Daily reserve surplus over the course of a maintenance period**

x-axis: number of days until the end of the maintenance period
y-axis: daily reserve surplus in EUR billions observed on average

daily reserve surplus (maintenance periods ending between August 2005 and August 2007)
daily reserve surplus (maintenance periods ending between September 2007 and February 2008)




Source: ECB.

On 8 October and 23 November the ECB announced[2] (via news wire services) that it would reinforce this policy of "frontloading" and that it would steer liquidity towards more balanced conditions also during the period if this was needed to keep short-term rates close to the minimum bid rate. In line with this communication, the ECB steadily allotted amounts significantly above the benchmark in the MROs, and whenever notable downward pressure on the overnight rate started to appear, the ECB conducted liquidity-absorbing fine-tuning operations. In addition to the usual fine-tuning operations on the last day of the maintenance period, such liquidity-absorbing fine-tuning operations were carried out on 12 October, 7 December, 17 December and, as described below, around the year-end. On 14 January 2008 the ECB confirmed that it would continue its frontloading policy for as long as necessary.

### Supplementary longer-term refinancing operations

The financial market volatility seemed to increase banks' preference for reducing their future liquidity needs, which led to significant tensions in the money market, not only in the short-term segment but also in the longer-term segment, where the turnover was reported to be very low. In order to support a normalisation of conditions, the Eurosystem increased the share of refinancing provided via three-month longer-term refinancing operations (LTROs), while at the same time reducing the share provided via the one-week MROs. Accordingly, the total amount of outstanding refinancing remained unchanged, while the average maturity was extended, thereby temporarily reducing the future liquidity needs of the banking system. Specifically, two supplementary LTROs with a maturity of three months were carried out, one on 23 August and one on 12 September, for amounts of €40 billion and €75 billion respectively. As the regular monthly LTROs were conducted as usual, the total amount of refinancing provided via LTROs increased from €150 billion (three allotments of €50 billion) to €265 billion, while the size of the MROs decreased correspondingly from around €300 billion to below €200 billion. The supplementary LTROs were renewed when they matured in November and December, with an

2 The full list of statements issued by the ECB can be found at: http://www.ecb.europa.eu/mopo/implement/omo/html/communication.en.html

adjustment in the allotment amounts to €60 billion each. On 7 February 2008 it was announced that they would again be renewed in February and March 2008.

### Special measures around the year-end

Banks are usually more reluctant to lend in the money market in the last weeks of the year, owing to balance sheet concerns. This well-known phenomenon was foreseen to be particularly strong in 2007. In a press release on 30 November, the ECB therefore announced special measures to alleviate tensions in the money market during this time period. The maturity of the MRO allotted on 18 December was exceptionally extended from one to two weeks, so that banks could cover their liquidity needs over Christmas and the days around the year-end in advance of this difficult period. On 17 December the ECB also communicated via news wire services that in this two-week MRO it would deviate from the usual allotment procedure and satisfy all bids at or above the weighted average rate of the previous MRO, which was 4.21%. This decision was mainly driven by evidence suggesting that liquidity needs could push up bidding rates to undesirable levels. As a result, the ECB allotted €348.6 billion, which was €168.1 billion more than the benchmark amount. The provision of such abundant liquidity resulted in downward pressure on the overnight rate. In order to reduce this pressure, the ECB conducted a series of liquidity-absorbing fine-tuning operations. The last of these fine-tuning operations was conducted on 3 January, the day before the settlement of the first MRO in 2008. On average, the ECB drained €143.8 billion per day via fine-tuning operations. However, the ECB also provided €20 billion of additional liquidity at a marginal tender rate of 4.20% in the MRO covering the year-end, thereby accommodating further liquidity demands from counterparties over this period. As a result of the very ample supply of liquidity, the EONIA stood 8 basis points below the minimum bid rate on the last trading day of 2007, whereas it had been 19 and 17 basis points above the minimum bid rate in the previous two years.

### Operations in connection with the US dollar Term Auction Facility

As euro area banks were reported to be particularly concerned about the availability of their funding denominated in US dollars, the ECB established a reciprocal currency arrangement (swap line) in connection with the US dollar Term Auction Facility of the Federal Reserve System. The Eurosystem provided the US dollar funding received via this swap line to its counterparties against collateral eligible for Eurosystem credit operations in two operations settling on 20 and 27 December. Similar operations were also carried out by the Swiss National Bank. In each of the Eurosystem's operations, US dollar funding of USD 10 billion was provided to counterparties with access to the marginal lending facility for a maturity of approximately one month. The two operations were conducted at a fixed rate equal to the marginal rate of the simultaneous Federal Reserve tenders, 4.65% and 4.67% respectively, and attracted bids of USD 22 billion on 17 December and USD 14 billion on 20 December. These operations did not have a direct effect on euro liquidity conditions, but aimed to improve global funding conditions. The operations were renewed in January 2008, but liquidity needs in US dollars had declined, as highlighted by the decreasing volume of bids. The ECB did not carry out any US dollar funding operations in February.

### The collateral framework in the period of financial market volatility

Owing to its acceptance of a broad range of collateral, the Eurosystem's collateral framework has been well equipped to support the implementation of monetary policy during the ongoing market turbulence. As Charts 42 and 43 demonstrate, sufficiency of collateral has not been a constraint for the Eurosystem, even at the peak of outstanding credit during the turmoil. Against this background, the collateral framework has facilitated access for a broad range of counterparties to central bank money.

The ECB executes liquidity-providing and liquidity-absorbing fine-tuning operations on an ad hoc basis to manage liquidity conditions in the market and to steer interest rates. The Eurosystem has selected a limited number of counterparties most active in the money market for these operations (127 at the end of 2007). In 2007 the ECB conducted 24 fine-tuning operations, 18 of which were launched after 9 August as a result of the financial market turmoil. This compares with 31 fine-tuning operations conducted in the eight-year period from 1999 until 2006. All six operations conducted before 9 August were executed in order to re-establish balanced liquidity conditions on the last day of the maintenance period, as has been the practice since November 2004. Four were liquidity-absorbing and two liquidity-providing operations, reflecting the slightly higher probability of a liquidity surplus after an allotment above the benchmark amount in the last MRO of the maintenance period. On two occasions, the intended amount could not be reached in a liquidity-absorbing operation, owing to an insufficient volume of bids. The practice of conducting end-of-period fine-tuning operations was maintained after 9 August. However, most fine-tuning operations thereafter (a total of 14) were used to counter fluctuations in liquidity conditions and the overnight rate related to the financial market turmoil within the maintenance period (see Box 9).

## STANDING FACILITIES

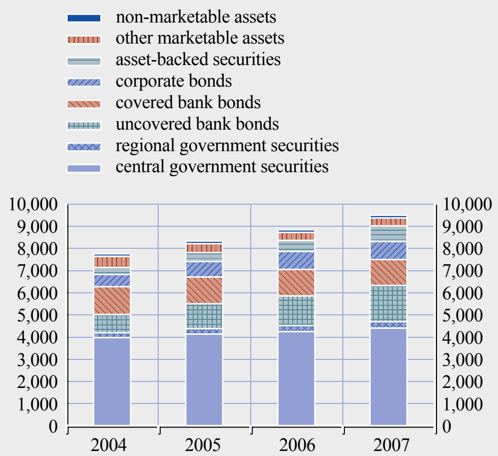
Counterparties may use the two standing facilities on their own initiative to obtain overnight liquidity against eligible collateral or to make overnight deposits with the Eurosystem. At the end of 2007, 2,122 counterparties had access to the marginal lending facility and 2,798 counterparties had access to the deposit facility. The rates for these facilities, at 100 basis points above and below the minimum bid rate on the MROs respectively, provide in principle a ceiling and a floor for the overnight rate and therefore perform an important function for monetary policy implementation. In 2007 the marginal lending facility was used to the average amount of €0.2 billion and the deposit facility to €0.5 billion per day, which represented an increase of €0.1 and €0.3 billion respectively by comparison with the previous year. The increase in the average recourse to the deposit facility can be attributed to the developments after 9 August.

## ELIGIBLE ASSETS FOR MONETARY POLICY OPERATIONS

In line with central bank practice worldwide, all credit operations of the Eurosystem need to be based on adequate collateral. The concept of adequacy implies, first, that the Eurosystem is protected from incurring losses in its credit operations and, second, that sufficient collateral should be available to a wide

**Chart 42 Eligible collateral by asset type**

(EUR billions; annual averages)




Source: ECB.

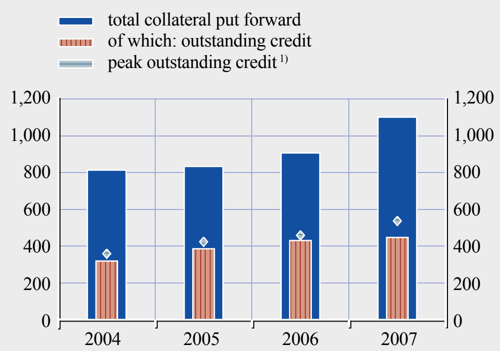
set of counterparties, so that the Eurosystem can provide the amount of liquidity it deems necessary through both its monetary policy and payment systems operations. To facilitate this, the Eurosystem accepts a broad range of assets as collateral. This proved to be a stabilising feature in the ongoing financial market turmoil, since it ensured that counterparties had enough collateral at their disposal to access the credit operations of the Eurosystem.

In 2007 the average amount of eligible collateral increased by 7.7% compared with 2006, to a total of €9.5 trillion (see Chart 42). General government debt, at €4.7 trillion, accounted for 49% of the total, with the remainder of marketable collateral taking the form of credit institution uncovered bonds (€1.6 trillion, or 17%), credit institution covered bonds (€1.2 trillion, or 12%), corporate bonds (€0.8 trillion, or 9%), asset-backed securities (€0.7 trillion, or 8%), and other bonds, such as those issued by supranational organisations, (€0.4 trillion, or 4%). In addition, non-marketable assets, consisting in particular of credit claims (also referred to as bank loans), have been included in the single list of eligible assets since 1 January 2007. However, as the eligibility of these assets is not assessed in advance of their acceptance, the potential volume of such assets cannot easily be measured. Their use in 2007 reached €0.1 trillion, representing 1% of total eligible collateral in the Eurosystem.

The average value of marketable and non-marketable assets deposited by counterparties as collateral in Eurosystem credit operations rose significantly from €906 billion on average in 2006 to €1,101 billion in 2007. This increase was mainly due to the fact that counterparties deposited large additional amounts of collateral with the Eurosystem after the outbreak of the financial turmoil in August (see Chart 43). As the comparison of collateral with outstanding credit to the Eurosystem's counterparties indicates, the share of deposited collateral not used to cover credit from monetary policy operations continued to be high. This suggests that sufficiency of collateral has not been a constraint on the Eurosystem's counterparties in the wake of the turmoil.

**Chart 43 Collateral put forward in Eurosystem credit operations versus outstanding credit in monetary policy operations**

(EUR billions)



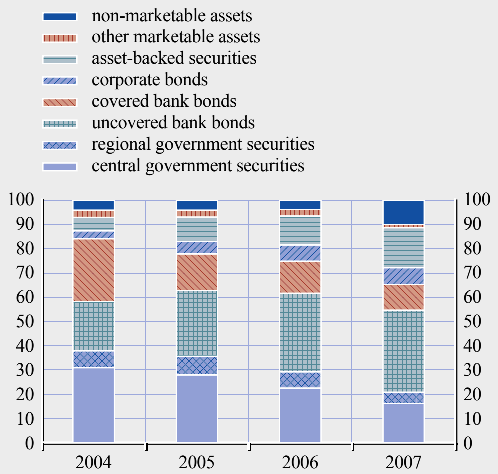

Source: ECB.
1) Annual peak of outstanding credit for monetary policy operations.

As regards the asset types deposited as collateral with the Eurosystem, the annual average share of central government bonds dropped from 23% in 2006 to 15% in 2007. Uncovered bank bonds continued to form the largest class of assets deposited with the Eurosystem (33% on average in 2007). The average share of asset-backed securities increased from 12% in 2006 to 16% in 2007.

Following the euro area-wide introduction on 1 January 2007 of non-marketable assets as eligible collateral in Eurosystem credit operations, counterparties have started to make use of this additional collateral source. On a yearly average this asset class represented 10% of the overall amount of collateral deposited, compared with 4% in 2006 (see Chart 44). The number of credit claims whose creditworthiness could be assessed remained limited in 2007 (see the section on risk management issues). The full potential of this additional collateral source has therefore not yet been reaped.

**Chart 44 Breakdown of assets (including credit claims) put forward as collateral by asset type**

(percentages; annual averages)




Source: ECB.

On 24 May 2007 the Governing Council adopted the following two minor adjustments to the collateral framework during 2007:

– The calendar for the phasing-out of marketable tier two assets eligible as collateral for Eurosystem credit operations was amended.[2]

– The residence criteria for assets eligible as collateral for Eurosystem credit operations were further defined.[3]

## RISK MANAGEMENT ISSUES

The Eurosystem mitigates the risk of a counterparty default in a Eurosystem credit operation by requiring counterparties to submit adequate collateral. However, despite this requirement, the Eurosystem may still be exposed to a number of financial risks if a counterparty defaults. These include the credit risk associated with the collateral accepted, and the market and liquidity risks of adverse movements in the price of the collateral during the liquidation period after a counterparty default. In order to reduce these risks to acceptable levels, the Eurosystem maintains high credit standards for assets accepted as collateral, valuates collateral on a daily basis and applies appropriate risk control measures. Financial risks in credit operations are quantified and reported to the ECB's decision-making bodies.

To ensure that its high credit standards for collateral are met, the Eurosystem relies on a set of procedures, rules and techniques that together constitute the Eurosystem credit assessment framework (ECAF). The credit quality threshold for the collateral eligible for Eurosystem credit operations is defined within the ECAF in terms of a "single A" credit assessment.[4] The ECAF foresees a number of alternative credit assessment sources. The euro area-wide introduction of non-marketable assets as eligible collateral in Eurosystem credit operations as of 1 January 2007 was combined with the first, but still limited, use of internal ratings-based systems by Eurosystem counterparties as a new source of credit assessment. As a consequence of the limited use of internal ratings-based systems, most of the credit claims that were newly eligible as of 1 January 2007 and were submitted thereafter to the Eurosystem were claims on public sector entities for which an implicit credit assessment is derived from the credit assessment of the country where the debtor or guarantor of the credit claim is established.

A number of additions related to the ECAF were introduced in 2007. Following a decision by the Governing Council on 19 October 2007,

2 Marketable assets which were issued prior to 31 May 2007 and are traded on non-regulated markets that currently fulfil the Eurosystem's requirements for safety and accessibility, but not for transparency, will remain eligible until 31 December 2009 and will become ineligible thereafter.

3 As a result of the completion of the single collateral framework on 1 January 2007, the Eurosystem has specified that, with the exception of international or supranational institutions, issuers of marketable assets eligible for Eurosystem credit operations must be established either in the EEA or in one of the four non-EEA G10 countries (Canada, Japan, Switzerland and the United States). Assets issued after 1 January 2007 by entities domiciled outside the EEA or the non-EEA G10 countries are not eligible, irrespective of whether a guarantee by an entity established in the EEA is available. However, assets issued before 1 January 2007 will remain eligible until 31 December 2011 and will only become ineligible after that date.

4 "Single A" means a minimum long-term rating of "A-" by Fitch or Standard & Poor's, "A3" by Moody's or "AL" by DBRS.

the rating agency DBRS is used, as of 1 January 2008, as an additional external credit assessment institution source within the ECAF. The Governing Council also decided in 2007 that covered bank bonds complying strictly with the criteria set out in Article 22(4) of the Directive on undertakings for collective investment in transferable securities (UCITS Directive) and issued after 1 January 2008 will be subject to the same credit assessment requirements as other marketable assets.

## 1.2 FOREIGN EXCHANGE OPERATIONS

In 2007 the Eurosystem did not undertake any interventions in the foreign exchange market for policy reasons. The ECB's foreign exchange transactions were exclusively related to investment activity. Furthermore, the ECB did not undertake any foreign exchange operations 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 18 occasions in 2007.

In the context of the financial market volatility in 2007, the Eurosystem also conducted two operations in connection with the US dollar Term Auction Facility of the Federal Reserve System, on both occasions providing an amount of USD 10 billion to the Eurosystem's counterparties (for more details, see Box 9).

## 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 was originally set up through transfers of foreign reserve assets from the euro area NCBs. Over time, the composition of the portfolio reflects changes in the market value of the invested assets, as well as 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 foreign reserve portfolio consists of US dollars, Japanese yen, gold and SDRs. The US dollar and Japanese yen reserves are actively managed by the ECB and the euro area NCBs, as agents for the ECB. As of January 2006 a "currency specialisation model" has been in operation to increase the efficiency of the Eurosystem's investment operations. Under this scheme, each NCB is as a rule allocated a share in either the US dollar or the Japanese yen portfolio, with two NCBs currently managing two.[5] In January 2007 two NCBs (Banka Slovenije and the Banque centrale du Luxembourg) pooled their operational activities for the management of their share of the ECB's foreign reserves. Two further pooling arrangements came into effect in January 2008 with the entry of the Central Bank of Cyprus and the Central Bank of Malta into the Eurosystem (see Chapter 3).

During 2007 the ECB carried out gold sales amounting to around 79 tonnes of gold in total. These sales were in full conformity with the Central Bank Gold Agreement dated 27 September 2004, to which the ECB is a signatory. Most of the proceeds of the gold sales

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

were added to the Japanese yen portfolio and, to a minor extent, to the US dollar portfolio.

The value of the ECB's net foreign reserve assets[6] at current exchange rates and market prices increased from €42.3 billion at end-2006 to €42.8 billion at end-2007, of which €32.1 billion was in foreign currencies – the Japanese yen and the US dollar – and €10.7 billion was in gold and SDRs. Applying the exchange rates of end-2007, US dollar-denominated assets represented 79.7% of the foreign currency reserves, while those denominated in Japanese yen accounted for 20.3%. The most substantial change in 2007 was therefore in the market value of gold and SDRs, which rose to €10.7 billion from €10.3 billion in 2006, mostly as a result of the appreciation of gold by around 18% measured in euro-denominated terms. The mark-to-market value of the foreign currencies in the portfolio was broadly unchanged in 2007, with the depreciation of the US dollar and the Japanese yen vis-à-vis the euro being compensated for by the positive net returns (comprising capital gains and interest income) generated by portfolio management activities and the proceeds from the ECB's gold sales.

In 2007 the list of eligible instruments in which the ECB's foreign reserves can be invested was extended to include interest rate swaps. In addition, the pilot project set up to establish an automatic securities lending programme for the ECB's US dollar assets is well advanced and is expected to be implemented in the course of 2008.

### 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 maximise expected returns, subject to a no-loss constraint at a certain

confidence level. The portfolio is invested in euro-denominated assets.

The value of the portfolio at current market prices grew from €7.5 billion at end-2006 to €9.3 billion at end-2007. 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, floating rate notes were added to the investment options available for the management of this portfolio. In addition, the list of eligible issuers of covered bonds and senior unsecured bonds was further extended.

### RISK MANAGEMENT ISSUES

The financial risks to which the ECB is exposed in its investment activities are closely monitored and measured in order to keep them within the levels specified by the ECB's decision-making bodies. For this purpose, a detailed limit structure is in place and limits are monitored daily. Regular reporting ensures that

6 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 on the data sources, see http://www.ecb.europa.eu/stats/external/reserves/templates/html/index.en.html

all stakeholders are adequately informed of the level of such risks.

In 2007 the ECB further enhanced its risk management capabilities by improving and upgrading its IT systems. The enhancements mean that many risk monitoring, measuring and reporting tasks can be automated within a robust and flexible infrastructure. Moreover, a model-based performance attribution framework has been developed that allows portfolio performance to be assigned to exposures to individual risk factors. Finally, in recognition of the fact that credit risk management techniques are gaining in importance within the central bank community, the ECB chaired a special Task Force of the Market Operations Committee, which carried out a comparative analysis of portfolio credit risk models used by Eurosystem central banks. The results of this analysis were published in the ECB's Occasional Paper Series.[7]

One of the indicators used to monitor market risk is Value-at-Risk (VaR), which defines the loss for a portfolio of assets that will not be exceeded at the end of a specified period of time with a given probability. The value of this indicator depends on a series of parameters used for the calculation, in particular the confidence level, the length of the time horizon and the sample used to estimate asset price volatility. As an illustration, computing this indicator for the ECB's investment portfolio, using as parameters a 95% confidence level, a time horizon of one year and a sample of one year for asset price volatility, would result in a VaR of €3,500 million. Computing the same indicator with a five-year sample instead of one year would result in a VaR of €4,800 million. Most of this market risk is due to currency and gold price risk. The low levels of interest rate risk reflect the fact that the modified duration of the ECB's investment portfolios remained relatively low.

7 For more details, see "The use of portfolio credit risk models in central banks" by the Task Force of the Market Operations Committee of the ESCB, ECB Occasional Paper No 64, July 2007.

# 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 – aside from 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 and urgent payments in euro. The technically decentralised TARGET system is being progressively replaced by the TARGET2 system, which is based on a single technical platform that is shared by all participants. A first group of countries migrated to TARGET2 on 19 November 2007.

With regard to collateral management, the Eurosystem and the market offer a number of channels to facilitate the use of collateral across national borders. Furthermore, the Eurosystem, together with market participants, is defining the user requirements for the provision of securities settlement services in central bank money through a single European technical platform with harmonised processes and procedures (TARGET2-Securities). Such an initiative would ensure that there is no difference between conducting domestic and cross-border settlements within the euro area.

## 2.1 THE TARGET SYSTEM

TARGET plays an important role in the execution of the single monetary policy and the functioning of the euro money market. Since TARGET offers a real-time settlement service in central bank money and broad market coverage, it has also attracted a variety of other payments. TARGET is available for all credit transfers in euro between participating 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).

TARGET functioned smoothly in 2007 and continued to settle an increasing number of 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 2007 89% of the total value of payments in euro large-value payment systems were executed via TARGET. The launch of TARGET2 on 19 November 2007 also went very smoothly (see Section 2.2 of this chapter).

About 9,300 banks, including branches and subsidiaries, use TARGET to initiate payments on their own behalf or on their customers' behalf. Overall, around 52,000 institutions, in particular branches of participants, can be addressed through TARGET using a Bank Identifier Code.

### TARGET OPERATIONS

In 2007 the daily average of payments processed by TARGET increased by 12.3% in volume and 15.6% in value. Table 12 provides an

**Table 12 Payment traffic in TARGET [1]**

| Volume (number of transactions) | 2006 | 2007 | Change (%) |
|---|---|---|---|
| **Overall** | | | |
| Total | 83,179,996 | 93,375,701 | |
| Daily average | 326,196 | 366,179 | 12.3 |
| **Intra-Member State [2]** | | | |
| Total | 64,162,211 | 72,574,446 | |
| Daily average | 251,617 | 284,606 | 13.1 |
| **Inter-Member State** | | | |
| Total | 19,017,785 | 20,801,255 | |
| Daily average | 74,580 | 81,574 | 9.4 |

| Value (EUR billions) | 2006 | 2007 | Change (%) |
|---|---|---|---|
| **Overall** | | | |
| Total | 533,541 | 616,731 | |
| Daily average | 2,092 | 2,419 | 15.6 |
| **Intra-Member State [2]** | | | |
| Total | 348,764 | 395,412 | |
| Daily average | 1,368 | 1,551 | 13.4 |
| **Inter-Member State** | | | |
| Total | 184,777 | 221,319 | |
| Daily average | 725 | 868 | 19.7 |

Source: ECB.
1) There were 255 operating days in both 2006 and 2007.
2) Includes the traffic of remote participants.

overview of the payment traffic in TARGET in 2007, comparing it with the traffic in the previous year. In 2007 the overall availability of TARGET, i.e. the extent to which participants were able to use TARGET during its business hours without incident, reached 99.90%. 97.9% of inter-Member State payments were processed within five minutes.

#### 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 crucial that systemically important payments – i.e. those that could cause a systemic risk if not processed when due, notably the settlement transactions from the Continuous Linked Settlement (CLS) system and EURO1 (see Section 4.1 of Chapter 4), as well as margin calls for central counterparties – are 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 2007 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 AND 2007

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. Narodowy Bank Polski and Eesti Pank connected their real-time gross settlement (RTGS) systems to TARGET via the Banca d'Italia's RTGS system in 2005 and 2006 respectively. With regard to Slovenia's entry into the euro area in January 2007, Banka Slovenije decided, for efficiency reasons, not to develop its own RTGS system, but to use the RTGS system of the Deutsche Bundesbank to connect to TARGET. When TARGET2 went live in November 2007, Cyprus, Latvia, Lithuania and Malta began operations on TARGET2's single shared platform (SSP).

#### 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 2007, 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 and the implementation of and migration to TARGET2. 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 2007. Increasing interrelations, such as those stemming from CLS operations, have created the need for joint discussions on operational issues.

### 2.2 TARGET2

The TARGET2 system started operating on 19 November 2007 when a first group of countries (Germany, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Austria and Slovenia) migrated their operations to the SSP. The second group of countries (Belgium, Ireland, Spain, France, the Netherlands, Portugal and Finland) migrated to TARGET2 on 18 February 2008. The third and final group (consisting of Denmark, Estonia, Greece, Italy, Poland and the ECB) will migrate on 19 May 2008.

The start of TARGET2 operations was very successful. The SSP (operated on behalf of the Eurosystem by the Banque de France, the Banca d'Italia and the Deutsche Bundesbank) achieved a very high level of performance. The technical communication with remaining TARGET components also functioned smoothly. With the first group of countries, some 50% of overall TARGET traffic in terms of volume and 30% in terms of value migrated to TARGET2. Both these figures reached around 80% with the migration of the second group of countries. With the launch of TARGET2, it is now possible to process interbank direct debits as well as credit transfers. Moreover, with TARGET2, ancillary systems are able to conduct settlement directly on the SSP. Each participant is, in principle, able to conduct its cash settlement with any ancillary system through a single central bank account in TARGET2.

In view of the start of operations of TARGET2, throughout 2007 work was conducted to finalise the operational and legal frameworks. In particular, the testing and migration activities with future users of the system were thoroughly prepared and carried out. Between February and April 2007 the compliance of TARGET2's SSP with the system specifications defined by the Eurosystem in cooperation with users (general functional specifications (GFS) and user detailed functional specifications (UDFS)) was tested. The tests involving TARGET2 users started as planned on 2 May 2007, with the results made available through regular status reports. The tests also presented the opportunity to assess the planning of the changeover weekends. In particular, a fully-fledged "rehearsal" of the first changeover weekend took place with all NCBs on 29 and 30 September 2007. In a press release on 9 November 2007, following the successful completion of its tests, the Eurosystem acknowledged the readiness of the national banking communities of the first migration group and confirmed that the new system would go live, as scheduled, on 19 November 2007.

On 22 June 2007 the Governing Council released the "Fourth progress report on TARGET2". The objective of the report was to update market participants on the Eurosystem's decisions on outstanding issues related to pricing and on the approval of the TARGET2 Guideline, as well as to fine-tune some previous decisions. The report also contained the final version of the GFS and provided information on legal issues, on recent changes to the envisaged functionality of the SSP, and on testing and migration activities. In addition, on 29 October 2007 the Governing Council released the "Fifth progress report on TARGET2", which updated market participants on the Eurosystem's decisions concerning remaining operational issues. The report also included the "Information guide for TARGET2 users" and the "User information guide to the TARGET2 pricing".

The "Information guide for TARGET2 users" provides banks and ancillary systems using TARGET2 with a standard set of information to give the participants a better understanding of the overall functioning of TARGET2 and enable them to use it as efficiently as possible. It answers the most frequently asked questions relating to TARGET2 and attempts, in particular, to provide users with a clear understanding of those features that are common and those that are specific to each country. In addition, the guide contains information about the operational procedures in normal and, more specifically, abnormal situations.

The "User information guide to the TARGET2 pricing" gives TARGET2 users a comprehensive overview of the pricing schemes related to TARGET2 (core services, liquidity pooling and ancillary system services) and details of the billing principles for the various types of transaction, as well as the entities to be invoiced.

In addition to these progress reports and the close cooperation with users in the field of testing and migration, users were kept informed of progress via the ECB and NCB websites dedicated to TARGET2. The websites contained information on the following developments:

- A user-focused plan for TARGET2 was created and regularly updated throughout 2007 as a tool to facilitate users' internal planning and alignment with the Eurosystem planning.

- In the course of 2007 regular workshops with users took place at the national level. In addition, at the European level a TARGET2 information session for users was held at the ECB on 14 June 2007.

- The TARGET2 Guideline was adopted by the Governing Council on 26 April 2007 and published in all official EU languages on 11 June 2007. It is addressed to the NCBs of the Member States that have adopted the euro ("Eurosystem NCBs") and also applies, on the basis of a separate agreement, to EU NCBs outside the euro area that are connected or will connect to TARGET2 ("connected NCBs"). Annex II to the Guideline contains the harmonised conditions for participation in TARGET2, which have to be implemented in the TARGET2 documentation of all participating and connected NCBs. The Guideline was published in the Official Journal of the European Union on 8 September 2007 and is also available on the ECB's website in all EU languages.

- The national migration profiles and the ancillary system profiles were regularly updated throughout the year. These profiles show, for each central bank, which SSP modules will be used and how ancillary systems will settle after migration to TARGET2.

- A final version of the user handbook for the information and control module of the SSP was published on 2 November 2007, while final versions of the UDFS (books 1, 2 and 4 on XML messages and their corresponding XML scheme files) were published on 9 October 2007.

## 2.3 TARGET2-SECURITIES

The objective of the TARGET2-Securities (T2S) initiative is to provide harmonised and efficient settlement of securities transactions in central bank money in euro, by concentrating securities and cash settlements in euro within a single platform. With T2S there would be no difference between conducting domestic and cross-border settlements within the euro area in participating central securities depositories (CSDs). It would therefore act as a catalyst to the integration and harmonisation of European post-trading financial services. T2S would also foster competition by providing equal, cheaper and harmonised access to settlement services within the European financial market.

On 8 March 2007 the Governing Council made a positive assessment of the feasibility of T2S[8] and decided to launch the next phase of the project, consisting of the definition of the T2S user requirements, in full transparency and in cooperation with market participants, in particular CSDs and their users. On 26 April 2007 the Governing Council launched the first public consultation on the general T2S principles and the high-level proposals defining the nature and scope of T2S, and approved the establishment of a framework for the organisation and governance of the preparation of the T2S user requirements. The Advisory Group – assigned with the mandate of delivering the user requirements – divided the work between six different technical groups focusing on specific technical areas of settlement. The Advisory Group and the technical groups started the preparatory work in early summer 2007 and conducted a total of seven "mini-consultations", requesting feedback from national user groups and European associations in order to draw on the wealth of knowledge and experience accumulated in the various market segments. The findings and progress reports were shared

8 The feasibility study, which covered operational, technical, legal and economic aspects of the project, was published on the ECB's website.

with market participants during three information sessions held in June, August and November 2007. All T2S documents, including mini-consultations, newsletters, progress reports, agendas and meeting summaries, are available on the ECB's website. In total, the T2S governance structure during this phase involves more than 188 individuals from 77 organisations[9], ensuring that all user requirements and functionalities required by market participants are addressed and included where appropriate. The Advisory Group, which reports directly to the Governing Council, completed the first draft version of the T2S user requirements in December 2007.

On 8 March 2007 the Governing Council also decided that T2S would be fully owned, developed and operated within the Eurosystem on the TARGET2 platform in order to exploit synergies to the fullest extent. Credit institutions would be able to pool all securities and central bank money on a single platform, instead of distributing securities and central bank money across several independent national platforms, thereby benefiting from the synergies between TARGET2 and T2S. This should increase the efficiency of collateral management. T2S would also enable a faster re-use of securities and central bank money, which would be of benefit to market participants. Four euro area NCBs (the Deutsche Bundesbank, the Banco de España, the Banque de France and the Banca d'Italia) are prepared to develop and operate T2S.

Public authorities such as the European Parliament, the ECOFIN Council and the European Commission were regularly informed throughout 2007 about the latest developments with regard to the T2S proposal and expressed support for the T2S project.

With respect to legal issues, a comprehensive stocktaking exercise was undertaken during 2007 covering the EU and national legislation, and other national arrangements and practices, that could have a bearing on the legal feasibility of T2S. This exercise included settlement procedures, data storage requirements, and reporting and auditing requirements. No major legal obstacles to the T2S initiative were identified.

A further public consultation, on the fully articulated user requirements and the methodology for economic impact analysis, was launched at the end of 2007, requesting market stakeholders to provide comments and suggestions by 2 April 2008. Following this public consultation, the user requirements will be finalised, together with an assessment of the economic, legal and governance structure of the T2S initiative. The Governing Council will then decide whether to enter the next phase of the project.

With the implementation of T2S, the euro area would benefit from a safe, efficient and borderless infrastructure for the settlement in central bank money of securities transactions in euro. The services provided by this infrastructure would also be available to CSDs, central banks and banks in other EU and EEA countries if requested. Financial market participants would have one common set of harmonised settlement procedures and processes regardless of their own location and that of the trade.

## 2.4 SETTLEMENT PROCEDURES FOR COLLATERAL

Eligible assets may be used to collateralise all types of Eurosystem credit operation not only at the domestic level but also across national borders, the latter only 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 to €683 billion in December 2007, from €514 billion in the same month of the previous year. Overall, at the end of 2007 cross-border collateral represented 48.5% of the total collateral provided to the Eurosystem.

9 This includes all CSDs settling in euro and 33 custodian banks.

### THE CORRESPONDENT CENTRAL BANKING MODEL

The CCBM has remained the main channel for transferring cross-border collateral in Eurosystem monetary policy and intraday credit operations. It accounted for 39.6% of the total collateral provided to the Eurosystem in 2007. Assets held in custody through the CCBM increased from €414 billion at the end of 2006 to €558 billion at the end of 2007.

The CCBM framework has been revised in order to allow for the integration of new euro area countries. In this context, the CCBM Agreement with the Central Bank of Malta and the Central Bank of Cyprus was signed on 22 November 2007.

Despite its success and considerable contribution to the process of financial integration, the CCBM arrangement has a number of drawbacks, mainly linked to the fact that it was designed as an interim solution and relies on the principle of minimum harmonisation. These drawbacks, in combination with the growing importance of cross-border collateral, led to the Governing Council decision of 8 March 2007[10] to review the current Eurosystem collateral management handling procedures and to create a new collateral management system for the Eurosystem (based on existing systems such as that of the Nationale Bank van België/Banque Nationale de Belgique and De Nederlandsche Bank), called Collateral Central Bank Management, or CCBM2. The participation of the euro area NCBs in CCBM2 is of a voluntary nature.

Although CCBM2 is primarily designed to increase the efficiency of the collateral management of Eurosystem central banks, for both cross-border and domestic transactions, it will also bring new opportunities for Eurosystem counterparties, particularly multi-country banks, to optimise their collateral use and enhance their liquidity management. The scope of CCBM2 goes beyond that of the current CCBM and will establish efficient methods for delivering and accepting both securities and credit claims at the domestic and cross-border levels with a harmonised level of service based on SWIFT communication protocols. CCBM2 will be implemented in accordance with the principle of decentralised access to credit and will be fully compatible with TARGET2 and T2S. CCBM2 will process instructions in real time on a straight-through-processing basis, permitting the delivery of collateral to generate the release of related credit in TARGET2 on a real-time basis. It will be able to take collateral through all eligible SSSs and eligible linkages between them. In order to integrate counterparties' needs, the Eurosystem is developing CCBM2 in close cooperation with market participants. A first public consultation on the principles for its development was launched on 26 April 2007. The comments received have been used as input for the definition of the user requirements for the new platform. A further public consultation on these user requirements is taking place in the first half of 2008, after which the user requirements for CCBM2 will be finalised.

### 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 direct and 5 relayed links are currently available to counterparties, but only a limited number of them 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 user standards (see Section 4 of Chapter 4).

The amount of collateral held through links increased from €99 billion in December 2006 to €125 billion in December 2007, but accounted for only 8.9% of the total collateral (both cross-border and domestic) held by the Eurosystem in 2007.

10 See http://www.ecb.europa.eu/paym/coll/coll/ccbm2/html/index.en.html

# 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 2007 the number of euro banknotes in circulation stood at 12.1 billion, with a value of €676.6 billion, which represented an increase of 6.7% in terms of volume and 7.7% in terms of value compared with the levels at the end of 2006 (11.3 billion banknotes with a value of €628.2 billion).

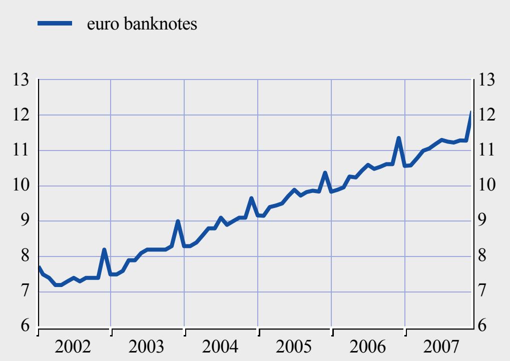
The number of banknotes in circulation has continued to expand since the cash changeover in 2002, although at a declining annual growth rate (see Charts 45 and 46). At the end of 2007 the average value of a banknote in circulation was €55.85 (compared with €55.36 one year before).

It is estimated that, in value terms, between 10% and 20% – but potentially a figure closer to the upper end of the range – 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.

Looking at a breakdown of the denominations, the €50 and €100 banknotes showed the strongest growth in circulation in numerical terms, rising by 8.9% and 8.3% respectively, followed by the €500 banknote, which rose by

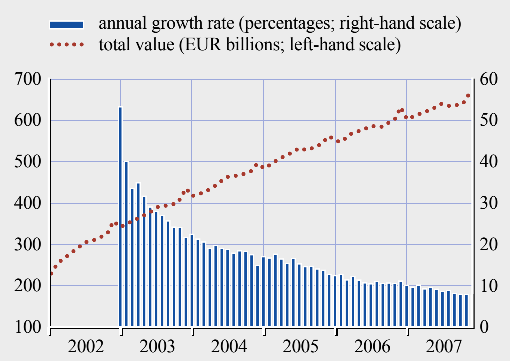
**Chart 45 Total number of euro banknotes in circulation between 2002 and 2007**

(billions)




Source: ECB.

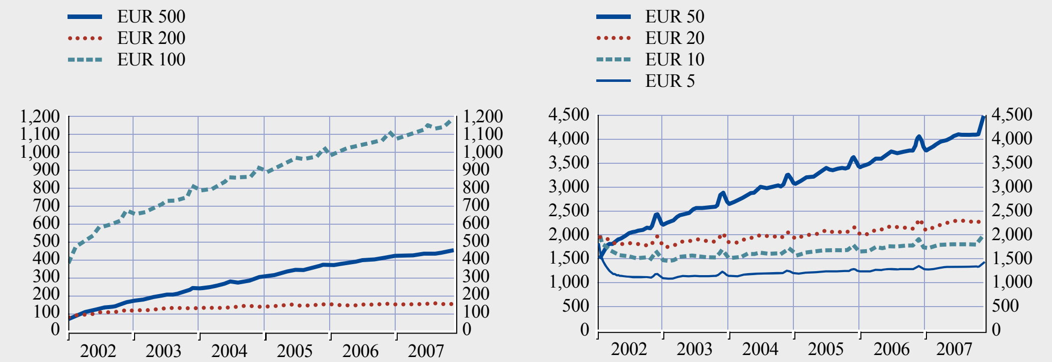
**Chart 46 Total value of euro banknotes in circulation between 2002 and 2007**




Source: ECB.

**Chart 47 Number of euro banknotes in circulation between 2002 and 2007**

(millions)



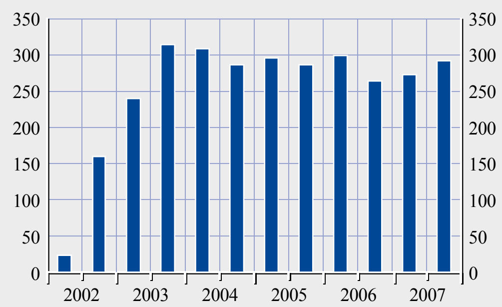

Source: ECB.

7.9%. The number of the other denominations in circulation rose at rates of between 2% and 6% (see Chart 47).

In 2007 the total number of euro coins in circulation (i.e. net circulation excluding stocks held by the NCBs) grew by 9.1% to 75.8 billion, while the value of coins in circulation rose by 7.6% to €19.2 billion. The share of the small denominations, the 1, 2 and 5 cent coins, in the total number of coins in circulation reached 58.0% (compared with 57.3% one year earlier). Anecdotal evidence suggests that this continuing strong demand for low-value coins is explained by relatively high loss rates and hoarding.

**Chart 48 Number of counterfeit euro banknotes recovered from circulation between 2002 and 2007**

(thousands)




Source: Eurosystem.

### BANKNOTE HANDLING BY THE EUROSYSTEM

The slight upward trend observed in euro banknote issues and withdrawals in previous years continued. In 2007 the euro area NCBs issued 33.4 billion banknotes, while 32.7 billion banknotes were returned to them. The return frequency[11] of banknotes in circulation fell slightly from 3.03 in 2006 to 2.93 in 2007.

The euro area NCBs check each euro banknote returned to them for authenticity and fitness using fully automated banknote processing machines in order to maintain the quality and integrity of the banknotes in circulation. In 2007 the NCBs identified some 5.5 billion banknotes as being unfit for circulation and replaced them accordingly. This represented an increase of 5.1% compared with the previous year and an unfit rate[12] of 17.0% (16.9% in 2006).

## 3.2 BANKNOTE COUNTERFEITING AND COUNTERFEIT DETERRENCE

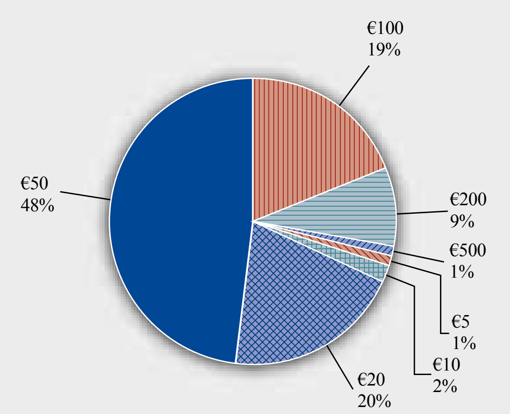
### COUNTERFEIT EURO BANKNOTES

The number of counterfeit euro banknotes removed from circulation has remained stable over the last four years, despite the increase in the number of genuine banknotes in circulation over the same period. Chart 48 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[13] in 2007 was around 566,000[14]. Compared with the number of genuine euro banknotes in circulation, which was on average more than 11 billion in 2007, the quantity of counterfeits is very small indeed. The €50 banknote was the counterfeiters' biggest target, accounting for nearly half of the number of counterfeits. Chart 49 gives a detailed breakdown of the distribution of counterfeits in terms of volume.

The public can remain confident in the security of the euro: it has proven to be a well-protected currency, in 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 to the possibility of fraud and to remember the "feel-look-tilt" test.[15]

11 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.
12 Defined as the number of banknotes identified as unfit in a given period divided by the total number of banknotes sorted during that period.
13 Centres established in each EU Member State for the initial analysis of counterfeit euro banknotes at the national level.
14 This figure is subject to very slight correction on account of late reports, particularly from outside the EU.
15 For details, see http://www.ecb.europa.eu/bc/banknotes/security/html/index.en.html

**Chart 49 Distribution of euro banknote counterfeits by denomination**




Source: ECB.

### COUNTERFEIT DETERRENCE

The Eurosystem continued in 2007 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 Eurosystem participates actively in the work of the Central Bank Counterfeit Deterrence Group (CBCDG) (a working group of 30 central banks and note-printing authorities cooperating under the auspices of the G10). The ECB hosts the International Counterfeit Deterrence Centre (ICDC), which acts as the technical centre for all CBCDG members. Its main role is to provide technical support and to operate a centralised communication system serving all parties involved in the field of counterfeit deterrence systems. The ICDC also maintains a public website which provides information and guidance concerning the reproduction of banknote images as well as links to country-specific websites.

## 3.3 BANKNOTE ISSUANCE AND PRODUCTION

### FRAMEWORK FOR RECYCLING BANKNOTES

Following the transposition of the ECB's framework for the detection of counterfeits and the sorting of banknotes for fitness by credit institutions and other professional cash handlers ("Banknote Recycling Framework", or BRF) into national arrangements by all euro area NCBs (with the exception of one, for which the process is pending), credit institutions and other professional cash handlers have been given a transitional period to adjust their cash handling procedures.

In implementing the BRF, the NCBs have followed a variety of approaches that take into account differences in national situations (e.g. as regards the economic and legal environment, the banking structure, and the role of the NCB in the cash cycle). While in a few countries the BRF has been implemented by means of a legal act (complemented by mandatory contracts to be signed with the respective NCB), in other countries, NCBs have issued obligatory instructions (which in some cases bind only credit institutions) or entered into bilateral contractual agreements (whereby credit institutions agree to adhere to the rules of the BRF and to include those rules in contracts with their service providers). In an opinion in December 2007 the Governing Council welcomed the European Commission's proposal to amend Council Regulation (EC) 1338/2001 on the protection of the euro against counterfeiting. In accordance with this proposal, Article 6 of the Regulation would include the express obligation for credit institutions and other professional cash handlers to check euro banknotes and coins which they have received and that they intend to put back into circulation, and would also contain a reference to the procedures to be defined by the ECB as regards the method for checking recycled banknotes.

The ECB continued its efforts, in close cooperation with the euro area NCBs, to ensure the uniform interpretation of the provisions of the BRF throughout the euro area, especially with regard to the Eurosystem's common test procedure for banknote handling machines.

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 contribute effectively 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 EXTENDED CUSTODIAL INVENTORY PILOT PROGRAMME

The Governing Council decided in 2006 to launch an Extended Custodial Inventory (ECI) pilot programme for euro banknotes in Asia. An ECI is a cash depot maintained by a private bank (ECI bank) that holds currency on a custodial basis. ECIs are expected to facilitate the international distribution of euro banknotes and to provide statistical data on euro banknote circulation outside the euro area, as well as information on counterfeits. In 2007 two large commercial banks active in the wholesale banknote market each began operating, for a one-year period, an ECI for euro banknotes: one in Hong Kong and one in Singapore.

During the pilot programme the ECI banks ensured that only fit banknotes were recirculated and that counterfeits were withdrawn from circulation according to the standards specified by the BRF. Surplus banknotes and banknotes unfit for circulation were shipped to the Deutsche Bundesbank, which acted as the logistical and administrative counterpart for the ECI banks. The ECI operations and statistical reporting of the ECI banks proceeded smoothly.

On the basis of this pilot programme, the Governing Council will decide in 2008 whether such an ECI programme should be established on a permanent basis.

### ROADMAP FOR GREATER CONVERGENCE OF NCB CASH SERVICES

In February 2007 the Governing Council adopted a roadmap with the aim of achieving, in the medium term, greater convergence in the cash services offered by the Eurosystem.

Greater convergence is important because it will allow stakeholders – in particular those with significant cross-border cash activities – to fully reap the benefits of the single currency, and will ensure fair competitive treatment. In view of the different national economic and geographical environments, the Eurosystem does not envisage a "one-size-fits-all" cash supply system. The process of convergence will require some flexibility regarding customer requirements, the cash infrastructure and transitional periods for implementation.

As part of the roadmap, since July 2007 NCBs have provided cash services upon request to euro area credit institutions established outside their jurisdiction ("non-resident banks") and, since the end of 2007, euro coin lodgements from professional clients have been accepted at all euro area NCBs.

The Eurosystem is still considering a number of further steps, including electronic data exchange with credit institutions for cash lodgements and withdrawals, orientation-independent banknote lodgements and withdrawals as a common free-of-charge NCB service, and common banknote packaging standards for the free-of-charge NCB cash services.

As these issues have a bearing on stakeholders in the cash cycle and could have operational and cost implications, consultations have been conducted at both the national and the European level.

### PRODUCTION ARRANGEMENTS

A total of 6.3 billion euro banknotes were produced in 2007, compared with 7.0 billion in 2006. This reduction in the production volume

**Table 13 Allocation of euro banknote production in 2007**

| Denomination | Quantity (millions of banknotes) | NCB commissioning production |
|---|---|---|
| €5 | 980.0 | DE, ES, FR |
| €10 | 1,280.0 | DE, GR, FR, NL, AT |
| €20 | 1,890.0 | IE,GR, ES, FR, IT, PT, FI |
| €50 | 1,730.0 | BE, DE, ES, IT |
| €100 | 230.0 | IT, LU, NL |
| €200 | - | - |
| €500 | 190.0 | DE |
| Total | 6,300.0 | |

Source: ECB.

was primarily due to a slightly smaller increase in circulation in 2006 than in the previous year and the production in 2006 of 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 13).

## THE SECOND SERIES OF EURO BANKNOTES

In April 2005 the Governing Council approved a master plan for the development and introduction of the second series of euro banknotes. Since then, the ECB has established the functional and technical requirements for the banknotes by seeking input from various stakeholders, for example through qualitative research activities among members of the public and scientific visual perception and tactility studies. These activities resulted in a shortlist of user-friendly security features which were regarded as potentially suitable for inclusion in the second series of banknotes. During the subsequent industrial validation phase, the shortlist was reduced on the basis of the performance of the security features in a large-scale production environment. Other aspects were also taken into consideration, such as the resilience of the security features to counterfeiting, quality control requirements, cost, intellectual property rights and supply chain situations, as well as health, safety and environmental issues.

In August 2007 the industrial validation phase was largely completed. It resulted in a package of security features which the Governing Council adopted in October 2007. In addition to traditional security features which have proven their effectiveness, several innovative visual and machine-readable security features will be integrated into the second series of banknotes, with a view to effectively thwarting modern counterfeiting techniques. The selected security features have now been embedded in the artistic design, which is based on the "ages and styles" theme of the current series. Keeping this theme, while redesigning the graphical elements, will ensure that the new banknotes are immediately recognisable as euro banknotes, yet allow cash users to distinguish easily between the two series of banknotes. In December 2007 the Governing Council approved the draft design of the new series of banknotes, paving the way for the origination [16] phase. The new series will be launched over a period of several years, and the first denomination is expected to be issued in a few years' time. The ECB will inform the public well in advance about the modalities of the introduction of the new banknotes.

16 "Origination" covers the process of high-quality image preparation and the transformation of designs into production tools, such as printing plates.

# 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. They are also increasingly used by the financial markets and the general public. As in previous years, in 2007 the provision of euro area statistics proceeded smoothly. A major milestone in the ECB's medium-term strategy for statistics was reached in June 2007, with the first joint ECB/Eurostat publication of a set of quarterly integrated non-financial and financial accounts for the institutional sectors of the euro area. In addition, the ECB, in close collaboration with the NCBs, 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

In June 2007 the ECB and Eurostat jointly published, for the first time, a set of quarterly integrated euro area non-financial and financial sector accounts starting from the first quarter of 1999. These euro area accounts, which can be considered as "national accounts" for the euro area, are prepared by the Eurosystem together with Eurostat and the national statistical institutes. Among other things, they allow a 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 general government) and between these sectors and the rest of the world.

The euro area accounts also provide a framework for analysing higher frequency data in a more comprehensive way. In this regard, the publication, since November 2007, of a sectoral breakdown of the broad monetary aggregate M3 has further enhanced the scope for monetary analysis.

In April 2007 the existing monthly statistics on outstanding amounts of Short-Term European Paper (STEP) were supplemented by daily statistics on yields, with breakdowns by initial maturity and sector of issuer (see Section 3 of Chapter 4).

In July 2007 the ECB began the electronic publication of daily yield curves reflecting the implicit market remuneration rates of euro area central government debt securities denominated in euro (based on the interest rate and the market price) for a wide spectrum of maturities, ranging from 3 months to 30 years. The euro area yield curves can assist in gauging market expectations of economic and financial activity over a medium to long-term horizon.

The ECB has also compiled and released, on an experimental basis, monthly HICP-based estimates of administered prices in the euro area, using information on HICP sub-indices published by Eurostat and definitions agreed within the ESCB.

Additional geographical breakdowns[17] for quarterly balance of payments flows and annual international investment position data have been made available through regular press releases and the ECB's online Statistical Data Warehouse (SDW).[18]

The legal framework for the collection of monetary and financial statistics was enhanced with a new ECB Regulation concerning statistics on the assets and liabilities of investment funds (other than money market funds), under which investment funds will report harmonised data from early 2009. The Governing Council also adopted a recast Guideline on monetary, financial institution and market statistics, which now includes further provisions for statistics on investment funds' assets and liabilities and for payments statistics. In addition, the Governing

17 For Brazil, Russia, India, China and Hong Kong SAR.

18 The public version of the SDW was launched on the internet at the end of 2006 and was welcomed by users of euro area statistics. Owing to its robust and easy-to-use interfaces, it has quickly become a popular tool for searching for euro area data on the internet. Each month around 20,000 people use the SDW to find and download euro area data, including national breakdowns.

Council amended the ECB Guideline and Recommendation on balance of payments and international investment position statistics and the international reserves template.

Work is under way in several areas to further improve the euro area monetary and financial statistics in the coming years. In particular, preparations have been made for an integrated approach to MFI securitisation and the activities of financial vehicle corporations, paving the way for greatly enhanced availability of data on loan sales and loan securitisation.

In addition, the Eurosystem is exploring 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 and evolving financial markets in a cost-effective way.

The ECB continued to work on the development of a Centralised Securities Database (CSDB). The CSDB, an ESCB-wide project, is a single database containing benchmark information on individual securities that are relevant for the statistical purposes of the ESCB. The project is playing a pivotal role in the move towards security-by-security reporting, which has the potential to significantly alleviate the reporting burden for respondents while improving the quality and flexibility of euro area statistics. The database is already used by some NCBs to compile national financial statistics.

## 4.2 OTHER STATISTICAL DEVELOPMENTS

In 2007 the Eurosystem analysed in detail possible ways to further increase the efficiency of the production of ECB statistics, also with a view to keeping the statistical burden to a minimum. In this context, further work was conducted on the feasibility of reusing existing micro-data, in particular from credit registers and central balance sheet data offices. In addition, work continued with a view to promoting the alignment of statistical and supervisory concepts and data, focusing initially on the reporting requirements of credit institutions.

Several documents published in 2007 helped to increase transparency on the governance and quality standards currently applied to the production and dissemination of ECB and ESCB statistics. The document entitled "The ESCB's governance structure as applied to ESCB statistics" provides a brief overview of the governance structure guiding the provision of statistics by the ECB and the NCBs. The "Public commitment with respect to the ESCB's statistical function" featured on the first page of the statistics section of the ECB's website states the statistical principles and ethical and quality standards to which the ECB and the NCBs are committed when performing their statistical tasks. Furthermore, the "ECB Statistics Quality Framework" elaborates on the quality principles that guide the production of ECB statistics. Qualitative assessments and quantitative indicators, such as those contained in the annual quality report on the euro area balance of payments and international investment position statistics, are provided regularly as part of this quality framework.

The dissemination of statistics was further enhanced through the publication of additional tables on euro area statistics and all corresponding national data on the websites of both the ECB and the NCBs. Payments statistics have also been enhanced and the Blue Book Addendum has been replaced by time series and tables which can be found on the ECB's website (see Section 2 of Chapter 2). In addition, new data on securities trading and central counterparties have been made available.

As in previous years, the statistical information provided in the ECB's publications has been made more comprehensive. Examples include the wide range of indicators presented in the annual report entitled "Financial integration in Europe" and the addendum to the publication "Bond markets and long-term interest rates in non-euro area Member States of the European

Union and in accession countries" (see Section 3 of Chapter 4). Annual data on banking structures and quarterly data underpinning the Financial Stability Review were further improved. The euro money market survey was enhanced, in terms of both data quality and timeliness, and the underlying datasets have been made available in the SDW.

An ECB Occasional Paper entitled "Towards harmonised balance of payments and international investment position statistics – the experience of the European compilers", published in July 2007, provides an overview of the methodological framework and practical issues related to the collection, compilation and dissemination of these statistics.

The ECB continued to cooperate closely with Eurostat and other international organisations and has played an important role in the current update of global statistical standards (with the work on the System of National Accounts (SNA 93) and the IMF Balance of Payments Manual due to be completed by 2008). Eurostat, supported by the ECB, has recently started to prepare for the revision of the ESA 95, which will implement most of the changes to the SNA at the European level. The ECB was also actively involved in reviewing the OECD Benchmark Definition of Foreign Direct Investment. Finally, it continued to support and implement global technical standards for data exchange.[19]

### 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.

19 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, which serves to foster global standards for the exchange of statistical information.

# 5 ECONOMIC RESEARCH

The main functions of research at the ECB, as well as in the Eurosystem as a whole, are: to provide research results that are relevant for the formulation of policy advice on monetary policy and other Eurosystem tasks, and to design and implement the respective models and analytical tools; to maintain and use econometric models for economic forecasts and the comparison of the effects of alternative policies; and to communicate with the academic community, for example through the publication of research results in external journals and the organisation of research conferences.

## 5.1 RESEARCH PRIORITIES

At the ECB economic research is mainly conducted by the Directorate General Research, but also by several other business areas. A Research Coordination Committee coordinates the research, setting priorities and bringing together the business areas which are requesting or supplying research.

The following fields were the main research priorities for 2007: forecasting model development; the role of financial sector information, including credit and monetary aggregates, in monetary policy analysis; understanding the transmission mechanism of monetary policy; financial stability; the efficiency of the European financial system; and international issues.

With respect to forecasting model development, the focus was on the further development and use of structural dynamic stochastic general equilibrium (DSGE) models and on the implementation of dynamic factor models for short-term forecasting purposes. DSGE models have been developed and used in the past at the ECB for the analysis of a large and growing number of policy issues. This work continued in 2007, with particular emphasis on the impact of structural change (e.g. demographics), external factors (e.g. oil price shocks), productivity developments and financial issues (e.g. credit frictions). Furthermore, work on two medium-scale models and their use for policy analysis continued: the New Area-Wide Model (NAWM) and the Christiano, Motto and Rostagno model. The first is a forecasting and simulation tool being developed for use, together with other models, in the context of the Eurosystem and ECB projection exercises. The second is a simulation tool with special emphasis on financial factors. As regards the development of forecasting tools, factor-based models were further developed and increasingly used for the short-term assessment of economic developments. Finally, the ECB actively supported the Euro Area Business Cycle Network, a joint venture between central banks and the academic community managed by the Centre for Economic Policy Research (CEPR).

Research on monetary policy analysis centred on the development and use of quantitative methods for the monetary analysis, with an emphasis on providing high-quality analytical tools for the preparation of policy decisions. Work focused on developing money-based indicator models for inflation and on analysing money demand, as well as on introducing the structural models described above into the policy analysis process.

The monetary policy transmission mechanism was investigated from a number of perspectives. The Wage Dynamics Network (WDN), a network of ESCB researchers that investigates the features and sources of wage dynamics in the euro area and their relationship with prices, continued its work at both the aggregate and the micro level. The WDN survey group launched an ad hoc survey on wages, labour costs and price-setting behaviour at the firm level in 17 countries. The survey collects information on wage and price-setting, downward wage rigidity and the adjustment of wages and prices to shocks. The first set of research findings will be presented at a conference planned for 2008. Housing markets were also analysed, as well as the role of banks and credit in the monetary transmission mechanism. Work on household finances was further pursued, with plans for a euro area-wide survey being prepared by the Eurosystem Household Finance and

Consumption Network. Other topics analysed within this area of research were central bank communication policies, expectations and risk premia in the yield curve, and the determinants of equity price dynamics.

Financial stability issues and their impact on monetary policy were also explored, particularly in the context of work carried out for the ECB's Financial Stability Review. The financial system was analysed along two dimensions: its degree of integration and the evolution of capital markets.

Under the research priority related to international issues, the main areas of interest were global imbalances and the international role of the euro. As regards the former, a high-level seminar will be organised in 2008, while the outcome of work on the latter will be used to enhance the analytical content of the annual "Review of the international role of the euro". In the context of this research priority, an international extension of the NAWM was developed.

## 5.2 PUBLICATIONS AND CONFERENCES

The ECB's research results were published in its Working Paper Series and, to some extent, also through the Occasional Paper Series and the Legal Working Paper Series. In particular, the Working Paper Series – already a well-established tool to communicate policy-relevant internal research – saw the publication of more than 140 working papers in 2007. Slightly more than 100 were written by ECB staff, either alone or with external co-authors, with the remainder being written by external visitors attending conferences and workshops, working in the context of research networks or following a prolonged stay at the ECB for the completion of a research project. As is now the established norm, most of the papers are eventually expected to be published in leading, peer-reviewed academic journals. In 2007 ECB staff published more than 50 articles in academic journals.

In order to disseminate the findings of the Working Paper Series to a wider audience, it was decided to publish a Research Bulletin outlining policy-relevant research work, including topical articles and summaries of selected research papers. Featured articles in 2007 included discussions of the effects of imperfect information and learning on financial market prices, financial integration and capital flows in new EU Member States, and productivity growth in the euro area.

The ECB organised or co-organised more than ten conferences or workshops on research topics. Co-organised conferences involved the CEPR and other central banks, both from the Eurosystem and from outside the Eurosystem. Furthermore, a large number of workshops and seminars were organised to disseminate research within the ECB.

Most of the conferences and workshops were related to specific research priority areas. The area of forecasting model development continued in 2007 to receive the same degree of attention as in previous years. In September a workshop co-organised by the ECB, together with the CEPR and the Banque de France, in the context of the Euro Area Business Cycle Network, was held to discuss changes in inflation dynamics and their implications for forecasting. Conclusions from the workshop provided a useful input into work on inflation forecasting under way at the ECB. Furthermore, a workshop on forecasting techniques (an event organised by the ECB on a biennial basis) discussed forecast uncertainty in macroeconomics and finance, and more specifically how to integrate measures of risk into forecasting activities, a topical issue for many central banks.

Concerning the research priority of monetary policy analysis, a conference jointly organised by the Bank of Canada and the ECB on the definition of price stability was held at the ECB in November 2007. The conference addressed the theoretical options and practical experience in the context of defining price stability. Another conference in November 2007 on the analysis of the role, challenges and implications of money markets from a monetary policy perspective further advanced the understanding of the transmission mechanism of monetary policy. A conference on the implications of changes in banking and the financing of firms for the monetary policy transmission mechanism was held in May 2007.

A joint conference with the Bank of England – on payments and monetary and financial stability – was held in June 2007 as part of the work in the area of financial stability research, and a conference on globalisation and the macroeconomy took place in July 2007 in the context of the work on international issues.

An additional mechanism for the dissemination of research was the organisation of seminar series, of which two were of particular relevance: the Joint Lunchtime Seminars, co-organised with the Deutsche Bundesbank and the Center for Financial Studies, and the Invited Speakers Seminars. The two series comprise weekly seminars to which external researchers are invited to present their recent work. The ECB also organises research seminars outside the scope of these two series on a more ad hoc basis.

# 6 OTHER TASKS AND ACTIVITIES

## 6.1 COMPLIANCE WITH THE PROHIBITION 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 the 27 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 the domestic public sector, the public sector of other Member States and Community institutions and bodies. 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 2007 the Governing Council identified two cases of non-compliance with the above Treaty requirements and the associated Council Regulations.

First, Národná banka Slovenska purchased debt instruments issued by the European Investment Bank (EIB) in the primary market. More specifically, on 6 February 2007 Národná banka Slovenska bought USD-denominated EIB bonds amounting to USD 50 million for the purpose of foreign exchange reserve management. 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. Národná banka Slovenska sold the EIB debt instruments purchased in the primary market on 22 May 2007 and took immediate measures to prevent the occurrence of such events in the future.

Second, Banka Slovenije exceeded the limit on central bank holdings of coins which are credited to the public sector's account. On 15 February 2007 Banka Slovenije's holdings of coins issued by the public sector and credited to the national public sector's account exceeded, on a daily average basis, the limit of 10% of the value of coins in circulation established by Article 6 of Council Regulation (EC) No 3603/93. On that date, the value of coins held by Banka Slovenije and credited to the public sector's account reached 12.27% of the value of coins in circulation. This was a consequence of the strong return of coins to Banka Slovenije in the first half of February 2007, following the frontloading of the distribution to banks in autumn 2006 prior to the adoption of the euro. The situation was fully corrected immediately and the Treaty provisions have been respected since that date.

## 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.[20] All ECB opinions are published on the ECB's website.

The ECB adopted 43 opinions in 2007: 8 were in response to consultations by the EU institutions and 35 were in response to consultations by national authorities. This compares with 62 consultations in 2006. A list of the opinions adopted in 2007 and early 2008 is annexed to this Annual Report.

20 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 ECB opinions issued at the request of the EU Council are particularly noteworthy.

In addition to the opinions adopted under Article 105(4) of the Treaty, on 5 July 2007 the ECB issued an opinion[21] pursuant to Article 48 of the Treaty concerning the opening of the Intergovernmental Conference (IGC) that drew up the new Lisbon Treaty[22]. The ECB welcomed in particular the fact that price stability and the establishment of an Economic and Monetary Union with the euro as its currency were to be among the EU's objectives and that monetary policy was to be expressly listed as one of the EU's exclusive competences (see Section 1.2 of Chapter 5). On 2 August 2007, after the draft text of the new Treaty was unveiled, the President of the ECB wrote a letter to the Presidency of the IGC[23] with some suggestions regarding the institutional status of the ECB and the ESCB.

Following the abrogation by the Council of Cyprus's and Malta's derogation, the ECB issued a single opinion[24] on the proposals of the European Commission for amending Regulation (EC) No 974/98 on the introduction of the euro and Regulation (EC) No 2866/98 on the conversion rates between the euro and the currencies of the Member States adopting the euro.[25]

The ECB was consulted on a proposal for a Council directive on the identification and designation of European critical infrastructures[26], aimed at enhancing coordination in response to terrorist threats. The ECB noted that national provisions implementing the directive need to be compatible with central banks' responsibilities for oversight of payment and securities settlement systems and clearing houses, and that duplication of work already undertaken by central banks in this area should be avoided. The ECB also emphasised that the list of European critical infrastructures should be kept confidential.

In an opinion on a proposal for a Council regulation amending Regulation (EC) No 1338/2001 (on the protection of the euro against counterfeiting[27]), the ECB recalled that criminal law may exceptionally fall within Community competence if necessary to ensure the effectiveness of Community law. The ECB noted that the ECB and the NCBs should in principle receive samples of banknotes, even if retained as evidence in criminal proceedings, and that the ECB's own competence to ensure the integrity of euro banknotes under Article 106(1) of the Treaty and Article 16 of the Statute of the ESCB should be more precisely reflected in the proposal. On the procedures to be defined by the ECB and the Commission regarding the obligation to verify that received euro banknotes and coins are checked for authenticity, the opinion noted that these institutions should set the deadlines for national implementation.

In its opinion on a proposal for a regulation of the European Parliament and of the Council amending Regulation (EC) No 322/97 on European statistics,[28] the ECB welcomed the recognition of the need for close cooperation between the European Statistical System and the ESCB in the development, production and dissemination of European statistics, and the provisions regarding their exchange of confidential data.

In June 2007 a joint task force composed of representatives of the European Commission, the EU Council's Secretariat and the ECB issued a report on the consultation of the ECB on proposed Community legal acts. The task force was established following a suggestion of the President of the ECB. The report aims to ensure that all parties speed up internal procedures so that the ECB may be consulted and deliver its opinions as early as possible in the legislative

21 CON/2007/20 of 5 July 2007, OJ C 160, 13.7.2007, p. 2.
22 See Section 1.2 of Chapter 5 for details.
23 The letter has been published on the websites of both the IGC and the ECB.
24 CON/2007/19 of 5 July 2007, OJ C 160, 13.7.2007, p. 1.
25 See Section 2 of Chapter 3.
26 CON/2007/11 of 13 April 2007, OJ C 116, 26.7.2007, p. 1.
27 CON/2007/42 of 17 December 2007, OJ C 27, 31.1.2008, p. 1.
28 CON/2007/35 of 14 November 2007, OJ C 291, 5.12.2007, p. 1.

process. It recognises the obligation to consult the ECB on Lamfalussy Level 2 measures[29] falling within the ECB's fields of competence, and clarifies the ECB's advisory competence in the fields of prudential supervision and financial stability. The discussions within the task force have developed a shared understanding of the need for cooperation for the benefit of the legislative processes of the Community as a whole. The report reflects the common understanding of the members of the task force and does not formally bind their respective institutions.

The ECB continued to be consulted by national authorities on issues pertaining to the NCBs, in particular on amendments to the statutes of the German, Greek, Hungarian and Austrian NCBs.[30] The ECB was also consulted by the Czech Republic, Hungary, Portugal and Romania on issues that may have a bearing on the NCBs' independence as members of the ESCB.[31]

The ECB was consulted in the area of monetary policy by Latvia, Malta, Poland and Romania on the minimum reserves regime,[32] and by Cyprus, Poland and Slovenia with regard to currency matters and means of payment.[33] The ECB was also consulted by Austria, Germany, Hungary and Romania on statistical issues.[34]

With regard to supervision, Bulgaria, Germany, Greece, Italy, Austria, Poland and Romania[35] consulted the ECB on draft legislative proposals relating to significant reforms of the financial supervisory framework and to financial stability-related issues. In this context, in its opinions on a draft law amending the Banking Act, the Savings Banking Act, the Financial Supervisory Authority Act and the Act of the Oesterreichische Nationalbank aimed at further improving the supervisory framework for credit institutions in Austria and strengthening the role of the NCB, the ECB restated, in line with its previous opinions in this area, that cooperation (including information-sharing) between supervisory authorities and central banks is essential for the conduct of macro-prudential monitoring, the oversight of payment systems and the safeguarding of other market infrastructures which are essential for the smooth conduct of monetary policy. In particular from a financial stability perspective, the ECB held the view that NCBs would inevitably need to be involved in financial market crisis management.

In the area of payment and settlement systems, the ECB was consulted by the Netherlands, Hungary, Latvia, Greece, Slovenia, Romania, and Spain.[36] In this field, the Dutch Ministry of Finance requested the ECB's opinion on a draft law concerning systemic oversight of clearing and settlement companies. The ECB reiterated its view that, since payment systems are interlinked with securities clearing and settlement systems, there is a strong argument in favour of the NCB performing the oversight of both payment systems and securities clearing and settlement systems. It also repeated its recommendation that the oversight of payment systems, including market conduct, be explicitly assigned to De Nederlandsche Bank, which would be consistent with its participation in the Eurosystem. The ECB also noted that the NCB, as the prudential and systemic supervisor, should play a role in assessing whether the rules of the clearing and settlement institutions contain criteria limiting access by participants on grounds other than risk.

With regard to the legal framework for the introduction of the euro, the ECB was consulted by Cyprus.[37] Slovakia consulted the ECB on draft national legislation intended to facilitate the future introduction of the euro and amending the Law on Národná banka Slovenska and

29 The Lamfalussy approach is a four-level process for approving securities, banking and insurance legislation. For more details, see the report entitled "Final report of the Committee of Wise Men on the regulation of European securities markets", 15 February 2001, which is available on the European Commission's website. See also the ECB's Annual Report 2003, p. 111.
30 CON/2007/33, CON/2007/6, CON/2007/13 and CON/2007/14.
31 CON/2007/8, CON/2007/14, CON/2007/23 and CON/2007/29.
32 CON/2007/12, CON/2007/16, CON/2007/34 and CON/2007/22.
33 CON/2007/39, CON/2007/28 and CON/2007/5.
34 CON/2007/33, CON/2007/21, CON/2007/41, CON/2007/2 and CON/2007/24.
35 CON/2007/17, CON/2007/32, CON/2007/33, CON/2007/15, CON/2007/23, CON/2007/31 and CON/2007/40.
36 CON/2007/7, CON/2007/10, CON/2007/12, CON/2007/13, CON/2007/15, CON/2007/18, CON/2007/25 and CON/2007/27.
37 CON/2007/1.

27 other laws governing issues falling within the competence of the ECB that are relevant for legal convergence with the Treaty and the Statute of the ESCB.[38]

As of 2008, information regarding the most important cases of non-compliance with the duty to consult the ECB on draft national and Community legislation is also included in the Annual Report. In 2007 there were six cases of non-consultation of the ECB. In one case of non-compliance, the Polish authorities failed to seek the views of the ECB on a draft law on disclosure. The law intended to impose on certain individuals the obligation to declare activities between 1944 and 1990 which could be defined as collaboration with the state security services. Certain provisions of the draft law could have affected central bank independence and amended some aspects of the NCB's institutional regime under the Law on Narodowy Bank Polski, with implications for members of the governing bodies and staff of Narodowy Bank Polski. Had the ECB been consulted on this draft legislation, it would have raised significant objections. The ECB corresponded with the Sejm Marshal (the speaker of the lower house of the Polish parliament) regarding the obligation to consult, but received replies disputing the ECB's competence to be consulted on the aforementioned draft legislation. Subsequently, certain provisions of the law on disclosure that were of relevance for the ESCB were invalidated by the Polish Constitutional Court.

In another case of non-consultation, the Latvian authorities failed to consult the ECB on a draft legislative provision on currency matters, as required by Community law. The draft provision in question, which was adopted on 18 December 2007, was an amendment to the Regulation of the Cabinet of Ministers on the rendering of the name of the single currency of the European Union in Latvian, which was originally adopted on 26 July 2005 and in relation to which the Latvian authorities also failed to consult the ECB. Whereas the original Regulation provided that the name of the single currency in Latvian was "eiro", this provision has now been changed so that in Latvian legal acts the name "euro" must be used. Outside legal acts the single currency is still officially named "eiro" in Latvia. Following the adoption of the original Regulation in 2005, the ECB wrote to the Latvian Minister of Finance on 1 September 2005, clearly indicating that, in accordance with the consistent case law of the European Court of Justice, Member States may not legislate on matters regulated by directly applicable Community law, and emphasising that the Community has exclusive competence to legislate on the euro and its name.

38 CON/2007/43.

### 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 2007 the ECB did not perform any administration tasks. There was no outstanding balance at the end of 2006 and no new operations were initiated during 2007.

### 6.4 EUROSYSTEM RESERVE MANAGEMENT SERVICES

In 2007 a comprehensive set of services continued to be offered under the framework established in 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 2007 remained stable by comparison with 2006. With respect to the services themselves, there was an increase in customers' total cash balances and/or securities holdings. In 2007 the Eurosystem carried out a customer satisfaction survey, which confirmed customers' overall satisfaction with the range of services available under the framework and the quality of service offered.

CHAPTER 3

# ENTRY OF CYPRUS AND MALTA INTO THE EURO AREA

# 1 ECONOMIC AND MONETARY DEVELOPMENTS IN CYPRUS AND MALTA

On 10 July 2007 the ECOFIN Council adopted a decision allowing Cyprus and Malta to introduce the euro as their currency as from 1 January 2008, increasing the number of euro area countries from 13 to 15. The Council's decision was based on the convergence reports published by the ECB and the European Commission in May 2007, and followed a discussion by the EU Council in the composition of the Heads of State or Government, 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 rates between the Cyprus pound and the Maltese lira on the one hand and the euro on the other. The conversion rates were set at CYP 0.585274 and MTL 0.429300 to the euro and were identical to the central rates agreed with effect from 2 May 2005, when the currencies entered ERM II. The Cyprus pound had remained close to its central rate against the euro on the strong side of the fluctuation band, whereas the Maltese lira had stayed at its central rate during the whole period of participation in ERM II. Both currencies were trading very close to or at those rates on the day when the conversion rates were set.

Looking back over the past ten years, HICP inflation in both Cyprus and Malta has been relatively contained, fluctuating mostly between 2% and 3% (see Tables 14 and 15). These relatively favourable inflation developments should be seen against the background of long-standing pegged exchange rate regimes. In Cyprus, HICP inflation stood at higher levels in 2000 and 2003, largely reflecting strong increases in energy and food prices, as well as the EU harmonisation-related gradual increases in energy excise taxes and in the VAT rate from 10% to 15% in the period 2002-03. In Malta, somewhat higher HICP inflation rates were recorded in 1997 and 1998, largely owing to relatively strong increases in hotel, restaurant and transport prices. In 2007 average HICP inflation in Cyprus stood at 2.2%, with annual inflation rates rising from subdued levels in the first half of the year to above 3% at the end of 2007, mainly reflecting the development of energy prices. In Malta, HICP inflation in 2007 was on average lower than in 2006, mainly reflecting a sizeable drop in energy prices from the elevated levels recorded in the previous year, as well as a decline in accommodation prices. In the second half of 2007, annual inflation

**Table 14 Main economic indicators for Cyprus**

(annual percentage changes, unless otherwise indicated)

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP growth | 5.0 | 4.8 | 5.0 | 4.0 | 2.1 | 1.9 | 4.2 | 4.0 | 4.0 | 4.4 |
| *Contribution to real GDP growth (in percentage points)* | | | | | | | | | | |
| Domestic demand excluding stocks | 5.9 | 3.2 | 4.0 | 5.1 | 3.3 | 2.7 | 4.7 | 4.3 | 5.5 | .. |
| Net exports | -0.5 | 2.7 | -1.0 | 0.6 | -2.2 | 0.1 | -2.2 | 0.7 | -1.2 | .. |
| HICP inflation [1] | 2.3 | 1.1 | 4.9 | 2.0 | 2.8 | 4.0 | 1.9 | 2.0 | 2.3 | 2.2 |
| Compensation per employee | 3.1 | 4.5 | 6.0 | 3.7 | 4.8 | 7.7 | 1.9 | 1.8 | 2.7 | .. |
| Nominal unit labour costs (whole economy) | -0.3 | 1.5 | 2.7 | 1.9 | 4.8 | 9.7 | 1.5 | 1.4 | 0.5 | .. |
| Import deflator (goods and services) | 0.0 | 2.5 | 5.2 | 1.1 | 1.1 | -0.3 | 2.3 | 4.5 | 2.3 | .. |
| Current and capital account balance (% of GDP) [2] | 3.1 | -1.7 | -5.2 | -3.3 | -3.6 | -2.0 | -4.2 | -5.4 | -5.8 | -7.1 |
| Total employment | 1.6 | 1.8 | 1.7 | 2.2 | 2.1 | 3.8 | 3.8 | 3.6 | 1.7 | 1.5 |
| Unemployment rate (% of labour force) | 4.3 | 4.6 | 4.9 | 3.8 | 3.6 | 4.1 | 4.6 | 5.2 | 4.6 | 3.9 |
| General government surplus (+)/deficit (-) | -4.1 | -4.3 | -2.3 | -2.2 | -4.4 | -6.5 | -4.1 | -2.4 | -1.2 | 1.5 |
| General government gross debt | 58.4 | 58.7 | 58.8 | 60.7 | 64.6 | 68.9 | 70.2 | 69.1 | 65.2 | 60.0 |
| Three-month interest rate (% per annum) [1] | .. | 6.2 | 6.4 | 5.9 | 4.4 | 3.9 | 4.7 | 4.2 | 3.4 | 4.2 |
| Long-term ten-year government bond yield (% per annum) [1] | .. | .. | .. | 7.6 | 5.7 | 4.7 | 5.8 | 5.2 | 4.1 | 4.5 |
| Exchange rate against the euro [1, 3] | 0.58 | 0.58 | 0.57 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |

Sources: ECB and Eurostat.
1) Average of period values.
2) Data for 2007 refer to the four-quarter average up to the third quarter of 2007.
3) Cyprus pounds per euro.

**Table 15 Main economic indicators for Malta**

(annual percentage changes, unless otherwise indicated)

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP growth | .. | .. | .. | -1.6 | 2.6 | -0.3 | 0.2 | 3.3 | 3.4 | 3.1 |
| *Contribution to real GDP growth (in percentage points)* | | | | | | | | | | |
| Domestic demand excluding stocks | .. | .. | .. | -2.1 | -4.3 | 6.8 | 1.6 | 2.4 | 2.1 | .. |
| Net exports | .. | .. | .. | 6.7 | 5.4 | -5.3 | -1.5 | -2.2 | 1.2 | .. |
| HICP inflation [1] | 3.7 | 2.3 | 3.0 | 2.5 | 2.6 | 1.9 | 2.7 | 2.5 | 2.6 | 0.7 |
| Compensation per employee | .. | .. | .. | 5.4 | 3.1 | 4.6 | 1.4 | 1.8 | 2.5 | .. |
| Nominal unit labour costs (whole economy) | .. | .. | .. | 9.0 | 1.0 | 6.0 | 0.4 | 0.1 | 0.3 | .. |
| Import deflator (goods and services) | .. | .. | .. | -6.7 | 0.8 | -2.4 | -0.8 | 4.8 | 7.5 | .. |
| Current and capital account balance (% of GDP) [2] | -5.3 | -2.8 | -12.0 | -3.8 | 2.6 | -2.8 | -4.6 | -5.5 | -3.7 | -3.2 |
| Total employment | .. | .. | .. | 1.7 | 0.6 | 1.0 | -0.8 | 1.6 | 1.1 | 1.4 |
| Unemployment rate (% of labour force) | .. | .. | 6.7 | 7.6 | 7.5 | 7.6 | 7.4 | 7.3 | 7.3 | 6.3 |
| General government surplus (+)/deficit (-) | -9.9 | -7.7 | -6.2 | -6.4 | -5.5 | -9.8 | -4.9 | -3.1 | -2.5 | -1.6 |
| General government gross debt | 53.4 | 57.1 | 55.9 | 62.1 | 60.1 | 69.3 | 72.7 | 70.8 | 64.7 | 62.9 |
| Three-month interest rate (% per annum) [1] | 5.4 | 5.2 | 4.9 | 4.9 | 4.0 | 3.3 | 2.9 | 3.2 | 3.5 | 4.3 |
| Long-term ten-year government bond yield (% per annum) [1] | .. | .. | .. | 6.2 | 5.8 | 5.0 | 4.7 | 4.6 | 4.3 | 4.7 |
| Exchange rate against the euro [1, 3] | 0.43 | 0.43 | 0.40 | 0.40 | 0.41 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 |

Sources: ECB and Eurostat.
1) Average of period values.
2) Data for 2007 refer to the four-quarter average up to the third quarter of 2007.
3) Maltese liri per euro.

rates rose steadily to stand at just above 3% in December, resulting in an average inflation rate for the year as a whole of 0.7%. In both Malta and Cyprus, food prices contributed to rising inflation in the course of 2007. In Malta, this increase in inflation, which became particularly visible during the last quarter of the year, also reflected increases in the clothing and footwear and hotel and restaurant sub-indices.

Inflation developments should be seen against a background of solid economic growth over the past decade in Cyprus, while growth was more sluggish in Malta. In Cyprus, real GDP grew by approximately 5% at the start of the decade, before moderating to around 2% in 2002 and 2003, reflecting weakening tourism demand. In recent years, real GDP growth has picked up again to around 4%, in line with renewed strength in domestic demand. In Malta, following a period of solid economic growth until 2000, output growth slowed significantly, reflecting external weakness, increased competition in Malta's export markets and restructuring operations in the manufacturing sector. Output growth picked up again in later years and averaged around 3%, mainly driven by domestic demand. As regards external developments, Cyprus and Malta have on average recorded current and capital account deficits of around 3.5% and 4% of GDP respectively over the past ten years. In 2007 the current and capital account deficit increased to 7.1% of GDP in Cyprus and declined to 3.2% of GDP in Malta.

Labour market conditions have remained relatively stable over the past decade in both countries. In Cyprus, the unemployment rate fluctuated between 3% and 5%, while in Malta it mostly hovered around 7%. Employment growth was relatively strong in Cyprus, rising to almost 4% between 2003 and 2005, whereas in Malta employment increased more moderately over this period. Following the economic recovery in recent years, however, conditions in the labour market strengthened in both countries in the course of 2007. Unemployment rates followed a declining trend in both Cyprus and Malta, standing at 3.9% and 5.8% respectively at the end of 2007. Significant flows of foreign workers, including seasonal workers, support the flexibility of the labour markets in both countries.

Fiscal policy has become more supportive of the achievement of price stability over recent years in both Cyprus and Malta as their fiscal positions have improved significantly. Starting from high levels, the general government deficit-to-GDP ratio started to decline in both countries in 2004. In Cyprus, the deficit ratio of 6.5% of GDP in 2003 turned into a surplus of 1.5% in 2007, whereas in Malta, the deficit ratio fell from 9.8% of GDP in 2003 to 1.6% in 2007. In both countries, the improvement in the government's budgetary situation was mainly driven by non-cyclical factors, although temporary measures have also played an important role in recent years. The general government debt-to-GDP ratio is high in both countries but has declined in recent years. In Cyprus, the debt ratio declined from a peak of 70.2% of GDP in 2004 to 60% in 2007, while in Malta, it fell from 72.7% of GDP to 62.9% over the same period. In Malta, further fiscal consolidation is required if the country is to comply with its medium-term objective specified in the Stability and Growth Pact. In addition, in both countries, sufficient room for manoeuvre should be created in the public finances to cope with the expected worsening of the demographic situation, which is likely to entail an increase in age-related public expenditure.

Monetary policy played an important role in the convergence process in Cyprus and Malta. Both countries have a long-standing tradition of pegged exchange rate regimes, dating back to the 1960s. In addition, the maintenance of price stability as the primary objective of monetary policy was enshrined in the Central Bank of Cyprus Law and the Central Bank of Malta Act in 2002. The Cyprus pound was pegged to the ECU in 1992 and to the euro in 1999, with a fluctuation band of ±2.25%. The band was widened to ±15% in 2001 in the context of an ongoing gradual liberalisation of capital movements. However, the Central Bank of Cyprus did not make use of the wider band and the exchange rate moved within a narrow range. The Maltese lira was pegged to a basket of currencies for most of the period following Malta's independence in 1964, with large weights being assigned to the ECU/euro, the pound sterling and the US dollar. As the euro was the currency with the largest weight in the basket (accounting for 70%), exchange rate fluctuations of the lira vis-à-vis the euro remained fairly limited in the years before ERM II entry. Both the Cyprus pound and the Maltese lira entered ERM II on 2 May 2005, joining with the standard fluctuation band of ±15%. At that time, the Maltese authorities also stated their intention to maintain the exchange rate of the lira at the central rate against the euro as a unilateral commitment.

During 2007 the monetary policy of the central banks of Cyprus and Malta continued to be geared towards the achievement of price stability. Both central banks provided support for their exchange rate pegs by keeping their key official interest rates above those of the ECB. The Central Bank of Cyprus kept its minimum bid rate unchanged at 4.5% for most of the year, whereas the Central Bank of Malta increased its central intervention rate twice, in January and May, by a total of 50 basis points to 4.25%. The alignment of the official interest rates with those of the ECB took place on 21 December 2007 in Cyprus and on 28 December 2007 in Malta, completing the process of convergence of official interest rates. Money market interest rates in Cyprus and Malta moved broadly in line with the official interest rates in each country, resulting in the completion of the convergence of market interest rates in December 2007. Long-term interest rates had already been close to euro area levels since early 2006. This reflected market confidence in general economic developments in both countries and the credibility of their monetary and exchange rate policies.

Following their adoption of the euro, the main policy challenge for both Cyprus and Malta is to ensure the conduct of appropriate national economic policies in order to secure a high degree of sustainable convergence. It is particularly important for both countries to continue on sustainable and credible paths of fiscal consolidation based on structural measures and to improve their fiscal performances by tangibly reducing their debt ratios. It is also important that they maintain moderate wage developments that take into account labour productivity growth, labour market conditions and developments in competitor countries. In both countries, the strengthening of competition in product markets and improvements in the functioning of the labour market are key elements in this regard. In Cyprus, for example, the indexation mechanism for wages and for some social benefits (such as cost-of-living allowances) should be overhauled in order to reduce the risks associated with inflation inertia. In Malta, attention must also be paid to overcoming the structural constraints on economic growth and job creation, notably by fostering labour participation.

**Box 10**

### STATISTICAL IMPLICATIONS OF THE ENLARGEMENT OF THE EURO AREA TO INCLUDE CYPRUS AND MALTA

The enlargement of the euro area to include Cyprus and Malta as of 1 January 2008 is the third occasion on which statistical series for the euro area have had to be amended in order to include additional member countries. The preparation of statistics for the enlarged euro area has been coordinated, where necessary, with the European Commission.

The entry of Cyprus and Malta into the euro area means that residents of these countries 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 residents of Cyprus and Malta and other euro area residents must now be consolidated.

As of January 2008 Cyprus and Malta are thus obliged to meet all the statistical requirements of the ECB, i.e. to provide fully harmonised and comparable national data.[1] Since the preparatory work for new statistics requires a long lead time, the central banks of Cyprus and Malta and the ECB started the statistical preparations well before Cyprus and Malta joined the EU. After becoming members of the ESCB, the Central Bank of Cyprus and the Central Bank of Malta intensified their preparations to fulfil the requirements of the ECB in the field of monetary, banking, balance of payments, government finance, financial accounts and other financial statistics. In some statistical areas, an action plan has been developed with the two countries in order to ensure the gradual fulfilment of all ECB statistical requirements in the course of 2008. In addition, the central banks of Cyprus and Malta had to carry out the necessary preparations for the integration of Cypriot and Maltese credit institutions into the ECB's minimum reserve system and to fulfil the relevant statistical requirements.

For the data reporters and NCBs of the other euro area countries, the enlargement of the euro area meant that from January 2008 they had to report transactions (or flows) and positions with residents of Cyprus and Malta as part of the euro area data, rather than as transactions and positions with non-euro area residents.

1 The statistical requirements of the ECB are summarised in the document "ECB statistics: an overview", April 2006.

In addition, Cyprus, Malta and the other euro area countries all had to provide backdata with sufficient geographical and sector detail, dating back at least as far as 2004, the year Cyprus and Malta 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 Cyprus and Malta) 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 THE CENTRAL BANK OF CYPRUS AND THE CENTRAL BANK OF MALTA INTO THE EUROSYSTEM

Pursuant to Article 122(2) of the Treaty, the ECB reviewed the statutes of the Central Bank of Cyprus and the Central Bank of Malta and other relevant Cypriot and Maltese legislation for compliance with Article 109 of the Treaty. The ECB made a favourable assessment of the compatibility of Cypriot and Maltese legislation with the Treaty and with the Statute of the ESCB, as stated in its Convergence Report on Cyprus and Malta published in May 2007.

The ECB, the Central Bank of Cyprus and the Central Bank of Malta put in place a number of legal instruments with a view to ensuring the integration of the Central Bank of Cyprus and the Central Bank of Malta into the Eurosystem on 1 January 2008. The Eurosystem's legal framework was adapted as a consequence of the decision taken by the ECOFIN Council on 10 July 2007 to abrogate the derogations of Cyprus and Malta[1]. The introduction of the euro in Cyprus and Malta and the integration of their central banks into the Eurosystem also required changes to some Cypriot and Maltese legal instruments.

In March 2007 the Central Bank of Cyprus's statutes were brought into line with recommendations in the ECB's Convergence Reports 2004 and 2006. Cyprus had consulted the ECB on the draft amendments to the statutes of the Central Bank of Cyprus on three occasions. The ECB adopted three opinions proposing changes,[2] which were reflected in the final version of the statutes. In the course of 2007, the ECB was also consulted on amendments to other Cypriot legislation, governing currency issues.[3]

Malta consulted the ECB on the draft amendments to the Central Bank of Malta's statutes on 30 March 2006. The ECB adopted an opinion[4] proposing a number of changes, which were taken on board in the amendments to the statutes. The Central Bank of Malta also consulted the ECB on 21 November 2006 on further changes to the Central Bank of Malta's statutes to reflect the recommendations contained in the ECB's Convergence Report 2006. The ECB adopted an opinion[5] on the changes, which was also reflected in the final version of the Central Bank of Malta's statutes. On 28 May 2007 the ECB was also consulted on amendments to Central Bank of Malta Directive No 1 on minimum reserve requirements and adopted an opinion on the amendments.[6]

The ECOFIN Council's decision of 10 July 2007 triggered amendments to Council Regulation (EC) No 974/98 to enable the introduction of the euro in Cyprus[7] and Malta[8], and the adoption of Council Regulation (EC) No 1135/2007[9] and Council Regulation (EC) No 1134/2007[10] amending Regulation (EC) No 2866/98, which determined the irrevocably fixed exchange rate of the euro vis-à-vis the Cyprus pound and the Maltese lira respectively. The Council consulted the ECB on proposals for both these regulations, on which the ECB adopted an opinion.[11] The ECB was also consulted on national legislation regulating the euro changeover in Cyprus and Malta.[12]

As regards legal preparations for integrating the Central Bank of Cyprus and the Central Bank of Malta into the Eurosystem, the ECB adopted the necessary legal instruments to provide for the paying-up of the remaining capital and the transfer by each central bank of foreign reserves

1 Council Decision 2007/503/EC of 10 July 2007 in accordance with Article 122(2) of the Treaty on the adoption by Cyprus of the single currency on 1 January 2008, OJ L 186, 18.7.2007, p. 29, and Council Decision 2007/504/EC of 10 July 2007 in accordance with Article 122(2) of the Treaty on the adoption by Malta of the single currency on 1 January 2008, OJ L 186, 18.7.2007, p. 32.
2 CON/2006/4, CON/2006/33 and CON/2006/50.
3 CON/2007/39 and CON/2008/1.
4 CON/2006/23.
5 CON/2007/58.
6 CON/2007/16.
7 Council Regulation (EC) No 835/2007 of 10 July 2007 amending Regulation (EC) No 974/98 as regards the introduction of the euro in Cyprus, OJ L 186, 18.7.2007, p.1.
8 Council Regulation (EC) No 836/2007 of 10 July 2007 amending Regulation (EC) No 974/98 as regards the introduction of the euro in Malta, OJ L 186, 18.7.2007, p. 3.
9 Council Regulation (EC) No 1135/2007 of 10 July 2007 amending Regulation (EC) No 2866/98 as regards the conversion rate to the euro for Cyprus, OJ L 256, 2.10.2007, p. 2.
10 Council Regulation (EC) No 1134/2007 of 10 July 2007 amending Regulation (EC) No 2866/98 as regards the conversion rate to the euro for Malta, OJ L 256, 2.10.2007, p. 1.
11 CON/2007/19, OJ C 160, 13.7.2007, p 1.
12 CON/2006/10 and CON/2007/1.

to the ECB.[13] Pursuant to Article 27.1 of the Statute of the ESCB, the Governing Council adopted recommendations on the external auditors of the Central Bank of Cyprus[14] and of the Central Bank of Malta[15] for the annual accounts starting from the financial year 2008. The ECB also reviewed its legal framework and introduced, where necessary, amendments resulting from the Eurosystem membership of the Central Bank of Cyprus and the Central Bank of Malta. This included a review of Cypriot and Maltese legislation implementing the Eurosystem's legal framework for monetary policy and TARGET2. Cypriot and Maltese counterparties were consequently able to participate in the Eurosystem's open market operations from 2 January 2008. 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 Cyprus and Malta.[16] Finally, the ERM II agreement[17] was terminated for the Central Bank of Cyprus and the Central Bank of Malta.

13 Decision ECB/2007/22 of 31 December 2007 on the paying-up of capital, transfer of foreign reserve assets and contributions by the Central Bank of Cyprus and the Central Bank of Malta to the European Central Bank's reserves and provisions, OJ L 28, 1.2.2008, p. 36.
14 Recommendation ECB/2007/12 of 15 November 2007 to the Council of the European Union on the external auditors of the Central Bank of Cyprus, OJ C 277, 20.11.2007, p. 1.
15 Recommendation ECB/2007/17 of 29 November 2007 to the Council of the European Union on the external auditors of the Central Bank of Malta, OJ C 304, 15.12.2007, p. 1.
16 Regulation ECB/2007/11 of 9 November 2007 concerning transitional provisions for the application of minimum reserves by the ECB following the introduction of the euro in Cyprus and Malta, OJ L 300, 17.11.2007, p. 44.
17 Agreement of 14 December 2007 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 319, 29.12.2007, p. 7.

# 3 OPERATIONAL ASPECTS OF THE INTEGRATION OF THE CENTRAL BANK OF CYPRUS AND THE CENTRAL BANK OF MALTA INTO THE EUROSYSTEM

Following the ECOFIN Council's decision of 10 July 2007 on the adoption of the euro by Cyprus and Malta on 1 January 2008, the ECB conducted technical preparations with a view to fully integrating the Central Bank of Cyprus and the Central Bank of Malta into the Eurosystem. In line with the provisions of the Treaty, both central banks 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 the central banks of Cyprus and Malta into the Eurosystem were conducted in close cooperation between the ECB and the Central Bank of Cyprus and the Central Bank of Malta and, where appropriate, in a multilateral manner with the 13 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

Following the adoption of the euro by Cyprus and Malta on 1 January 2008, credit institutions located in these two countries became subject to the Eurosystem's reserve requirements as from that date. However, as 1 January 2008 fell almost in the middle of the regular Eurosystem reserve maintenance period running from 12 December 2007 to 15 January 2008, transitional provisions had to be made for the application of minimum reserves in Cyprus and Malta during this maintenance period. Transitional provisions were also needed for the calculation of the reserve base of the respective counterparties. The list of the 215 Cypriot and 22 Maltese credit institutions subject to the Eurosystem's reserve requirements was published on the ECB's website for the first time on 31 December 2007.

The entry of Cyprus and Malta into the euro area increased the aggregate reserve requirements of euro area credit institutions by less than 1% (€1.1 billion and €0.4 billion respectively). The autonomous liquidity factors in the balance sheets of the two central banks reduced the liquidity needs of the entire euro area banking sector by, on average, €2.7 billion in the period from 1 to 15 January 2008. In the calculation of this figure, the liquidity-absorbing monetary policy operations launched by the Central Bank of Cyprus and the Central Bank of Malta before entering the euro area, which had all matured by 4 January, are also treated as autonomous factors. Accordingly, taking into account both reserve requirements and autonomous factors, the entry of Cyprus and Malta into the euro area reduced the total liquidity needs of the euro area banking sector by €1.2 billion, equating to 0.3% of the aggregate liquidity needs.

In general, this liquidity surplus of €1.2 billion was smoothly channelled via the interbank market to banks in other euro area countries, so that it could be used for the fulfilment of reserve requirements in those countries. However, until 15 January, a daily average of around €0.3 billion was also placed in the deposit facility by Cypriot counterparties.

The ECB took account of the impact on euro area liquidity conditions by adjusting the allotment amounts in its main refinancing operations already as of the operation which was settled on 28 December and matured on 4 January. Given the liquidity surplus, counterparties from Cyprus and Malta only submitted a negligible amount of bids in the main refinancing operations at the beginning of 2008. However, they did participate in the liquidity-absorbing fine-tuning operations which were conducted on 2 and 3 January, depositing €0.3 and €0.5 billion with the Eurosystem.

On entering the euro area, the central banks of Cyprus and Malta also adopted the collateral framework of the Eurosystem. The Central Bank of Cyprus reported assets of €4.2 billion located in Cyprus and the Central Bank of Malta reported assets of €3.1 billion located in Malta which were eligible to be used as collateral in Eurosystem credit operations as of 1 January 2008.

### 3.2 CONTRIBUTION TO THE ECB'S CAPITAL, RESERVES AND FOREIGN RESERVE ASSETS

Upon joining the ESCB on 1 May 2004, the Central Bank of Cyprus and the Central Bank of Malta paid up 7% of their 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, the Central Bank of Cyprus and the Central Bank of Malta paid up the remaining part of their subscription on 1 January 2008. Their total subscribed shares amount to €7.2 and €3.6 million respectively, equivalent to 0.1249% and 0.0622% of the ECB's subscribed capital of €5.761 billion as at 1 January 2008.

At the beginning of 2008, in accordance with Articles 30 and 49.1 of the Statute of the ESCB, the Central Bank of Cyprus and the Central Bank of Malta transferred foreign reserve assets (of €73.4 million and €36.6 million respectively) to the ECB in proportion, based on their 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. Following the precedent set in 2007 by the pooling of operational activities between Banka Slovenije and the Banque centrale du Luxembourg for the management of their share of the ECB's foreign reserve assets, the Central Bank of Cyprus and the Central Bank of Malta have agreed to pool their operational activities for the management of their share of the ECB's foreign reserve assets with the Bank of Greece and the Central Bank and Financial Services Authority of Ireland respectively. In connection with the transfer of foreign reserve assets to the ECB, the Central Bank of Cyprus and the Central Bank of Malta were credited with a euro-denominated claim on the ECB.

# 4 THE CASH CHANGEOVER IN CYPRUS AND MALTA

Six years after the successful introduction of the euro banknotes and coins in 12 euro area countries at the same time and one year after Slovenia joined the Eurosystem, the euro banknotes and coins were successfully introduced in Cyprus and Malta on 1 January 2008. After a dual circulation period of one month, the euro had fully replaced the Cyprus pound and the Maltese lira.

As in the previous cash changeovers, timely and comprehensive preparation was crucial to the smooth introduction of the euro banknotes and coins. Both Cyprus and Malta had established changeover plans at the national level long before €-Day. These plans were based on, among other things, the legal framework adopted by the Governing Council in July 2006 in relation to certain preparations for the euro cash changeover and the frontloading and sub-frontloading of euro banknotes and coins outside the euro area.

Following the ECOFIN Council's decision of 10 July 2007 on the adoption of the euro in Cyprus and Malta on 1 January 2008, the Central Bank of Cyprus and the Central Bank of Malta became eligible to borrow banknotes from the Eurosystem in preparation for the cash changeover and the banknote requirements in 2008.

To cover the launch requirements, the Eurosystem provided the Central Bank of Cyprus with a total of 79.1 million euro banknotes with a face value of €1,730.0 million from its stocks, while the Central Bank of Malta received a total of 72.0 million banknotes with a face value of €1,566.0 million. For geographical and logistical reasons, the physical delivery of the banknotes was performed on behalf of the Eurosystem by the Bank of Greece, the Banca d'Italia and the Banco de Portugal.

With regard to the euro coins, the competent authorities in both countries opted for a public tender procedure to procure the required quantities. In the case of Cyprus, 395.0 million euro coins with a face value of €100.3 million were produced by Mint of Finland, while the Monnaie de Paris minted 200.0 million euro coins with a face value of €56.1 million for Malta.

The Central Bank of Cyprus began frontloading euro coins to credit institutions on 22 October 2007; the frontloading of euro banknotes began on 19 November 2007. Sub-frontloading to retailers and the cash-operated machine industry started at the same time as the frontloading operation. A widespread predistribution of euro coins was supported by making some 40,000 pre-packed coin starter kits, worth €172 each, available to businesses and retailers from 3 December 2007. 250,000 mini-kits, worth CYP 10 each, went on sale to the general public on the same date.

In Malta the frontloading of euro coins started in late September 2007, while the frontloading of euro banknotes began in late October. The sub-frontloading of banknotes and coins to businesses and retailers, including the distribution of coin starter kits, worth €131 each, started on 1 December 2007. The general public was offered the opportunity to buy one of 330,000 mini-kits worth €11.65 from 10 December 2007.

The frontloading and sub-frontloading operations in both countries, which contributed to a widespread distribution of euro cash before the launch, were completed as scheduled and were key to ensuring that the overall process ran smoothly. The changeover process in Cyprus and Malta also benefited from the quick conversion of the automated teller machines, which either had been converted before €-Day or were converted in the course of 1 January 2008. In addition, retailers gave change only in euro cash from the first day.

In both countries the euro was brought into circulation under a "big bang" scenario, i.e. the euro banknotes and coins were physically introduced at the same time as the euro became legal tender. The Central Bank of Cyprus and the Central Bank of Malta will redeem their respective legacy banknotes for ten years, and their coins for two years.

In connection with the introduction of the euro in Cyprus and Malta, the euro area NCBs exchanged Cyprus pound and Maltese lira banknotes against euro at par value from the first working day of 2008, and will continue this facility until 29 February 2008 as a free-of-charge service.[18] The amount exchanged was limited to €1,000 for any given party/transaction on any one day.

## THE INFORMATION CAMPAIGN ON THE INTRODUCTION OF THE EURO

The ECB, in cooperation with the Central Bank of Cyprus and the Central Bank of Malta, designed and implemented comprehensive information campaigns in preparation for the introduction of the euro in Cyprus and Malta on 1 January 2008. The objective of these joint euro information campaigns was to familiarise the public with the visual appearance and the security features of the euro banknotes and coins, as well as with the cash changeover modalities. Particular attention was paid to professional cash handlers and the visually impaired, for whom special training sessions and materials were developed.

The logo "€ Our money", which is based on the logo used for the information campaign for the introduction of the euro banknotes and coins in 2002, featured in all the joint communication activities related to the changeover in Cyprus and Malta.

The joint euro information campaigns adopted a communication mix involving research activities, publications, a press and public relations programme and a partnership programme, as well as dedicated web pages. Following pan-European qualitative research which was conducted in 2006, a strong human element was used when communicating about euro cash. Pictures of Cypriot and Maltese citizens in cash-handling situations were used in the information materials in order to bring the euro closer to the people. The campaigns also took into account the lessons learnt in the context of the euro information campaign in Slovenia, where the communication mix used was validated by a survey conducted in February 2007.

Almost 1.8 million publications, in Greek, Maltese, English and Turkish, were produced by the ECB and distributed by the Central Bank of Cyprus and the Central Bank of Malta. Every household in Cyprus and Malta received one of the 560,000 "public information leaflets". Together with these leaflets, households in Cyprus also received a euro calculator and two euro banknote cards, while those in Malta received two euro conversion cards. These are wallet-size cards showing two images that become alternately visible when the card is tilted. In Malta, the cards showed a conversion table for standard amounts in euro and Maltese lira, and on the reverse side the €20 banknote and its security features. In Cyprus, both the €20 and €50 banknote and their security features were shown.

Special attention was paid to visually impaired citizens. The "€ talking card", an innovative product based on the principle of birthday cards which play a tune, contained an electronic chip with a pre-recorded three-minute message describing the main features of the euro and the local changeover modalities.

Several public relations and press events triggered extensive press coverage: euro banners on the buildings of the Central Bank of Cyprus and the Central Bank of Malta, a euro conference in Malta to foster dialogue on the economic and practical aspects of the euro, a lecture for the academic world in Cyprus, and euro celebrations on 12 and 18 January 2008 in Malta and Cyprus respectively. In order to provide authoritative information about the organisation, responsibilities and activities of the ECB/Eurosystem, a two-day seminar for Cypriot and Maltese journalists was organised at the ECB in Frankfurt in September 2007.

18 Article 52 of the Statute of the ESCB requires that the Governing Council of the ECB take the necessary measures to ensure that banknotes denominated in currencies with irrevocably fixed exchange rates to the euro are exchanged by the euro area NCBs at par value. Against this background, the Governing Council adopted a guideline on the exchange of such banknotes on 24 July 2006.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CHAPTER 4

# FINANCIAL STABILITY AND INTEGRATION

# 1 FINANCIAL STABILITY

The Eurosystem contributes to the smooth conduct of policies 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.

## 1.1 FINANCIAL STABILITY MONITORING

The ECB, in collaboration with the ESCB's Banking Supervision Committee (BSC), aims to safeguard the stability of the financial system.[1] Key activities are monitoring risks to financial stability and assessing the financial system's shock-absorbing capacity. The main focus is on banks as they are still the primary intermediaries of funds and also the main potential channel for the propagation of risk in the financial system. At the same time, the increasing importance of financial markets and other financial institutions and their linkages with banks implies that vulnerabilities in these components of the financial system need to be monitored by the ESCB.

### CYCLICAL DEVELOPMENTS

In 2007 the turmoil in international financial markets in the second half of the year raised a number of issues pertaining to financial stability in the euro area. The main developments, their dynamics and the lessons that may be drawn from this episode are treated elsewhere in this report (see Section 2 of Chapter 1), as well as in a number of pertinent ECB publications, notably the Financial Stability Review. Overall, and despite the turmoil, the euro area financial system remained sound and resilient in 2007. However, its shock-absorbing capacity was severely tested over a prolonged period during the second half of the year. While the macroeconomic backdrop remained largely supportive of financial system stability throughout the year, there was an abrupt reversal of favourable financial market conditions in July and August. This episode of financial market turbulence, which was sparked by a sharp rise in delinquency rates on US sub-prime mortgages, involved a repricing of credit risk across several markets and ultimately led to a disruption in the functioning of core funding markets.

Before the market turmoil began, the euro area financial system was in a robust financial position, as a result of several years of strong profitability in the banking sector which continued into the first half of 2007. This left the banking system with an ample buffer with which to absorb disturbances. The improvement in the profitability of large euro area banks in the first half of 2007 was mostly driven by strong growth in non-interest income, whereas net interest income continued to come under pressure against the background of a flat yield curve despite robust, albeit slowing, growth in loans to the private sector. The profitability of large euro area banks was also supported by a continuation of low loan impairment charges. However, profitability levels were adversely affected in the second half of the year by the repricing of credit risk and by more difficult market conditions for funding liquidity. This negative impact was partly due to valuation changes in sub-prime and structured credit securities as well as leveraged loan commitments. The credit market turmoil had implications in particular for banks' non-interest income sources, while banks reliant on wholesale funding sources also faced challenges in increasing their sources of net interest income.

While continued strong profitability in the first half of 2007 contributed positively to the capital of banks, solvency ratios decreased slightly as risk-weighted assets grew at a higher rate than banks' capital bases. This notwithstanding, solvency levels remained comfortably above minimum regulatory requirements in the first half of 2007. In spite of the adverse developments in profitability in the second half of the year, the direct implications of the financial market

1 Since the end of 2004 the ECB has published a semi-annual report on the stability of the euro area financial system entitled "Financial Stability Review". In 2007 it also published the sixth 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.

turmoil are not likely to significantly affect the solvency ratios of large euro area banks for 2007, indicating that these banks maintained an adequate shock-absorbing capacity.

Aside from the possible consequences of the credit market turbulence, future risks to the euro area banking system mainly relate to the possibility of adverse developments in the credit cycle, with negative implications for banks' asset quality and loan impairment charges. In addition, the possibility of a disorderly unwinding of global imbalances remains a source of medium-term risk to global financial stability.

Financial conditions in the euro area insurance sector continued to improve in the first half of 2007, consolidating the improvements observed since 2004. This strength was supported by further growth in premiums, as well as by cost containment and moderate developments in losses. A strengthening of investment income, resulting from favourable stock market developments in the first half of 2007, also contributed to the improvement in profitability. Some risks remain in the insurance sector, however, and may have increased. Financial market risks remain one of the largest risks facing insurers. While euro area insurance companies appear to have limited exposure to sub-prime mortgages and structured credit products, the secondary effects of a challenging credit market environment may be of some concern. Further risks may emerge from increased competition, in particular in the non-life segment of the insurance industry, which could put downward pressure on premium growth.

The global hedge fund industry continued to grow in 2007 as a whole, although developments in net inflows varied significantly throughout the year. Net inflows were very strong in the first half of the year, notwithstanding a short-lived episode of financial market turbulence in late February and early March. In the second half of the year, however, net investor inflows to the hedge fund sector were adversely affected by the credit market turmoil and widespread losses in August which had an impact on all


investment strategies pursued by hedge funds. Nevertheless, at the end of the third quarter of 2007, year-to-date returns remained positive for the hedge fund industry as a whole.

## STRUCTURAL DEVELOPMENTS

Structural developments in the banking industry, which typically occur over long periods of time, can have important consequences for the stability of the financial system. In 2007 the main long-term trends in consolidation and intermediation continued. The structure of banking markets continued to vary significantly across EU Member States.

The consolidation process, which is reflected in the decrease in the number of credit institutions, continued at the aggregate level, although at a declining rate. At the end of 2006 the number of credit institutions in the EU25 was 2% lower than in 2005. At the same time, banking intermediation, measured by total banking assets, continued to outpace nominal GDP growth. The combination of a declining number of credit institutions and an increase in banking assets points to the growing importance of larger institutions.

The reduction in the number of credit institutions was closely related to the mainly domestic merger and acquisition (M&A) activity within the EU banking sector. At the same time, the declining trend in the number of M&A transactions that has been observed since 2000 continued in 2007. Cross-border deals between credit institutions within the EU and those outside the EU are an exception to this trend, as they have increased, especially over the past two years. The value of M&As, however, increased in 2007, mainly as a result of large domestic deals in some Member States. With the acquisition of ABN Amro by the consortium of Royal Bank of Scotland, Santander and Fortis, cross-border deals in the EU reached a new scale. This highlights the predominance of a relatively small number of large-scale deals, which have been taking place every year since 2004.

As regards the distribution channels used in retail banking, a number of recent developments can be identified. Branch networks are being redesigned in terms of location and services in order to become more cost-effective and better integrated into the new distribution channels used by credit institutions. In addition, electronic channels are rapidly being developed, not only for the provision of information and transaction services but also for the promotion and sale of banking products. In an effort to address the fierce competition in the area of consumer credit, banks are also increasing their cooperation with third parties, such as retailers, financial companies and financial agents/services groups. These developments, and in particular the growing use of electronic channels, could involve different types of risk, such as operational, reputational, liquidity, legal and strategic risk. However, no significant concerns for financial stability have been identified to date, as electronic channels are still of limited importance for the majority of banks.

## 1.2 FINANCIAL STABILITY ARRANGEMENTS

The main developments in the area of financial stability arrangements in 2007 concerned the follow-up to the findings of the EU-wide financial crisis simulation exercise carried out in April 2006.[2] The Ad Hoc Working Group on EU Financial Stability Arrangements of the Economic and Financial Committee (EFC), which was mandated to consider some of the key issues arising from the exercise and in which the ECB was represented, submitted its final report in September 2007 with a number of recommendations which were subsequently endorsed by the EFC. Throughout this discussion, the ECB emphasised that the prevention of financial crises should be the main focus of attention of the work, without, however, neglecting the pertinent issues related to the management of crises, if they occur, and their eventual resolution. As part of this endeavour, the BSC, in cooperation with the Committee of European Banking Supervisors (CEBS), developed a common analytical framework for assessing the systemic implications of a financial crisis with the aim of providing a common language for discussions between authorities in Member States affected by a cross-border financial crisis. This will allow the respective national authorities to address more effectively the impact of a crisis on their domestic financial systems and real economies.

As a result of the EFC recommendations, the ECOFIN Council agreed in October 2007 on a strategic roadmap for strengthening the EU arrangements for financial stability at both the EU and the national level. As a first step, the Council adopted a set of common principles for cross-border financial crisis management which will be included in a Memorandum of Understanding (MoU) between the central banks, supervisors and finance ministries of the EU Member States to be signed in spring 2008 as an extension of the EU MoU signed in 2005. The extended MoU will also include the above-mentioned common analytical framework. In addition, it will contain practical guidelines for crisis management which reflect a common

2 This exercise was organised by the Economic and Financial Committee with the aim of testing the Memorandum of Understanding on cooperation in financial crisis situations between banking supervisors, central banks and finance ministries. For more details, see the ECB's Annual Report 2006, pp. 138-139.

understanding of the measures that need to be taken in the event of a cross-border crisis. The ECOFIN Council also encouraged the Member States which share financial stability concerns to develop and sign "voluntary specific cooperation agreements" that are consistent with the extended EU-wide MoU and build on cross-border supervisory arrangements for crisis prevention. The European Commission was invited, in close cooperation with the Member States, to consider possible enhancements and, where necessary, to propose regulatory changes with particular regard to information exchange, the cross-border transfer of assets, the winding-up of banking groups, and deposit guarantee scheme arrangements. The European Commission is already reviewing Directive 2001/24/EC on the reorganisation and winding-up of credit institutions, taking into account the ECB's technical input, with the aim of presenting proposals in 2008 to further improve EU banking groups' crisis resolution and management arrangements.

# 2 FINANCIAL REGULATION AND SUPERVISION

## 2.1 GENERAL ISSUES

Ensuring the efficiency and effectiveness of the EU regulatory and supervisory framework for financial services has been a key priority in recent years. The Lamfalussy framework[3] for financial regulation and supervision, established in the securities sector in 2002 and extended to the banking and insurance sectors in 2005, was designed to provide the appropriate institutional setting in this respect.

The progress made towards convergence and cooperation under the Lamfalussy framework has been monitored closely. A first full review of the Lamfalussy framework for financial regulation and supervision across financial sectors was performed during the second half of 2007, culminating with the ECOFIN Council's adoption of its conclusions at its meeting on 4 December 2007. The review benefited from the assessment of various EU institutions and fora, including the European Commission, the Inter-Institutional Monitoring Group, the Financial Services Committee (FSC) and the European Parliament. The Eurosystem, which has actively supported the Lamfalussy approach since its inception and has closely followed its development as part of its task to contribute to the smooth conduct of policies relating to the prudential supervision of credit institutions and the stability of the financial system, published its contribution on 30 November 2007.

In this contribution, the Eurosystem noted that market developments – notably progress in banking integration, the increasing importance of EU banking groups with significant cross-border activities and the growing centralisation of business functions – underscored the urgency of enhancing cross-border convergence and cooperation in the supervision of EU banks. This would ensure the effective monitoring of and response to cross-border financial risks, while at the same time providing a streamlined supervisory interface and a level playing-field for market participants. If these aims are to be achieved, improvements are required at each step of the regulatory and supervisory process.

The Eurosystem furthermore considers that the role of CEBS in the EU institutional setting should be enhanced and the responsibilities of CEBS members in fostering EU convergence and cooperation further stressed. At the same time, EU policy objectives need to be specified more clearly. With respect to the regulatory framework, the Eurosystem sees a need to further enhance convergence in EU banking legislation. While the main priority in the area of cooperation between home and host supervisory authorities will be the effective day-to-day implementation of the enhanced regulatory framework provided by the Capital Requirements Directive (CRD)[4], further clarifications should be considered. The home-host cooperation arrangements for foreign branches deserve particular attention in this context, notably with a view to ensuring adequate host country involvement with regard to large foreign branches. In order to spur convergence of supervisory requirements, the Eurosystem highlights the importance of enhanced decision-making processes for CEBS, coupled with implementation on a "comply-or-explain" basis, and of effective supervisory disclosure and peer review. Finally, several measures to foster the convergence of supervisory processes have recently been introduced. These relate especially to the consistent implementation of CEBS standards and guidelines at the day-to-day level, "operational networking" within the supervisory colleges responsible for EU banking groups,

3 The Lamfalussy approach is composed of four levels. At Level 1, the basic principles of the legislation are laid down via the normal legislative process: a co-decision procedure involving the European Parliament and the EU Council, acting on a proposal of the European Commission. At Level 2, measures for the implementation of Level 1 legislation are adopted and amended via fast-track procedures. Level 3 relates to the work of the Level 3 Committees to strengthen supervisory convergence and cooperation. Level 4 relates to Commission measures to strengthen the enforcement of EU law. For more details, see the "Final report of the Committee of Wise Men on the regulation of European securities markets", 15 February 2001, which is available on the European Commission's website. See also the ECB's Annual Report 2003, p. 111.

4 The CRD comprises two recast Directives of 14 June 2006: Directive 2006/48/EC relating to the taking up and pursuit of the business of credit institutions and Directive 2006/49/EC on the capital adequacy of investment firms and credit institutions.

the delegation of tasks and mediation among supervisors, and efforts to foster a common supervisory culture. The Eurosystem deems it important that these measures be effectively implemented and further developed in the period ahead.

## 2.2 BANKING

The ECB, in cooperation with the BSC, has been carrying out work with regard to banks' liquidity risk management. A report on liquidity risk management for cross-border banking groups in the EU was finalised in the first quarter of 2007 and provided a timely contribution to the European Commission's regulatory work in the area of liquidity risk. The report was also submitted to the Basel Committee on Banking Supervision and CEBS as input into their work on the subject.

A streamlined version of the report was published in October 2007 as a special feature in the ECB's "EU banking structures" report. It focuses on issues relating to liquidity regulation and to developments in the organisation of cross-border banks' liquidity risk management, as well as the potential implications for financial stability. The main findings of the report can be summarised as follows. First, cross-border banks do not perceive that the fragmentation of liquidity risk regulation in the EU imposes undue restrictions on the management of intra-group liquidity across borders. However, banks indicated that other regulations related to home-host arrangements and large exposure limits may pose potential obstacles to efficient liquidity risk management. Second, while cross-border banks acknowledge the utility of initiatives taken by central banks to address problems related to international liquidity flows and the cross-border use of collateral, they note that certain hurdles regarding the pooling of liquidity and the cross-border use of collateral may remain. Third, despite the remaining differences in the liquidity risk management of cross-border banks, the trend towards the centralisation of liquidity management policies and procedures, and the decentralisation of day-to-day liquidity management, was confirmed. Fourth, sophisticated internal liquidity risk management approaches are still not widely employed, but the larger banks which have developed such approaches would also wish to use them for regulatory purposes. On the other hand, smaller banks currently use regulatory liquidity ratios also for internal management purposes. Finally, the shortening of the time horizon for banks' payment obligations, the use of more market-based and potentially more volatile funding sources and the increasing need for high-quality collateral were identified as being among the major market developments affecting banks' liquidity risk management.

Looking ahead, the ECB, in cooperation with the BSC, will continue its work in this important area. In this context, the BSC will analyse current practices regarding EU banks' liquidity risk stress-testing and contingency funding plans.

Work is also under way at the ECB in relation to the potential pro-cyclical effects of the CRD. Under the CRD, the European Commission, in cooperation with the Member States, and taking into account the contribution of the ECB, has been given a mandate to periodically monitor whether the minimum capital requirements have significant effects on the economic cycle, and to propose remedial measures if this is found to be the case. To this end, the BSC and CEBS are jointly developing an analytical framework for assessing the potential pro-cyclical impact of the new regulatory capital framework.

## 2.3 SECURITIES

The ECB contributed to the EU's regulatory work in the area of securities through its participation in the European Securities Committee. The ECB also participated with observer status in the work of the European Securities Market Expert Group (ESME), established by the European Commission as an advisory body for the securities sector.

In general, public authorities focused their attention in 2007 on the correct implementation by Member States of both the Markets in Financial Instruments Directive and the Transparency Directive, as well as on the assessment of the need for further regulatory intervention.

More specifically, the ECB actively participated in international and European fora in the debate on possible regulatory measures for hedge funds, given their increasing role in the financial system and the possible implications for financial stability. Following a report on highly leveraged institutions prepared by the Financial Stability Forum (FSF), the international consensus on the prevailing indirect regulatory approach, based on the close scrutiny of hedge funds by their counterparties – mainly banks – and investors, was confirmed. The indirect approach, together with the pursuit of best practices by market participants, is fully supported by the ECB. The FSF is closely monitoring the implementation of its recommendations to supervisory authorities, counterparties, investors and the hedge fund industry, and has already reported to the G10 governors and ministers of finance on the progress made so far in this field.

## 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 payment and securities settlement systems. Furthermore, financial integration, a priority objective of the EU, can help to promote the development of the financial system, thereby 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 2007.

### RAISING AWARENESS OF AND MONITORING FINANCIAL INTEGRATION

In March 2007 the ECB published a new annual publication entitled "Financial integration in Europe". The main purpose of this report is to contribute to the advancement of European financial integration and to raise public awareness of the Eurosystem's role in supporting the financial integration process. The report is divided into three chapters. The first chapter sets out the ECB's assessment of the state of financial integration in the euro area. This assessment is based on a set of quantitative indicators – with detailed elaborations thereof in a statistical annex – covering many important aspects of the financial system (such as the money, bond, equity and banking markets, as well as market infrastructures) which are published semi-annually on the ECB's website and annually in this new report. The second chapter, entitled "Special features", contains in-depth analyses of selected issues. The topics are generally chosen on the basis of their importance to the EU's financial integration agenda and their relevance to the pursuit of the ECB's tasks. The second chapter of the first report covers the following topics: monetary policy and financial integration, strengthening the EU framework for cross-border banks, and the Single Euro Payments Area (SEPA) initiative and its implications for financial integration. Finally, the third chapter provides an overview of the Eurosystem's contribution over the past calendar year towards achieving more integrated and developed financial markets in Europe.

In 2007 the ECB also continued its involvement in the Research Network on Capital Markets and Financial Integration in Europe, run in cooperation with the Center for Financial Studies at the University of Frankfurt am Main. The network continued its series of conferences with academics, market participants and policy-makers, with the active participation of NCBs. Its ninth conference, hosted by the Central Bank and Financial Services Authority of Ireland in Dublin on 8-9 October 2007, focused on "Asset management, private equity firms and international capital flows: their role for financial integration and efficiency". In the context of the network, the ECB awards each year five "Lamfalussy Fellowships" to young researchers. Given 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 closely linked to its wider analysis of factors supporting the adequate functioning of financial systems. Work in this area continued in 2007, with the aim of setting out a conceptual framework for measuring the development of the financial system.

### ACTING AS A CATALYST FOR PRIVATE SECTOR ACTIVITIES

Progress in European financial integration depends to a large extent on private sector initiatives aiming to make use of the existing opportunities for cross-border business. Public authorities support such private efforts.

In 2007 the Eurosystem continued its support for the SEPA initiative. The project implementation reached its most important phase in 2007, in preparation for the launch of the SEPA in January 2008. The Eurosystem strengthened its catalyst role by maintaining a constant dialogue with banks and other stakeholders and by intensifying coordination efforts with the European Commission. In July 2007 the Eurosystem stated its position on all relevant topics in its fifth SEPA progress report, which addresses the status of and recommendations on SEPA instruments and infrastructures, presents the Eurosystem's views on the implementation measures and migration towards the SEPA, and deals with the legal framework for the SEPA and the governance of the related schemes and frameworks. The Eurosystem worked very closely with the European Commission, especially in supporting the adoption of the Payment Services Directive (PSD)[5], which was approved by the European Parliament on 24 April 2007 and by the EU Council on 15 October 2007. The ECB and the Commission issued a joint statement welcoming the adoption of the PSD as a decisive step towards the realisation of the SEPA. With regard to the SEPA implementation process, the NCBs are directly involved in the work of the national bodies responsible for migration to the SEPA. At the European level, the ECB provided an analytical framework which allowed comparisons between national implementation plans. The Eurosystem hosted several fora to facilitate an open dialogue with banks, users and infrastructure providers, and supported similar initiatives by banks and the European Commission. The Eurosystem provided information to all stakeholders in brochures and on the websites of the ECB and the NCBs, and is hosting a link directory which brings together SEPA-related information.

Euro card schemes operating in Europe have needed to comply with the SEPA cards framework since the beginning of 2008, and the SEPA credit transfer was launched on 28 January 2008. To mark this important milestone, the ECB, the European Commission and the European Payments Council organised a high-level SEPA launch event for SEPA stakeholders and the media on 28 January.

The ECB has supported the Short-Term European Paper (STEP) initiative since its inception in 2001. Following the successful launch of the STEP market in July 2006, the Eurosystem has continued to contribute to the initiative in two main areas. First, the ECB and nine euro area NCBs will continue to provide technical assistance to the STEP Secretariat in the STEP labelling process until June 2008. However, the ultimate responsibility for granting and withdrawing the STEP label rests with the STEP Secretariat. Second, the ECB regularly publishes statistics on yields and volumes in the STEP market on its website. The STEP statistics are expected to play an important role in fostering the integration of this market by contributing to greater transparency. Since September 2006 the ECB has published STEP statistics on monthly outstanding amounts, and since April 2007 it has released STEP statistics on yields on a daily basis for selected data providers. It is planned to publish daily statistics for all data providers from 2008.

### ADVICE ON THE LEGISLATIVE AND REGULATORY FRAMEWORK FOR THE FINANCIAL SYSTEM AND DIRECT RULE-MAKING

The Eurosystem regularly contributes 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 2007 on the broad-based review of the Lamfalussy framework, to which the Eurosystem contributed (see Section 2 of this chapter). Furthermore, 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 also Section 2).

5 Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC (OJ L 319, 5.12.2007, p. 1).

The ECB continued its work on the integration of European mortgage markets, following the Eurosystem's contribution at the end of 2005 to the European Commission's Green Paper on this subject. The ECB pays close attention to the further integration and development of mortgage markets for several reasons. Mortgage markets are relevant for the transmission of monetary policy in the euro area and can have important implications for financial stability. In addition, mortgage securities play a role in the implementation of monetary policy via the Eurosystem's framework for eligible collateral. Following its Green Paper consultation, the European Commission published a White Paper on 18 December 2007. The ECB contributes to work in this field through its participation in various Commission expert groups and the European Financial Markets Lawyers Group (EFMLG). On 7 May 2007 the EFMLG published a report on legal obstacles to cross-border securitisation in the EU.[6]

The ECB provided advisory input on issues related to the integration of securities settlement systems and of payment systems. In particular, the ECB was closely involved in the work relating to the "Code of Conduct for Clearing and Settlement". The code essentially aims to allow users to choose freely their preferred service provider at each stage along the transaction chain. To this end, the code contains commitments in three areas: price transparency; access and interoperability; and service unbundling and accounting separation. Given that the code is a self-regulatory tool, a strict monitoring mechanism has been set up to ensure that all the measures are implemented properly and on time. In principle, the mechanism relies on external auditors and an ad hoc Monitoring Group composed of the European Commission, the Committee of European Securities Regulators and the ECB. As the code of conduct ultimately aims to establish freedom of choice, it needs to be complemented by the full removal of the "Giovannini barriers" to efficient clearing and settlement (named after the group that identified them in 2001), which result from differences in technical standards and business practices, legal uncertainty, and differences in tax procedures. The removal of the first set of barriers is addressed within the context of the Clearing and Settlement Advisory Monitoring Expert Group (CESAME). The fiscal barriers are being addressed by the Fiscal Compliance Expert Group, while the Legal Certainty Group is working on the legal barriers. The ECB continued to participate in CESAME and the Legal Certainty Group. Finally, the ECB continued to contribute to several strands of work that are being pursued in this field on a global level (e.g. by Unidroit), with a view to ensuring that EU initiatives in the area of securities clearing and settlement both complement and are consistent with the approaches developed by international bodies.

6 Available at www.efmlg.org

Article 65(1) of the Markets in Financial Instruments Directive requires the European Commission to submit a review to the European Parliament and the EU Council on the possible extension of the transparency provisions set out in the Directive to financial instruments other than equities, in particular to bonds. Market participants and regulators have extensively debated the implications of enhanced trading transparency for non-equity financial instruments, especially corporate bonds. The ECB is of the view that there is no firm evidence that the limited transparency in the bond market after trades have been executed is currently causing any market failure. At the same time, there is no evidence either that such limited transparency means an efficient market functioning. The ECB suggested, at the Commission's public hearing on 11 September 2007 and at meetings of the ESME during 2007, that this lack of experience in Europe be addressed via a market-led controlled experiment in both retail and wholesale markets to assess the effect of gradually introducing post-trade transparency into the markets for certain bonds.

### PROVIDING CENTRAL BANKING SERVICES THAT FOSTER FINANCIAL INTEGRATION

The successful launch of TARGET2 on 19 November 2007 gave further impetus to the process of financial integration in Europe. TARGET2 introduces a single technical infrastructure which permits the provision of a harmonised service level and ensures a level playing-field for banks across Europe. A single price structure applies to both domestic and cross-border transactions. TARGET2 also provides a harmonised set of cash settlement services in central bank money for all ancillary systems. The new functionalities of TARGET2 enable banks with multinational operations to consolidate their internal processes, such as treasury and back office functions, and to further integrate their euro liquidity management. In addition, TARGET2 users have uniform access to comprehensive online information and liquidity control measures (see Section 2.2 of Chapter 2).

Furthermore, with a view to reaping the full benefits of TARGET2, the Eurosystem continued to explore, in close cooperation with market participants, the possibility of offering a new service, called TARGET2-Securities (T2S), to provide a common technical infrastructure for the euro settlement of securities transactions in central bank money by central securities depositories and to process both securities and cash settlements on a single technical platform (see Section 2.3 of Chapter 2).

Finally, in the area of collateral management, a single shareable platform (CCBM2) will be developed in parallel, and in close cooperation with market participants (see 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[7], 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.

It is essential that, in their endeavours to promote the soundness and efficiency of payment and securities clearing and settlement systems, central banks have comprehensive information on these systems at their disposal. For this reason, the ECB publishes, every few years, a comprehensive description of the main payment and securities settlement systems in the EU Member States. The fourth edition of this report, which has become known as the "Blue Book", was published on 14 August 2007.

The ECB also publishes on an annual basis statistical data on payments and securities trading, clearing and settlement. In the past, these statistics were published in an addendum to the "Blue Book". As of the publication of the data for 2006 on 16 November 2007, the hard copy publication of the Blue Book Addendum has been discontinued, as the full time series for these data can now be downloaded from the ECB's website through the Statistical Data Warehouse at http://sdw.ecb.europa.eu/.

## 4.1 OVERSIGHT OF LARGE-VALUE EURO PAYMENT SYSTEMS AND INFRASTRUCTURES

The Eurosystem oversees all major 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. They are complemented by the business continuity oversight expectations for systemically important payment systems (SIPS) which were adopted by the Governing Council in 2006.

Based on the Core Principles and the business continuity oversight expectations, the Eurosystem in 2007 developed a common methodology for the oversight assessment of systemically and prominently important euro payment systems. The common methodology aims to provide the Eurosystem's payment systems overseers with clear and comprehensive guidelines for the assessment of the relevant systems and the preparation of oversight reports. In addition, it provides payment system designers and operators with greater insight into overseers' safety and efficiency concerns, gives operators additional incentives to continue their efforts to mitigate or limit the various risks their systems may face and, ultimately, helps to ensure the smooth functioning of their systems. Following a public consultation on the common oversight assessment methodology, the final versions of the "Terms of reference for the oversight assessment of euro systemically and prominently important payment systems against the Core Principles"[8] and the "Guide for the assessment against the business continuity oversight expectations for SIPS" were published on 12 November 2007.

The Eurosystem must retain ultimate control over the euro. Therefore, from both a general

7 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.

8 A payment system is considered prominently important if it plays a prominent role in the processing and settlement of retail payments and its failure could have major economic effects and undermine the confidence of the public in payment systems and in the currency in general.

policy and a systemic risk perspective, the Eurosystem cannot, as a matter of principle, allow payment infrastructures for euro transactions which are located outside the euro area to have the potential to develop into major euro payment infrastructures, particularly if this would put at risk the Eurosystem's control over the euro. On 19 July 2007 the ECB published the "Eurosystem policy principles on the location and operation of infrastructures settling euro-denominated payment transactions". These principles do not constitute a new policy stance but further detail the position of the Eurosystem which was outlined in 1998 in the policy statement on euro payment and settlement systems located outside the euro area and in 2001 in the Eurosystem's policy line with regard to consolidation in central counterparty clearing. The principles apply to any existing or potential payment infrastructure located outside the euro area that settles euro transactions.

#### 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 real-time gross settlement systems which participate in or are connected to TARGET, as well as with regard to the ECB payment mechanism (EPM). In view of the implementation of TARGET2 in November 2007, changes in TARGET were of a very limited nature, and the oversight of TARGET thus focused on regular activities, such as incident reporting and follow-up.

Before going live on 19 November 2007, TARGET2 was subject to a comprehensive oversight assessment which concluded in the third quarter of 2007. There were a number of oversight findings with regard to individual Core Principles. These findings will be addressed on the basis of an action plan established by the TARGET2 operators and agreed with the overseers. However, it will only be possible to further explore certain aspects when initial experience has been gained with TARGET2 in operation. In line with existing Eurosystem policies, it is intended that the oversight assessment of TARGET2 will be published in the course of 2008.

#### EURO1

EURO1 is the largest privately operated payment system for euro credit transfers 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 in central bank money via the TARGET system. As no major changes took place in the EURO1 system in 2007, the ECB's oversight activities focused on monitoring the regular functioning of the system. The ECB concluded that there were no issues during 2007 which adversely affected the EURO1 system's continued compliance with the Core Principles.

#### CONTINUOUS LINKED SETTLEMENT SYSTEM

The Continuous Linked Settlement (CLS) system was set up in 2002 to provide settlement services for foreign exchange transactions in multiple currencies. CLS currently settles in 15 major currencies around the world. Run by CLS Bank International ("CLS Bank"), the system virtually eliminates foreign exchange settlement risk by settling the two currency legs involved in foreign exchange trades simultaneously, i.e. on a payment-versus-payment (PvP) basis, and only when sufficient funds are available.

CLS is regulated by the Federal Reserve System, which is also its lead overseer since CLS Bank is located in the United States. The Federal Reserve System cooperates with the central banks of all currencies which are eligible for CLS settlement, including the ECB. Within this cooperative oversight arrangement, the ECB (in close cooperation with the euro area NCBs) is the lead overseer for the settlement of euro transactions. In 2007 CLS prepared a self-assessment on the basis of the Core Principles.

In 2007 CLS Bank was granted regulatory approval by the Federal Reserve System to extend its services to the settlement of single currency (non-PvP) payment instructions associated with non-deliverable forwards (NDFs) and to act as the central settlement provider for all payment instructions associated with over-the-counter (OTC) credit derivatives calculated or matched by the DTCC Deriv/SERV Trade Information Warehouse. The Eurosystem agreed that CLS Bank could include the settlement of NDFs and OTC credit derivatives in euro as part of this service in view of the continued compliance of the CLS system with both the Core Principles and the Eurosystem policy principles on the location and operation of infrastructures settling euro-denominated payment transactions.

The continuous safety and efficiency of CLS and its compliance with the Eurosystem policy principles are 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. In December 2007 CLS settled an average of 381,436 foreign exchange transactions per day with an average daily settlement value equivalent to €2.9 trillion.[9] With a share of 20% of all transactions settled in CLS, the euro has continued to be the second most important currency for settlement, after the US dollar (45%). The average daily value of CLS transactions settled in euro was €564 billion.

In 2007 the BIS published a consultative report entitled "Progress in reducing foreign exchange settlement risk" to which the Eurosystem contributed. The report presents the results of a survey among major foreign exchange market participants on the size, duration, concentration and control of foreign exchange settlement exposures, which was conducted in 2006 by the central banks whose currencies are settled in CLS. The report indicates that further action is needed by individual institutions, industry groups and central banks to address the system-wide risks to financial stability posed by foreign exchange settlement exposures. The final version of the report will be published in 2008.

#### BUSINESS CONTINUITY

At the ECB conference on business continuity for market infrastructures, held in September 2006, market participants requested that the Eurosystem/ESCB organise business continuity exercises at the cross-border and cross-system level. As a follow-up, the Eurosystem/ESCB developed a framework and methodology for the organisation of business continuity exercises and conducted first internal crisis communication tests in 2007. More complex business continuity exercises are foreseen for 2008. In addition, the ESCB has worked on developing a proposal on how EU central banks can share public information concerning business continuity with market participants, and how central banks can exchange confidential information with one another. In this context, the ESCB conducted a number of fact-finding exercises to collect information on a variety of issues, such as international and national standards and initiatives, and national business continuity exercises. Non-confidential information will be made available to the public on a dedicated business continuity area of the website of each central bank. The ECB is expected to make this dedicated area available on its website in 2008.

#### SWIFT

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 it 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. In the context of its participation in the cooperative oversight of SWIFT, the ECB started working

9 The cash settlement of each foreign exchange trade consists of two payment transactions, one in each currency involved. Thus, in December 2007 CLS settled 190,718 trades with an average daily value equivalent to around €1.5 trillion.

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 five oversight expectations were finalised in June 2007 and integrated into the oversight group's risk-based oversight methodology. They are as follows:

1 Risk identification and management: SWIFT is expected to identify and manage operational and financial risks to its critical services and ensure that its risk management processes are effective.

2 Information security: SWIFT is expected to implement appropriate policies and procedures, and to devote sufficient resources, to ensure the confidentiality and integrity of information and the availability of its critical services.

3 Reliability and resilience: Commensurate with its role in the global financial system, SWIFT is expected to implement appropriate policies and procedures, and devote sufficient resources, to ensure that its critical services are available, reliable and resilient and that business continuity management and disaster recovery plans support the timely resumption of its critical services in the event of an outage.

4 Technology planning: SWIFT is expected to have in place robust methods to plan for the entire life cycle of the use of technologies and the selection of technological standards.

5 Communication with users: SWIFT is expected to be transparent to its users and to provide them information that is sufficient to enable users to understand well their roles and responsibilities in managing risks related to their use of SWIFT.

SWIFT is finalising a self-assessment on the basis of these high-level expectations and will report to the central banks on its ability to meet the overseers' expectations. The five expectations provide a framework within which the overseers organise their activities and on the basis of which risk-based oversight planning is prepared. The high-level expectations and the rationale for the framework were presented in detail in the "Financial stability review" of the Nationale Bank van België/Banque Nationale de Belgique, published in June 2007.

## 4.2 RETAIL PAYMENT SERVICES

The Eurosystem's oversight also covers retail payment systems and instruments. In 2007 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.

In the context of monitoring developments in the retail payments industry, the ECB carried out a comparative study together with the Federal Reserve Bank of Kansas City on the role of non-banks in retail payments in the United States and in some European countries.

## 4.3 CARD PAYMENT SCHEMES

In line with its statutory responsibility to promote the smooth functioning of payment systems in the euro area, the Eurosystem has developed an oversight framework for card payment schemes which process euro payments. Its aim is to contribute to the maintenance of public confidence in card payments and to promote a level playing-field for all card schemes operating across the euro area.

A public consultation was conducted on the basis of a report entitled "Draft oversight framework for card payment schemes – requirements". A revised version of that report was then produced, taking into account the comments received during the public consultation. The report defines the intended scope of oversight activities to be performed by the Eurosystem vis-à-vis card payment schemes and proposes standards which, if observed, would contribute to the soundness of such schemes. Those standards are based on a risk analysis conducted by the Eurosystem. The framework will apply to all card payment schemes providing services involving either debit or credit cards.

The final version of the Eurosystem's oversight standards for card payment schemes was approved by the Governing Council in January 2008 and will be implemented in the course of 2008.

## 4.4 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.

In its capacity as a user of securities settlement systems (SSSs), the Eurosystem assesses the compliance of 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 the "Eurosystem user standards").[10]

Links become eligible for Eurosystem credit operations if they fulfil the Eurosystem's nine user standards. The Eurosystem assesses any new links or updates of eligible links against these standards. In 2007 three existing eligible links were updated and positively assessed. In addition, the use of five relayed links, i.e. where more than two SSSs are involved, was assessed. No specific risks were identified in the course of this assessment. Consequently, the Governing Council considered all five assessed relayed links to be eligible to participate in the collateralisation process of the Eurosystem's credit operations.

In preparation for the entry of Cyprus and Malta into the euro area on 1 January 2008, the Governing Council assessed the SSSs of the two countries. The detailed analysis revealed that both systems were broadly compliant with the user standards and thus eligible for use in Eurosystem monetary policy and intraday credit operations.

In March 2007 the CPSS published a report entitled "New developments in clearing and settlement arrangements for OTC derivatives" to which the ECB contributed. The report, for which a series of interviews was conducted with banks, analysed the following six issues: the risks created by backlogs in documenting and confirming trades, the implications of the use of collateral to mitigate credit risk, the use of central counterparties to reduce counterparty risk, the risks involved in prime brokerage, the risks stemming from invalid novations of contracts and the potential for market disruption from closeout following the default of one or more large counterparties.

### 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 year the 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. During this period the group worked in parallel on the adaptation of the CPSS-IOSCO recommendations for central counterparties. A number of open issues have stalled progress since late 2005. However, the European

10 "Standards for the use of EU securities settlement systems in ESCB credit operations", January 1998.

Commission provided new impetus in 2007 in discussions at meetings of the ECOFIN Council, the EFC and the FSC. Following those discussions, the ECOFIN Council recognised "that the investor protection and prudential safety of the post-trading sector, including its risk-management aspects, are important issues to be discussed and that concrete action, including for example by agreeing on the standards or regulatory measures, should be considered as a complement for the Code of Conduct on risks and financial stability". Furthermore, the ECOFIN Council requested that the FSC "deepen its work on the scope, legal basis and contents of the standards giving due consideration to the importance of ensuring a level playing-field; and together with the Commission propose ways forward on this subject to be submitted to the Council in early spring 2008".[11] The ECB has been contributing to this work.

11 ECOFIN Council Conclusions on Clearing and Settlement, 2822nd Economic and Financial Affairs Council meeting, Luxembourg, 9 October 2007.


Dégustation

CHAPTER 5

# EUROPEAN AND INTERNATIONAL RELATIONS

# 1 EUROPEAN ISSUES

In 2007 the ECB continued to have regular contacts with European institutions and fora, particularly 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.

## 1.1 POLICY ISSUES

### THE STABILITY AND GROWTH PACT

In 2007 the favourable macroeconomic environment supported the improvement of budget balances in most countries and hence the abrogation of excessive deficit procedures in a number of cases. The number of Member States in excessive deficit decreased from eleven at the end of 2006 to six by the end of 2007. In January 2007 the ECOFIN Council brought the excessive deficit procedure against France to an end. It took the same step for Germany, Greece and Malta in June 2007. For the latter country, this removed a major obstacle to the adoption of the euro in 2008. Finally, in October 2007 the ECOFIN Council abrogated the excessive deficit procedure against the United Kingdom. Following the correction of the excessive deficits, it is now essential that Member States continue their structural fiscal consolidation in line with the provisions of the Stability and Growth Pact to reach their medium-term objective. This will also help to prevent the 3% of GDP deficit reference value from being breached again as a result of normal cyclical variations in economic activity. Two euro area countries (Italy and Portugal) and four non-euro area countries (the Czech Republic, Hungary, Poland and Slovakia) were still subject to ongoing excessive deficit procedures at the end of 2007.

Fiscal developments in the Czech Republic were a cause for concern. In July 2007 the ECOFIN Council decided, upon a recommendation by the European Commission, that the actions taken by the Czech Republic were proving inadequate to bring its deficit below the 3% threshold by 2008. In particular, the updated convergence programme of the Czech Republic of March indicated that the 3% of GDP deficit threshold would be exceeded not only in 2008, but also in 2009. In October 2007 the Council again recommended under Article 104(7) of the Treaty that the Czech Republic bring the deficit below 3% of GDP by 2008 at the latest, with a 0.75% structural improvement in the budget balance between 2007 and 2008. According to the European Commission's autumn 2007 forecast, the deficit will indeed decline to below 3% of GDP in 2008.

No further steps were taken regarding the excessive deficit procedures against Italy (which, according to the ECOFIN Council's recommendation, should have corrected its excessive deficit by 2007), Hungary (2009), Poland (2007), Portugal (2008) and Slovakia (2007) as, in general, new data and projections pointed to progress in the correction of excessive deficits in line with the Council's latest recommendations.

In October 2007 the ECOFIN Council discussed the effectiveness of the preventive arm of the Stability and Growth Pact, based on proposals from the European Commission included in its communication accompanying the report entitled "Public finances in EMU – 2007". Ministers concluded that all countries which had not yet reached their medium-term objective should speed up the pace of deficit and debt reduction and allocate higher than expected revenues to this objective. They also reiterated the importance of national rules-based multi-annual fiscal frameworks and appropriate involvement of national parliaments. Moreover, Member States were asked to specify in their stability and convergence programmes how their medium-term objectives would be met, including information on the extent to which further measures are required to achieve them. The Commission was requested to work further on the measurement of underlying fiscal positions. With regard to the long-term sustainability of public finances, the ECOFIN Council invited the Commission to provide proposals for discussion in 2008 on how to include the ageing-induced fiscal burden in the definition of the medium-term objectives.

### THE LISBON STRATEGY

The Lisbon strategy – the EU's wide-ranging programme of economic, social and environmental reform – continued to be at the centre of the EU economic policy debate. The EU Council left unchanged the Integrated Guidelines that were adopted in 2005 for a three-year period, while calling for a greater focus on the implementation of the strategy in order to achieve the overall goal of higher growth and more jobs.[1] At the same time, in spring 2007 the EU Council complemented these guidelines with country-specific recommendations for each Member State, and with a horizontal guideline addressed to euro area countries. Member States submitted in autumn 2007 their second progress reports on their 2005-08 national reform programmes. These reports set out the progress Member States have made so far in implementing their structural reform strategies. These strategies include ensuring the sustainability and quality of public finances, improving the regulatory environment of businesses, investing in research and development and innovation, and taking measures to boost labour participation and enhance labour market flexibility (see also Chapter 1). The progress reports on the national reform programmes were assessed by the ECOFIN Council, as well as by the European Commission, which published a "Strategic report" in December 2007. These assessments prepared the ground for the adoption of a new set of integrated guidelines in 2008 for the new three-year policy cycle 2008-10. At the same time, the Community Lisbon programme, which was updated at the end of 2007, set out a number of key priorities for Community-level action for the period 2008-10, in line with the four priority areas of reform identified by the Spring 2006 European Council (knowledge and innovation, business potential, labour markets, and energy).

The ECB has repeatedly stressed the importance of implementing structural reforms and welcomes the determination of the Commission and the Member States to implement the renewed Lisbon strategy at the EU and national levels. It is particularly important that the euro area countries implement comprehensive reform measures, as they share the responsibility for ensuring the smooth functioning of EMU.

## 1.2 INSTITUTIONAL ISSUES

### THE TREATY OF LISBON

On 13 December 2007 the Heads of State or Government of the EU Member States signed the Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community. The new Treaty is now in the process of being ratified by all 27 Member States. The intention is for it to enter into force on 1 January 2009, provided that the ratification process has been finalised by that date. If this is not the case, the Treaty of Lisbon will enter into force on the first day of the month following ratification by the last Member State.

The new Treaty amends the Treaty establishing the European Community and the Treaty on European Union. These two Treaties will continue to be the basis on which the EU functions. Under the new Treaty, the Community is succeeded and replaced by the Union, which will have legal personality. The ECB welcomes this simplification of the EU's legal and institutional framework.

The ECB considered it essential that price stability should remain not only the primary objective of the ECB and the ESCB, but should also be a stated objective of the EU. The new

1 In accordance with the 2005 mid-term review of the Lisbon strategy, the Integrated Guidelines are determined for a period of three years and thereafter updated annually during that period (see the ECB's Annual Report 2005, pp. 140-141).

Treaty provides for this, as well as making an Economic and Monetary Union, with the euro as its currency, an EU objective.

The ECB, currently a Community body, becomes a Union institution. The ECB deemed it indispensable to the successful performance of its tasks that the specific institutional features of the ECB and of the ESCB be preserved. The new Treaty does this by confirming the tasks and composition of the ESCB and the independence of the ECB and the NCBs, as well as the legal personality, regulatory powers and financial independence of the ECB. Under the new Treaty, the appointment of members of the ECB's Executive Board takes place by a qualified majority of the European Council, instead of the current requirement for a common accord of the governments of the Member States at the level of Heads of State or Government. Further to the ECB's request, the term "Eurosystem" is introduced into the Treaties.

The new Treaty also introduces several innovations in the area of economic governance. These include recognition of the Eurogroup, which retains its current informal status. Its President will serve a two and a half year term. Moreover, the role of the euro area countries is strengthened. Although the EU Council will still decide, on the basis of a Commission proposal, whether a Member State can adopt the euro, the euro area countries will provide a recommendation prior to such a decision. Similarly, decisions on non-compliance by euro area countries with the excessive deficit procedure and the Broad Economic Policy Guidelines will be taken only by euro area countries, and without the Member State concerned. Finally, a new provision allows the euro area countries, by a qualified majority, to adopt new measures to strengthen the coordination and surveillance of their budgetary discipline and to set out specific economic policy guidelines for the euro area countries.

The ECB considers that the new Treaty broadly confirms the current set-up of EMU. It would therefore welcome the successful completion of the ratification process.

#### CONVERGENCE REPORTS

Following requests from Cyprus and Malta, the ECB and the European Commission, in line with Article 122 of the Treaty, each prepared convergence reports 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 2007, and a proposal from the Commission, the ECOFIN Council adopted a decision on 10 July 2007 allowing Cyprus and Malta to introduce the euro as their currency from 1 January 2008 (see Chapter 3).

### 1.3 DEVELOPMENTS IN AND RELATIONS WITH EU CANDIDATE COUNTRIES

The ECB continued its cooperation with the central banks of the candidate countries with the aim of creating the conditions for a smooth monetary integration process in the EU, when institutional and economic conditions have been met. This cooperation developed in parallel with the overall institutional dialogue between the EU and these countries.

Accession negotiations with Croatia began in October 2005. The opening of individual chapters of the *acquis communautaire* for negotiation started in June 2006 and proceeded smoothly in 2007, with negotiations having been conducted on a substantial number of the 35 chapters by the end of the year. The ECB continued to strengthen its bilateral relations with the Croatian National Bank, paying a staff visit to Zagreb in April 2007 and hosting its governor in Frankfurt for the annual high-level pre-accession dialogue in October 2007.

After opening accession negotiations with Turkey in October 2005, the European Commission started negotiations on the individual chapters of the *acquis communautaire* in June 2006. In December 2006 the European Council decided to suspend talks for 8 out of the 35 chapters in the EU accession process, owing to the lack of progress in the extension of the customs union to the EU Member States. Five chapters – on enterprise and industrial policy, statistics, financial control, trans-European networks, and health and consumer protection – were opened in the course of 2007. The EU institutions are continuing to screen the compatibility of Turkish legislation with the *acquis communautaire* and preparations are under way for the possible opening of the other chapters. The ECB continued its long-standing high-level policy dialogue with the Central Bank of the Republic of Turkey, which included a visit of the President of the ECB to Ankara on 1 June 2007, on the occasion of the 75th anniversary of the Turkish central bank. The discussions focused on recent macroeconomic and financial developments in Turkey, the monetary policy of the Central Bank of the Republic of Turkey, and the economic and monetary situation in the euro area. In the course of 2007, technical assistance was also provided when requested by the Turkish central bank, for example in the areas of internal finance and payment systems.

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 had been met, including the effective implementation of the Stabilisation and Association Agreement signed with the EU, and no exact date has yet been specified. The Commission closely monitors progress achieved, and while it acknowledged that steps in the right direction have been taken, it listed several areas for reform where efforts need to be increased. Contacts between the ECB and the National Bank of the Republic of Macedonia were intensified at the staff level.

# 2 INTERNATIONAL ISSUES

## 2.1 KEY DEVELOPMENTS IN THE INTERNATIONAL MONETARY AND FINANCIAL SYSTEM

### SURVEILLANCE OF MACROECONOMIC POLICIES IN THE GLOBAL ECONOMY

Given the rapid pace of economic and financial integration, the global economic environment is becoming increasingly relevant for the conduct of economic policy in the euro area. As a result, the Eurosystem closely monitors and analyses macroeconomic policies and underlying developments in countries outside the euro area. It also 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 BIS, the IMF and the OECD, as well as in fora such as the G7 and G20 finance ministers and central bank governors. In relevant institutions and fora, the ECB has been granted either member status (for example, in the G20) or observer status (for example, at the IMF). The ECB assesses international developments with a view to contributing to a stable macroeconomic environment and sound macroeconomic and financial policies.

The international economic environment in 2007 continued to be dominated by large global current account imbalances, with some adjustments taking place in the United States and oil-exporting countries.[2] In the United States, the current account deficit declined slightly to 5.7% of GDP, from 6.2% in 2006, mainly reflecting a more balanced pattern of global demand growth and favourable exchange rate developments. At the same time, the adjustments in the United States were not directly reflected in the current account positions of Asian economies, which continued to enjoy substantial surpluses, reaching around 6.1% of GDP on average compared with 5.3% in 2006. In particular, current account surpluses widened to 11.7% in China and to 4.5% in Japan. However, the oil-exporting economies – also a major counterpart of the US current account deficit – reduced their current account surpluses to 11.9% of GDP, from 16.1% in 2006. Some Asian and oil-exporting economies continued to accumulate considerable amounts of foreign reserves. The accumulation of reserves continued to be particularly significant in the case of China, where foreign exchange reserves reached levels well above USD 1 trillion. The increase in foreign exchange reserves in surplus economies contributed to a rise in the importance of sovereign wealth funds in global financial markets.

On various occasions, the Eurosystem continued to stress the risks and distortions related to the persistence of such imbalances. It also confirmed its full support for a cooperative approach on this issue, whereby all affected economies implement the necessary policies to ensure an orderly adjustment of global imbalances. A progressive and orderly adjustment of the imbalances would support and strengthen the prospects for global growth and stability. The international policy agenda includes policies aimed at increasing private and public savings in countries with current account deficits, urges implementation of further structural reforms in mature economies with relatively low potential growth, and stresses the need for an increase in domestic demand as well as for an improved capital allocation in emerging market economies. Since exchange rates should reflect economic fundamentals, exchange rate flexibility in major countries and regions that lack such flexibility remains a priority. In China, the move towards greater flexibility is desirable, and in view of its rising current account surplus and domestic inflation, there is still a need to allow for an accelerated appreciation of its effective exchange rate. Overall, several developments and policy measures went in the right direction in 2007, but further adjustments are still needed if global imbalances are to be significantly reduced.

Global credit market conditions deteriorated in the second half of 2007, as a repricing of credit risk related to strains in the US sub-prime mortgage market led to a spike in

2 2007 estimates in this section are based on the projections contained in the IMF's September 2007 "World Economic Outlook".

yields and disruptions to liquidity conditions in segments of the interbank market. While emerging economies were also affected by these developments, the impact there was far less severe than in previous episodes of global financial turbulence. This resilience partly reflects the improved policy frameworks in these countries, although an additional explanation is that the financial turbulence was rooted in markets for innovative credit instruments that are less widespread in emerging economies than in mature economies with developed financial systems.

Finally, the euro area itself is subject to international policy surveillance exercises. In 2007 both the IMF and the OECD's Economic and Development Review Committee conducted their regular reviews of the monetary, financial and economic policies of the euro area, as a complement to their reviews of the individual euro area countries. 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 discussions, both the IMF and the OECD produced individual reports assessing euro area policies.[3] The euro area also participated in the IMF's first multilateral consultation exercise, which focused on global imbalances (see the next section for more details).

### INTERNATIONAL FINANCIAL ARCHITECTURE

Efforts to reform the IMF in line with its medium-term strategy continued over the year. Progress on the various initiatives proceeded at different speeds, with the most notable achievement being the introduction of a new decision on bilateral surveillance.[4] Other key reform areas included governance of the IMF (quotas and voice), the income and expenditure framework of the Fund, and the Fund's role in emerging market economies. Agreement on these issues is pursued through discussions both inside the IMF and in other fora, such as the G7 and G20, and the ESCB plays its part by monitoring and contributing to the discussions on these issues as appropriate.

One of the main recent achievements of the IMF has been an improvement in surveillance. A new decision on bilateral surveillance over members' policies was introduced in mid-2007 to replace the existing 30-year-old surveillance decision and to improve clarity, candour, even-handedness and accountability. The new decision seeks to pay greater attention to cross-country spillovers by employing external stability as the organising principle for surveillance. External stability is defined with reference to the exchange rate, the analysis of which consequently becomes a key component of the surveillance process. Owing to the single currency of the euro area, external stability for the euro area is to be assessed at the level of the euro area as a whole, while bilateral country surveillance, focusing on the national policies of individual Member States, remains important also in this context. Efforts are now under way to ensure the effective implementation of the new decision, taking into account the technical and conceptual challenges.

In addition, the first multilateral consultation process advanced to the monitoring stage. Multilateral consultations are a new approach to surveillance that aim to bring together key parties in a confidential setting for a frank dialogue in order to facilitate appropriate policy action on problems of systemic or regional importance. The first multilateral consultation sought to address global imbalances and involved China, the euro area, Japan, Saudi Arabia and the United States. The forum served as a useful platform to exchange ideas and views on the causes of and solutions to the imbalances. The emphasis has now shifted from dialogue to policy implementation and IMF staff are monitoring progress and communicating their findings in bilateral and multilateral reports.

3 "Euro area policies: 2007 Article IV consultation – staff report", IMF, July 2007, and "Economic survey of the euro area", OECD, January 2007.

4 The Executive Board decision on bilateral surveillance over members' policies adopted on 15 June 2007 replaces the 1977 decision on surveillance over exchange rate policies.

Progress has also been made on other elements of the medium-term strategy. On the topic of quota and voice reform, discussions focused on a new quota formula, a second round of ad hoc increases in quotas for a broader range of countries, and an increase in basic votes. The two key objectives of the reforms are to make significant progress in realigning quota shares with members' relative weight and role in the global economy and to enhance the voice and participation of low-income countries in the IMF. Agreement on the main elements of the package is expected to be achieved by the 2008 Spring Meetings. Efforts are also under way to put the institution on a sounder financial footing. On the income side, the recommendations made in the report by the Committee of Eminent Persons (a body appointed to study the sustainable long-term financing of the IMF) provide the basis for specific proposals. On the expenditure side, consideration of the Fund's core mandate and careful priority-setting are guiding proposals for a new expenditure framework, which envisages substantial budget reductions. Finally, work is also continuing on the Fund's engagement with emerging market economies. The Fund improved its assistance in identifying vulnerabilities and in debt management, and continued to reflect on the option of a new liquidity instrument as a crisis prevention measure.

Beyond IMF reforms, the agenda of the international financial community continued to feature the promotion of mechanisms for crisis prevention and orderly crisis resolution. In this context, progress was made in the implementation of the principles for stable capital flows and fair debt restructuring in emerging markets, which were endorsed by the G20 in 2004. The aim of these principles, which are market-based and voluntary, is to provide guidelines for the behaviour of sovereign issuers and their private creditors regarding information-sharing, dialogue and close cooperation. An increasing number of financial institutions and issuing countries have voiced support for the principles and expressed particular interest in advancing their implementation. To guide the implementation and evolution of the principles, a Group of Trustees, comprising senior leaders in global finance, was established in 2006. At its last meeting in Washington, D.C. in October 2007, the Group of Trustees reviewed the progress being made on the implementation of the principles within the framework of the international financial architecture.

A number of other initiatives related to financial markets were taken in the course of 2007. Drawing on the example provided by the private sector with the aforementioned principles, a code of conduct for hedge funds was put forward by a group of leading London-based hedge funds. The code, which is voluntary, is designed to improve transparency and risk management. Additionally, the G8 agreed on an action plan for developing local bond markets in emerging market economies and developing countries. The action plan specified a number of key policy issues for further detailed examination, including strengthening market infrastructures and public debt management policies, broadening and diversifying the investor base, developing derivative and swap markets, improving databases and promoting regional initiatives. The goal is to increase the depth and efficiency of local bond markets so that they can play their full role in financial intermediation, financial stability and sustained economic growth. Finally, highlighting increasing interest in the role and operations of sovereign wealth funds, the International Monetary and Financial Committee requested that the IMF open a dialogue with sovereign asset and reserve managers. The first round table was convened in November 2007.

## 2.2 COOPERATION WITH COUNTRIES OUTSIDE THE EU

As part of its international activities, the Eurosystem continued to develop its contacts with the central banking community outside the EU, mainly through the organisation of seminars and workshops. Moreover, technical cooperation has become an important tool supporting

institution-building and enhancing effective compliance with European and international standards at institutions outside the EU.

The Eurosystem held its fourth bilateral high-level seminar with the Central Bank of the Russian Federation (Bank of Russia) in October 2007 in Moscow. Seminar participants exchanged views on the current challenges for monetary and exchange rate policy in Russia, as well as on the process of financial deepening and its implications for the monetary policy transmission mechanism both in Russia and in other mature and emerging market economies. Furthermore, after reviewing the challenges of and the prospects for EU and euro area enlargement, the discussion focused on the implications for Russia. Similar events will continue to be organised on a regular basis, with the next seminar to be held in Vienna in spring 2009.

Following up on the discussions at the high-level Eurosystem/Bank of Russia seminar held in Dresden in October 2006, the Bank of Russia hosted an expert workshop on the long-term growth prospects of the Russian economy in Tula on 14 June 2007. Bank of Russia staff, as well as other experts from the Russian government and financial community, exchanged views with Eurosystem economists on the determinants of growth in and the prospects for the Russian economy. At the workshop, presentations were given on, among other topics, "Long-term challenges for the Russian economy: oil price dependency and Dutch disease" and "Forecasting GDP growth in Russia and the role of policies".

Technical cooperation with the Bank of Russia continues. For example, in October 2007 the ECB hosted two high-level study visits in the areas of market operations and internal finance. The Bank of Russia, the ECB and euro area NCBs have also engaged in close cooperation as a follow-up to the large-scale banking supervision training programme that was implemented between 2003 and 2005. A new central bank cooperation programme, funded by the European Commission, is envisaged to start on 1 April 2008, ending in December 2010. One aim of the programme is to enhance the internal audit capacity of the Bank of Russia through the transfer of EU knowledge and experience in the area of risk-based internal audits. Another aim is to pursue a gradual implementation of the Basel II principles for banking supervision in Russia through consultations and the sharing of the EU experience with the implementation of the EU's Capital Requirements Directive. Advice in the area of payment systems was extended to the Commonwealth of Independent States through a seminar hosted by the National Bank of Kazakhstan in September 2007.

The fourth high-level Eurosystem seminar with governors of central banks of the EU's euro-Mediterranean partners took place in Valencia on 28 March 2007, while the fifth will be held in Cairo on 26 November 2008. Discussions in Valencia focused, among other things, on fiscal policy in Mediterranean countries and euro-Mediterranean trade. Several ECB visits took place at the staff level to the central banks of the Maghreb countries, for example the Bank of Algeria (February 2007), the Bank Al-Maghrib (November 2007) and the Central Bank of Tunisia (November 2007).

The ECB continued to deepen its relations with the central banks and monetary agencies of the member states of the Gulf Cooperation Council (GCC).[5] The ECB also provided the GCC with advice in the areas of payment systems and banknotes. Together with the Deutsche Bundesbank, the ECB will organise a high-level

5 Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

Eurosystem seminar with central banks and monetary authorities of the GCC on 11-12 March 2008 in Mainz. On 25 November 2007 the ECB, together with four euro area NCBs (Deutsche Bundesbank, Bank of Greece, Banque de France and Banca d'Italia), completed a two-year cooperation programme with the Central Bank of Egypt, funded by the European Commission. The programme supported the Central Bank of Egypt in its far-reaching reform agenda, focusing on the introduction of a risk-based approach to banking supervision and improving its supervisory capacities. For this purpose, six projects in the areas of ongoing supervision, inspections and controls, macro-prudential supervision, legal matters and standard-setting, training, and information technology were established in which each of the four NCBs assumed a mentorship and closely cooperated with a team leader from the Central Bank of Egypt.

The ECB and a number of NCBs further deepened their relations with countries in the western Balkans. On 1-2 October 2007 the ECB organised the second economic conference on the region in Frankfurt, broadening its focus to all countries in central, eastern and south-eastern Europe. Senior central bank experts from EU Member States and south-eastern European countries, as well as representatives from the European Commission, international organisations and academia, discussed selected aspects of and key challenges for real convergence in the region.

The ECB, together with eight NCBs (Deutsche Bundesbank, Eesti Pank, Bank of Greece, Banco de España, Banque de France, Banca d'Italia, Oesterreichische Nationalbank and Banka Slovenije), provided the Central Bank of Bosnia and Herzegovina with a needs analysis report on progress to be made in selected central banking areas in preparation for EU accession. The report, which concluded a mission initiated on 1 March 2007, was officially delivered by the Eurosystem on 12 September 2007. It contains recommendations on areas in which the Central Bank of Bosnia and Herzegovina will need to make progress over the coming years in order to bring its standards into line with those adopted by the ESCB. The programme was funded by the European Commission through the Community Assistance for Reconstruction, Development and Stabilisation (CARDS) programme and coordinated by the ECB.

CHAPTER 6

# ACCOUNTABILITY

# 1 ACCOUNTABILITY VIS-À-VIS THE GENERAL PUBLIC AND THE EUROPEAN PARLIAMENT

Over the past decades, central bank independence has emerged as a fundamental component of the monetary policy frameworks of industrialised and emerging economies. The decision to grant central banks independence is firmly grounded in economic theory and empirical evidence, both of which show that such a set-up is conducive to maintaining price stability. At the same time, it is a founding principle of democratic societies that public authorities should be accountable to the general public, from which their mandate ultimately derives. In the case of an independent central bank, accountability can be understood as the obligation to explain how it used its powers and to justify its decisions to citizens and their elected representatives.

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 reporting requirements 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 2007, explaining the ECB's 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 the Treaty, the President presented the ECB's Annual Report 2006 to the plenary session of the European Parliament in 2007. 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 invited to an additional hearing before this Committee to explain the ECB's operations in the money market in response to the financial market turmoil during the second half of 2007, and to discuss the potential lessons for the framework for financial regulation, supervision and stability. The President also appeared before a joint meeting of the European Parliament and the national parliaments to exchange views on economic convergence in the euro area.

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 2006 to the Committee on Economic and Monetary Affairs. Gertrude Tumpel-Gugerell appeared twice before the Committee to provide information on recent developments in the field of securities clearing and settlement and the Eurosystem's TARGET2-Securities project.

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. 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.

# 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 EU FRAMEWORK FOR FINANCIAL REGULATION, SUPERVISION AND STABILITY

The European Parliament and the ECB continued their close dialogue on matters concerning financial integration and stability. In its resolution on financial services policy (2005-2010), the Parliament, while recognising that hedge funds can provide an additional source of liquidity and diversification in the market and create opportunities to improve corporate efficiency, shared the concerns of some central banks and supervisors that such funds may be a source of systemic risk. Accordingly, it called for increased cooperation among supervisors in taking forward the recommendations of the Financial Stability Forum and urged investors, core intermediaries and public authorities to assess the potential counterparty risks presented by hedge funds. The European Parliament also noted the high degree of concentration in the credit rating agency sector, and recommended greater transparency with regard to the working methods of these entities. In respect of financial supervision, the Parliament expressed concern that the current framework may fail to keep pace with financial market dynamics and stressed that it must be sufficiently resourced, coordinated and legally entitled to provide adequate and quick responses in the event of major cross-border systemic crises. It thus considered it necessary to allow the relatively new Level 2 and Level 3 arrangements of the Lamfalussy framework[1] time to become established and, at the same time, to look into the desirability and feasibility of execution of prudential supervision at the EU level where needed in the future.

The President of the ECB emphasised that the reassessment of risk which had taken place in the second half of 2007 reflected the materialisation of some of the vulnerabilities that had previously been identified by the ECB and other central banks. He perceived a need to increase transparency and improve risk management with regard to sophisticated financial products. The President acknowledged that the small number of global credit rating agencies was a real issue for the functioning of global finance. At the same time, he stressed that investors must not treat the opinion of rating agencies as a substitute for their own credit analysis and due diligence. On the subject of hedge funds, he underlined the positive role they played in enhancing the efficiency and liquidity of financial markets, whilst acknowledging that they can also represent a source of risk to the stability of the financial system. He therefore advocated a rapid implementation of the recommendations of the Financial Stability Forum and supported the proposal that the hedge fund sector would strive for best practices and that industry-led benchmarks would be a suitable tool to pursue this objective. He also noted the need for a substantial improvement in the understanding of non-regulated entities, such as conduits and special purpose vehicles, and asked to continue the thorough examination of all non-regulated entities. Finally, he stressed that the potential of the Lamfalussy framework should be exploited to the maximum extent possible before any far-reaching institutional changes were considered (see Chapter 4).

### PUBLIC FINANCES

The conduct of fiscal policies figured prominently in the discussions between the European Parliament and the ECB. In its resolution on the European Commission's "Public finances in EMU 2006" report, the European Parliament

1 The Lamfalussy approach is composed of four levels. At Level 1, the basic principles of the legislation are laid down via the normal legislative process: a co-decision procedure involving the European Parliament and the EU Council, acting on a proposal of the European Commission. At Level 2, measures for the implementation of Level 1 legislation are adopted and amended via fast-track procedures. Level 3 relates to the work of the Level 3 Committees to strengthen supervisory convergence and cooperation. Level 4 relates to Commission measures to strengthen the enforcement of EU law. For more details, see the "Final report of the Committee of Wise Men on the regulation of European securities markets", 15 February 2001, which is available on the European Commission's website. See also the ECB's Annual Report 2003, p. 111.

supported a strict application of the Stability and Growth Pact and called for renewed efforts by Member States to use the economic upswing to prepare their public finances for the challenges of the future, notably an ageing population. In its resolution on the Commission's annual report on the euro area, the European Parliament therefore welcomed the orientations for fiscal policies adopted by the Eurogroup in April 2007, which recalled the commitment to actively consolidate public finances in "good times" and to use windfall revenues for deficit and debt reduction.

The President of the ECB stressed that the economic good times should be used to rapidly address the remaining budgetary imbalances in euro area countries, as well as to accelerate the adjustment towards their medium-term objectives. Against this background, he urged all euro area countries to honour the commitment made in the Eurogroup to reach their medium-term budgetary objectives as soon as possible and by 2010 at the latest (see Section 1.1 of Chapter 5).

#### PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

The ECB continued to inform the European Parliament about its ongoing activities in the field of payment systems and securities clearing and settlement systems. Gertrude Tumpel-Gugerell appeared twice before the Committee on Economic and Monetary Affairs to report on the progress made in establishing a Eurosystem infrastructure for the provision of securities settlement services in central bank money, called TARGET2-Securities. The ECB also welcomed the adoption by the European Parliament and the EU Council of the Payment Services Directive in 2007, as it provides the legal foundation for the creation of a Single Euro Payments Area (SEPA) (see Section 3 of Chapter 4).

In its own-initiative resolution on the ECB's Annual Report 2006, the European Parliament fully supported the ECB's efforts to foster financial integration by acting as a catalyst for private sector initiatives, such as the SEPA. The Parliament also considered that the TARGET2-Securities project might have the potential to enhance the integration, efficiency and safety of the European securities settlement infrastructure. At the same time, it deemed it essential that an appropriate governance framework be put in place. In its resolution on financial services policy (2005-2010), the European Parliament called for further progress in removing the barriers identified in the Giovannini Group's report on cross-border clearing and settlement arrangements (see Section 2 of Chapter 2).


L'OCÉA

CHAPTER 7

# EXTERNAL COMMUNICATION

# 1 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 the official languages of the EU, as are the consolidated financial statements of the Eurosystem.[1] The ECB's Annual Report and the quarterly issues of its Monthly Bulletin are also made available in full in the official EU languages.[2] The Convergence Report is made available either in full or in summary form in all official EU languages.[3] For the purposes of public accountability and transparency, the ECB also publishes other documentation in addition to the statutory publications in some or all official languages, in particular press releases announcing monetary policy decisions, staff macroeconomic projections,[4] policy positions and information material 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 With the exception of Irish, for which a derogation at the EU level is in effect.
2 With the exception of Irish (by EU derogation) and Maltese (by agreement with the Central Bank of Malta, following the lifting of the temporary EU derogation in May 2007).
3 See footnote 2.
4 ECB staff projections since September 2004 and Eurosystem staff projections since December 2000.

# 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, taking into account the different audiences.

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.

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 2007 the President of the ECB appeared seven times before the European Parliament, and these hearings also started to be webcast on the ECB's website.

The members of the Executive Board delivered around 220 speeches to a variety of audiences in 2007 and granted numerous interviews, as well as having articles published in journals, magazines and newspapers.

The ECB organised 15 seminars addressed to international and national media in 2007. Three of these seminars were organised in cooperation with the European Commission and four in cooperation with EU NCBs.

The ECB continued to contribute to the dissemination of research findings by publishing Working Papers and Occasional Papers and by organising academic conferences, seminars and workshops (see Section 5 of Chapter 2).

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.

In 2007 the ECB, in conjunction with the Central Bank of Cyprus and the Central Bank of Malta, organised information campaigns in preparation for the introduction of the euro in Cyprus and Malta on 1 January 2008. The logo "€ Our money", which is based on the logo used for the information campaign for the introduction of the euro banknotes and coins in 2002, was used in all the joint communication activities for the changeover in Cyprus and Malta. The campaigns followed the pattern of the communication strategy developed for Slovenia's entry into the euro area on 1 January 2007. They aimed to familiarise professional 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 Section 4 of Chapter 3).

The ECB welcomed around 13,500 visitors to its premises in Frankfurt in 2007. The visitors received first-hand information in the form of lectures and presentations given by ECB experts. 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, which received 15 million visits in 2007 (with 15 million documents downloaded).

In particular, the information kit entitled "Price stability: why is it important for you?"[5] for young teenagers and their teachers, produced by the ECB in cooperation with the euro area NCBs in all official EU languages, received a high level of attention from users. The kit consists of an eight-minute animated film, leaflets for pupils and a teachers' booklet. The film features two secondary school pupils finding out about price stability. The leaflets provide an easy-to-understand overview of the topic, while the booklet provides greater detail for teachers.

Around 60,000 public enquiries involving requests for information on different aspects of the ECB's activities were handled in 2007.

The ECB holds an annual Cultural Days programme which aims to bring the cultural diversity of the EU Member States closer to the staff of the ECB and the ESCB, to the international financial community in Frankfurt as well as to the residents of Frankfurt and the surrounding region. 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 2007 the Cultural Days programme focused on Greece, following on from Austria, Hungary, Poland and Portugal in previous years. The programme was organised in close cooperation with the Bank of Greece and took place between 24 October and 13 November 2007.

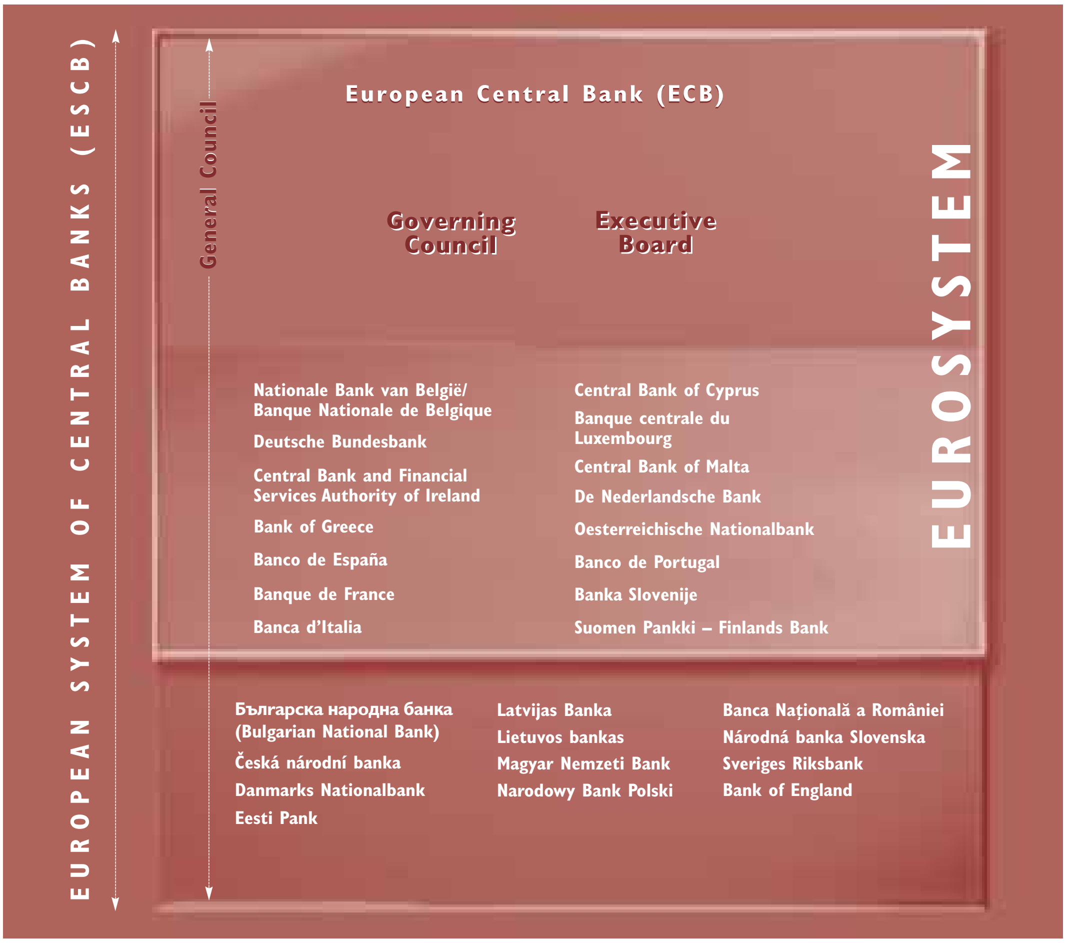
5 The information kit can be accessed on the ECB's website under http://www.ecb.europa.eu/ecb/educational/pricestab/html/index.en.html

CHAPTER 8

# INSTITUTIONAL FRAMEWORK, ORGANISATION AND ANNUAL ACCOUNTS

# 1 DECISION-MAKING BODIES AND CORPORATE GOVERNANCE OF THE ECB

## 1.1 THE EUROSYSTEM 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 (15 since 1 January 2008). 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 Treaty of Lisbon incorporates the term "Eurosystem" (see Section 1.2 of Chapter 5).

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.[1] 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 2007 two meetings were held outside Frankfurt: one was hosted by the Central Bank and Financial Services Authority of Ireland in Dublin and the other by the Oesterreichische Nationalbank in Vienna.

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.

1 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):**
Jürgen Stark, Erkki Liikanen,
Klaus Liebscher,
Nicholas C. Garganas,
Nout Wellink, Marko Kranjec

**Middle row (left to right):**
John Hurley,
Miguel Fernández Ordóñez,
Christian Noyer, Axel A. Weber,
Lorenzo Bini Smaghi,
Michael C. Bonello

**Front row (left to right):**
Yves Mersch,
José Manuel González-Páramo,
Lucas D. Papademos,
Jean-Claude Trichet,
Gertrude Tumpel-Gugerell,
Athanasios Orphanides

**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
**Michael C. Bonello**[2]
Governor of the Central Bank of Malta
(from 1 January 2008)
**Vítor Constâncio**
Governor of the Banco de Portugal
**Mario Draghi**
Governor of the Banca d'Italia
**Miguel Fernández Ordóñez**
Governor of the Banco de España
**Nicholas C. Garganas**
Governor of the Bank of Greece
**Mitja Gaspari**
Governor of Banka Slovenije
(from 1 January until 31 March 2007)
**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
**Marko Kranjec**
Governor of Banka Slovenije
(from 16 July 2007)
**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
**Athanasios Orphanides**[2]
Governor of the Central Bank of Cyprus
(from 1 January 2008)
**Guy Quaden**
Governor of the Nationale Bank van België/ Banque Nationale de Belgique
**Andrej Rant**
Acting Governor of Banka Slovenije
(from 1 April until 15 July 2007)
**Jürgen Stark**
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

2 The governors of the central banks of Malta and Cyprus attended the Governing Council meetings in 2007 as special invitees following the decision by the ECOFIN Council on 10 July 2007 to abrogate the respective countries' derogations with effect from 1 January 2008.

## 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
**Jürgen Stark**
Member of the Executive Board of the ECB
**Gertrude Tumpel-Gugerell**
Member of the Executive Board of the ECB

**Executive Board**

**Directorate General Statistics**
Steven Keuning
Deputy: Werner Bier
Divisions:
- Euro Area Accounts and Economic Data
- External Statistics
- Monetary and Financial Statistics
- Statistical Information Services
- Statistics Development/Coordination

**Directorate General Administration**
Gerald Grisse
Divisions:
- Office Services
- Premises
- Security

**Directorate Internal Finance:** Ian Ingram
Divisions:
- Accounting and Procurement
- Financial Reporting and Policy

**Directorate Banknotes**
Antti Heinonen
Divisions:
- Currency Development
- Currency Management

**Directorate Communications**
Elisabeth Ardaillon-Poirier
Divisions:
- Official Publications and Library
- Press and Information
- Protocol and Conferences

**Counsel to the Executive Board**
Gilles Noblet

**ECB Representation in Washington, D.C.**
Johannes Onno de Beaufort Wijnholds

**Directorate General Economics**
Wolfgang Schill
Deputy: Philippe Moutot
Divisions:
- Fiscal Policies

**Directorate Economic Developments**
Hans-Joachim Klöckers
Divisions:
- Euro Area Macroeconomic Developments
- EU Countries
- External Developments

**Directorate Monetary Policy**
Philippe Moutot
Divisions:
- Capital Markets/Financial Structure
- Monetary Policy Stance
- Monetary Policy Strategy

**Directorate Financial Stability and Supervision**
Mauro Grande
Divisions:
- Financial Stability
- Financial Supervision

**Directorate General HR, Budget and Organisation**
Koenraad De Geest
Deputy: Berend van Baak
Divisions:
- Budget and Projects
- HR Policies and Staff Relations
- Organisational Planning
- Recruitment and Compensation
- Risk Management [2]

**Directorate General Information Systems**
Hans-Gert Penzel
Deputy: François Laurent
Divisions:
- IT Management Functions
- IT Operations and Support

**Directorate IT Projects:** Magi Clavé

**Directorate Internal Audit**
Klaus Gressenbauer
Divisions:
- Audit Missions
- Audit Services

**Directorate General International and European Relations**
Frank Moss
Deputy: Georges Pineau
Divisions:
- EU Institutions and Fora
- EU Neighbouring Regions
- International Policy Analysis

**Directorate General Legal Services**
Antonio Sáinz de Vicuña
Divisions:
- Lawyer-Linguists
- Legal Advice [1]

**Directorate General Market Operations**
Francesco Papadia
Deputies: Paul Mercier, Werner Studener
Divisions:
- Back Office
- Front Office
- Investment
- Market Operations Analysis
- Market Operations Systems

**Directorate General Payments and Market Infrastructure**
Jean-Michel Godeffroy
Deputy: Daniela Russo
Divisions:
- Market Infrastructure
- Oversight
- TARGET

**Directorate General Research**
Lucrezia Reichlin
Deputy: Frank Smets
Divisions:
- Econometric Modelling
- Financial Research
- Monetary Policy Research

**Directorate General Secretariat and Language Services**
Pierre van der Haegen [3]
Deputy: Klaus Riemke
Divisions:
- Language Services
- Secretariat

**Executive Board**

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 (President), Lucas D. Papademos (Vice-President)

1 Includes the data protection function.
2 Reports directly to the Executive Board.
3 Secretary to the Executive Board, the Governing Council and the General Council.

## 1.4 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 2007 the General Council met five times. Since January 2007 the governors of Българска народна банка (Bulgarian National Bank) and Banca Naţională a României have been members of the General Council.

**Back row (left to right):**
Erkki Liikanen, András Simor, Klaus Liebscher, Nicholas C. Garganas, Axel A. Weber, Reinoldijus Šarkinas, Nout Wellink, Andres Lipstok

**Middle row (left to right):**
John Hurley, Nils Bernstein, Christian Noyer, Ilmārs Rimšēvičs, Zdeněk Tůma, Stefan Ingves, Marko Kranjec, Mugur Constantin Isărescu

**Front row (left to right):**
Miguel Fernández Ordóñez, Ivan Šramko, Lucas D. Papademos, Jean-Claude Trichet, Michael C. Bonello, Athanasios Orphanides, Yves Mersch

**Jean-Claude Trichet**
President of the ECB
**Lucas D. Papademos**
Vice-President of the ECB
**Leszek Balcerowicz**
President of Narodowy Bank Polski
(until 10 January 2007)
**Nils Bernstein**
Governor of Danmarks Nationalbank
**Michael C. Bonello**
Governor of the Central Bank of Malta
**Christodoulos Christodoulou**
Governor of the Central Bank of Cyprus
(until 2 May 2007)
**Vítor Constâncio**
Governor of the Banco de Portugal
**Mario Draghi**
Governor of the Banca d'Italia
**Miguel Fernández Ordóñez**
Governor of the Banco de España
**Nicholas C. Garganas**
Governor of the Bank of Greece
**Mitja Gaspari**
Governor of Banka Slovenije
(until 31 March 2007)
**John Hurley**
Governor of the Central Bank and Financial Services Authority of Ireland
**Stefan Ingves**
Governor of Sveriges Riksbank
**Mugur Constantin Isărescu**
Governor of Banca Naţională a României
**Ivan Iskrov**
Governor of Българска народна банка
(Bulgarian National Bank)
**Zsigmond Járai**
Governor of the Magyar Nemzeti Bank
(until 2 March 2007)
**Mervyn King**
Governor of the Bank of England
**Marko Kranjec**
Governor of Banka Slovenije
(from 16 July 2007)
**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
**Athanasios Orphanides**
Governor of the Central Bank of Cyprus (from 3 May 2007)
**Guy Quaden**
Governor of the Nationale Bank van België/ Banque Nationale de Belgique
**Andrej Rant**
Acting Governor of Banka Slovenije (from 1 April until 15 July 2007)
**Ilmārs Rimšēvičs**
Governor of Latvijas Banka
**Reinoldijus Šarkinas**
Chairman of the Board of Lietuvos bankas
**Sławomir Skrzypek**
President of Narodowy Bank Polski (from 11 January 2007)
**András Simor**
Governor of the Magyar Nemzeti Bank (from 3 March 2007)
**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

## 1.5 EUROSYSTEM/ESCB COMMITTEES, THE BUDGET COMMITTEE, THE HUMAN RESOURCES CONFERENCE AND THE EUROSYSTEM IT STEERING COMMITTEE

**EUROSYSTEM/ESCB COMMITTEES, BUDGET COMMITTEE, HUMAN RESOURCES CONFERENCE AND THEIR CHAIRPERSONS**

| | |
|---|---|
| **Accounting and Monetary Income Committee (AMICO)**<br>Ian Ingram | **International Relations Committee (IRC)**<br>Henk Brouwer |
| **Banking Supervision Committee (BSC)**<br>Peter Praet | **Legal Committee (LEGCO)**<br>Antonio Sáinz de Vicuña |
| **Banknote Committee (BANCO)**<br>Antti Heinonen | **Market Operations Committee (MOC)**<br>Francesco Papadia |
| **Committee on Cost Methodology (COMCO)**<br>Wolfgang Duchatczek | **Monetary Policy Committee (MPC)**<br>Wolfgang Schill |
| **Eurosystem/ESCB Communications Committee (ECCO)**<br>Elisabeth Ardaillon-Poirier | **Payment and Settlement Systems Committee (PSSC)**<br>Jean-Michel Godeffroy |
| **Information Technology Committee (ITC)**<br>Hans-Gert Penzel | **Statistics Committee (STC)**<br>Steven Keuning |
| **Internal Auditors Committee (IAC)**<br>Klaus Gressenbauer | |
| **Budget Committee (BUCOM)**<br>José de Matos | **Human Resources Conference (HRC)**<br>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. In July 2007 the Committee on Cost Methodology was established as a Eurosystem/ESCB committee under Article 9.1 of the Rules of Procedure of the ECB, bringing the number of Eurosystem/ESCB committees which have been established under this Article to 13.

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.

In August 2007 the Governing Council established the Eurosystem IT Steering Committee (EISC) with a mandate to steer continuous improvement in the use of IT within the Eurosystem. The EISC's responsibilities relate in particular to Eurosystem IT governance, covering such areas as the development and maintenance of policies for IT architecture and security, the identification of IT demand, IT project portfolio management and prioritisation, IT project planning, realisation and control, and the monitoring of IT systems and operations. The EISC is expected to increase the efficiency and effectiveness of the Governing Council's decision-making on Eurosystem/ESCB IT projects and operations by considering proposals from ESCB committees or Eurosystem central banks prior to discussion by the Governing Council, and by submitting reports on these proposals to the Governing Council. The EISC reports to the Governing Council via the Executive Board.

## 1.6 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 as well as 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.[3]

### INTERNAL CONTROL LAYERS

The internal control structure of the ECB is based on the functional approach that each organisational unit (section, division, directorate or directorate general) is responsible for managing its own risks, controls, effectiveness and efficiency. Each organisational unit implements operational control procedures

3 KPMG Deutsche Treuhand-Gesellschaft AG Wirtschafts-prüfungsgesellschaft was the ECB's external auditor for the financial years 2003-07. Following the conclusion of a public tender procedure and in line with the ECB's agreed practice of rotating audit firms, a new external auditor for the financial years 2008-12 will be appointed.

within its area of responsibility in accordance with the risk tolerance set ex ante by the Executive Board. 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. The ECB enhanced its approach to operational risk management during 2007 by creating an umbrella framework which allows operational risks to be managed in a consistent, structured and integrated manner by bringing together a number of risk and control policies, procedures and instruments. In addition, the Directorate General Human Resources, Budget and Organisation monitors the portfolio of risks and the internal control structure and makes proposals to improve the effectiveness of risk identification, assessment and treatment in the ECB.

Independently from the internal control structure and risk monitoring of the ECB, audit missions are performed by the Directorate Internal Audit under the direct responsibility of the Executive Board. In accordance with the mandate defined in the ECB Audit Charter,[4] the ECB's internal auditors provide independent and objective assurance and consulting services, bringing a systematic approach to evaluating and improving the effectiveness of risk management, control and governance processes. The Directorate Internal Audit abides by the International Standards for the Professional Practice of Internal Auditing of 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 coordinating the auditing of Eurosystem/ESCB joint projects and operational systems.

In order to enhance corporate governance, the Governing Council decided to create an ECB Audit Committee as of April 2007, composed of three of its members, with John Hurley (Governor of the Central Bank and Financial Services Authority of Ireland) as Chairman.

### 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.[5] 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 European Central Bank, which gives guidance to, and sets benchmarks 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.[6] 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.[7] The third code is a Supplementary Code of Ethical Criteria for the members of the Executive Board.[8] It complements the other two codes by further detailing the ethical

4 This Charter is published on the ECB's website to foster the transparency of audit arrangements in place at the ECB.
5 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.
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.

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[9] 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[10] 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[11] 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.[12]

In 2007 the number of public access requests remained limited.

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, an "Archives" section of the ECB's website provides access to historical documentation.

# 2 ORGANISATIONAL DEVELOPMENTS

## 2.1 HUMAN RESOURCES

In 2007 the ECB enhanced its human resources (HR) policy framework to underline the importance of its values and the HR basic principles.[13] This framework is also an instrument for explaining why specific HR policies have been chosen and how they relate to one another. Under the framework, policies relating to HR management fall into four main areas:

### CORPORATE CULTURE

With staff from the 27 EU Member States, the ECB has integrated diversity management into its HR practices to ensure that the individual competencies of staff are recognised and fully utilised for the purpose of achieving the ECB's objectives. The management of diversity at the ECB is based on the diversity strategy launched in 2006. It seeks to ensure that all members of staff are treated with respect and that their performance is assessed on the basis of merit.

The six ECB common values (competence, effectiveness and efficiency, integrity, team spirit, transparency and accountability, and working for Europe) were further embedded in the HR policies with a view to shaping day-to-day behaviour and improving performance.

### STAFF DEVELOPMENT

Following the introduction in 2006 of general principles for mobility which encourage members of staff to change positions after five years of service, internal mobility has received considerable support. Mobility is seen as an opportunity for staff to widen their expertise and develop their skills and as a means for the ECB to broaden awareness among its staff and 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. In 2007 a "mobility window" was launched to foster exchanges between staff members as well as temporary internal transfers, for instance to cover for the absence of colleagues. In total, 152 members of staff, including 31 managers and advisers, moved internally to other positions in 2007, either on a temporary or on a long-term basis.

The ECB's external work experience scheme facilitates the secondment of staff to the 27 NCBs in the EU or to relevant international organisations (e.g. the IMF and the BIS) for periods of two to twelve months. 23 members of staff were seconded under this scheme in 2007. In addition, the ECB granted unpaid leave, for up to three years, to 36 members of staff. Many of them (19) took up employment at NCBs, international organisations or private companies. Others used these periods of unpaid leave for study purposes.

In addition to promoting mobility, including managerial rotation, the HR strategy continued to focus on the development of ECB management and, in particular, on strengthening managerial skills through training and individual coaching. Training for managers concentrated on the enhancement of leadership skills, on performance and organisational change management, and on "dignity at work" as an essential pillar of the ECB's diversity strategy.

Managers also participated in an annual mandatory multi-source feedback exercise in which directly reporting staff, peers and external contacts identify areas for managers' personal development. Based on the results of the multi-source feedback, individual coaching can be provided.

The continuous acquisition and development of skills and competencies by all members of staff remains a cornerstone of the ECB's HR strategy. As a basic principle, learning and development are a shared responsibility between staff and institution. On the one hand, the ECB provides the budgetary means and training framework

13 The HR basic principles are: organisational need, decentralised staff management, merit, diversity, attractive employment conditions and reciprocal commitment.

and managers define the training needs of staff for their current position. On the other hand, staff have to take the necessary steps for learning and development and ensure that their expertise is maintained at the highest level. In addition to numerous in-house training opportunities, staff continued to take up external training opportunities to address individual training needs of a more technical nature. They also benefited from training opportunities organised as part of ESCB programmes or offered by the NCBs.

In the context of its secondary training policy, the ECB provided 22 members of staff with support to acquire a qualification that would increase their professional competence beyond the requirements of their current position.

## RECRUITMENT

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 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 2007 the ECB offered 27 convertible fixed-term contracts to external applicants. It also issued 56 non-convertible fixed-term contracts to cover for staff absences of more than one year and 114 short-term contracts to cover for absences of less than one year, such as unpaid or parental leave. The following table summarises developments in the staffing of the ECB in 2007.

**Staffing developments**

| | 2007 | 2006 |
|---|---|---|
| Staff with an ECB contract, full-time equivalent [1] | 1,375 | 1,342 |
| Short-term contracts offered to experts from NCBs and/or international organisations | 106 | 93 |
| New participants in the Graduate Programme | 10 | 6 |
| Internships | 145 | 173 |

Source: ECB.
1) The approved headcount as at 31 December 2007 was 1,348. 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.

Offering short-term contracts to staff from NCBs and international organisations allows the ECB and these organisations to gain from each other's experience. Employing NCB staff on a short-term basis also helps to foster an ESCB-wide team spirit.

In September 2007 the second intake of 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 internship opportunities offered by the ECB focused on students and graduates with backgrounds in economics, statistics, business administration, law and translation.

The ECB also offered five 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.

## EMPLOYMENT CONDITIONS

The ECB has started an ambitious project which aims to introduce an enterprise resource planning system. The SAP-based system called "ISIS" (Integrated data, Streamlined processes, Information Sharing), once operational, will have a significant impact on a number of tasks relating to HR management. As well as simplifying various administrative processes, the system will allow staff and managers to perform some activities in "self-service mode", thus contributing to increased efficiency within the organisation.

Taking into account the most recent developments regarding life expectancy, the ECB has initiated a review of the retirement plan it offers to its staff. It is expected that the outcome of this review will be implemented at the beginning of 2009.

In order to improve the balance between professional and private life, and to further develop the resilience of the ECB, the Executive Board decided to launch a pilot project with a view to progressively introducing teleworking. After completion of the project, the benefits and drawbacks will be carefully assessed before a decision is taken on extending the scheme.

### THE HUMAN RESOURCES CONFERENCE AND THE FOLLOW-UP TO THE EUROSYSTEM MISSION STATEMENT

The Human Resources Conference (HRC) was established in 2005, with the aim of further promoting cooperation and team spirit among Eurosystem/ESCB central banks in the field of HR management. The HRC's activities in 2007 covered different aspects of staff training and development, including opportunities for ESCB training activities and the development of measures to increase intra-ESCB mobility.

With the aim of exchanging experiences and moving towards the establishment of best practices, workshops and presentations were organised on topics such as recruitment and selection procedures, assessment centres, internal mobility and career path policies. A conference on leading organisational change also took place, and a new task force on ESCB human resources management information was launched.

## 2.2 NEW ECB PREMISES

Work on the ECB's new premises progressed according to schedule in 2007. The detailed planning phase started on 20 February 2007 and the results of this phase were presented to the public on 8 October 2007. The design was submitted to the relevant authorities of the City of Frankfurt on 22 October 2007 in order to obtain the necessary building permits.

While the overall appearance of the building ensemble remained unchanged as a result of the detailed planning phase, the design for the new premises was further developed. On-site analyses of original building elements and materials used in the Grossmarkthalle were conducted with a view to developing appropriate methods of restoration.

The specifics of the construction envisaged inside the Grossmarkthalle were elaborated in further detail, especially with regard to fire and safety requirements, as well as the structural elements of the functional areas within the hall.

The overall concept for the interior of the new premises, including the materials and surfaces, was defined. Sample installations were built to test the functionality and quality of the materials chosen for the main building elements. An actual-size, two-storey mock-up building, showing the facade of a middle section of the high-rise south office tower and the adjacent atrium, has been installed at the ECB's future site in order to verify the technical, functional and architectural details.

In 2007 the land use plan was further developed by the planning department of the City of Frankfurt, in cooperation with the ECB. The purpose of the land use plan is to ascertain sustainable urban development. The general public and various authorities are involved in the development of the plan, thereby ensuring its democratic legitimacy. The land use plan was published in the "Amtsblatt", the official gazette of the City of Frankfurt, on 13 November 2007, rendering it legally binding.

In August 2007 the ECB launched an international public tender for a general contractor to construct its new premises. The contract notice was published both in the Official Journal of the European Union and on the ECB's website. It is envisaged that the contract will be awarded in October 2008, with the main construction work scheduled to begin in the fourth quarter of 2008. Preliminary work on the ECB's future site will begin in the first quarter of 2008. The new premises are expected to be finalised by the end of 2011.

In 2008 the City of Frankfurt will launch a competition to design a memorial and information space to commemorate the deportation of Jewish citizens from the Grossmarkthalle.

## 2.3 THE EUROSYSTEM PROCUREMENT COORDINATION OFFICE

In July 2007 the Governing Council decided to establish the Eurosystem Procurement Coordination Office (EPCO) in order to enhance cooperation within the Eurosystem in the field of procurement. The main tasks of EPCO are to facilitate the adoption and exchange of best practices within the Eurosystem, to develop an infrastructure (skills, functional tools and IT processes) enabling purchasing power to be pooled, and to coordinate the Eurosystem procurement agenda. Eurosystem central banks participate on a voluntary basis. In December 2007 the Banque centrale du Luxembourg was designated to host EPCO from 1 January 2008 to 31 December 2012.

# 3 ESCB SOCIAL DIALOGUE

The ESCB Social Dialogue is a consultative forum involving the ECB and employee representatives from the central banks of the ESCB and from European trade union federations.[14] Its purpose is to provide information and foster exchanges of views on issues that may have a major impact on employment conditions at the central banks of the ESCB.

Meetings of the ESCB Social Dialogue were held in July and December 2007. In addition to issues relating to banknote production and circulation, payment systems (TARGET2, TARGET2-Securities and CCBM2) and financial supervision, 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.

The implementation of the measures agreed in 2006 between the ECB and the European trade union federations to enhance further the ESCB Social Dialogue was initiated in 2007 and will be pursued in 2008.

14 The Standing Committee of European Central Bank Unions (SCECBU), Union Network International – Europa (UNI – Europa) Finance and the European Federation of Public Service Unions (EPSU).

# 4 ANNUAL ACCOUNTS OF THE ECB

# MANAGEMENT REPORT FOR THE YEAR ENDING 31 DECEMBER 2007

## 1 NATURE OF THE BUSINESS

The ECB's activities in 2007 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). 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.

The emoluments of the members of the Executive Board are set out in note 29 "Staff costs" of the Annual Accounts.

### EMPLOYEES

The average number of staff (full-time equivalent) employed on permanent or fixed-term contracts by the ECB rose from 1,337 in 2006 to 1,366 in 2007. At the end of that year 1,375 staff were employed. For further details, see note 29 "Staff costs" of the Annual Accounts 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. As at 31 December 2006, this provision amounted to €2,371,395,162. In accordance with Article 49.2 of the Statute of the ESCB, Banka Slovenije also contributed an amount of €10,947,042 to the provision with effect from 1 January 2007. Taking the results of its assessment into account, the Governing Council decided to transfer as at 31 December 2007 an additional amount of €286,416,109 to the provision, which increased its size to €2,668,758,313 and, as in 2006, reduced 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, taking a range of factors into account, including in particular the level of holdings of risk-bearing assets, the extent of materialised risk exposures in the current financial year, projected results for the coming year, and a risk assessment involving calculations of Values at Risk (VaR) on risk-bearing assets, which is applied consistently over time. The Governing Council has decided that the provision, together with any amounts held in the ECB's general reserve fund, may not exceed the value of the capital shares paid up by the euro area NCBs.

### FINANCIAL RESULT FOR 2007

Had the provision against foreign exchange rate, interest rate and gold price risks not been increased in 2007, the ECB would have reported a net profit of €286 million.

In 2007, the appreciation of the euro vis-à-vis the US dollar and, to a lesser extent, the Japanese yen resulted in write-downs in the euro value of the ECB's holdings of assets denominated in these currencies. These write-downs amounted to some €2.5 billion and were expensed in the Profit and Loss Account.

In 2007 net interest income increased to €2,421 million from €1,972 million in 2006, owing mainly to 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.

Net realised gains arising from financial operations rose from €475 million in 2006 to €779 million in 2007, mainly due to (a) the drop in US interest rates in 2007 which resulted in higher net realised gains from security sales during the year and (b) the rise in the price of gold, which led to greater realised gains from gold sales in 2007. These sales were conducted in accordance with the Central Bank Gold Agreement, which came into effect on 27 September 2004 and of which the ECB is a signatory.

Total administrative expenses of the ECB, including depreciation, increased from €361 million in 2006 to €385 million in 2007.

## CHANGE TO THE CAPITAL OF THE ECB

In accordance with Article 49.3 of the Statute of the ESCB, which was added to the Statute by the Treaty of Accession, the ECB's subscribed capital is automatically increased when a new Member State joins the EU and its NCB joins the ESCB. This increase requires the calculation of the capital key weighting of each NCB that is part of the ESCB by analogy with Article 29.1 and in compliance with Article 29.2 of the Statute of the ESCB. Consequently, upon the accession of Bulgaria and Romania as new Member States as at 1 January 2007 (a) the NCBs' capital key shares were adjusted in accordance with 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 and (b) the subscribed capital of the ECB was increased to €5,761 million.

In addition, in accordance with Article 49.1 of the Statute of the ESCB, Banka Slovenije paid up the remainder of its capital subscription to the ECB upon Slovenia's adoption of the single currency as at 1 January 2007, while the Bulgarian National Bank and Banca Națională a României, similarly to the other non-euro area NCBs, paid up 7% of their subscribed capital as a contribution to the operational costs of the ECB.

The combined effect of the developments described was that the ECB's paid-up capital increased from €4,089 million on 31 December 2006 to €4,127 million on 1 January 2007. Details of these changes are contained in note 15 "Capital and reserves" of the Annual Accounts.

# BALANCE SHEET AS AT 31 DECEMBER 2007

| ASSETS | NOTE NUMBER | 2007 € | 2006 € |
|---|---|---|---|
| **Gold and gold receivables** | **1** | **10,280,374,109** | **9,929,865,976** |
| **Claims on non-euro area residents denominated in foreign currency** | **2** | | |
| Receivables from the IMF | | 449,565,998 | 414,768,308 |
| Balances with banks and security investments, external loans and other external assets | | 28,572,614,853 | 29,313,377,277 |
| | | **29,022,180,851** | **29,728,145,585** |
| **Claims on euro area residents denominated in foreign currency** | **2** | **3,868,163,459** | **2,773,828,417** |
| **Claims on non-euro area residents denominated in euro** | **3** | | |
| Balances with banks, security investments and loans | | **25,128,295** | **4,193,677** |
| **Other claims on euro area credit institutions denominated in euro** | **4** | **100,038,774** | **33,914** |
| **Intra-Eurosystem claims** | **5** | | |
| Claims related to the allocation of euro banknotes within the Eurosystem | | 54,130,517,580 | 50,259,459,435 |
| Other claims within the Eurosystem (net) | | 17,241,183,222 | 3,545,868,495 |
| | | **71,371,700,802** | **53,805,327,930** |
| **Other assets** | **6** | | |
| Tangible fixed assets | | 188,209,963 | 175,180,989 |
| Other financial assets | | 9,526,196,135 | 8,220,270,389 |
| Off-balance-sheet instruments revaluation differences | | 34,986,651 | 29,518,315 |
| Accruals and prepaid expenses | | 1,557,414,330 | 1,094,509,354 |
| Sundry | | 69,064,934 | 5,580,697 |
| | | **11,375,872,013** | **9,525,059,744** |
| **Total assets** | | **126,043,458,303** | **105,766,455,243** |

| LIABILITIES | NOTE NUMBER | 2007 € | 2006 € |
|---|---|---|---|
| **Banknotes in circulation** | 7 | **54,130,517,580** | **50,259,459,435** |
| **Liabilities to other euro area residents denominated in euro** | 8 | **1,050,000,000** | **1,065,000,000** |
| **Liabilities to non-euro area residents denominated in euro** | 9 | **14,571,253,753** | **105,121,522** |
| **Liabilities to non-euro area residents denominated in foreign currency** | 10 | | |
| Deposits, balances and other liabilities | | **667,076,397** | **330,955,249** |
| **Intra-Eurosystem liabilities** | 11 | | |
| Liabilities equivalent to the transfer of foreign reserves | | **40,041,833,998** | **39,782,265,622** |
| **Other liabilities** | 12 | | |
| Off-balance-sheet instruments revaluation differences | | 69,589,536 | 0 |
| Accruals and income collected in advance | | 1,863,461,316 | 1,262,820,884 |
| Sundry | | 659,763,920 | 899,170,800 |
| | | **2,592,814,772** | **2,161,991,684** |
| **Provisions** | 13 | **2,693,816,002** | **2,393,938,510** |
| **Revaluation accounts** | 14 | **6,169,009,571** | **5,578,445,671** |
| **Capital and reserves** | 15 | | |
| Capital | | **4,127,136,230** | **4,089,277,550** |
| **Profit for the year** | | **0** | **0** |
| **Total liabilities** | | **126,043,458,303** | **105,766,455,243** |

# PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING 31 DECEMBER 2007

| | NOTE NUMBER | 2007 € | 2006 € |
|---|---|---|---|
| Interest income on foreign reserve assets | | 1,354,887,368 | 1,318,243,236 |
| Interest income arising from the allocation of euro banknotes within the Eurosystem | | 2,004,355,782 | 1,318,852,000 |
| Other interest income | | 4,380,066,479 | 2,761,697,060 |
| *Interest income* | | *7,739,309,629* | *5,398,792,296* |
| Remuneration of NCBs' claims in respect of foreign reserves transferred | | (1,356,536,045) | (965,331,593) |
| Other interest expense | | (3,962,006,944) | (2,461,625,254) |
| *Interest expense* | | *(5,318,542,989)* | *(3,426,956,847)* |
| **Net interest income** | **23** | **2,420,766,640** | **1,971,835,449** |
| Realised gains/losses arising from financial operations | **24** | 778,547,213 | 475,380,708 |
| Write-downs on financial assets and positions | **25** | (2,534,252,814) | (718,467,508) |
| Transfer to/from provisions for foreign exchange rate and price risks | | (286,416,109) | (1,379,351,719) |
| **Net result of financial operations, write-downs and risk provisions** | | **(2,042,121,710)** | **(1,622,438,519)** |
| **Net expense from fees and commissions** | **26** | **(621,691)** | **(546,480)** |
| **Income from equity shares and participating interests** | **27** | **920,730** | **911,866** |
| **Other income** | **28** | **6,345,668** | **11,407,583** |
| **Total net income** | | **385,289,637** | **361,169,899** |
| Staff costs | **29** | (168,870,244) | (160,847,043) |
| Administrative expenses | **30** | (184,589,229) | (166,426,595) |
| Depreciation of tangible fixed assets | | (26,478,405) | (29,162,141) |
| Banknote production services | **31** | (5,351,759) | (4,734,120) |
| **Profit for the year** | | **0** | **0** |

*Frankfurt am Main, 26 February 2008*

EUROPEAN CENTRAL BANK

Jean-Claude Trichet
*President*

# ACCOUNTING POLICIES[1]

### 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[2], 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 was 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 recorded 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.

### 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 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 2007, was derived from

1 The detailed accounting policies of the ECB were 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 was repealed and replaced by Decision ECB/2006/17, OJ L 348, 11.12.2006, p. 38, as amended.

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 exchange rate of the euro against the US dollar on 31 December 2007.

### SECURITIES

All marketable securities and similar assets are valued either at the mid-market prices or on the basis of the relevant yield curve prevailing at the Balance Sheet date on a security-by-security basis. For the year ending 31 December 2007, mid-market prices on 28 December 2007 were used. Non-marketable securities are valued at cost, while illiquid equity shares are valued at cost subject to impairment.

### 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 2007 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 and of interest rate swaps is based on generally accepted valuation methods using observable market prices and rates and the discount factors from the settlement dates 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/TARGET2 – 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/TARGET2. 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 with the ECB, arising from their participation in TARGET/TARGET2,[3] are disclosed under "Liabilities to non-euro area residents denominated in euro".

### 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 period for which the asset is expected to be available for use, as follows:

| | |
|---|---|
| Computers, related hardware and software, and motor vehicles | 4 years |
| Equipment, furniture and plant in building | 10 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.

3 As at 31 December 2007, the non-euro area NCBs participating in TARGET/TARGET2 were: Danmarks Nationalbank, Central Bank of Cyprus, Latvijas Banka, Lietuvos bankas, Central Bank of Malta and Bank of England.

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 euro area NCBs, which together comprise the Eurosystem, issue euro banknotes.[4] 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.[5]

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,[6] 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 notes on accounting policies). Interest income on these claims is included within the item "Net interest income". 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.[7] It is distributed in full unless

4 Decision ECB/2001/15 of 6 December 2001 on the issue of euro banknotes, OJ L 337, 20.12.2001, p. 52, as amended.

5 "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.

6 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.

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.

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.

# NOTES ON THE BALANCE SHEET

## 1 GOLD AND GOLD RECEIVABLES

As at 31 December 2007 the ECB held 18,091,733 ounces of fine gold (2006: 20,572,017 ounces). The reduction was due to (a) gold sales of 2,539,839 ounces in accordance with the Central Bank Gold Agreement, which came into effect on 27 September 2004 and of which the ECB is a signatory, and (b) Banka Slovenije's transfer to the ECB of 59,555 ounces of fine gold[8] upon Slovenia's adoption of the single currency, in accordance with Article 30.1 of the Statute of the ESCB. The decrease in the euro equivalent of this holding, resulting from these transactions, was more than offset by a significant rise in the price of gold during 2007 (see "Gold and foreign currency assets and liabilities" in the notes on accounting policies).

## 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 2007. 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).

### BALANCES WITH BANKS AND SECURITY INVESTMENTS, EXTERNAL LOANS AND OTHER EXTERNAL ASSETS; AND CLAIMS ON EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

These two items consist of balances with banks and loans denominated in foreign currency, and investments in securities denominated in US dollars and Japanese yen, as follows:

| *Claims on non-euro area residents* | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Current accounts | 761,073,851 | 1,388,630,590 | (627,556,739) |
| Money market deposits | 688,783,688 | 1,352,326,756 | (663,543,068) |
| Reverse repurchase agreements | 543,247,188 | 330,983,321 | 212,263,867 |
| Security investments | 26,579,510,126 | 26,241,436,610 | 338,073,516 |
| Total | 28,572,614,853 | 29,313,377,277 | (740,762,424) |

| *Claims on euro area residents* | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Current accounts | 574,945 | 18,535 | 556,410 |
| Money market deposits | 3,867,588,514 | 2,621,949,594 | 1,245,638,920 |
| Reverse repurchase agreements | 0 | 151,860,288 | (151,860,288) |
| Total | 3,868,163,459 | 2,773,828,417 | 1,094,335,042 |

Despite the depreciation of both the US dollar and the Japanese yen against the euro in 2007, the net euro value of these positions increased, mainly as a result of (a) the investment of the proceeds of the gold sales in Japanese yen and to a lesser extent in the US dollar portfolio (see note 1, "Gold and gold receivables") and (b) income received primarily in the US dollar portfolio.

Additionally, upon Slovenia's adoption of the single currency with effect from 1 January 2007, Banka Slovenije transferred US dollars with a value of €162.9 million to the ECB, in accordance with Article 30.1 of the Statute of the ESCB.

8 The transfer, with a value equivalent to €28.7 million, was made with effect from 1 January 2007.

The ECB's net foreign currency holdings[9] of US dollars and Japanese yen, as at 31 December 2007, were as follows:

| | (million currency units) |
|---|---|
| US dollars | 37,149 |
| Japanese yen | 1,076,245 |

## 3 CLAIMS ON NON-EURO AREA RESIDENTS DENOMINATED IN EURO

As at 31 December 2007 this claim consisted of money market deposits with a value of €20.0 million and current accounts with non-euro area residents.

## 4 OTHER CLAIMS ON EURO AREA CREDIT INSTITUTIONS DENOMINATED IN EURO

As at 31 December 2007 this claim consisted of money market deposits with a value of €100.0 million and current accounts 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/TARGET2 balances of the euro area NCBs vis-à-vis the ECB (see "Intra-ESCB balances/intra-Eurosystem balances" in the notes on accounting policies). The increase in this position is due mainly to the settlement of the euro leg of the back-to-back swap transactions conducted with NCBs in connection with the US dollar Term Auction Facility (see note 9, "Liabilities to non-euro area residents denominated in euro").

| | 2007 € | 2006 € |
|---|---|---|
| Due from euro area NCBs in respect of TARGET/ TARGET2 | 145,320,642,526 | 83,764,470,700 |
| Due to euro area NCBs in respect of TARGET/ TARGET2 | (128,079,459,304) | (80,218,602,205) |
| Other claims within the Eurosystem (net) | 17,241,183,222 | 3,545,868,495 |

## 6 OTHER ASSETS

### TANGIBLE FIXED ASSETS

These assets comprised the following main items on 31 December 2007:

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| **Cost** | | | |
| Land and buildings | 156,964,236 | 160,272,602 | (3,308,366) |
| Computer hardware and software | 168,730,634 | 157,573,338 | 11,157,296 |
| Equipment, furniture, plant in building and motor vehicles | 27,105,564 | 26,670,476 | 435,088 |
| Assets under construction | 59,791,855 | 28,790,200 | 31,001,655 |
| Other fixed assets | 1,195,290 | 1,232,143 | (36,853) |
| **Total cost** | **413,787,579** | **374,538,759** | **39,248,820** |
| **Accumulated depreciation** | | | |
| Land and buildings | (49,672,589) | (39,696,727) | (9,975,862) |
| Computer hardware and software | (150,195,777) | (135,057,096) | (15,138,681) |

9 Assets minus liabilities denominated in the respective foreign currency that are subject to foreign currency revaluation. These are included under the headings "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", "Off-balance-sheet instruments revaluation differences" (Liabilities side) 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 financial instruments denominated in foreign currency are not included.

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Equipment, furniture, plant in building and motor vehicles | (25,562,068) | (24,471,251) | (1,090,817) |
| Other fixed assets | (147,182) | (132,696) | (14,486) |
| **Total accumulated depreciation** | **(225,577,616)** | **(199,357,770)** | **(26,219,846)** |
| **Net book value** | **188,209,963** | **175,180,989** | **13,028,974** |

The decrease in "Land and buildings" at cost is due mainly to the sale in January 2007 of the official residence for Presidents of the ECB purchased in 2001. A new official residence was acquired in December 2006.

The increase in the category "Assets under construction" is due mainly to initial works related to the ECB's new premises. Transfers from this category to the relevant fixed asset headings will occur once the assets are in use.

## OTHER FINANCIAL ASSETS

The main components of this item are as follows:

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Securities denominated in euro | 8,815,612,722 | 7,303,413,758 | 1,512,198,964 |
| Reverse repurchase agreements in euro | 668,392,837 | 874,669,464 | (206,276,627) |
| Other financial assets | 42,190,576 | 42,187,167 | 3,409 |
| Total | 9,526,196,135 | 8,220,270,389 | 1,305,925,746 |

(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 amount transferred to the ECB's provision against foreign exchange, interest rate and gold price risks in 2006.

(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 mainly of valuation changes in swap and forward transactions in foreign currency that were outstanding on 31 December 2007 (see note 21, "Foreign exchange swap and forward transactions"). These valuation changes are the result of the conversion of such transactions into their euro equivalents at the exchange rates prevailing on the Balance Sheet date, compared with the euro values resulting from the conversion of the transactions at the average cost of the respective foreign currency (see "Gold and foreign currency assets and liabilities" in the notes on accounting policies). Valuation gains in forward transactions in securities are also included in this item.

## ACCRUALS AND PREPAID EXPENSES

In 2007, this position included accrued interest receivable on the ECB's claims related to the allocation of euro banknotes within the Eurosystem for the final quarter (see "Banknotes in circulation" in the notes on accounting policies) amounting to €545.8 million, and accrued interest receivable on the TARGET/TARGET2 balances due from euro area NCBs for the final month of 2007 amounting to €481.6 million.

Also included under this item is accrued interest, including the amortisation of discounts, on securities and other financial assets.

## SUNDRY

This item consists mainly of balances related to swap and forward transactions in foreign currency that were outstanding on 31 December 2007 (see note 21, "Foreign exchange swap and forward transactions"). These balances arise from the conversion of such transactions into their euro equivalents at the respective currency's average cost on the Balance Sheet date, compared with the euro values at which the transactions are initially recorded (see "Off-balance-sheet instruments" in the notes on accounting policies).

This item also 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/TARGET2 system.

### 9 LIABILITIES TO NON-EURO AREA RESIDENTS DENOMINATED IN EURO

This item consists mainly of a liability to the Federal Reserve amounting to €13.9 billion in connection with the US dollar Term Auction Facility. Under this programme, USD 20 billion were provided by the Federal Reserve to the ECB by means of a temporary reciprocal currency arrangement (swap line), with the aim of offering short-term US dollar funding to Eurosystem counterparties. The ECB simultaneously entered into back-to-back swap transactions with NCBs that have adopted the euro, which used the resulting funds to conduct liquidity-providing operations with the Eurosystem counterparties. These back-to-back swap transactions resulted in non-remunerated intra-Eurosystem balances between the ECB and the NCBs reported under "Other claims within the Eurosystem (net)".

The remainder of this item reflects balances held at the ECB by non-euro area NCBs arising from transactions processed via the TARGET/TARGET2 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. They 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 23, "Net interest income").

The enlargement of the EU through the accession of Bulgaria and Romania and the concomitant adjustment of the total limit of NCBs' claims and weightings in the ECB's capital key (see note 15, "Capital and reserves"), along with Banka Slovenije's transfer of foreign reserve assets upon Slovenia's adoption of the single currency, led to an increase of these liabilities by €259,568,376.

| | Until 31 December 2006 € | From 1 January 2007[1] € |
|---|---|---|
| Nationale Bank van België/Banque Nationale de Belgique | 1,419,101,951 | 1,423,341,996 |
| Deutsche Bundesbank | 11,761,707,508 | 11,821,492,402 |
| Central Bank and Financial Services Authority of Ireland | 513,006,858 | 511,833,966 |
| Bank of Greece | 1,055,840,343 | 1,046,595,329 |
| Banco de España | 4,326,975,513 | 4,349,177,351 |
| Banque de France | 8,275,330,931 | 8,288,138,644 |
| Banca d'Italia | 7,262,783,715 | 7,217,924,641 |
| Banque centrale du Luxembourg | 87,254,014 | 90,730,275 |
| De Nederlandsche Bank | 2,223,363,598 | 2,243,025,226 |
| Oesterreichische Nationalbank | 1,157,451,203 | 1,161,289,918 |
| Banco de Portugal | 982,331,062 | 987,203,002 |
| Banka Slovenije | - | 183,995,238 |
| Suomen Pankki – Finlands Bank | 717,118,926 | 717,086,011 |
| Total | 39,782,265,622 | 40,041,833,998 |

1) Individual amounts are shown rounded to the nearest euro. Total may not add up due to rounding.

Banka Slovenije's claim was set at €183,995,238 in order to ensure that the ratio between that claim and the aggregate claim credited to the other NCBs that have adopted the euro will be equal to the ratio between Banka Slovenije's weighting in the ECB's capital key and the other participating NCBs' aggregate weighting in this key. The difference between the claim and the value of the assets transferred (see notes 1 "Gold and gold receivables" and 2 "Claims on non-euro area and euro area residents denominated in foreign currency") was treated as part of the contributions of Banka Slovenije, due under Article 49.2 of the Statute of the ESCB, to the reserves and provisions equivalent to reserves of the ECB existing as at 31 December 2006 (see notes 13 "Provisions" and 14 "Revaluation accounts").

## 12 OTHER LIABILITIES

### OFF-BALANCE-SHEET INSTRUMENTS REVALUATION DIFFERENCES

This item is composed mainly of valuation changes in swap and forward transactions in foreign currency that were outstanding on 31 December 2007 (see note 21, "Foreign exchange swap and forward transactions"). These valuation changes are the result of the conversion of such transactions into their euro equivalents at the exchange rates prevailing on the Balance Sheet date, compared with the euro values resulting from the conversion of the transactions at the average cost of the respective foreign currency (see "Gold and foreign currency assets and liabilities" in the notes on accounting policies and also note 6, "Other assets").

Valuation losses in forward transactions in securities and interest rate swaps are also included in this item.

### ACCRUALS AND INCOME COLLECTED IN ADVANCE

This item consists mainly of interest payable to the NCBs in respect of their claims relating to the foreign reserves transferred (see note 11, "Intra-Eurosystem liabilities"), amounting to €1.4 billion. Also included within this balance are accruals on balances due to NCBs in respect of TARGET/TARGET2, accruals on financial instruments, including the amortisation of coupon bond premiums, and other accruals.

### SUNDRY

This item consists mainly of outstanding repurchase transactions of €517 million conducted in connection with the management of the ECB's own funds (see note 6, "Other assets") and the net liability in respect of the ECB's pension obligations as described below.

### 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:

| | 2007 € millions | 2006 € millions |
|---|---|---|
| Present value of obligations | 285.8 | 258.5 |
| Fair value of plan assets | (229.8) | (195.3) |
| Unrecognised actuarial gains/(losses) | 35.4 | 17.3 |
| Liability recognised in the Balance Sheet | 91.4 | 80.5 |

The present value of the obligations includes unfunded obligations of €36.8 million (2006: €32.6 million) relating to the pensions of Executive Board members and to staff disability provisions.

The amounts recognised in the Profit and Loss Account in 2007 and 2006 in respect of "Current service cost", "Interest on obligation" and "Expected return on plan assets" are as follows:

| | 2007 € millions | 2006 € millions |
|---|---|---|
| Current service cost | 26.5 | 27.3 |
| Interest on obligation | 8.6 | 6.8 |
| Expected return on plan assets | (7.9) | (6.7) |
| Net actuarial (gains)/losses recognised in year | 0 | 0 |
| Total included in "Staff costs" | 27.2 | 27.4 |

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 2007.

Changes in the present value of the defined benefit obligation are as follows:

| | 2007 € millions | 2006 € millions |
|---|---|---|
| Opening defined benefit obligation | 258.5 | 223.5 |
| Service cost | 26.5 | 27.3 |
| Interest cost | 8.6 | 6.8 |
| Contributions paid by plan participants | 14.2 | 10.4 |
| Other net changes in liabilities representing plan participants' contributions | 2.5 | 3.7 |
| Benefits paid | (2.5) | (2.6) |
| Actuarial (gains)/losses | (22.0) | (10.6) |
| Closing defined benefit obligation | 285.8 | 258.5 |

Changes in the fair value of plan assets are as follows:

| | 2007 € millions | 2006 € millions |
|---|---|---|
| Opening fair value of plan assets | 195.3 | 161.2 |
| Expected return | 7.9 | 6.7 |
| Actuarial gains/(losses) | (4.0) | 0.2 |
| Contributions paid by employer | 16.2 | 15.4 |
| Contributions paid by plan participants | 14.1 | 10.3 |
| Benefits paid | (2.2) | (2.2) |
| Other net changes in assets representing plan participants' contributions | 2.5 | 3.7 |
| Closing fair value of plan assets | 229.8 | 195.3 |

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.

| | 2007 % | 2006 % |
|---|---|---|
| Discount rate | 5.30 | 4.60 |
| Expected return on plan assets | 6.50 | 6.00 |
| Future salary increases | 2.00 | 2.00 |
| Future pension increases | 2.00 | 2.00 |

## 13 PROVISIONS

As at 31 December 2005, 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. This 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 for this provision is reviewed annually, based on the ECB's assessment of its exposure to the above risks. This assessment takes a range of factors into account, including in particular the level of holdings of risk-bearing assets, the extent of materialised risk exposures in the current financial year, projected results for the coming year, and a risk assessment involving calculations of Values at Risk (VaR) on risk-bearing assets, which is applied consistently over time.[10] The provision, together with any amount held in the general reserve fund, may not exceed the value of the ECB's capital paid up by the euro area NCBs.

As at 31 December 2006, the provision against foreign exchange rate, interest rate and gold price risks amounted to €2,371,395,162. In accordance with Article 49.2 of the Statute of the ESCB, Banka Slovenije also contributed an amount of €10,947,042 to the provision with effect from 1 January 2007. Taking the results of its assessment into account, the Governing Council decided to transfer, as at 31 December 2007, an additional amount of €286,416,109 to the provision, which increased its size to €2,668,758,313 and, as in 2006, reduced net profit to exactly zero.

This item also includes 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, and other miscellaneous provisions.

## 14 REVALUATION ACCOUNTS

These accounts represent revaluation balances arising from unrealised gains on assets and liabilities. In accordance with Article 49.2 of the Statute of the ESCB, Banka Slovenije contributed an amount of €26 million to these balances with effect from 1 January 2007.

| | 2007<br>€ | 2006<br>€ | Change<br>€ |
|---|---|---|---|
| Gold | 5,830,485,388 | 4,861,575,989 | 968,909,399 |
| Foreign currency | 0 | 701,959,896 | (701,959,896) |
| Securities | 338,524,183 | 14,909,786 | 323,614,397 |
| Total | 6,169,009,571 | 5,578,445,671 | 590,563,900 |

The foreign exchange rates used for the year-end revaluation were as follows:

| Exchange rates | 2007 | 2006 |
|---|---|---|
| US dollars per euro | 1.4721 | 1.3170 |
| Japanese yen per euro | 164.93 | 156.93 |
| Euro per SDR | 1.0740 | 1.1416 |
| Euro per fine ounce of gold | 568.236 | 482.688 |

## 15 CAPITAL AND RESERVES

### CAPITAL

#### (A) CHANGE TO THE ECB'S CAPITAL KEY

Pursuant to Article 29 of the Statute of the ESCB, 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,[11] the NCBs' capital key shares were adjusted on 1 January 2007, upon the accession of Bulgaria and Romania as new Member States, as follows:

10 See also Chapter 2 of the ECB's Annual Report.
11 OJ L 181, 19.7.2003, p. 43.

| | 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 |
| ***Subtotal for euro area NCBs*** | ***71.4908*** | ***69.5092*** |
| 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 Naţională 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 |
| ***Subtotal for non-euro area NCBs*** | ***28.5092*** | ***30.4908*** |
| **Total** | **100.0000** | **100.0000** |

## (B) CAPITAL OF THE ECB

In accordance with Article 49.3 of the Statute of the ESCB, which was added to the Statute by the Treaty of Accession, the ECB's subscribed capital is automatically increased when a new Member State joins the EU and its NCB joins the ESCB. The increase is determined by multiplying the prevailing amount of the subscribed capital (i.e. €5,565 million as at 31 December 2006) by the ratio, within the expanded capital key, between the weighting of the entering NCB(s) and the weighting of those NCBs that are already members of the ESCB. Therefore, on 1 January 2007, the subscribed capital of the ECB was increased to €5,761 million.

In accordance with Article 49.1 of the Statute of the ESCB and a legal act adopted by the Governing Council on 30 December 2006[12], Banka Slovenije paid up an amount of €17,096,556 as at 1 January 2007, which represented the remainder of its capital subscription to the ECB.

The non-euro area NCBs are required to pay up 7% of their subscribed capital as a contribution to the operational costs of the ECB. Therefore, as at 1 January 2007, the Bulgarian National Bank and Banca Naţională a României paid amounts of €3,561,869 and €10,156,952 respectively. Including these amounts, this contribution amounted to a total of €122,952,830 at end-2007. 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.

The combined effect of the three developments described was that the ECB's paid-up capital increased from €4,089,277,550 on 31 December 2006 to €4,127,136,230 on 1 January 2007, as shown in the table below: [13]

12 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.

13 Individual amounts are shown rounded to the nearest euro. Totals in the tables of this section may not add up due to rounding.

| | Subscribed capital until 31 December 2006 € | Paid-up capital until 31 December 2006 € | Subscribed capital from 1 January 2007 € | Paid-up capital from 1 January 2007 € |
|---|---|---|---|---|
| Nationale Bank van België/ Banque Nationale de Belgique | 141,910,195 | 141,910,195 | 142,334,200 | 142,334,200 |
| Deutsche Bundesbank | 1,176,170,751 | 1,176,170,751 | 1,182,149,240 | 1,182,149,240 |
| Central Bank and Financial Services Authority of Ireland | 51,300,686 | 51,300,686 | 51,183,397 | 51,183,397 |
| Bank of Greece | 105,584,034 | 105,584,034 | 104,659,533 | 104,659,533 |
| Banco de España | 432,697,551 | 432,697,551 | 434,917,735 | 434,917,735 |
| Banque de France | 827,533,093 | 827,533,093 | 828,813,864 | 828,813,864 |
| Banca d'Italia | 726,278,371 | 726,278,371 | 721,792,464 | 721,792,464 |
| Banque centrale du Luxembourg | 8,725,401 | 8,725,401 | 9,073,028 | 9,073,028 |
| De Nederlandsche Bank | 222,336,360 | 222,336,360 | 224,302,523 | 224,302,523 |
| Oesterreichische Nationalbank | 115,745,120 | 115,745,120 | 116,128,992 | 116,128,992 |
| Banco de Portugal | 98,233,106 | 98,233,106 | 98,720,300 | 98,720,300 |
| Banka Slovenije | - | - | 18,399,524 | 18,399,524 |
| Suomen Pankki – Finlands Bank | 71,711,893 | 71,711,893 | 71,708,601 | 71,708,601 |
| ***Subtotal for euro area NCBs*** | ***3,978,226,562*** | ***3,978,226,562*** | ***4,004,183,400*** | ***4,004,183,400*** |
| Bulgarian National Bank | - | - | 50,883,843 | 3,561,869 |
| Česká národní banka | 81,155,136 | 5,680,860 | 79,957,855 | 5,597,050 |
| Danmarks Nationalbank | 87,159,414 | 6,101,159 | 87,204,756 | 6,104,333 |
| Eesti Pank | 9,927,370 | 694,916 | 9,810,391 | 686,727 |
| Central Bank of Cyprus | 7,234,070 | 506,385 | 7,195,055 | 503,654 |
| Latvijas Banka | 16,571,585 | 1,160,011 | 16,204,715 | 1,134,330 |
| Lietuvos bankas | 24,623,661 | 1,723,656 | 24,068,006 | 1,684,760 |
| Magyar Nemzeti Bank | 77,259,868 | 5,408,191 | 75,700,733 | 5,299,051 |
| Central Bank of Malta | 3,600,341 | 252,024 | 3,583,126 | 250,819 |
| Narodowy Bank Polski | 285,912,706 | 20,013,889 | 280,820,283 | 19,657,420 |
| Banca Naţională a României | - | - | 145,099,313 | 10,156,952 |
| Banka Slovenije | 18,613,819 | 1,302,967 | - | - |
| Národná banka Slovenska | 39,770,691 | 2,783,948 | 38,970,814 | 2,727,957 |
| Sveriges Riksbank | 134,292,163 | 9,400,451 | 134,298,089 | 9,400,866 |
| Bank of England | 800,321,860 | 56,022,530 | 802,672,024 | 56,187,042 |
| ***Subtotal for non-euro area NCBs*** | ***1,586,442,685*** | ***111,050,988*** | ***1,756,469,003*** | ***122,952,830*** |
| **Total** | **5,564,669,247** | **4,089,277,550** | **5,760,652,403** | **4,127,136,230** |

## 16 POST-BALANCE-SHEET EVENTS

### ENTRY OF CYPRUS AND MALTA INTO THE EURO AREA

Pursuant to Council Decision 2007/503/EC of 10 July 2007, taken in accordance with Article 122(2) of the Treaty, Cyprus and Malta adopted the single currency on 1 January 2008. In accordance with Article 49.1 of the Statute of the ESCB and the legal acts adopted by the Governing Council on 31 December 2007,[14] the Central Bank of Cyprus and the Central Bank of Malta paid up amounts of €6,691,401 and €3,332,307 respectively as at 1 January 2008, representing the remainder of their capital subscription to the ECB. In accordance with Article 30.1 of the Statute of the ESCB, the Central Bank of Cyprus and the Central Bank of Malta transferred foreign reserve assets with a

14 Decision ECB/2007/22 of 31 December 2007 on the paying-up of capital, transfer of foreign reserve assets and contributions by the Central Bank of Cyprus and the Central Bank of Malta to the European Central Bank's reserves and provisions, OJ L 28, 1.2.2008, p. 36; Agreement of 31 December 2007 between the European Central Bank and the Central Bank of Cyprus regarding the claim credited to the Central Bank of Cyprus 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 29, 1.2.2008, p. 4; Agreement of 31 December 2007 between the European Central Bank and the Central Bank of Malta regarding the claim credited to the Central Bank of Malta 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 29, 1.2.2008, p. 6.

total value equivalent to €109,953,752 to the ECB with effect from 1 January 2008. The total amount transferred was determined by multiplying the euro value, at the exchange rates prevailing on 31 December 2007, of the foreign reserve assets already transferred to the ECB by the ratio between the number of shares subscribed by the two central banks 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.

The Central Bank of Cyprus and the Central Bank of Malta were credited with claims in respect of the paid-up capital and foreign reserve assets equivalent to the amounts transferred. The latter are to be treated in an identical manner to the existing claims of the other participating NCBs (see note 11, "Intra-Eurosystem liabilities").

## 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 €3.0 billion (2006: €2.2 billion) were outstanding as at 31 December 2007 (see "Reverse transactions" in the notes on accounting policies).

### 18 INTEREST RATE FUTURES

In 2007 interest rate futures were used as part of the management of the ECB's foreign reserves and own funds. As at 31 December 2007, the following transactions were outstanding:

| Foreign currency interest rate futures | Contract value € |
|---|---|
| Purchases | 5,932,333,678 |
| Sales | 2,105,780,978 |

| Euro interest rate futures | Contract value € |
|---|---|
| Purchases | 25,000,000 |
| Sales | 190,600,000 |

### 19 INTEREST RATE SWAPS

Interest rate swap transactions with a contract value of €13 million were outstanding as at 31 December 2007. These transactions were conducted in the context of the management of the ECB's foreign reserves.

### 20 FORWARD TRANSACTIONS IN SECURITIES

Forward securities purchases of €113 million and sales of €9 million remained outstanding as at 31 December 2007. These transactions were conducted in the context of the management of the ECB's foreign reserves.

### 21 FOREIGN EXCHANGE SWAP AND FORWARD TRANSACTIONS

Foreign exchange swap and forward transaction claims of €794 million and liabilities of €797 million remained outstanding as at 31 December 2007. These transactions were conducted in the context of the management of the ECB's foreign reserves.

In addition, forward claims on NCBs and liabilities to the Federal Reserve, which arose in connection with the US dollar Term Auction Facility established by the Federal Reserve (see note 9, "Liabilities to non-euro area residents denominated in euro"), remained outstanding as at 31 December 2007.

## 22 PENDING LAWSUITS

An action for damages was brought against the ECB before the Court of First Instance of the European Communities (CFI) by Document Security Systems Inc. (DSSI), alleging that the ECB had infringed a DSSI patent[15] in the production of euro banknotes. The CFI has dismissed DSSI's action for damages against the ECB.[16] The ECB is currently pursuing actions to revoke that patent in a number of national jurisdictions. Furthermore, the ECB has the firm conviction that it has in no way infringed the patent, and will consequently also enter a defense against any infringement action that may be brought by DSSI before any competent national court.

15 DSSI's European Patent No 0455 750 B1.

16 Order of the Court of First Instance of 5 September 2007, Case T-295/05. Available at www.curia.eu.

# NOTES ON THE PROFIT AND LOSS ACCOUNT

## 23 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:

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Interest income on current accounts | 24,052,321 | 15,399,229 | 8,653,092 |
| Money market deposit income | 196,784,561 | 195,694,549 | 1,090,012 |
| Reverse repurchase agreements | 138,079,630 | 201,042,718 | (62,963,088) |
| Net income on securities | 1,036,836,752 | 934,077,489 | 102,759,263 |
| Net interest income on forward and swap transactions in foreign currencies | 19,766,033 | 3,853,216 | 15,912,817 |
| **Total interest income on foreign reserve assets** | 1,415,519,297 | 1,350,067,201 | 65,452,096 |
| Interest expense on current accounts | (154,041) | (225,549) | 71,508 |
| Repurchase agreements | (60,476,997) | (31,598,416) | (28,878,581) |
| Net interest expense on interest rate swaps | (891) | 0 | (891) |
| **Interest income on foreign reserve assets (net)** | 1,354,887,368 | 1,318,243,236 | 36,644,132 |

### INTEREST INCOME ARISING FROM THE ALLOCATION OF EURO BANKNOTES WITHIN THE EUROSYSTEM

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 2007 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 2007, 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 €3.9 billion (2006: €2.5 billion) and expenses of €3.8 billion (2006: €2.4 billion) on balances arising from TARGET/TARGET2. Interest income and expenses in respect of other assets and liabilities denominated in euro are also shown here.

## 24 REALISED GAINS/LOSSES ARISING FROM FINANCIAL OPERATIONS

Net realised gains/losses arising from financial operations in 2007 were as follows:

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Net realised price gains/(losses) on securities and interest rate futures | 69,252,941 | (103,679,801) | 172,932,742 |
| Net realised exchange rate and gold price gains | 709,294,272 | 579,060,509 | 130,233,763 |
| Realised gains arising from financial operations | 778,547,213 | 475,380,708 | 303,166,505 |

## 25 WRITE-DOWNS ON FINANCIAL ASSETS AND POSITIONS

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Unrealised price losses on securities | (15,864,181) | (73,609,623) | 57,745,442 |
| Unrealised price losses on interest rate swaps | (18,899) | 0 | (18,899) |
| Unrealised exchange rate losses | (2,518,369,734) | (644,857,885) | (1,873,511,849) |
| Total write-downs | (2,534,252,814) | (718,467,508) | (1,815,785,306) |

The exchange rate losses are primarily due to the write-down of the average acquisition costs of the ECB's US dollar and Japanese yen holdings to their end-of-year exchange rates, following the depreciation of these currencies against the euro over the year.

## 26 NET EXPENSE FROM FEES AND COMMISSIONS

| | 2007 € | 2006 € | Change € |
|---|---|---|---|
| Income from fees and commissions | 263,440 | 338,198 | (74,758) |
| Expenses relating to fees and commissions | (885,131) | (884,678) | (453) |
| Net expense from fees and commissions | (621,691) | (546,480) | (75,211) |

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").

## 27 INCOME FROM EQUITY SHARES AND PARTICIPATING INTERESTS

Dividends received on shares in the BIS (see note 6, "Other assets") are shown under this heading.

## 28 OTHER INCOME

Other miscellaneous income during the year arose principally from the contributions of other central banks to the cost of a service contract held centrally by the ECB with an external provider of an IT network.

## 29 STAFF COSTS

Salaries, allowances, staff insurance and other miscellaneous costs of €141.7 million (2006: €133.4 million) are included under this heading. Staff costs of €1.1 million (2006: €1.0 million) incurred in connection with the construction of the new ECB premises have been capitalised and are excluded from this item. 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.

Members of the Executive Board receive a basic salary and additional allowances for residence and representation. In the case of the President, an official residence owned by the ECB is provided in lieu of a residence allowance. Subject to the Conditions of Employment for Staff of the European Central Bank, members of the Executive Board are entitled to household, child and education allowances, depending on their individual circumstances. Basic salaries are subject to a tax for the benefit of the European Communities as well as to deductions in respect of contributions to the pension, medical and accident insurance schemes. Allowances are non-taxable and non-pensionable. The pension arrangements for the Executive Board are described in "The ECB's retirement plan and other post-employment benefits" in the notes on accounting policies.

Basic salaries paid to members of the Executive Board over the year were as follows:

| | 2007<br>€ | 2006<br>€ |
|---|---|---|
| Jean-Claude Trichet (President) | 345,252 | 338,472 |
| Lucas D. Papademos (Vice-President) | 295,920 | 290,112 |
| Gertrude Tumpel-Gugerell (Board Member) | 246,588 | 241,752 |
| José Manuel González-Páramo (Board Member) | 246,588 | 241,752 |
| Lorenzo Bini Smaghi (Board Member) | 246,588 | 241,752 |
| *Otmar Issing (Board Member until May 2006)* | - | *100,730* |
| Jürgen Stark (Board Member since June 2006) | 246,588 | 141,022 |
| Total | 1,627,524 | 1,595,592 |

The total allowances paid to the members of the Executive Board and their benefits from the ECB's contributions to the medical and accident insurance schemes amounted to €579,842 (2006: €557,421), resulting in total emoluments of €2,207,366 (2006: €2,153,013).

Transitional payments are made to former members of the Executive Board for a period after the end of their terms of office. In 2007, these payments and the ECB's contributions to the medical and accident insurance schemes of former members amounted to €52,020 (2006: €292,280). Pension payments, including related allowances, to former members of the Executive Board or their dependents and contributions to the medical and accident insurance schemes amounted to €249,902 (2006: €121,953).

Also included under this item is an amount of €27.2 million (2006: €27.4 million) recognised in connection with the ECB's retirement plan and other post-employment benefits (see note 12, "Other liabilities").

At the end of 2007 the actual full-time equivalent number of staff holding permanent or fixed-term contracts was 1,375[17], including 149 with managerial positions. The change in the number of staff during 2007 was as follows:

| | 2007 | 2006 |
|---|---|---|
| As at 1 January | 1,342 | 1,338 |
| New staff[1)] | 82 | 54 |
| Resignations/end of contract[2)] | 49 | 50 |
| As at 31 December | 1,375 | 1,342 |
| Average number of staff employed | 1,366 | 1,337 |

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 2007 includes the full-time equivalent of 79 staff (2006: 63) on unpaid/parental leave and 21 on maternity leave (2006: 10). In addition, as at 31 December 2007, the ECB employed the full-time equivalent of 71 staff (2006: 70) 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, and the related costs are included under this heading. 76 ESCB staff were participating in this programme as at 31 December 2007 (2006: 61).

## 30 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.

## 31 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.

17 Until 2006, the full-time equivalent of all permanent and fixed-term contractual commitments was provided in this note. From 2007, it has been decided to provide the actual full-time equivalent number of staff holding permanent or fixed-term contracts, as it is considered to be more relevant to the users of the financial statements. The 2006 figures have been adjusted accordingly.

KPMG Deutsche Treuhand-Gesellschaft
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Marie-Curie-Straße 30
60439 Frankfurt a.M.
Postfach 50 05 20
60394 Frankfurt a.M.

T (069) 9587-0
F (069) 9587-1050
www.kpmg.de

**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 2007, 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 Decision ECB/2006/17 on the annual accounts of the European Central Bank, as amended. 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 2007 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 Decision ECB/2006/17 on the annual accounts of the European Central Bank, as amended.

Frankfurt am Main, 26 February 2008

KPMG Deutsche Treuhand-Gesellschaft
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Wohlmannstetter
Wirtschaftsprüfer

Dr. Lemnitzer
Wirtschaftsprüfer

# NOTE ON PROFIT DISTRIBUTION/ ALLOCATION OF LOSSES

*This note is not part of the financial statements of the ECB for the year 2007.*

## INCOME RELATED TO THE ECB'S SHARE OF TOTAL BANKNOTES IN CIRCULATION

In 2006, following a decision by the Governing Council, income of €1,319 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 2007 an amount of €2,004 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.[18]

In 2007 the funding of the provision against foreign exchange rate, interest rate and gold price risks for the amount of €286 million had the effect of reducing net profit to exactly zero. Consequently, as in both 2005 and 2006, no transfers to the general reserve fund or profit distribution to the shareholders of the ECB took place. There was also no requirement to offset a loss.

18 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.

# 5 CONSOLIDATED BALANCE SHEET OF THE EUROSYSTEM AS AT 31 DECEMBER 2007

(EUR MILLIONS)

| ASSETS | 31 DECEMBER 2007[1] | 31 DECEMBER 2006 |
|---|---|---|
| **1 Gold and gold receivables** | **201,545** | **176,768** |
| **2 Claims on non-euro area residents denominated in foreign currency** | **135,133** | **142,288** |
| 2.1 Receivables from the IMF | 9,058 | 10,658 |
| 2.2 Balances with banks and security investments, external loans and other external assets | 126,075 | 131,630 |
| **3 Claims on euro area residents denominated in foreign currency** | **41,973** | **23,404** |
| **4 Claims on non-euro area residents denominated in euro** | **13,835** | **12,292** |
| 4.1 Balances with banks, security investments and loans | 13,835 | 12,292 |
| 4.2 Claims arising from the credit facility under ERM II | 0 | 0 |
| **5 Lending to euro area credit institutions related to monetary policy operations denominated in euro** | **637,175** | **450,541** |
| 5.1 Main refinancing operations | 368,606 | 330,453 |
| 5.2 Longer-term refinancing operations | 268,476 | 120,000 |
| 5.3 Fine-tuning reverse operations | 0 | 0 |
| 5.4 Structural reverse operations | 0 | 0 |
| 5.5 Marginal lending facility | 91 | 88 |
| 5.6 Credits related to margin calls | 2 | 0 |
| **6 Other claims on euro area credit institutions denominated in euro** | **23,898** | **11,036** |
| **7 Securities of euro area residents denominated in euro** | **96,044** | **77,614** |
| **8 General government debt denominated in euro** | **37,063** | **39,359** |
| **9 Other assets** | **321,315** | **216,728** |
| **Total assets** | **1,507,981** | **1,150,030** |

Totals/subtotals may not add up due to rounding.

1 Consolidated figures as at 31.12.2007 also include Banka Slovenije which has been a member of the Eurosystem since 01.01.2007

| LIABILITIES | | 31 DECEMBER 2007 | 31 DECEMBER 2006 |
|---|---|---|---|
| 1 | **Banknotes in circulation** | **676,678** | **628,238** |
| 2 | **Liabilities to euro area credit institutions related to monetary policy operations denominated in euro** | **379,181** | **174,051** |
| | 2.1 Current accounts (covering the minimum reserve system) | 267,335 | 173,482 |
| | 2.2 Deposit facility | 8,831 | 567 |
| | 2.3 Fixed-term deposits | 101,580 | 0 |
| | 2.4 Fine-tuning reverse operations | 0 | 0 |
| | 2.5 Deposits related to margin calls | 1,435 | 2 |
| 3 | **Other liabilities to euro area credit institutions denominated in euro** | **126** | **65** |
| 4 | **Debt certificates issued** | **0** | **0** |
| 5 | **Liabilities to other euro area residents denominated in euro** | **46,183** | **53,374** |
| | 5.1 General government | 38,116 | 45,166 |
| | 5.2 Other liabilities | 8,067 | 8,208 |
| 6 | **Liabilities to non-euro area residents denominated in euro** | **45,095** | **16,614** |
| 7 | **Liabilities to euro area residents denominated in foreign currency** | **2,490** | **89** |
| 8 | **Liabilities to non-euro area residents denominated in foreign currency** | **15,552** | **12,621** |
| | 8.1 Deposits, balances and other liabilities | 15,552 | 12,621 |
| | 8.2 Liabilities arising from the credit facility under ERM II | 0 | 0 |
| 9 | **Counterpart of special drawing rights allocated by the IMF** | **5,278** | **5,582** |
| 10 | **Other liabilities** | **123,174** | **71,352** |
| 11 | **Revaluation accounts** | **147,122** | **121,887** |
| 12 | **Capital and reserves** | **67,102** | **66,157** |
| **Total liabilities** | | **1,507,981** | **1,150,030** |

# ANNEXES

# LEGAL INSTRUMENTS ADOPTED BY THE ECB

The following table lists the legal instruments that were adopted by the ECB in 2007 and early 2008 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/2007/1 | Decision of the European Central Bank of 17 April 2007 adopting implementing rules concerning data protection at the European Central Bank | OJ L 116, 4.5.2007, p. 64 |
| ECB/2007/2 | Guideline of the European Central Bank of 26 April 2007 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET2) | OJ L 237, 8.9.2007, p. 1 |
| ECB/2007/3 | Guideline of the European Central Bank of 31 May 2007 amending Guideline ECB/2004/15 on the statistical reporting requirements of the European Central Bank in the field of balance of payments and international investment position statistics, and the international reserves template | OJ L 159, 20.6.2007, p. 48 |
| ECB/2007/4 | Recommendation of the European Central Bank of 31 May 2007 amending Recommendation ECB/2004/16 on the statistical reporting requirements of the European Central Bank in the field of balance of payments and international investment position statistics, and the international reserves template | OJ C 136, 20.6.2007, p. 6 |
| ECB/2007/5 | Decision of the European Central Bank of 3 July 2007 laying down the Rules on Procurement | OJ L 184, 14.7.2007, p. 34 |
| ECB/2007/6 | Guideline of the European Central Bank of 20 July 2007 amending Guideline ECB/2006/28 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 L196, 28.7.2007, p. 46 |
| ECB/2007/7 | Decision of the European Central Bank of 24 July 2007 concerning the terms and conditions of TARGET2-ECB | OJ L 237, 8.9.2007, p. 71 |
| ECB/2007/8 | Regulation of the European Central Bank of 27 July 2007 concerning statistics on the assets and liabilities of investment funds | OJ L 211, 11.8.2007, p. 8 |
| ECB/2007/9 | Guideline of the European Central Bank of 1 August 2007 on monetary, financial institutions and markets statistics (recast) | OJ L 341, 27.12.2007, p. 1 |
| ECB/2007/10 | Guideline of the European Central Bank of 20 September 2007 amending Annexes I and II to Guideline ECB/2000/7 on monetary policy instruments and procedures of the Eurosystem | OJ L 284, 30.10.2007, p. 34 |

| Number | Title | OJ reference |
|---|---|---|
| ECB/2007/11 | Regulation of the European Central Bank of 9 November 2007 concerning transitional provisions for the application of minimum reserves by the European Central Bank following the introduction of the euro in Cyprus and Malta | OJ L 300, 17.11.2007, p. 44 |
| ECB/2007/12 | Recommendation of the European Central Bank of 15 November 2007 to the Council of the European Union on the external auditors of the Central Bank of Cyprus | OJ C 277, 20.11.2007, p. 1 |
| ECB/2007/13 | Guideline of the European Central Bank of 15 November 2007 amending Guideline ECB/2002/7 on the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts | OJ L 311, 29.11.2007, p. 47 |
| ECB/2007/14 | Guideline of the European Central Bank of 15 November 2007 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 L 311, 29.11.2007, p. 49 |
| ECB/2007/15 | Decision of the European Central Bank of 22 November 2007 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 333, 19.12.2007, p. 86 |
| ECB/2007/16 | Decision of the European Central Bank of 23 November 2007 on the approval of the volume of coin issuance in 2008 | OJ L 317, 5.12.2007, p. 81 |
| ECB/2007/17 | Recommendation of the European Central Bank of 29 November 2007 to the Council of the European Union on the external auditors of the Central Bank of Malta | OJ C 304, 15.12.2007, p. 1 |
| ECB/2007/18 | Regulation of the European Central Bank of 29 November 2007 amending Regulation ECB/2001/13 concerning the consolidated balance sheet of the monetary financial institutions sector | OJ L 330, 15.12.2007, p. 20 |
| ECB/2007/19 | Decision of the European Central Bank of 7 December 2007 amending Decision ECB/2001/15 of 6 December 2001 on the issue of euro banknotes | OJ L 1, 4.1.2008, p. 7 |
| ECB/2007/20 | Guideline of the European Central Bank of 17 December 2007 amending Guideline ECB/2006/16 on the legal framework for accounting and financial reporting in the European System of Central Banks | OJ L 42, 16.2.2008, p. 85 |
| ECB/2007/21 | Decision of the European Central Bank of 17 December 2007 amending Decision ECB/2006/17 on the annual accounts of the European Central Bank | OJ L 42, 16.2.2008, p. 83 |

| Number | Title | OJ reference |
|---|---|---|
| ECB/2007/22 | Decision of the European Central Bank of 31 December 2007 on the paying-up of capital, transfer of foreign reserve assets and contributions by the Central Bank of Cyprus and the Central Bank of Malta to the European Central Bank's reserves and provisions | OJ L 28, 1.2.2008, p. 36 |
| ECB/2008/1 | Recommendation of the European Central Bank of 28 January 2008 to the Council of the European Union on the external auditors of Suomen Pankki | OJ C 29, 1.2.2008, p. 1 |

# OPINIONS ADOPTED BY THE ECB

The following table lists the opinions adopted by the ECB in 2007 and early 2008 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 [1]**

| Number [2] | Originator | Subject |
|---|---|---|
| CON/2007/1 | Cyprus | Legal framework for adoption of the euro and a smooth changeover |
| CON/2007/2 | Hungary | Establishment of a direct reporting system for balance of payments statistics |
| CON/2007/3 | Ireland | Asset-covered securities |
| CON/2007/5 | Slovenia | Issuance of commemorative and collector euro coins |
| CON/2007/6 | Germany | Amendment to the Deutsche Bundesbank's statute relating to the number and nomination of the members of its Executive Board |
| CON/2007/7 | Netherlands | Oversight of clearing and settlement services |
| CON/2007/8 | Czech Republic | Certain Česká národní banka tasks in the area of consumer protection |
| CON/2007/10 | Hungary | Amendments to the law on the prevention and combating of money laundering relating to sanctions and supervision regimes and their scope of application to the national central bank |
| CON/2007/12 | Latvia | Monetary policy instruments and Latvijas Banka's securities settlement system |
| CON/2007/13 | Greece | Amendments to the Bank of Greece's statutes to adapt to developments in the Eurosystem collateral framework and to safeguard the smooth operation of payment systems |
| CON/2007/14 | Hungary | Amendments to the Magyar Nemzeti Bank's statutes relating to the Magyar Nemzeti Bank's structure and governance |
| CON/2007/15 | Greece | Supervision of credit and financial institutions, and eligible collateral for monetary policy operations |

1 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.
2 Consultations are numbered in the order in which the Governing Council adopted them.

| Number[2] | Originator | Subject |
|---|---|---|
| CON/2007/16 | Malta | Calculation of minimum reserve requirements and related procedures |
| CON/2007/17 | Italy | Regulation and supervision of markets and the functioning of the competent independent authorities |
| CON/2007/18 | Slovenia | Amendments to the law on payment transactions regarding access to data from the register of transaction accounts |
| CON/2007/21 | Germany | Introduction of a new regulatory and supervisory environment to improve the international competitiveness of the investment fund industry, harmonising the law with 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) |
| CON/2007/22 | Romania | Minimum reserves regime |
| CON/2007/23 | Romania | Regulation of non-banking financial institutions by the central bank |
| CON/2007/24 | Romania | Statistical reporting of assets and liabilities recorded on the balance sheet of non-banking financial institutions |
| CON/2007/25 | Spain | Amendments to the legislation on payment and securities settlement systems in preparation for TARGET2 |
| CON/2007/26 | Poland | Amendments relating to the governance, supervision and mode of financing of the deposit protection scheme, in particular as regards the participation of Narodowy Bank Polski |
| CON/2007/27 | Romania | Banca Națională a României's oversight of payment systems, securities settlement systems and payment instruments |
| CON/2007/28 | Poland | Rules for the sorting and packaging of banknotes and coins |
| CON/2007/29 | Portugal | Establishment of a consumer protection regime within the scope of the Banco de Portugal's prudential supervisory role |
| CON/2007/31 | Poland | Reform of financial supervision, in particular as regards Narodowy Bank Polski |
| CON/2007/32 | Germany | Modernisation of the supervisory structure of the Federal Financial Supervisory Authority (BaFin) |
| CON/2007/33 | Austria | Reform of financial supervision |

| Number[2] | Originator | Subject |
|---|---|---|
| CON/2007/34 | Poland | Amendments to the minimum reserves regime relating to the division of banks |
| CON/2007/36 | Slovenia | New tasks for Banka Slovenije relating to the prevention of money laundering |
| CON/2007/37 | Belgium | Implementation of the abolition of bearer securities with respect to shares issued by the Nationale Bank van België/Banque Nationale de Belgique |
| CON/2007/38 | Slovenia | Supervision of foreign exchange cash operations |
| CON/2007/39 | Cyprus | Scope of the protection of legal tender against counterfeiting and other illicit activities |
| CON/2007/40 | Bulgaria | Introduction of a licensing regime for entities providing money remittance services |
| CON/2007/41 | Germany | Reporting provisions for payments and for direct investments in domestic and foreign economic territories in connection with the creation of the Single Euro Payments Area |
| CON/2007/43 | Slovakia | Legal framework in preparation for the adoption of the euro |
| CON/2008/1 | Cyprus | Control of reproduction of euro banknotes and coins in Cyprus |
| CON/2008/2 | Czech Republic | Distribution of powers between Česká národní banka and the Ministry of Finance to prepare and submit certain draft laws to the Government |
| CON/2008/3 | Germany | Legislation on coins |
| CON/2008/4 | Sweden | Amendments to Sveriges Riksbank's statutes regarding the terms of office of members of its Executive Board |
| CON/2008/5 | Poland | Amendments relating to the governance, supervision and mode of financing of the deposit protection scheme, in particular as regards the participation of Narodowy Bank Polski |
| CON/2008/6 | Portugal | Principles, rules and structure of the National Statistical System and the role of Banco de Portugal |
| CON/2008/7 | Romania | Amendments to the laws on cheques, bills of exchange and promissory notes |
| CON/2008/8 | France | Consequences for their monetary regime of the change of status of Saint-Martin and Saint-Barthélemy under French law |

**(b) ECB opinions following a consultation by a European institution[3]**

| Number[4] | Originator | Subject | OJ reference |
|---|---|---|---|
| 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 |
| CON/2007/9 | EU Council | Regulation on statistics on Community job vacancies | OJ C 86, 20.4.2007, p. 1 |
| CON/2007/11 | EU Council | Identification and designation of European Critical Infrastructure | OJ C 116, 26.5.2007, p. 1 |
| CON/2007/19 | EU Council | Introduction of the euro in Cyprus and Malta, and the conversion rates to the euro for the Cyprus pound and the Maltese lira | OJ C 160, 13.7.2007, p. 1 |
| CON/2007/20 | EU Council | Mandate for the Intergovernmental Conference to draw up a Treaty to amend the existing Treaties | OJ C 160, 13.7.2007, p. 2 |
| CON/2007/30 | EU Council | Sampling, replacement and quality adjustment relating to the harmonised indices of consumer prices | OJ C 248, 23.10.2007, p. 1 |
| CON/2007/35 | EU Council | Proposal for a regulation of the European Parliament and of the Council on European statistics | OJ C 291, 5.12.2007, p. 1 |
| CON/2007/42 | EU Council | Authorisation of the transport of counterfeit notes and coins among competent national authorities as well as EU institutions and bodies as a measure for the detection of counterfeits | OJ C 27, 31.1.2008, p. 1 |

3 Also published on the ECB's website.
4 Consultations are numbered in the order in which the Governing Council adopted them.

# CHRONOLOGY OF MONETARY POLICY MEASURES OF THE EUROSYSTEM[1]

### 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.

### 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.

### 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.

### 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.

### 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.

### 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.

### 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.

### 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

1 The chronology of monetary policy measures taken by the Eurosystem between 1999 and 2005 can be found in the ECB's Annual Report for the respective years.

increase the interest rates on both the marginal lending facility and the deposit facility by 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 the year 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 allotmennt 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.

### 12 APRIL AND 10 MAY 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 3.75%, 4.75% and 2.75% respectively.

### 6 JUNE 2007

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 4%, starting from the operation to be settled on 13 June 2007. In addition, it decides to increase by 25 basis points the interest rates on both the marginal lending facility and the deposit facility, to 5% and 3% respectively, with effect from 13 June 2007.

### 5 JULY, 2 AUGUST, 6 SEPTEMBER, 4 OCTOBER, 8 NOVEMBER AND 6 DECEMBER 2007 AND 10 JANUARY, 7 FEBRUARY AND 6 MARCH 2008

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 4.00%, 5.00% and 3.00% respectively.

# DOCUMENTS PUBLISHED BY THE EUROPEAN CENTRAL BANK SINCE 2007

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## CONVERGENCE REPORT

"Convergence Report May 2007".

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# 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 the contracts traded in one or more financial markets, becoming 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 i) enables securities transactions to be processed and settled by book entry, and ii) plays an active role in ensuring the integrity of securities issues. Securities can be held in physical (but immobilised) or dematerialised form (i.e. so that they exist only as electronic records).

**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.

**Correspondent central banking model (CCBM):** a mechanism established by the **Eurosystem** with the aim of enabling **counterparties** to use eligible assets on a cross-border basis. In the CCBM, NCBs act as custodians for one another. Each NCB has a securities account in its securities administration for each of the other NCBs (and for the **European Central Bank**).

**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 for full value, either when due or at any time thereafter. Credit risk includes replacement cost risk and principal risk. It also includes the risk of the failure of the settlement bank.

**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-22 (comprising the 12 non-euro area EU Member States and 10 main trading partners outside the EU) and the EER-42 (composed of the EER-22 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 mechanism which provides the framework for exchange rate policy cooperation between the **euro area** countries and the non-euro area EU Member States. ERM II is a multilateral arrangement with fixed, but adjustable, central rates and a standard fluctuation band of ±15%. Decisions concerning central rates and, possibly, narrower fluctuation bands are taken by mutual agreement between the EU Member State concerned, the euro area countries, the **European Central Bank (ECB)** and the other EU Member States participating in the mechanism. All participants in ERM II, including the ECB, have the right to initiate a confidential procedure aimed at changing the central rates (realignment).

**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, Cyprus, Luxembourg, Malta, 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.

**Financing gap of non-financial corporations:** the financing gap can be defined as the balance between the corporate savings (through retained earnings and depreciation allowances) and the non-financial investment of non-financial corporations. The financing gap can also be defined on the basis of the financial accounts, as the balance between the net acquisition of financial assets and the net incurrence of liabilities by non-financial corporations. There are statistical discrepancies between the two measures owing to differences in source statistics.

**Fine-tuning operation:** an **open market operation** executed by the **Eurosystem** 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 in full when due. Liquidity risk does not imply that a counterparty or participant is insolvent, since it may be able to effect the required settlement at some unspecified time 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 of losses (in both on and off-balance-sheet positions) arising from movements in market prices.

**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:** a contract to sell and subsequently repurchase securities on a specified date and at a specified price. Also called a "repo".

**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 transfer system for settling securities transactions. It comprises all of the institutional arrangements required for the clearing and settlement of securities trades and the provision of custody services for securities.

**Settlement risk:** the risk that settlement in a transfer system will not take place as expected, usually owing to a party defaulting on one or more settlement obligations. This risk comprises, in particular, operational risk, **credit risk** 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, where relevant, the automated completion of confirmation, matching, generation, clearing and settlement of orders.

**Systemic risk:** the risk that the inability of one participant to meet its obligations in a system will cause other participants to be unable to meet their obligations when due, with possible spillover effects such as significant liquidity or credit problems that may threaten the stability of the financial system. Such inability may be caused by operational or financial problems.

**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 national RTGS systems, the ECB payment mechanism (EPM) and the interlinking mechanism.

**TARGET2:** a new generation of the **TARGET** system which replaces the former decentralised technical structure with 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**.

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